



Norwegian School of Economics

Bergen, Spring of 2021



The Effect of Explanations on Perceived Credibility of Sustainability Claims

*How brands can position themselves as sustainable without being
suspected of greenwashing.*

Ingrid Tallhaug Sydnes and Mai-Linn Aarvold

Supervisor: Magne Supphellen

Master's thesis in Economics and Business Administration

Major in Marketing and Brand Management

NORWEGIAN SCHOOL OF ECONOMICS

This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

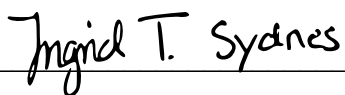
Acknowledgements

This master thesis was written as a part of the master program of Economics and Business Administration at the Norwegian School of Economics (NHH). The thesis represents the finished product of our major in Marketing and Brand Management.

Firstly, we are deeply grateful to our supervisor, Professor Magne Supphellen, for his guidance throughout the semester. He has given us invaluable advice, insightful comments and continuous support at every stage of the master thesis. We would also like to express our sincere gratitude to Nhat Quang for his assistance and support with the workings of SPSS. Moreover, we would like to extend our sincere thanks to PanelBase, and especially Gary Chow, for their contribution to having our questionnaire reach its target population. Our gratitude also extends to the participants who took the time to answer our questionnaire. Further, we are extremely grateful to the NHH for funding our master thesis, allowing us to acquire the help of PanelBase. Finally, we would like to offer our special thanks to our professors and lecturers at NHH, who have taught and inspired us throughout the last few years with their knowledge, passion and encouragement.

The Norwegian School of Economics

Bergen, May 2021



Ingrid Tallhaug Sydnes



Mai-Linn Aarvold

Abstract

As businesses are increasingly focusing on positioning themselves along sustainability dimensions, the occurrence of perceived greenwashing is threatening the perceived credibility of brands with genuine intentions. Hence, many brands accentuate their sustainability focus by explaining their intentions; either by emphasizing their resources or by focusing on ethical aspects. This thesis investigates the effect different explanations have on the perceived credibility of sustainability claims, and the moderating effect of regulatory focus. We hypothesized that resource-based explanations would increase perceptions of credibility for brands with a prior history of unsustainable operations, that promotion-focused consumers would perceive the claims as more credible compared to prevention-focused consumers, that ethical explanations would enhance the perceived credibility for promotion-focused consumers, and that resource-based explanations would enhance the perceived credibility for prevention-focused consumers. Utilizing a factorial design, UK residents were presented with ads from fictional brands within the energy industry, where brand histories and explanations were manipulated. No support for our hypotheses was observed, however due to limited research on the topic, further analysis was conducted. Our study revealed that companies with a history of unsustainable practices can increase the perceived credibility of sustainability claims by not providing any explanations to their efforts. Further, expertise is a central component of perceived credibility, and companies with prior histories of unsustainable practices can be seen as having more expertise when shifting to sustainable practices, compared to new sustainable companies within the same industry. Additionally, newer sustainable companies may benefit from using explanations which combine a resource- and ethical-aspect if the consumers are prevention-focused, consequently increasing the perceived level of expertise. These findings may help brands articulate their explanations more sufficiently to increase the perception of credibility in their claims, given their history and consumers' regulatory focus.

