Buying green or buying greenwashed?

The influence of sustainability labels on the consumer response towards supermarket products

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Abstract

Purpose - As the popularity of purchasing more sustainable products is rising, food companies validate their products quality with a corresponding label on the product package. As these labels are able to influence the consumers' attitude towards products, uncovering the influence of sustainability labels on consumer response towards products is necessary for successful implementation of these labels. Therefore, this research addresses how the existence of a sustainability label on a product package influences the consumer response. Furthermore, this study aims to analyse the consumer response after exposure to extra information regarding that sustainability label.

Methodology - Within this study, an online experiment (N = 172) was conducted in which participants were randomly assigned to one of the three experimental conditions with either no sustainability label, a mala fide sustainability label, or a bona fide label. This research was divided into two separate parts. The first part, a between-subjects experimental design (a sustainability label vs. no sustainability label) was conducted to examine the effects on the dependent variables purchase intention and product evaluation. For the second part of this research, a within-subjects experimental design (before vs. after exposure to information) was conducted to examine the effects on the dependent variables purchase intention and product evaluation. The variable age was used as a covariate.

Results - The findings of this study did not reveal an effect between consumer response and product packages with a sustainability label, when only being exposed to the product package. Moreover, the results did reveal that positive background information regarding bona fide labels have a positive effect on the consumer response, as opposed to negative information corresponding to mala fide sustainability labels.

Conclusion - This study provides insights on how the consumer response is influenced by sustainability labels. It shows that the existence of a sustainability label is not making a difference. Furthermore, it implies that guaranteeing the labels compliance with the regulations has a positive effect. As this study only addresses a limited scope within the topic of sustainability labels, directions for future research are suggested.

Keywords: consumer response, purchase intention, product evaluation, sustainability, greenwashing

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1. Introduction

In recent years, the popularity of buying 'greener' and 'better' products have been a rising trend. As people become more conscious of what they eat and the way that their food is produced, it has resulted in changes of consumer behaviour. According to the data of Cone Communications (2015), 80% of the consumers would make the conscious decision to buy products from companies that are environmentally responsible. With the rising awareness of sustainability in every aspect of life, this concept also penetrated into the food sector within recent years. Ten years ago, it was unusual to be a vegetarian and this was mainly associated with hippies. Currently this has become something trendy. Nowadays, a lot of urban progressivists are either a flexitarian, pescatarian, vegan or any other type of variation on this (Clarys, et al., 2014). Hence, the idea of such alternative cuisines is increasingly popular. Consistently, the food market anticipates on this trend by providing an extending amount of options. This increasing awareness supports people to make more informed and responsible decisions and enhancing the willingness to change their buying behaviour towards a more sustainable one. According to Fotopoulos and Krystallis (2001) the increasing demand for sustainable food products, especially in wealthy countries, is developed by this enhanced knowledge.

The rising popularity of purchasing products with quality labels is part of responsible consumption, which is one of the 17 sustainability goals (Canavari, & Coderoni, 2019). As the popularity of buying more sustainable food products increases, food companies act on this rising demand by selling all types of conscious variants of a product. These variants are produced under different conditions and requirements to ensure a particular quality. Currently, there is a substantial amount of product characteristics based on quality. These products differ from being either biological, ecological, fair trade, animal friendly or potentially offer the lowest price. To help the customers decide which product meets his or her expectation, quality labels for food products are applied. These labels translate the quality claim clearly in a simple visual logo. This way, consumers are more informed, and this adds extra value to the product (de Chernatony, Harris, & Riley, 2000). However, this posed the problem that an abundant amount of different sustainability labels was established by companies. Although these sustainability labels were originally designed to help consumers, it is causing greater chaos at the moment.

Sustainable consumption offers different benefits for people's health, the environment, and the economy (Hancock, 1993). This would indicate that buying products containing a sustainability label would contribute to something positive. However, some firms are trying to take advantage of this. As previous studies indicated, companies can strategically benefit from using sustainability labels as a marketing advantage. In this case, the point of focus of firms is shifting on achieving the quality goals instead of providing the quality products (Fotopoulos, & Krystallis, 2003). Thus, for numerous food companies, the use of labels on their products has become a marketing strategy closely related to branding. When it appears that the priority is more entrepreneurial instead of nature, environment, or sustainability, it can become problematic. When this is the case, it becomes a real problem when food companies mislead consumers by using sustainability labels with requirements they do not meet or that they created themselves. This phenomenon is called greenwashing. According to TerraChoice (2009) the sin of worshiping false labels is one of the seven sins of greenwashing. When firms use

sustainability labels to mislead their customers, it will result in more chaos and a decrease in the consumers' trust towards that company. Nevertheless, when sustainability labels are used in the correct manner, it adds value and provides useful guidance for consumers when purchasing products (Dahl, 2010). It is important that consumers inform themselves about the labels in order to make a distinction between the bona fide and mala fide labels. When people realize that they are being deceived, it would change their attitude towards that product.

At this point there is still limited information available on the effectiveness of sustainability labels on the consumer response, especially once extra information about that label is provided. This research will provide new insights on how sustainability labels are perceived and the influence of sustainability labels on the consumer response towards food products. Furthermore, this study will provide recommendations to further research on this topic. Therefore, this study will address the following main research question:

How does the awareness of sustainability *labels on product packages influence the consumer response towards supermarket products?*

To answer this main research question, this study focusses on two separate analyses. Firstly, the influence of the existence of a sustainability label opposed to no sustainability label on the consumer response will be investigated. Secondly, this research focusses on the influence of guaranteeing the compliance with the regulations of the sustainability label on the consumer response. As this research consists of two separate parts, the research question is divided into two sub research questions:

To what extent does the existence of a sustainability label on a product package influence the consumer response?

To what extent does guaranteeing the compliance with the regulations of the sustainability label influence the consumer response?

2. Theoretical framework

2.1 Consumer decision-making process

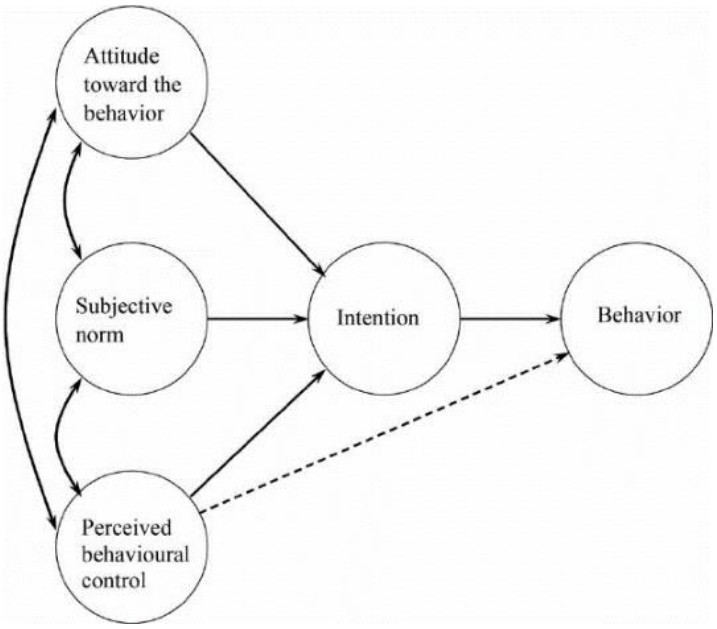
Purchasing supermarket products is usually a simple process, which is guided by convenience. The Food Standards Agency (FSA) and Sustainable Development Commission (SDC) argue that buying behaviour is driven by someone's preferences which includes aspects as money, habit, and response to influence by friends or advertisements (Canavari, & Coderoni, 2019). Since buying grocery products is seen as an everyday activity and often carried out quickly, this act belongs to the simple route of the decision-making process rather than the complex route (Kalnikaitė, Bird, & Rogers, 2012). When buying simple route products, people are not putting as much effort in considering if they should buy the product or not, as they would do when buying a complex route product, for instance a car or washing machine.

For supermarket products, the decision in general is made on low-cost and already familiar products, thus this is often a simple purchase decision. However, this simple process is becoming more complex when consumers are choosing between products with different values, for instance organic or animal friendly. According to Vermeir and Verbeke (2008) the theory of planned behaviour can often be applied to gain a better insight in the process taking place by the consumer when considering their social responsibility in buying products that are for example more sustainable or environmentally friendly.

When the purchase of supermarket products shifts from the simple route towards a more conscious route, the theory of planned behaviour (Ajzen, 1985) should be taken into consideration. This theory explains that a conscious buying decision anticipates on three main aspects, shown in figure 1. The first aspect, attitude towards the behaviour, indicates the degree to which extent the consumer has a favourable or unfavourable evaluation or appraisal of behaviour. Thus, the consumer makes a conscious consideration based on whether a particular act makes a positive or negative contribution to his or her life. Secondly, the subjective norms relate to the social environment of the consumer and the social pressure to perform or not to perform a particular act. Hence, the consumers' intentions are influenced by the subjective norm of their social network. Lastly, the concept of perceived behavioural control indicates peoples' ability to perform the act. According to Popovic, Bossink, and van der Sijde (2019) a positive perception of these three aspects will stimulate the conscious decision of consumers to invest in more sustainable food products.

In order to change the consumers' buying behaviour, companies must break through the convenience habits of consumers and stimulate them to make a more conscious choice. They have only a very little time to do so, as the decision time of purchasing supermarket products is a few seconds. To draw the attention of consumers, sustainability labels on packages are used (White, Habib, & Hardisty, 2019). These small visuals on the package of products intend to give more information and knowledge about the characteristics of that product, by presenting a clear and simple message that is understandable and recognizable for everyone. This enables consumers to make a more informed and conscious purchase decision.

Figure 1
Theory of planned behaviour by Ajzen (1991)



2.2 Ethical claims and product labels

Labelling of food products was constructed as a tool to inform consumers on the most essential product characteristics that the company wants to provide (Annunziata, Ianuario, & Pascale, 2011). Thus, labels on packages provide a certain degree of information supporting a specific quality claim. The marketing advantage of companies for using labels like these is substantiated by Pelsmacker, Driesen and Rayp (2005). Respondents in their study considered that products which possess a fair-trade label had a higher value then products without such a label. The label was seen as the second most important attribute in the purchase decision apart from the brand.

As the importance of these sustainability labels is rising, some negative aspects of this are brought to light. First of all, a sustainability label is constructed by an independent party who establishes a set of rules and requirements a company needs to meet to qualify for that specific label (Milieu Centraal, 2020). These independent institutions are required to carry out strict controls. However, the quality label owner himself is free to set the rules for the label, since there are no legal regulations for this. In addition, this applies for the method of testing as well. As a matter of fact, everyone in the Netherlands could start their own quality label (Keurmerkinstituut, 2020). As a result, the reliability of these labels can be put into question. The branch of certification and quality labels for sustainable products is creating more confusion and questions among consumers, rather than giving the consumer the right information and confidence to make a conscious purchase decision (Barron, 2007). The chaos that arises is resulting in a lacking awareness and knowledge among consumers.

Secondly, there is a general consensus that sustainability labels stand for positive criteria, however consumers get overwhelmed by all the different labels. Multiple companies are using this to their own advantage by implementing labels as a marketing strategy to increase profits (de Chernatony, et al., 2000). Considering that labels provide added value to the raw

product, it may lead to higher demand and consumption. If the popularity of a product increases, the prices and margins will possibly increase as well. This is leading to a competitive advantage for the company. According to Kalnikaitė, et al. (2012) the numerous amounts of sustainable labels is overwhelming and confusing consumers. The rising diversity is creating chaos and makes it unclear for consumers which criteria the label meets and whether these labels are controlled by independent organisations.

Thirdly, the rise of quality labels is also having a negative impact on small firms, as firms often must pay either a fixed amount annually or a percentage of sales price towards the sustainability label institution. Well-known quality labels (e.g. MSC, Beter Leven, & Fair Trade) present the costs for licensees on their website. These are considerable high prices for small businesses. Although small businesses are often more sustainable compared to big corporations, they are not able to afford the sustainability labels that are well known to customers. This lack of information could have a contradictory effect, as consumers often have the preference to buy from smaller sustainable businesses but end up buying the products from big companies that contain a sustainability label.

2.3 Willingness to pay for ethical labelled products

The factor that has the most negative effect on the consumers' willingness to buy any labelled supermarket products, is the premium prices that are asked for these products. According to Aschemann-Witzel and Zielke (2017) these premium prices are for consumers the most tremendous barrier to overcome. It is no surprise that these high prices are the main reason to prevent many consumers from purchasing more sustainable products. Often, people are simply not willing or able to spend extra money on these premium products. Nonetheless, this is the identifiable case to the majority of consumers, research of Vanhonacker and Verbeke (2013) argue on this notion by explaining that there is a group of consumers who have the highest priority in purchasing highly sustainable products. This suggests that they are dedicated to compensate by making the price the secondary priority and to purchase ethical responsible products by overpaying the premium prices.

The willingness to pay more for sustainable and ethically responsible products is analysed in several studies. For instance, research on the willingness to pay a higher price for animal friendly products reports that 44 per cent of the participants would be willing to pay up to five per cent more for meat products if the animals are raised under more 'humanely' circumstances. Furthermore, one-fifth of the participants in the study state that they are prepared to pay up to ten per cent more (Napolitano, Pacelli, Girolami, & Braghieri, 2008). The research by Van Loo, Caputo, Nayga, and Verbeke (2014) acknowledges that a distinction can be made between participants with a higher income and with a lower income. This is having a substantial effect on the purchase of organic food. The willingness to pay is fifty per cent higher for participants with a higher income compared to those with a lower income. Research from Velčovská, & Chiappa (2015) found that respondents are willing to pay a higher price up to ten per cent maximum for sustainability labelled products. Furthermore, this study showed that the willingness to pay a premium price for a product containing a sustainability label decreased with a higher age. From this it can be concluded that the willingness to pay is sensitive not only to the prices, but moreover to factors such as age and income.

Since money plays an important role in buying behaviour, consumers could be more stimulated to buy ethically and environmentally valued products if companies entail a reduction in the retail prices. The research of Vanclay et al. (2010) illustrates that increasing customer behaviour towards greener and more sustainable behaviour, can be encouraged if products are offered for a lower price. This is a complicated issue, as the production process of these ethical responsible products is often higher in costs. However, Vanclay et al. suggested this could be realized when all parties within the supply chain and policymakers corporate in constructing a joint and coordinated action.

Consumers express a more favourable attitude towards labelled food products (Verbeke & Viaene, 1999). As consumers evaluate product more positively, this reflects on the overall consumer response towards a product. This happens likewise for the consumers' purchase intention. As the value of a product increases once it contains a sustainability label and people become more willing to purchase the product, the following hypothesis is proposed:

H1: The consumers' a) purchase intention and b) product evaluation are more positive when the product contains a sustainability label, as opposed to a product without a sustainability label.

2.4 Greenwashing in relation to sustainability labels

When corporations decide to enhance their product with the purpose to receive a particular sustainability label on their product packages, they may use this as a marketing advantage. For these firms, the sustainable message might be contradictory to their primary goal, which is increasing the demand for their products. This is resulting in mixed responses from consumers who are trying to be more sustainable. They state that on the one side they are contented with the progress these companies are making towards a more sustainable society, but on the other side they see that this is not their main intention. As the importance of CSR increases, the understanding that it is in the business' own interest to enable sustainable consumption and production patterns is widely spread among businesses (Canavari, & Coderoni, 2019). With the pressure to comply, multiple companies are found guilty of exaggerating their claims on environmental sustainability, which occurs as the practices of greenwashing (de Jong, Huluba, & Beldad, 2019).

A bigger problem arises when a corporation is suggesting to behave more 'green' than its actual performance. This phenomenon is called greenwashing. The concept of greenwashing is defined as "the act of misleading consumers regarding the environmental practices of organizations (firm-level greenwashing) or the environmental benefits of a product or services (product-level greenwashing)" (Delmas, & Burbano, 2011, p.66). Hence, this indicates that organisations make the decision to exaggerate their claims on being sustainable and environmentally friendly in the interest in marketing benefits. The research of TerraChoice (2010) discuss the sin of worshiping false labels and state: "The Sin of Worshiping False Labels is committed by a product that, through either words or images, gives the impression of third-party endorsement where no such endorsement actually exists; fake labels, in other words" (Terrachoice, 2010, P 10).

When the awareness on greenwashing practices of companies increases among consumers, they develop more sceptic opinions towards environmental claims (Nyilasy, Gangadharbatla, & Paladino, 2013). Research by De Jong, Harkink, and Barth (2017) demonstrated findings which confirm that greenwashing negatively affects a company's CSR communication. This results in a decrease in both trust and attitude towards the product and the company (Majláth, 2017). A decrease in trust is having a substantial influence and negative impact on the buying behaviour of consumers, as it is assumed that it results of negative effects toward the three aspects of the theory of planned behaviour (Kahraman, & Kazançoğlu, 2019).

Thus, to prevent consumers from losing their trust in companies using sustainability labels, it is important that the used labels are certified, transparent, and controlled by an independent institution, to assure the consumer no greenwashing practices are taking place. As people's opinions on a sustainability label could change after receiving more information on it, the following hypothesis is proposed:

H2: After being exposed to background information about the corresponding bona fide sustainability label the consumers' a) purchase intention and b) product evaluation will increase, as opposed to a decreasing a) purchase intention and b) product evaluation when the background information corresponds to the mala fide sustainability label.