Key words: Sustainability, Greenwashing, Perceived credibility, Regulatory focus

Table of Contents

| | |
|--|-----------|
| 1 Introduction | 1 |
| 2 Theoretical Background | 4 |
| 2.1 Greenwashing..... | 4 |
| 2.1.1 Green Claims..... | 5 |
| 2.1.2 Perceived Greenwashing..... | 7 |
| 2.2 Credibility | 8 |
| 2.2.1 Source Credibility..... | 8 |
| 2.2.2 Characteristics of the Claim..... | 9 |
| 2.3 Regulatory Focus Theory | 10 |
| 2.4 Attribution of Responsibility Theory | 12 |
| 2.5 Conceptual Model..... | 14 |
| 2.5.1 Hypothesis: Resource-Based vs. Ethical Explanations..... | 15 |
| 2.5.2 Hypothesis: Regulatory Focus as Moderating Factor | 17 |
| 3 Research Methodology | 20 |
| 3.1 Research Design | 20 |
| 3.1.1 Factorial Design..... | 21 |
| 3.2 Sampling Process | 22 |
| 3.3 Treatment | 24 |
| 3.3.1 Brand 1: Disadvantageous Pre-Existing Perceptions | 24 |
| 3.3.2 Brand 2: Advantageous Pre-Existing Perceptions..... | 25 |
| 3.3.3 The Ad..... | 25 |
| 3.4 Questionnaire and Measurements | 27 |
| 3.4.1 Manipulation Check..... | 30 |
| 3.4.2 Qualtrics..... | 31 |
| 4 Analysis..... | 32 |
| 4.1 Cleaning the Dataset | 32 |
| 4.2 Descriptive Statistics | 35 |
| 4.2.1 Social Demographics..... | 36 |

| | |
|--|------------|
| 4.2.2 Regulatory Focus..... | 38 |
| 4.2.3 Green Values and Perceived Fit..... | 39 |
| 4.3 Measurements..... | 41 |
| 4.3.1 Checking Assumptions for ANCOVA..... | 43 |
| 4.4 Test of Hypotheses..... | 45 |
| 4.4.1 Testing Hypothesis 1a and 1b..... | 45 |
| 4.4.2 Testing Hypothesis 2..... | 47 |
| 4.4.3 Testing Hypothesis 3..... | 49 |
| 4.4.4 Testing hypothesis 4..... | 49 |
| 4.4.5 Summary of Hypothesis Testing..... | 51 |
| 4.5 Additional Results..... | 52 |
| 4.5.1 Perceived Credibility as the Dependent Variable..... | 53 |
| 4.5.2 Expertise as the Dependent Variable..... | 55 |
| 4.5.3 Trustworthiness as the Dependent Variable..... | 59 |
| 4.5.4 Summary of Additional Findings..... | 62 |
| 5 Discussion..... | 63 |
| 5.1 Main Findings..... | 63 |
| 5.2 Theoretical Implications..... | 66 |
| 5.2.1 Characteristics of the claim and explanations..... | 66 |
| 5.2.2 The Source..... | 68 |
| 5.2.3 Regulatory Focus – Prevention-focused consumers..... | 70 |
| 5.2.4 Regulatory focus – Promotion-focused consumers..... | 71 |
| 5.3 Managerial Implications..... | 72 |
| 5.4 Limitations..... | 74 |
| 5.4.1 Reliability..... | 74 |
| 5.4.2 Validity..... | 76 |
| 5.5 Suggestions for Future Research..... | 81 |
| References..... | 83 |
| Appendix..... | I |
| Appendix A: Poster Ads Presented to Participants..... | I |
| Appendix B: Scales and Items..... | III |

| | |
|---|------------|
| Appendix C: The Questionnaire in Qualtrics..... | VI |
| Appendix D: Central SPSS Output for Hypotheses Testing | XIV |

List of Figures

| | |
|--|----|
| Figure 1: The classifications of green claims | 5 |
| Figure 2: The conceptual model. | 15 |
| Figure 3: The factorial design..... | 22 |
| Figure 4: Ads for EcoOil and EcoWind with resource-based explanations. | 26 |
| Figure 5: Number of participants within each treatment group pre-manipulation check. | 32 |
| Figure 6: Final number of participants within each treatment group post data clean up, n = 329. | 35 |
| Figure 7: Regulatory focus of participants within the treatment groups. | 39 |
| Figure 8: Percentage of participants classified by their green values score as either low, moderate or high. | 40 |
| Figure 9: Percentage of participants classified as given low, moderate or high score for perceived fit. | 40 |
| Figure 10: Estimated marginal means of perceived credibility based on regulatory focus. | 54 |
| Figure 11: Marginal Means of Expertise for prevention-focused consumers with the interaction of company and explanation. | 59 |
| | |
| Figure A.1: Ethical-based explanations for EcoOil and EcoWind. | I |
| Figure A.2: Resource-based explanations for EcoOil and EcoWind..... | I |
| Figure A.3: Combination of resource- and ethical-based explanations for EcoOil and EcoWind. II | |
| Figure A.4: No explanations for EcoOil and EcoWind. | II |