2.5 Conceptual model

This study aims to answer two sub research questions in order to provide an answer to the main research question. Therefore, this research is divided into two separate analysis within the topic of sustainability labels. From the discussed literature, the following research models were conducted illustrating the variables that are taken into consideration when testing the proposed hypotheses:

Figure 2
Research models

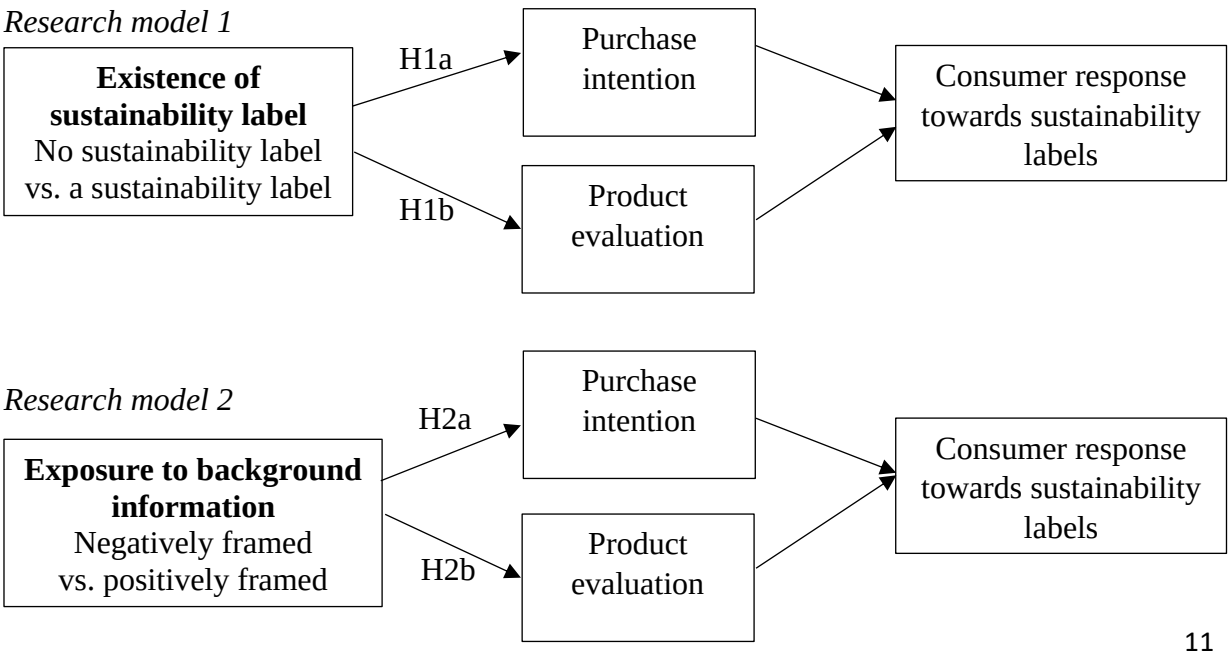


Table 1

Research hypotheses

	Hypothesis
H1a	The consumers' purchase intention is more positive when this product contains a sustainability label, opposed to a product without a sustainability label.
H1b	The consumers' product evaluation is more positive when this product contains a sustainability label, opposed to a product without a sustainability label.
H2a	After being exposed to background information about the corresponding bona fide sustainability label the consumers' purchase intension will increase, opposed to a decreasing purchase intention when the background information corresponds to the mala fide sustainability label.
H2b	After being exposed to background information about the corresponding bona fide sustainability label the consumers' product evaluation will increase, opposed to a decreasing product evaluation when the background information corresponds to the mala fide sustainability label.

3. Method

In order to analyse the consumer response towards products with sustainability labels, an online experiment was conducted. The collected data from this experiment was used to test the two hypotheses.

3.1 Experimental design

To gain more insight on the response of consumers towards labelled products and their awareness on sustainability labels, an online experiment was conducted. This experiment has been reviewed and approved by the BMS Ethics Committee. The online experiment (Appendix A) was constructed with the program Qualtrics, which is an online questionnaire tool that is made available for BMS students at the University of Twente to create an online questionnaire for research purposes. All research materials were produced in Dutch.

As most of today's products, organisations and services have obtained some type of label validating its quality, this is a broad topic within ethical consumerism. To diminish the scope of this research, the focus was entirely dedicated to supermarket products. Notwithstanding, narrowing this focus to convenience products, the amount of different types of sustainability labels on these products is nevertheless humongous. Therefore, it was decided to limit this research to a milk product as the focal point for the experiment. In order to examine the difference between a product package containing a sustainability label versus not containing a sustainability label and to determine the effect of providing extra information about that sustainability label, three experimental conditions were designed, see table 2.

This experiment was divided into two separate parts. For the first part, a between-subjects (no label, mala fide label or bona fide label) experimental design was used. The influence of a sustainability label on a milk package on the consumer response was tested this way. For the second part, a within-subjects (before versus after exposure to background information) experimental design was used. Hereby, the influence of extra background information on the consumer response was tested. The background information for the mala fide label was framed negatively and the information for the bona fide label was framed positively.

Table 2
Experimental Conditions

Product design	Sustainability label	Information
1	No label	
2	Mala fide label	Negatively framed
3	Bona fide label	Positively framed

3.2 Manipulations

The product designs for the experimental conditions were designed using Adobe Photoshop 2020. A plain white and blue mock-up design of a milk package was used for the basis of the design. The inspiration of the design followed existing milk packages of well-known dairy

brands. It was important for the design to be clear and simple, without too many different design cues so participants did not get distracted. The stimulus materials for the first part of this research consisted of three identical milk packages. Two out of the three designs consisted of a sustainability label, see figure 3. The sustainability label on the second product package was the label "Weidemelk" (Meadow milk) sold by supermarket chain Albert Heijn. The sustainability label on the third product package design was the label "Weidemelk" (Meadow milk) of certified foundation Weidegang. For the second part of the research, background information was provided so participants had better knowledge on the sustainability labels. The stimulus materials for the second part consisted of information retrieved from independent review websites "Keurmerken.nl" and "Keurmerkenwijzer", see figure 4.

Figure 3

Stimulus materials without a sustainability *label, with a mala fide* sustainability *label and with a bona fide* sustainability *label.*

Product design 1

Product design 2

Product design 3

Figure 4

Stimulus materials of the sustainability labels with the corresponding background information

The website Keurmerken.net lists all unreliable quality labels. The following information on meadow milk of supermarket chain Albert Heijn is stated:
The milk package that you have seen contains the sustainability label "Weidemelk" from Albert Heijn. With this sustainability label, Albert Heijn declared that the cows have been out in the pasture for at least 120 days a year, 6 hours a day.

Information on this sustainability label

This logo creates confusion since it is very similar to the official "Weidemelk" sustainability label from Weidegang. The logo looks different, but the name and message are the same. In contrast to Weidegangs' sustainability label, Albert Heijn cannot demonstrate how the claims are guaranteed. (Keurmerken, 2020)

The website Keurmerkenwijzer.nl lists all quality labels. The following information is stated on the sustainability label "Weidemelk" from Weidegang: The milk package that you have seen contains the Weidemelk sustainability label, which is owned by the Weidegang foundations. This sustainability label can be found on dairy products produced with milk from cows that are allowed to pasture. Meadow milk cows go out to pasture at least 6 hours a day for at least 120 days a year.

How is the control arranged?

Every year, 100% of the milk farms have an independent control of the administrative system, and 40% of the dairy farmers carry out field checks. Because the requirements of this sustainability label are strict controlled and guaranteed, this sustainability label has been improving animal welfare for years. (Keurmerkenwijzer, 2020).

3.3 Instrument

3.3.1 Measurements

A factor analysis was performed to identify which questions belong to the corresponding construct, see table 3. Since participants had to answer the questions in two rounds, the factor analysis was both done for the first and second round. The factor analysis indicated that two items needed to be excluded, as they did not load on to the constructs. To ensure the adequacy of the sample the Keiser-Meyer Olkin must be larger than KMO = .50. After doing the two factor analysis, the measures suggested the adequacy of the sample with round one demonstrating a KMO = .78 and round two demonstrating a KMO = .88.

The collected data was analysed using the program IBM SPSS Statistics 25. All participants were able to give their answers by filling out the questionnaire according to the 7-point Likert-scale, with 1 being equal to "highly disagree and 7 being equal to "highly agree". After completing the factor analysis and finalising the three constructs, the reliability was tested by calculating the Cronbach's Alpha. To ensure the reliability of each variable, the Cronbach's Alpha must be at least α = .70.

Table 3
Factor analysis

	Round 1			Round 2	
Scale items	1	2	3	1	2
Purchase intention					
I would buy this product	.90			.89	
I would consider buying this product	.85			.88	
I would not buy this product REVERSED	.76			.80	
Product evaluation					
In my opinion, this product is:					
Environmentally conscious produced		.86			.87
Sustainable		.84			.84
Animal-friendly produced		.81			.87
Of higher quality		.67			.71
Produced with care		.65			.80

Sustainable awareness	
I prefer products that are sustainable	.82
I am willing to pay more money for products that are produced sustainably, environmentally and / or animal-friendly	.78
In my opinion animal welfare is important	.76
I feel very committed to environmental issues	.73
The quality of products that are produced sustainably, environmentally and / or animal-friendly are better	.61

3.3.2 Purchase intention

The construct measuring the participants' purchase intention consisted of five items. For instance, the following two items were included in this construct: "I would consider buying this product" and "I would not buy this product". The other items were identical to the prior mentioned items. The negative framed items were recoded into reversed items. Finally, two of the items needed to be removed from this construct, as they did not load on to the construct. During the first round, the measures of all three experimental conditions were taken into consideration, as all participants have viewed one of the product designs and answered the first round of questions. Thus, after viewing one of the three designs, participants were asked to rate their willingness to purchase the product on a 7-point Likert scale (1 = fully disagree, 7 = fully agree). The Cronbach's Alpha of purchase intention in the first round was $\alpha = .83$ (items = 3).