Figure B.1: Scales and items for perceived credibility, perceived fit and green consumer values IV

Figure B.2: Scales and items measuring regulatory focus..... V

Figure D.1: Numbers used to calculate Type II errors for the hypotheses. XIV

List of Tables

| | |
|--|----|
| Table 1: The explanations presented in the questionnaire. | 26 |
| Table 2: A summary of the number of questions within each construct. | 30 |
| Table 3: Number of participants who failed the manipulation check according to their respective treatment group. | 33 |
| Table 4: Distribution of gender between different treatment groups. | 36 |
| Table 5: Distribution of participants by age group, given in quantity and percentage. | 37 |
| Table 6: Distribution of participants by age group and gender. | 37 |
| Table 7: Distribution of participants by age group and treatment group. | 37 |
| Table 8: Distribution of regulatory focus by gender and in total. | 38 |
| Table 9: Calculating the summated scale and the different items used. | 41 |
| Table 10: Findings from the scale reliability analysis. | 42 |
| Table 11: Shapiro-Wilks Test of Normality. | 43 |
| Table 12: Checking for homogeneity of regression slopes between IVs and covariates of age, gender, green values and perceived fit. | 44 |
| Table 13: The mean differences in perceived credibility between the types of explanations. | 45 |
| Table 14: Testing for between-subjects effects of explanation, company and the interaction, with perceived credibility as the dependent variable. | 46 |
| Table 15: The mean difference of perceived credibility between the companies when given resource-based and ethical-based explanations. | 47 |
| Table 16: Comparison of the mean values of perceived credibility based on regulatory focus and explanation type. | 48 |
| Table 17: The mean difference of regulatory focus on perceived credibility. | 49 |

| | |
|--|----|
| Table 18: The mean difference between the ethical explanation compared to the control group with perceived credibility as the dependent variable. | 50 |
| Table 19: Comparison of promotion-focused consumers presented with an ethical explanation vs. the other types of explanations with perceived credibility as the dependent variable. | 51 |
| Table 20: Comparison of the interaction between explanation and company with perceived credibility as the dependent variable. | 53 |
| Table 21: The two-way interaction between regulatory focus and type of company with perceived credibility as the dependent variable. | 54 |
| Table 22: Testing for between-subjects effects with expertise as the dependent variable. | 55 |
| Table 23: Pairwise comparisons of the type of company with expertise as the dependent variable. | 55 |
| Table 24: Pairwise comparison of the two-way interaction of explanations and company, with expertise as the dependent variable. | 56 |
| Table 25: Testing for between-subjects effects when regulatory focus is introduced into the model, with expertise as the dependent variable. | 57 |
| Table 26: Pairwise comparison of the three-way interaction of regulatory focus, explanation and company, with expertise as the dependent variable. | 58 |
| Table 27: Testing for between-subjects effects with trustworthiness as the dependent variable. | 60 |
| Table 28: Pairwise comparison of the two-way interaction of explanations and company, with trustworthiness as the dependent variable. | 60 |
| Table 29: Testing for between-subjects effects when regulatory focus is introduced into the model with trustworthiness as the dependent variable. | 61 |

1 Introduction

Sustainability has become a central element in firms' operations across all industries. The term "sustainable development" was first coined in 1987 in the report *Our Common Future*, also known as the Brundtland Report, with the definition "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 37). In 2015, the United Nations developed 17 Sustainable Development Goals. These goals function as a common work plan for countries, businesses, and civil society in the work to eradicate poverty, fight inequality, and stop climate change (United Nations, 2015). Today, sustainability has emerged as a vital part of a company's operations, where stakeholders expect sustainable actions (Supphellen, 2020). From being considered a green minority in the early 1980s, there has been an evolution of "greening" the marketplace, turning numerous customers into ethical consumers (Elkington, 1994). Consumers' awareness concerning sustainability has increased, and subsequently, a growing amount strives for more sustainable consumption (Unilever, 2017). Hence, the sustainable dimension has become more relevant in consumers' preference and decision-making process, which in turn creates new market opportunities as the demand for sustainable and green products grows. The expectations from consumers and other stakeholders are also drivers for firms taking a stronger stance on sustainable development; making their production and products more sustainable whilst minimizing their environmental footprint.