During the second round, the measures of the second and third experimental conditions after receiving information were examined. Participants were asked to rate the same questions again on their willingness to purchase the product on a 7-point Likert scale (1 = fully disagree, 7 = fully agree). The Cronbach's Alpha of purchase intention in the second round was $\alpha = .89$ (items = 3).

3.3.3 Product evaluation

The construct measuring the product evaluation was comprised of five items. Two examples of items that were included: "In my opinion this product is sustainable" and "In my opinion this product is animal friendly produced". The other items were all evaluating the participants' opinion on the qualifications and the sustainability of the label. During the first round the measures of all three experimental conditions were taken into consideration, as all participants have viewed one of the product designs and answered the first round of questions. Thus, after viewing one of the three designs, participants were asked to rate their opinions on the product on a 7-point Likert scale (1 = fully disagree, 7 = fully agree). The Cronbach's Alpha of product evaluation in the first round was $\alpha = .85$ (items = 5).

During the second round the measures of the second and third experimental condition after receiving information were analysed. Participants were asked to rate the same questions again on their opinions of the product on a 7-point Likert scale (1 = fully disagree, 7 = fully

agree). The Cronbach's Alpha of product evaluation in the second round was α = .92 (items = 5).

3.3.4 Overall sustainable awareness

The last construct measuring the participants' overall awareness on sustainability comprised out of five items. For instance, two items that were taken into consideration: "I am willing to pay more money for products that are produced sustainably, environmentally and / or animal-friendly" and "I prefer products that are sustainable". Participants were asked to rate their sustainable awareness and attitude towards this on a 7-point Likert scale (1 = fully disagree, 7 = fully agree). The Cronbach's Alpha of sustainable awareness was α = .79 (items = 5).

3.4 Procedure

In this study on the influence of labelled products on the consumer response, three different routes within the questionnaires were conducted. All participants were randomly assigned to one of the different groups, one containing questions regarding a product without a sustainability label, the second containing questions regarding a product with a mala fide sustainability label and the third containing questions regarding a bona fide sustainability label. The questionnaire flow demonstrates which route the participant performed, see figure 5.

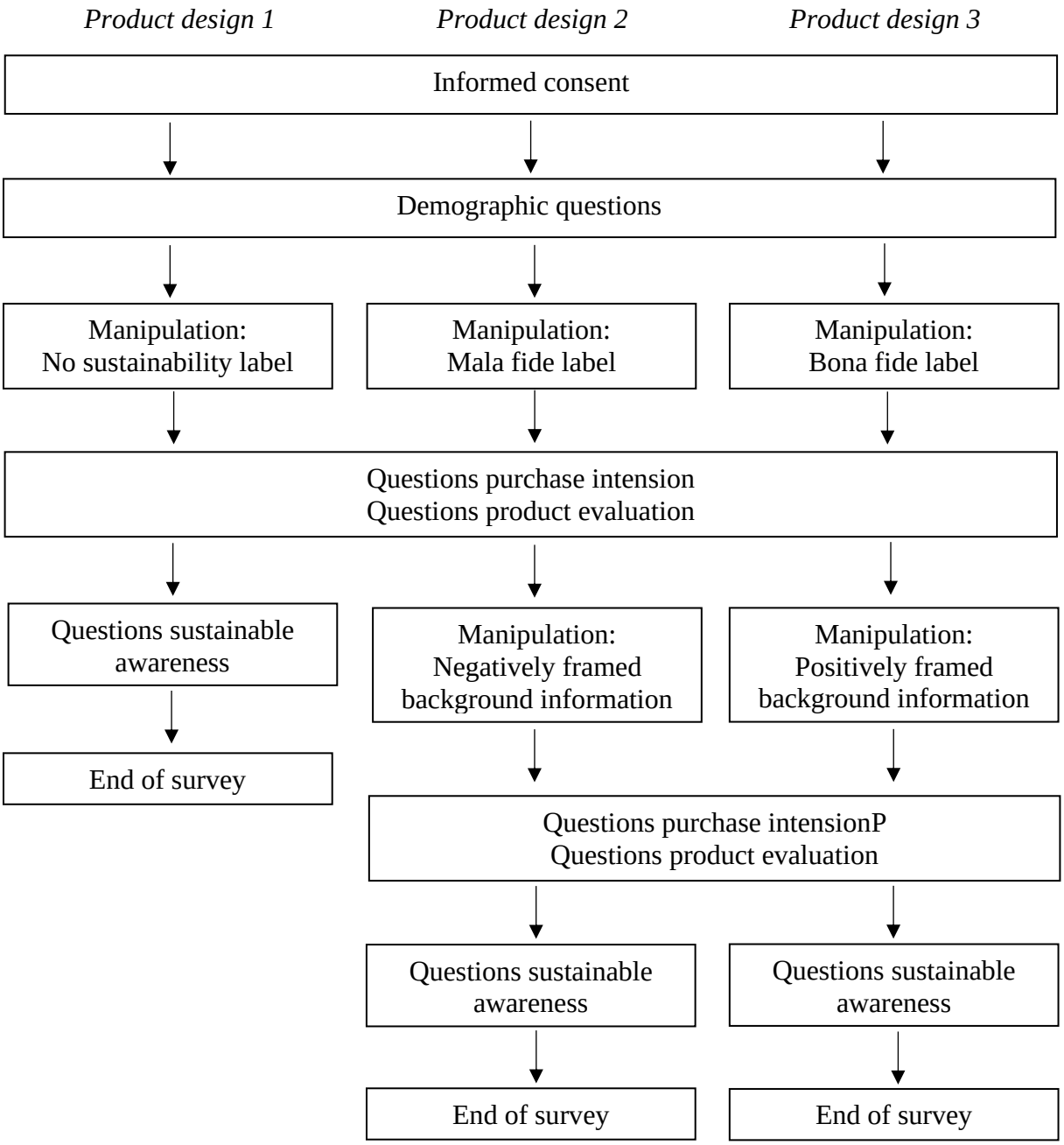
The questionnaire consisted of multiple phases containing questions to which participants were asked to fill in their answers. First, some information on this questionnaire was displayed and the participants were asked to read and sign the informed consent form by clicking the box "I agree". By clinking the box, they agreed that their data would be used for this research, that they would fill in the questionnaire to all honesty and finally it ensured the anonymity of the participants and the right to not answer any question regardless of their reasons for this. Furthermore, in this introduction face, participants were asked three demographic questions.

When continuing to the next phase, all participants were randomly divided among the three experimental conditions. After the image of the product design was displayed, participants were asked to answer several questions by means of a rating, scaled from highly disagree to highly agree. Five of these questions were related to their purchase intention and another five of these questions were related to their evaluation of the product. This was the first round of questions, which were answered by all the three experimental condition groups.

In order to test whether extra information on that sustainability label influenced the opinion of participants' purchase intention and product evaluation, a second round was added for the second and third experimental condition group. These participants received background information on the characteristics, intentions and requirements of that sustainability label and were afterwards asked to answer the same ten questions as in the previous phase.

The final phase, which was presented to all three groups, contained five questions on their general involvement and opinion on sustainability, environment, and animal welfare.

Figure 5
Questionnaire flow for all three experimental conditions



3.5 Participants

The profile of the target group were Dutch male and female consumers above the age of 18. A total of 172 (Female 71%, mean age 38.47, SD = 18.09) people participated in this online experiment on the opinions of consumers concerning supermarket products. The participants have been recruited in multiple ways. Primarily, the greatest number of participants were approached through personal social networks. Furthermore, participants were asked to inform others in their direct networks to participate in this study. This way, a form of snowball sampling took place to acquire all participants needed for this research. All participants were recruited via a WhatsApp message containing the link to the questionnaire. The duration of the questionnaire was approximately five minutes, however this was dependent on which group the participant was assigned to. All data has been collected between the 5th of May and the 8th of May. In total, 222 responses were recorded. However, 50 of these responses needed to be deleted from the dataset due to incomplete answers or insufficient responses. All participants were randomly assigned to one of the three experimental conditions. The distribution of participants among the three conditions and their demographic and background characteristics can be found in table 4 and table 5.

To examine whether the demographic characteristics and the distribution of these among the three experimental conditions have an impact on the mean outcomes, the variables age, gender, and educational level were tested. For the items gender and educational level, recoded into dummy variable (Secondary education and MBO = Low level; HBO and WO = high level), a Fisher Exact test was performed and indicated no statistically significant effect on both gender $p = .37$ and educational level $p = .41$.

For the item age, this effect was tested using the Univariate Analysis of Variance (ANOVA), since this is a variable on interval scale. The ANOVA revealed a statistically significant effect of age $F(2,17) = 3.58$, $p = .03$ on the experimental condition participants were assigned to. The Pearson correlation showed a negative correlation of age $r = -.21$, $p = .01$ on the construct of Purchase Intention. This indicated that if age would increase with one year, the purchase intention would decrease with .21. For this reason, it was important to include the item of age as a covariate in this research.

Apart from the demographic characteristics, the construct overall sustainable awareness also needed to be tested in order to see whether it had a significant effect and therefore would influence the final outcomes of the constructs. To do so, the Univariate Analysis of Variance (ANOVA) was performed. This demonstrated no statistically significant effect of the construct $F(2, 17) = .44$, $p = .65$.

Table 4
Distribution of participants' gender and educational level

		No sustain-ability label	Mala fide sustainability label	Bona fide sustainability label	Total frequency	Percentage
Gender	Male	21	12	15	48	28
	Female	41	39	42	122	71
	Other/Do not like to answer	2	0	0	2	1
	Total	64	51	57	172	100
Educational level	Secondary education	14	11	16	41	24
	MBO	5	7	8	20	12
	HBO	29	10	13	52	30
	WO	14	23	18	55	32
	Other	2	0	2	4	2
	Total	64	51	57	172	100

Table 5
Distribution of participants' age and sustainable awareness

		No sustainability label	Mala fide sustainability label	Bona fide sustainability label	Total frequency
Age	Minimum	18	19	18	18
	Maximum	77	66	74	77
	Mean	43.03	34.49	36.91	38.47
	Std. deviation	18.57	15.88	18.61	18.10
Sustainable awareness	Minimum	2.80	2.40	3.40	2.40
	Maximum	7.00	6.60	7.00	7.00
	Mean	5.20	5.05	5.20	5.15
	Std. deviation	.91	.94	.88	.91

Note: sustainable awareness is measured on a 7-point Likert scale (1 = fully disagree, 7 = fully agree)

4. Results

In the following section, the descriptive outcomes of the statistical analyses performed are discussed. As this study was divided into two separate parts, the results are demonstrated per hypotheses of the corresponding sub research question.

4.1 Effect exposure to sustainability label

***H1a**: The consumers' purchase intention towards products is a more positive attitude when this product contains a sustainability label, opposed to a product without a sustainability label.*

***H1b**: The consumers' product evaluation towards products is a more positive attitude when this product contains a sustainability label, opposed to a product without a sustainability label.*

A multivariate analysis of variance (MANOVA) was performed to examine the effects of the sustainability label on the consumers' purchase intention and the product evaluation. The item age was included as a covariate. To determine whether the results of the MANOVA test were statistically significant, the Wilks' Lambda measure was used.

Table 6
Between-subjects effect of purchase intention and product evaluation, with age as a covariate

Independent variable	Dependent variable	F	P
Age	Purchase intention	8.26	.01*
	Product evaluation	.40	.53
Product design	Purchase intention	.54	.58
	Product evaluation	1.73	.18

Note: * significant at .05

4.1.1 Age as a covariate

As was expected from the previous test on the item age, the MANOVO test showed a statistically significant effect on the dependent variables, Wilks' Lambda = .95, $F(2,167) = 4.28$, $p = .02$. To examine this effect, the MANOVA analysis between-subjects (table 6) revealed that the item age is only significant for the variable purchase intention.

4.1.2 The effect of product design

It was hypothesized that product design would have an effect on the dependent variables purchase intention and product evaluation. Moreover, it was expected that the two product designs with a sustainability label would lead to an increase in purchase intention and product evaluation, opposed to the product design without a sustainability label.

The MANOVA test revealed no statistically significant effect of product design on the purchase intention and the product evaluation, Wilks' Lambda = .96, $F(4,33) = 1.76$, $p = .14$. Furthermore, the between-subjects effects indicated no statistically significant effect for the variables purchase intention and product evaluation (table 6). Accordingly, hypothesis H1a and H1b are not supported.

However, the main effect of this test did not indicate a statistically significant effect of the existence of a sustainability label on the purchase intention and product evaluation, the means of the outcomes are still worth mentioning (table 7). For the variable purchase intention, the product design without a sustainability label scored highest. For the variable product evaluation, the product design with the mala fide sustainability label scored highest.

Table 7
Means of product intention and product evaluation round 1

Dependent Variable	Experimental condition	Mean	Std. Error
Purchase intention	No sustainability label	5.01	.18
	Mala fide sustainability label	4.73	.20
	Bona fide sustainability label	4.89	.19
Product evaluation	No sustainability label	4.14	.12
	Mala fide sustainability label	4.45	.14
	Bona fide sustainability label	4.42	.13

Note: measured on a 7-point Likert scale (1 = fully disagree, 7 = fully agree)

4.2 Effect exposure to background information

***H2a**: After being exposed to background information about the corresponding bona fide sustainability label the consumers' purchase intention will increase, as opposed to a decreasing purchase intention when the background information corresponds to the mala fide label.*

***H2b**: After being exposed to background information about the corresponding bona fide sustainability label the consumers' product evaluation will increase, as opposed to a decreasing product evaluation when the background information corresponds to the mala fide label.*

In the second part of the analysis, the Repeated Measures Analysis of Variance (RM-ANOVA) was performed to investigate the effects of exposure to background information to the corresponding sustainability label on purchase intention and product evaluation. Hence, the results were compared between the first round, in which the participant was exposed to the product design (sustainability label), and the second round, in which the participant was informed with relevant information belonging to that particular sustainability label. The comparison between the first and the second round was indicated by the effect of exposure to information. The item age was included as a covariate. To determine whether the results of the RM-ANOVA test were statistically significant, the Wilks' Lambda measure was used.

Table 8
Within-subjects effect of exposure to information on purchase intention and product evaluation, with age as a covariate

Effect	Dependent variable	F	p	η_p^2
Exposure to information	Purchase intention	3.92	.05*	.04
	Product evaluation	6.37	.01*	.06
Exposure to information * age	Purchase intention	1.56	.22	.02
	Product evaluation	5.00	.03*	.05
Exposure to information * product design	Purchase intention	13.12	.00*	.11
	Product evaluation	38.70	.00*	.27

Note: * significant at .05

4.2.1 Age as a covariate

The RM-ANOVA test did not yield a statistically significant effect on the interaction between the effect of exposure to information and age, Wilks Lambda = .95, F(2,104) = 2.52, p = .09. Although the multivariate tests did not show a statistically significant effect of the covariate age, the within-subjects effects (table 8) indicated a statistically significant effect on product evaluation. It did not reveal a statistically significant effect on the purchase intention.

4.2.2 The effect of exposure

It was expected that exposure to background information would have an effect on the dependent variables purchase intension and product evaluation.

The RM-ANOVA test revealed a statistically significant effect on the exposure to information (first round versus second round) on the dependent variables, Wilks' Lambda = .94, F(2,10) = 3.63, p = .03. The Partial Eta Squared presented a small effect size of η_p^2 = .07.

When continuing, the RM-ANOVA analysis showed the results of the effect of exposure to information (round 1 versus round 2) on purchase intention and product evaluation, with age as a covariate (table 8). The RM-ANOVA test revealed that there was a statistically significant effect of the effect of exposure to information on both the purchase intention and on product evaluation. The Partial Eta Squared on both purchase intention and product evaluation indicated a small effect size.

4.2.3 Interaction effect of exposure to information and product design

An interaction effect was hypothesized for exposure to information and product design on the dependent variables purchase intention and product evaluation. More specifically, it was expected that the dependent variables would increase as the participant was exposed to positive information about the bona fide sustainability label, as opposed to a decrease when the participant was exposed to negatively framed information about the mala fide label.

The RM-ANOVA test did yield a statistically significant effect between the effect of exposure to information and the product design, Wilks' Lambda = .73, F(2,10) = 19.69, p < .00. The Partial Eta Squared indicated a medium effect size of η_p^2 = .28.

Furthermore, the RM-ANOVA analysis indicated the results exposure to information (round 1 versus round 2) and product design on purchase intention and product evaluation, with age as a covariate (table 8). The interaction effect between exposure to information and product design revealed to be statistically significant on both purchase intention and product evaluation.

The Partial Eta Squared on both purchase intention and product evaluation indicated a medium effect size.