As a consequence of sustainability becoming more prevalent in consumers' preference and decision-making process, many firms' positioning strategies have taken a shift towards accommodating the sustainability dimension. However, the growing popularity of sustainable consumption has also led to firms attempting to falsely market their brands as sustainable to benefit from the new customer demand. Some firms market their positive sustainable efforts, while simultaneously concealing their negative activities in an attempt to create an inaccurately positive impression of their environmental footprint. Furthermore, some firms exaggerate the environmental benefits of their products and services to increase sales. This is commonly known as "greenwashing"; vague or false claims concerning firms' green efforts and activities (Schmuck, Metthes & Naderer, 2018). Greenwashing has made it difficult for consumers to trust firms' claims about being environmentally responsible. Thus, in recent years, consumers have grown more suspicious and sceptical about green claims (Chen & Chang, 2013). Moreover, some consumers

experience negative attitudes and purchase intentions toward advertisements they perceive as greenwashed (Newell, Goldsmith & Banzhaf, 1998; Stokes, 2009). Consequently, firms guilty of greenwashing might harm potential rewards from stakeholders to actual environmentally responsible firms (Delmas & Burbano, 2011). Therefore, the perceived credibility of sustainability claims is an important factor that may determine the success of a strategy aimed at a sustainable positioning.

It has previously been observed that the perceived credibility of sustainability claims is affected by source credibility and characteristics of the claim, i.e., claim type, compatibility between the claim and the brand, and specificity (Musgrove Choi & Chris, 2018; Carlson, Grove & Kangun, 1993; Breves, Liebers, Abt & Kunze, 2019). Additionally, a central element in perceived greenwashing is the intention of the brand in its sustainability efforts. Firms will often explain their sustainability efforts, which can be centralised around ethical aspects or resources making them capable of sustainable operations. These explanations are observable in firms' sustainability reporting and marketing communications, and thus seems to be a vital part of their sustainability positioning. Orkla, the leading supplier for consumer goods in Norway, explains their sustainability efforts by emphasizing their superiority in terms of resources, stating that "as a major Nordic company, we at Orkla have a responsibility for leading the way in our industry" (Orkla, n.d.). Coca-Cola, on the other hand, explains parts of their sustainability focus in terms of their "responsibility to help solve the global packaging waste crisis" (The Coca-Cola Company, 2021). Due to the widespread use of explanations to sustainability efforts, research into how different explanations may be perceived by consumers can thus prove to be valuable for companies and brands.

From a consumer perspective, these explanations may reveal firms' intentions behind the efforts, which in turn can affect the perceived credibility of the sustainability claims. However, previous research has not treated this potential effect with much detail. Thus, the first research question we will investigate in our thesis is:

Research question 1: What effect can different types of explanation of sustainability efforts have on the perceived credibility of sustainability claims?

Furthermore, there are individual differences between consumers which may affect how claims are perceived. As attribution of responsibility theory illustrates, characteristics of the actor, the organisational context, and characteristics of the perceiver can influence how individuals attribute responsibility (Gailey & Lee, 2005). We argue that one of these characteristics may be the individuals' regulatory focus, as this guides behaviour and evaluation process (Brockner & Higgins, 2001). Followingly, this thesis intends to unravel the following question:

Research question 2: What role does consumers' regulatory focus play on the perception of the credibility of sustainability claims, and how does regulatory focus influence the effect of explanations (RQ1)?