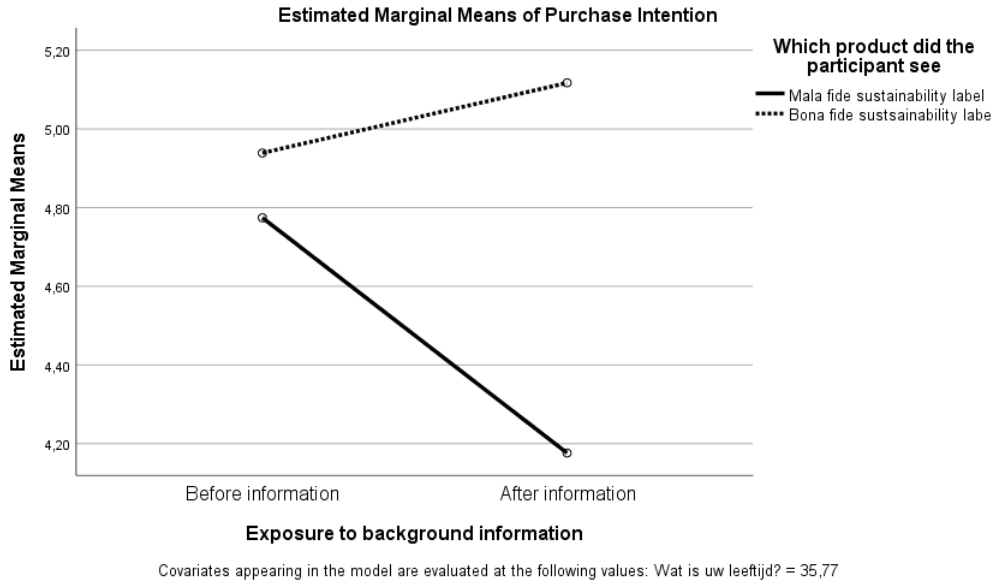
Table 9
*Means of experimental conditions * exposure to information*

Dependent variable	Experimental condition	Exposure to information	Mean	Std. Error
Purchase intention	Mala fide label	Before information	4.77	.21
		After information	4.18	.20
	Bona fide label	Before information	4.94	.20
		After information	5.12	.19
Product evaluation	Mala fide label	Before information	4.46	.15
		After information	3.81	.16
	Bona fide label	Before information	4.42	.14
		After information	4.87	.15

Note: measured on a 7-point Likert scale (1 = fully disagree, 7 = fully agree)

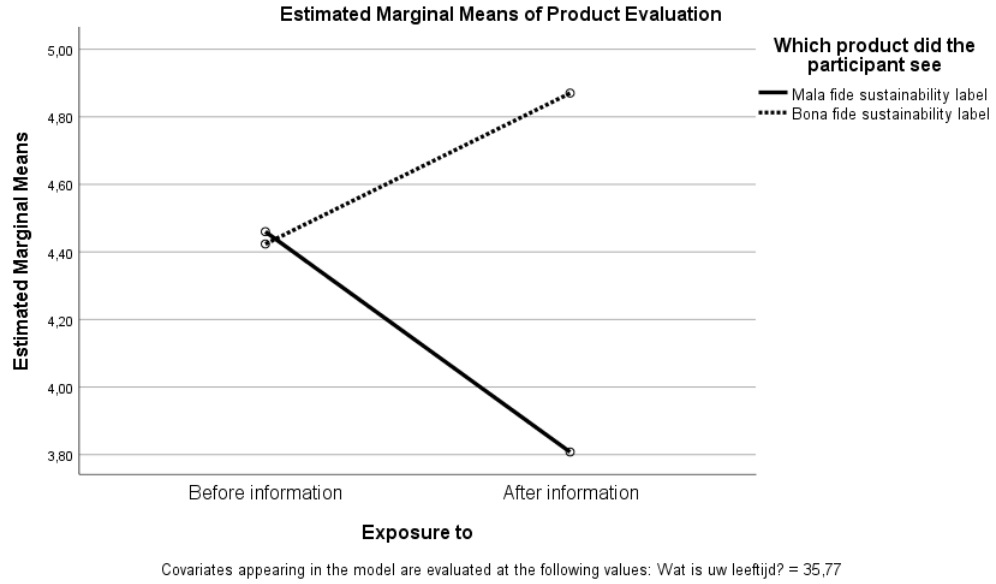
In the final part of the RM-ANOVA test, the means of the dependent variables purchases intention and product evaluation on the second and third experimental condition in both rounds, were analysed and compared (table 9). For the variable purchase intentions, the results indicated a decrease in value of the mala fide label from the first round to the second round. The opposite effect occurred for bona fide label, which slightly increased from the first round to the second round. As illustrated in figure 6, the effect of purchase intention before (round 1) and after (round 2) providing background information on the sustainability label has a contradictory effect on the different product designs (mala fide vs. bona fide sustainability label).

Figure 6
The effect of exposure to information on purchase intention



A similar effect was revealed for the variable product evaluation. The variable product evaluation demonstrates a decrease in value for the mala fide label, as the value of the first round decreases in the second round. Again, the bona fide label has increases in value between the first round and the second round. As illustrated in figure 7, the effect of product evaluation before (round 1) and after (round 2) providing background information on the sustainability label has a contradictory effect on the different product designs (mala fide vs bona fide sustainability label).

Figure 7
The effect of exposure to information on product evaluation



The results indicated a statically significant effect for both the exposure to background information as the interaction effect between exposure to background information and product design. Furthermore, the result show an increasing effect in value of the dependent variables for the product design containing the bona fide label and a decreasing effect for the values of the dependent variables when related to the product design containing the mala fide label. Therefore, hypothesis H2a and H2b are supported.

5. Discussion

The aim of this study was to provide an answer to the research question: "How does the awareness of sustainability labels on product packages influence the consumer response towards supermarket products?". Therefore, the influence of the existence of a sustainability label on a product package was tested firstly. Secondly, the influence of information guaranteeing compliance with the regulations on consumer response was analysed.

In order to test this, the first part of the study analysed the purchase intention and product evaluation after only being exposed to the product package with or without a sustainability label. The second part analysed the purchase intention and product evaluation after being exposed to background information corresponding the presented sustainability label. The information regarding the bona fide label was positively framed and the information regarding the mala fide label was negatively framed.

5.1 Main findings

5.1.1 Exposure to sustainability label

In the first part of this research, the participants' purchase intention and product evaluation were tested after being exposed to one of the three product designs of a milk package containing either no sustainability label, a mala fide sustainability label or a bona fide sustainability label. Based on previous research, it was expected that the participants would rate the product designs with a sustainability label higher on both purchase intention and product evaluation. Extra value is added to the product, once the product contains a sustainability label (de Chernatony et al., 2000). Furthermore, Verbeke and Viaene (1999) found that the consumers' attitude is more favourable towards sustainability labelled products after experiencing these products.

An unexpected result occurred, as the existence of a sustainability label did not yield a statistically significant effect on the dependent variables. Thus, product packages containing sustainability labels did not lead to an increase of purchase intention, nor did it for product evaluation. Furthermore, the means of purchase intention appeared not in line with the expectations, as this was highest among the group who answered the questions regarding the product package without a sustainability label. On the contrary, the means for product evaluation were in line with the expectations as this was rated higher for both product packages with the mala fide and the bona fide sustainability label, compared to the product design without a sustainability label. However, as these outcomes were not statistically significant, the assumption that product evaluation is higher when the package contains a sustainability label, cannot be concluded based on these results.

A possible explanation for these results is due to the fact that the use of only a sustainability label might not be sufficient enough to trigger the consumers attention. This was the case in this particular study, as the participants only observed one product design and were not able to compare this with the others designs. Existing studies revealing the positive effects of sustainability labels on the consumer response have tested this by either interviews or by letting participants compare multiple identical items with and without sustainability labels (e.g. Kumar, & Kapoor, 2017; Zepeda, & Deal, 2009; van Loo, et al., 2014). Thus, sustainability

labels might not have an effect if the consumer is not able to compare it to similar products with or without labels.

Finally, research found age to be a covariate. The results suggested that when age would increase, it would have a negative effect on the willingness to purchase sustainability products. This is in line with research from Velčovská, & Chiappa (2015), where they found that the willingness to pay for labelled products would decrease when the age of respondents was increasing.

5.1.2 Exposure to background information

In the second part of the experiments, background information was provided about the labels' regulations and how the institutions were able to guarantee the compliance with this. The participants of the mala fide label group were provided with negatively framed information about the "weidemelk" label from Albert Heijn, since Albert Heijn does not provide any guarantee that the regulations of the label are controlled by an independent institution. The information of the bona fide label was framed positively, as "Weidemelk" from Weidegang state their regulations and ensure that these regulations are controlled by an independent third party. Based on existing research, it was expected that both purchase intention and product evaluation would increase for the bona fide label after reading information ensuring the integrity. The purchase intention and product evaluation should decrease for the mala fide label, as participants would feel that they were being misled by the sustainability label. Subsequently, it would lead to a decrease in trust and negatively affect the buying behaviour of consumers (e.g. Nyilasy, et al., 2013; De Jong, et al., 2017; Kahraman, & Kazançoğlu, 2019).

As expected, the results of this study revealed a statistically significant interaction effect between exposure to background information and product design on the dependent variables purchase intention and product evaluation. On the one hand, people's consumer response towards products increases once they know that these are manufactures by companies that produce more sustainable and environmentally friendly (Pickett-Baker, & Ozaki, 2008). On the other hand, once consumers become aware of a company's greenwash practices, the trust and attitude towards that brand and product will decrease (Majláth, 2017). Therefore, it was hypothesized that the dependent variables would increase for the bona fide label after the participants were exposed to the background information and for the mala fide label the dependent variables would decrease. As can be seen, figure 6 and figure 7 clearly demonstrate that the final results were in line with these expectations. In both figures, an increase of purchase intention and product evaluation for the bona fide sustainability label is shown. For the mala fide sustainability label, a decrease in both purchase intention and product evaluation is shown.