To answer these research questions, we will assess two fictional brands within the energy industry, where one of the brands represents disadvantageous pre-existing perceptions due to previous unsustainable operations. The objective of our research is to assess the potential effects of different types of explanations on the perceived credibility of sustainability claims, as well as the role of regulatory focus. Hopefully, our work will serve as a helping hand for brands with different starting points and genuine sustainability intentions as they pursue their quest to successfully position their brand along the sustainability dimensions, without becoming a victim of perceived greenwashing.

2 Theoretical Background

Our thesis touches upon many different theoretical topics, and thus it is vital to lay the theoretical background of our research. We start by defining greenwashing and its distinction from perceived greenwashing. Additionally, we assess the topic of credibility and the components affecting how individuals perceive credibility. Then, we dive into theory surrounding regulatory focus and attribution of responsibility. Afterwards, we connect the aforementioned theory to sustainability claims, and lastly, we present our hypotheses which will assist us in answering the research questions.

2.1 Greenwashing

In the Merriam-Webster dictionary (n.d.), greenwashing is defined as “expressions of environmentalist concerns especially as a cover for products, policies, or activities”. The term was coined in 1986, in an essay that covered the hotel industry’s practice of placing signs in hotel rooms promoting the reuse of towels to help the environment when in reality it was mostly done to reduce the hotels’ laundry expenses (Rahman, Park & Chi, 2015). Greenwashing can broadly be placed into two categories; greenwashing at product or service-level and greenwashing at firm-level. The former relates to consumers being misled regarding the environmental benefits of a product or service, whereas the latter revolves around consumers being misled regarding the environmental practices of a company (Delmas & Burbano, 2011). The practise of greenwashing is often seen as a type of selective disclosure where companies market their positive sustainable efforts, while simultaneously concealing their negative efforts in an attempt to create an inaccurately positive impression of their sustainability efforts. Hence, they retain disclosing negative information regarding their environmental practices while exposing positive information (de Freitas Netto, Sobral, Ribeiro & da Luz Soares, 2020). Additionally, greenwashing can be seen as decoupling behaviour in instances where companies perform symbolic actions “which tend to deflect attention to minor issues or lead to creating ‘green talk’ through statements aimed at satisfying stakeholder requirements in terms of sustainability but without any concrete action” (Siano, Vollero, Conte & Amabile, 2017, p. 27).

As to why companies are engaging in such activities, Brebbia and Pineda (2004) observed that financial savings are one of the most significant factors driving the introduction of sustainable practices. For instance, actors within the hotel industry have been found to use signs reminding guests to turn off the lights and use less water by disguising it as an attempt to conserve water and saving the environment. However, they do not disclose that the hotels themselves greatly benefit from such cost-saving activities. Moreover, the hotels did not perform any other environmental activities that would offer more environmental impact (Rahman et al., 2015). These examples illustrate how some firms disguise their attempts at financial gains by making sustainability claims.

2.1.1 Green Claims

To be better equipped at identifying claims that can be classified as greenwashing, Carlson et al. (1993) developed two categorizations of green claims; claim deceptiveness and claim type.

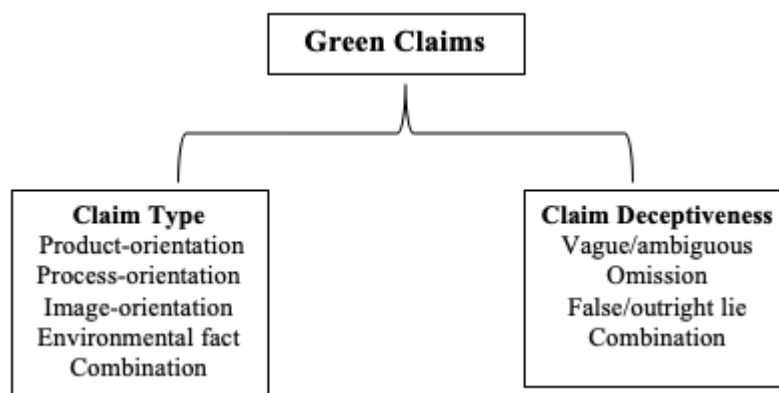


Figure 1: The classifications of green claims

Firstly, Carlson et al. (1993) categorize claim type, which concerns the claims firms are making regarding their sustainability efforts and green practices. These claim types can be categorized into five different categories:

1. Product-orientation: focus on the “environmentally friendly attributes that a product possesses” (Carlson et al., 1993 p. 31).
2. Process-orientation: focus on the internal techniques and methods that are favourable to the environment, such as the firm’s technology, production and disposal procedures.

3. Image-orientation: associate the firm “with an environmental cause or activity for which there is broad-based public support (Carlson et al., 1993, p. 31)
4. Environmental facts: general factual statements about the condition of the environment (Musgrove et al., 2018, p. 280).
5. Combination: claims entail a mixture of the different orientations.

It is worth noting that the different types of claims do not necessarily in itself determine whether the claim will be perceived as greenwashing or not. This will depend on other factors as well, such as the level of deceptiveness.

Secondly, Carlson et al. (1993) describe claim deceptiveness, which are misleading and deceptive categories of environmental advertising. Such green claims can be defined as; (1) vague/ambiguous (i.e., claims that are too broad and thus lack a clear meaning and definition), (2) omission (i.e., claims that omits necessary information needed to evaluate its truthfulness), (3) false/outright lie (i.e., claims that are a fabrication or inaccurate), and (4) combination (i.e., claims that contain more than one of the classifications above). However, green claims can also fall into a fifth classification, called acceptable, which encompasses claims that do not contain deceptive features (Carlson et al., 1993).

TerraChoice, a marketing and environmental consulting firm, further elaborated on claim deceptiveness and released a study distinguishing between “seven sins of greenwashing” (UL, n.d.). The study was released with the aim of helping consumers identify misleading environmental claims made by producers and has since been cited in numerous publications (de Freitas Netto et al., 2020; Delmas & Burbano, 2011; Dahl, 2010). Some of the sins described, such as the sin of vagueness, the sin of fibbing, and the sin of no proof, can be traced back to the claim deceptiveness categories described by Carlson et al. (1993). However, TerraChoice also introduced new categories; the sin of the *hidden trade-off* (i.e., implying something is environmentally friendly based on a narrow set of attributes when other important environmental issues are not addressed), the sin of *worshipping false labels* (i.e., suggesting that a product has a third-party endorsement or certification when no such endorsement exists), the sin of *irrelevance* (i.e., a claim that is technically true, but unimportant or unhelpful to consumers looking for eco-friendly products), and the sin of *the lesser of two evils* (i.e., claiming the product is greener than other products in its

category, but at the risk of distracting the consumers from how the category as a whole is not environmentally friendly).

Additionally, a newer form of greenwashing has emerged that does not employ any of the types of claims described above. “Executional Greenwashing” utilizes nature evoking elements to induce false perceptions of the brand’s greenness (Parguel, Benoit-Moreau & Russel, 2015). These elements include using colours (e.g., green and blue), sounds (e.g., birds, the sea), natural landscapes (e.g., forests, oceans, mountains), pictures of endangered animal species, or renewable sources of energy. Such elements may trigger ecological associations by indirectly activating nature imagery (Parguel et al., 2015).

2.1.2 Perceived Greenwashing

As a consequence of the above-mentioned deceptive greenwashing practices, consumers have become more sceptical towards environmental advertising claims as they are finding it difficult to distinguish between trustworthy and untrustworthy green advertising (de Freitas Netto et al., 2020; Szabo & Webster, 2020). Zinkhan and Carlson (1995) discovered that green consumers are more likely to hold anti-corporate biases, making it harder for them to have confidence in green marketing's credibility. Subsequently, consumers are more inclined to perceive green claims as greenwashing, even when those claims are truthful, and the corporations are engaging in genuine sustainable activities. Hence, gaining an understanding of what distinguishes perceived greenwashing and actual greenwashing can be of great value to consumers, as well as corporations who are trying to convey their honest sustainable business operations.