The results indicate that people actually change their opinion on purchase intention and product evaluation after being provided with information of the corresponding sustainability label of "Weidemelk" from Albert Heijn or "Weidemelk" from Weidegang on a milk package. It suggests that the value of a mala fide and bona fide label is perceived equally before information. However, this changes when information is provided showing the integrity of the label. These findings are in line with the research conducted by Chen and Chang (2012), which showed that once consumer notice greenwashing practices, the trust in the product and brand will decrease. Finally, it can be concluded that consumers are often not aware that greenwashing

practices are taking place. Only once this information is provided, consumers become aware of this. Then it will lead to a change in the consumers response.

5.2 Theoretical implications

This current study contributes several theoretical implications. For instance, it provides new insights on how a sustainability label effects the consumers' purchase intension and product evaluation. These findings are challenging the research by van Loo et al. (2014), implying that the existence of a sustainability label does not results in a higher purchase intension and product evaluation, as opposed to a product package without a sustainability label. This is contractionary to the findings of van Loo et al., as they suggested that people belief extra value is added on to the product once it contains a sustainability label. Although, the results from this study imply that there is no effect on the use of sustainability labels on product packages, this has only been tested with two specific meadow milk labels.

The results on the exposure to background information do support the findings of Majláth (2017), as these implied that obtaining knowledge about a company's greenwashing practices negatively affects the consumers trust in the products. The findings build on to the existing knowledge of the effects greenwashing has on the consumer response. Not only did the results reveal a decrease in purchase intention and product evaluation once participants became aware of greenwashing practices, moreover it suggested that ensuring participants of the label's compliance with the regulations would increases consumers' purchase intention and product evaluation.

5.3 Practical implications

Besides theoretical contributions, some practical implications for companies that want to make use of sustainability labels can also be derived from this research. First of all, according to this study a company would not benefit from using labels on their products, as no effect was shown on the consumer response comparing products with and without a sustainability label. However, as this research was only done for two specific sustainability labels for meadow milk, companies should be advised to also review other researches.

However, once a company is using sustainability labels, it is important for the consumer response that the labels' compliance with adherend rules and regulations is guaranteed and controlled. First, this will positively affect the consumer response towards the products. Furthermore, this will diminish the suspicion of a company's greenwashing practices. Thus, companies must be careful with their use of sustainability label. Only when bona fide labels are used and the firm is able to publish information ensuring the integrity of the label, labels can be successfully implemented and positively affect the consumer response.

5.4 Limitations

Although this research contributes towards new insights on the topic of consumers' responses regarding sustainability labels on supermarket products, it also involved some limitations. First of all, there are multiple small limitations within the collected data from the participants. As a

numerous amount of responses did not successfully finished the questionnaire, 50 respondents needed to be delated from the dataset. After deleting the participants that did not meet the requirements, a rather small sample size (N = 172) remained. Subsequently, as the program randomly assigned the participants to one of the product designs, the demographic distribution among the three product designs was unequal. Furthermore, the overall sustainable awareness of the participants was rated remarkably high. This could be explained by many different reasons, for instance that this particular target group was very sustainable, or people gave the more socially desirable answers in the online study. However, this cannot be traced.

The second notable limitation is on the product design of the milk package. This was designed taking existing dairy products from known brands as examples. When a real package would have been designed, a lot more thought and work would have gone in it. As this was rather amateurly designed and not based on theory, participants might have been distracted from the sustainability labels in the first round and have paid more attention to other design cues. When evaluating a product, people look for quality cues to help making an informed decision on the product (Trabelsi Trigui and Giraud, 2012). As there was no sustainability label on the package of the first product design, the participants may have looked for other signals, such as the brand, which possibly could have influenced their opinion about the product.

The final noteworthy limitation concerns the factor price. As various studies indicate, the purchase intention is highly dependent on the price of the product. People are not always willing to pay more for a product, even if this is produced in a more sustainably, environmentally and / or animal-friendly manner. Nevertheless, in this online experiment all three product designs were priced equally at €0.99. There was one question regarding the price of the product namely: "I think the price of this product is too high". This item was expected to load on to the construct of purchase intention. However, this was not the case and was therefore not taken into consideration when testing the results. Since price is one of the most important factors on consumers' willingness to purchase a product, it is expected when this factor was implemented the outcomes would have been different.

5.5 Recommendations for future research

Since this study only covers a limited part of the topic on sustainability labels, further research is necessary to develop better insights into the relationship between sustainability labels and consumer response. First of all, in order to broaden this study, it is advised to test the effects on other supermarket products. Afterwards, it is advised to test this also on non-supermarket products, such as energy labels and cleaning products which also contain sustainability labels. It is possible that positive consumer response is more apparent with products that are directly associated with nature or sustainability. When thinking about the sustainability for milk, most people automatically think about cows grazing outside in the pasture. It could be assumed that people make this connection less quickly when it comes to sustainability in cleaning products or cosmetic products. To determine if the outcomes of this study also apply in other contexts, scholars should focus on the effect of consumer response in different product categories.

A recommendation in order to deepen this study is to investigate the consumer behaviour in real life situations. As this experiment only tested the participants' response to products in an online experiment, the behaviour should also be observed when being in the

supermarket. As this quantitative study has been a methodology that is used frequently in social sciences, this method worked well in this study. However, to get a more in-depth analysis a mixed methodology could be implemented. According to Carvalho and White (1997) both a quantitative and a qualitative approach are generally required to address all the aspects of the problem and provide an answer to all questions. As the use of a quantitative experiment in social science comes with its limits, combining this method with both interviews and real-life observation could contribute to more enriched findings. Using this type of methodology will provide an expanded and more strengthened study's conclusion (Schoonenboom & Johnson, 2017).

The final direction for future research concerns the exposure to a sustainability label. This study indicated an unexpected result on purchase intention after being exposed to a product package with or without a sustainability label. As the purchase intention was higher for products without a sustainability label, it could suggest that people do not pay as much attention to the labels when looking at a product package as was expected. It could also imply that people do not care as much as was expected in the first place. Scholars should further investigate this by having participants directly compare products with sustainability labels to products without sustainability labels. Hereby, scholars are able to research if the existence of a sustainability label would result in a higher purchase intention and product evaluation.

5.6 Conclusion

The present study extents research on the influence awareness of sustainability labels has on the consumer response towards supermarket products. This online experiment was performed by using three experimental conditions of a milk package with either no sustainability label, a mala fide sustainability label, or a bona fide sustainability label. Two hypotheses were built to answer this research question. By means of a between-subjects effects design (a sustainability label vs. no sustainability label) and a within-subjects effects design (before vs. after exposure to information), the constructed hypotheses were tested.

The most important contribution of this study is that a statistically significant effect was shown for exposure to information on both dependent variables. This indicated that after extra information was provided, the purchase intention and product evaluation for the bona fide label increased. An adverse effect was shown for the mala fide label, as the purchase intention and product evaluation decreased.

No statically significant effect was found for a higher purchase intention and product evaluation when the package contained a sustainability label, as opposed to a lower purchase intention and product evaluation for product package without the sustainability label. It could be assumed that people do not directly connect a sustainability label with the willingness to buy the product. However, as this has not been tested in this study, it cannot be confirmed.

To conclude, this study provides new insights on how the consumer is influenced by sustainability labels on supermarket products. As this study was conducted in an online context with a specific product, future analysis is needed to determine if these results would also apply in other settings.

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Appendices

Appendix A – Online Questionnaire

Product evaluatie

Start of Block: Informed consent

Q1 Beste deelnemer,
Hierbij wil ik u uitnodigen om deel te nemen aan dit onderzoek voor mijn bachelorscriptie van Communication Science aan de Universiteit Twente. Dit onderzoek gaat over oordelen van consumenten over supermarktproducten.
Uw deelname aan dit onderzoek is geheel vrijwillig en u kunt uw deelname aan dit onderzoek dan ook op elk moment afbreken. Natuurlijk hoop ik van harte dat u het onderzoek volledig zult afmaken. Ik zou u willen vragen om dit in één ononderbroken sessie te doen. Al uw gegevens zullen anoniem worden verwerkt en worden onder geen enkele voorwaarde aan derde partijen buiten dit onderzoek verstrekt. Voor meer informatie over dit onderzoek kunt u te alle tijden contact opnemen met:

Onderzoeker	Ilse van Ree	i.vanree@student.utwente.nl
Begeleider	M.D.T. de Jong	m.d.t.dejong@utwente.nl

○ Door dit vakje aan te vinken, verklaar ik ouder te zijn dan 18 jaar, alle bovenstaande informatie gelezen te hebben en ga ik ermee akkoord vrijwillig deel te nemen aan dit onderzoek. (1)

End of Block: Informed consent

Start of Block: Achtergrond vragen

Q2 Wat is uw geslacht?

○ Man (1)

○ Vrouw (2)

○ Anders/wil ik niet zeggen (3)

Q3 Wat is uw leeftijd?

▼ 18 (1) ... 99 (82)

Q4 Wat is uw hoogst afgeronde opleiding?

- ○ Basis onderwijs (1)
- ○ Voortgezet onderwijs (2)
- ○ MBO (3)
- ○ HBO (4)
- ○ WO (5)
- ○ Anders (6)

End of Block: Achtergrond vragen

Start of Block: Product 1

Q5

U staat in de supermarkt voor de koeling met zuivelproducten. U wilt een literpak halfvolle melk kopen. Het goedkoopste literpak halfvolle melk dat u ziet staan is € 0,65 en het duurste literpak €1,59. Het pak melk dat hierboven is afgebeeld kost € 0,99.