2.2 Credibility

Credibility can be defined as “the believability of an entity’s intention at a particular time” and “exists when one can confidently use past actions to predict future behaviour” (Herbig & Milewicz, 1993, p. 20). In a corporate context, credibility refers to the extent to which a company can be trusted to do what they say. When there is a discrepancy between the claims made by a company and its actions, the credibility decreases, and repetition of such mixed signals can result in a total lack of credibility. Over time, this may bring about an undesired reputation. Furthermore, when firms are conveying a message, many factors may influence the perceived credibility of that message. According to Ganz and Grimes (2018), the credibility of an advertisement is influenced by two factors; the perceived credibility of the source and the perceived credibility of the message content. In the sections that follow, we will examine these factors, specifically source credibility and characteristics of the claims.

2.2.1 Source Credibility

The term ‘source’ is used to describe the “person involved in communicating a marketing message” (Belch & Belch, 2018, p. 186). It often refers to individuals, such as a spokesperson or an expert, communicating on behalf of a company. However, in other contexts, the source can be the company or the brand itself (Alacaniz, Cáceres, & Pérez, 2010). Accordingly, we will consider the company and its brand as the source throughout this thesis.

With respect to the credibility of the source, its definition is “a communicator’s positive characteristics that affect the receiver’s acceptance of a message” (Ohanian, 1990, p. 41). The theory of source credibility suggests that consumers are more likely to be persuaded by a message when the source of that message is perceived as credible (Musgrove et al., 2018). Moreover, the level of credibility can have a direct effect on brand attitude, purchase intention, reputation and attitude towards future claims made by the firm (Musgrove et al., 2018). Additionally, the perceived credibility of the source is affected by the level of *expertise* and *trustworthiness* of the source (Belch & Belch, 2018; Sternthal, Dholakia, & Leavitt, 1978). Expertise is linked to the firm’s knowledge and ability to fulfil its claims, whereas trustworthiness relates to the extent to which the source can be viewed as honest, ethical and believable, without bias and underlying motives (Belch & Belch, 2018).

2.2.2 Characteristics of the Claim

That being the case, the content of the message is also described as an important factor determining the perceived credibility. Consequently, the characteristics of the claim may be of help to analyse the content. These characteristics include specificity, orientation or the type of claim, and the perceived fit between the claim and the brand.

2.2.1.1 Specificity

Firstly, the more specific the claim is, the less time and effort the consumer has to spend to evaluate the claims. Economic-information theory (EOI theory) suggests that “consumers will continue to search for information as long as the benefits of doing so outweigh the cost” (Musgrove et al., 2018, p. 279). Moreover, when making statements concerning a product or a brand, the claim can revolve around attributes that can be evaluated either before or after purchase and use. On the other hand, the claim may concern attributes that are difficult to evaluate both pre and post purchase. The difficulty may be due to the customer’s lack of technical expertise or the economic or time cost of verifying the information (Musgrove et al., 2018). Hence, the more specific the claim is, where consumers can easily verify the information, the more credible the claim will be perceived as. Note that sustainability claims in general will often contain information that can be difficult for the consumers to verify. Thus, the extent of specificity in the claim may become even more imperative when the claim regards sustainability. Furthermore, as noted earlier in subsection 2.1.1, claims that are too vague and lack specificity can be seen as deceptive and as a form of greenwashing.

2.2.1.2 Claim Type

Secondly, as explained earlier in section 2.1.1, claims concerning sustainability can have different orientations, where they either focus on the product, process, image, environmental facts or a combination of the orientations (Carlson et al., 1993). The orientation of the claim is a characteristic that may affect the perceived credibility, depending on factors such as variation in specificity and organisational context.

2.2.1.3 Perceived Fit

Thirdly, how the content of the message fits with the brand can also affect the perceived credibility, considering brand fit is known to be an important success factor in different aspects of marketing strategy. The reason for its importance is often explained by congruence theory, which points out that “storage and retrieval of information from memory are influenced by relatedness or similarity. The more congruent, the better the association and retrieval” (Lafferty, 2007, p. 448). For instance, the fit is described as an important factor for positive brand attitude formations in brand extensions (Aaker & Keller, 1990; Völckner & Sattler, 2006). Similarly, the fit has been shown to have an effect on credibility, where source credibility increases when there is a perceived fit between the source and the brand (Breves et al., 2019).