Bekijk deze afbeelding goed en ga dan door naar de volgende vragen.

End of Block: Product 1

Start of Block: Product 2

Q6

U staat in de supermarkt voor de koeling met zuivelproducten. U wilt een literpak halfvolle melk kopen. Het goedkoopste literpak halfvolle melk dat u ziet staan is € 0,65 en het duurste literpak halfvolle melk €1,59. Het pak melk dat hierboven is afgebeeld kost € 0,99. Dit pak melk bevat een keurmerk Weidemelk.

Bekijk deze afbeelding goed en ga dan door naar de volgende vragen.

End of Block: Product 2

Start of Block: Product 3

Q7

U staat in de supermarkt voor de koeling met zuivelproducten. U wilt een liter pak halfvolle melk kopen. Het goedkoopste literpak halfvolle melk dat u ziet staan is € 0,65 en het duurste literpak halfvolle melk €1,59. Het pak melk dat hierboven is afgebeeld kost € 0,99. Dit pak melk bevat een keurmerk Weidemelk.

Bekijk deze afbeelding goed en ga dan door naar de volgende vragen.

End of Block: Product 3

Start of Block: Vragen deel 1

Q8 Ik denk dat dit een goed product is.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q9 Ik zou overwegen dit product te kopen.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q10 Ik zou dit product kopen.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q11 Ik vind de prijs van dit product te hoog.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q12 Ik zou dit product nooit kopen.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

End of Block: Vragen deel 1

Start of Block: Vragen deel 2

Q13 Naar mijn mening is dit product

	Volledig mee oneens (1)	Mee oneens (2)	Enigszins mee oneens (3)	Neutraal (4)	Enigszins mee eens (5)	Mee eens (6)	Volledig mee eens (7)
Van hoge kwaliteit (1)	○	○	○	○	○	○	○
Duurzaam (2)	○	○	○	○	○	○	○
Diervriendelijk geproduceerd (3)	○	○	○	○	○	○	○
Milieubewust geproduceerd (4)	○	○	○	○	○	○	○
Met zorg geproduceerd (5)	○	○	○	○	○	○	○

End of Block: Vragen deel 2

Start of Block: product 2 block 2

Q14
De website Keurmerken.net zet alle onbetrouwbare keurmerken op een rijtje. Over het keurmerk Weidemelk van Albert Heijn staat de volgende informatie online:

Het pak melk dat u heeft gezien bevat het keurmerk Weidemelk van Albert Heijn. Met dit keurmerk verklaart Albert Heijn dat de koeien minimaal 120 dagen per jaar, 6 uur per dag in de wei hebben gelopen.

Informatie over het keurmerk
Het logo wekt echter veel verwarring op, aangezien dit erg veel lijkt op het officiële keurmerk Weidemelk van stichting Weidegang. Het logo hiervan ziet er anders uit, maar de naam en boodschap is hetzelfde. In tegenstelling tot het keurmerk van stichting Weidegang, kan Albert Heijn niet aantonen hoe deze claim gewaarborgd wordt. Ook op de site van Albert Heijn is hier niks over te vinden.
(Keurmerken, 2020)

Na deze informatie goed doorgelezen te hebben, kunt u dezelfde vragen nogmaals invullen.

End of Block: product 2 block 2

Start of Block: vragen deel 1 block 2 product 2

Q15 Ik vind dit product een goed product.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q16 Ik zou overwegen dit product te kopen.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q17 Ik zou dit product kopen.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q18 Ik vind de prijs van dit product te hoog.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q19 Ik zou dit product nooit kopen.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

End of Block: vragen deel 1 block 2 product 2

Start of Block: vragen deel 2 block 2 product 2

Q20 Naar mijn mening is dit product

	Volledig mee oneens (1)	Mee oneens (2)	Enigszins mee oneens (3)	Neutraal (4)	Enigszins mee eens (5)	Mee eens (6)	Volledig mee eens (7)
Van hoge kwaliteit (1)	○	○	○	○	○	○	○
Duurzaam (2)	○	○	○	○	○	○	○
Diervriendelijk geproduceerd (3)	○	○	○	○	○	○	○
Milieubewust geproduceerd (4)	○	○	○	○	○	○	○
Met zorg geproduceerd (5)	○	○	○	○	○	○	○

End of Block: vragen deel 2 block 2 product 2

Start of Block: product 3 block 2

Q21

De website Keurmerkenwijzer.nl zet alle keurmerken op een rijtje. Over het keurmerk Weidemelk staat de volgende informatie online:

Het pak melk dat u heeft gezien bevat het keurmerk Weidemelk wat eigendom is van stichting Weidegang. Het keurmerk Weidemelk staat op zuivelproducten van koeien die in de wei mogen. Weidemelk-koeien lopen ten minste 120 dagen per jaar minstens 6 uur per dag in de wei.

Hoe is de controle geregeld?
Jaarlijks vindt er bij 100% van de melkafnemers een onafhankelijke controle op het administratieve systeem, en vindt bij 40% van de melkveehouders veldcontroles plaats. Doordat de eisen van dit keurmerk zo goed gecontroleerd en gewaarborgd worden, zorgt dit keurmerk al jaren voor verbetering van het dierenwelzijn.
(Keurmerkenwijzer, 2020).

Na deze informatie goed doorgelezen te hebben, kunt u dezelfde vragen nogmaals invullen.

End of Block: product 3 block 2

Start of Block: Vragen deel 1 block 2 product 3

Q22 Ik vind dit product een goed product.

- Volledig mee oneens (1)
- Mee oneens (2)
- Enigszins mee oneens (3)
- Neutraal (4)
- Enigszins mee eens (5)
- Mee eens (6)
- Volledig mee eens (7)

Q23 Ik zou overwegen dit product te kopen.

- Volledig mee oneens (1)
- Mee oneens (2)
- Enigszins mee oneens (3)
- Neutraal (4)
- Enigszins mee eens (5)
- Mee eens (6)
- Volledig mee eens (7)

Q24 Ik zou dit product kopen.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q25 Ik vind de prijs van dit product te hoog.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q26 Ik zou dit product nooit kopen.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

End of Block: Vragen deel 1 block 2 product 3

Start of Block: Vragen deel 2 block 2 product 3

Q27 Naar mijn mening is dit product

	Volledig mee oneens (1)	Mee oneens (2)	Enigszins mee oneens (3)	Neutraal (4)	Enigszins mee eens (5)	Mee eens (6)	Volledig mee eens (7)
Van hoge kwaliteit (1)	○	○	○	○	○	○	○
Duurzaam (2)	○	○	○	○	○	○	○
Diervriendelijk geproduceerd (3)	○	○	○	○	○	○	○
Milieubewust geproduceerd (4)	○	○	○	○	○	○	○
Met zorg geproduceerd (5)	○	○	○	○	○	○	○

End of Block: Vragen deel 2 block 2 product 3

Start of Block: Eind vragen

Q28 Ik voel me erg betrokken bij het milieu.

- Volledig mee oneens (1)
- Mee oneens (2)
- Enigszins mee oneens (3)
- Neutraal (4)
- Enigszins mee eens (5)
- Mee eens (6)
- Volledig mee eens (7)

Q29 Ik vind dierenwelzijn belangrijk.

- Volledig mee oneens (1)
- Mee oneens (2)
- Enigszins mee oneens (3)
- Neutraal (4)
- Enigszins mee eens (5)
- Mee eens (6)
- Volledig mee eens (7)

Q30 Ik geef de voorkeur aan producten die duurzaam zijn.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q31 Ik ben bereid meer geld te betalen voor producten die duurzaam, milieubewust en/of diervriendelijk geproduceerd zijn.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

Q32 De kwaliteit van producten die duurzaam, milieubewust en/of diervriendelijk geproduceerd zijn is beter.

- ○ Volledig mee oneens (1)
- ○ Mee oneens (2)
- ○ Enigszins mee oneens (3)
- ○ Neutraal (4)
- ○ Enigszins mee eens (5)
- ○ Mee eens (6)
- ○ Volledig mee eens (7)

End of Block: Eind vragen

Appendix B – Literature Logbook

Date	Source? Database (db), Book (b), Internet (url)	Search terms and strategies (Search profile incl. Boolean operators)	How many hits (how many relevant)	Related terms/authors	Notes
24/02	Scopus	Ethical claims food	175 results, first 20 hits very useful, later not much		Some articles not available
24/02	Google scholar	Quality labels	2.060.000 results.	Mark, claims	First page of hits very useful, later not so much
3/03	Google scholar	Quality labels AND food sector	17.800 results.	Purchase, awareness, willingness to pay	
23/03	Scopus	Greenwashing	323 results		Very general
23/03	Google scholar	Greenwashing AND quality label	15.000 results		Top hits are very useful
24/03	Web of Science	(quality labels OR marks) AND (food sector OR food OR products)	33.324		Some hits to specific to certain topic