2.3 Regulatory Focus Theory

Although the source and content of the claim may influence the perception of credibility, there are also individual aspects within the perceiver one needs to take into consideration. Following the logic of Codini, Miniero, and Bonera (2018), a person’s regulatory focus influences the individual’s information processing, consideration sets, evaluation, and choice between different alternatives. Thus, theory on this topic could provide us with information regarding how regulatory focus affects how consumers perceive information obtained from advertisements.

Regulatory focus theory refers to the process in which people seek to match their behaviours and self-conceptions to a goal or a standard (Brockner & Higgins, 2001). The theory posits two distinct self-regulatory orientations: promotion-focus and prevention-focus, where the regulatory orientation of an individual is based on the individual’s “particular concerns or interests that guide his or her behaviour” (Avnet & Higgins, 2006, p. 3). Accordingly, people’s degree of promotion- and prevention-focus influence their behaviours, and this degree is composed of three factors: needs, goals/standards, and psychological situations (Brockner & Higgins, 2001).

The first factor is *need*, as individuals operate differently when approaching pleasure and avoiding pain, depending on the need they are seeking to satisfy. Promotion-focused individuals may have growth and development needs, whereas prevention-focus individuals feel a need for security. The

second factor is the nature of the *goals and/or standards* individuals try to achieve. These goals and standards can be associated with the “ideal self” or the “ought self”. Goals and standards that reflect individuals’ hopes, wishes, and aspirations are associated with the ‘ideal self’. While goals and standards reflecting individuals’ felt duties, obligations, and responsibilities are associated with people’s ‘ought self’. Brockner and Higgins (2001) postulate that promotion-focused people want to achieve the goals/standards associated with the ‘ideal self’, whereas prevention-focused people want to achieve goals/standards associated with the ‘ought self’. The last factor is the *psychological situations* that matter to individuals. When promotion-focused individuals behave in a manner that aligns with their ideal self, achieving a positive outcome, they experience the pleasure of a gain. The opposite is true when they do not achieve a positive outcome and consumers are left with the pain of a non-gain. Prevention-focused individuals, on the other hand, have standards and goals associated with the absence of negative outcomes. Thus, they experience the pleasure of a non-loss when they align themselves with the ought self, and they experience the pain of loss when they fall short (Brockner & Higgins, 2001). In other words, individuals will engage in behaviours that bring themselves in line with the goals and standards associated with their predominant focus. Moreover, promotion-focused individuals are eager to pursue achievements to maximize potential gains and are not as attentive to avoiding mistakes and failures as individuals with a prevention focus (Zou & Chan, 2019).

Individuals will develop a chronic regulatory focus through socialization over time (Higgins, Friedman, Harlow, Idson, Ayduk & Taylor, 2001). However, the regulatory focus of an individual may temporarily change and thus deviate from their chronic orientation. How individuals will behave and act in a given situation is thus influenced by the regulatory focus active at the given time (Bullard & Manchanda, 2013). This means that the two orientations, regardless of the individual’s chronic regulatory focus, can be accessed through activation, also referred to as regulatory focus priming (Freitas, Liberman & Higgins, 2002).

2.4 Attribution of Responsibility Theory

When discussing sustainability in relation to corporations, an element to consider is who the consumers deem to be responsible for either causing or solving sustainability issues. Attribution of responsibility theory may shed some light on how individuals attribute responsibility. This theory has been a central topic in psychology, sociology, and organizational studies, where researchers attempt to explain how individuals attribute responsibility for events. Attribution can be seen as a cognitive evaluation process where individuals attempt to form a causal explanation for an event (Sims & Lorenzi, 1992; Harvey & Martinko, 2010). Different individuals will attribute different causes to the same event. The theory surrounding attribution investigates how individuals gather and use information to understand and explain behaviours or events in terms of forming such causal judgements (Gailey & Lee, 2005). Furthermore, attribution theory is “based on a human thought process used to explain cause and effect” (Sims & Lorenzi, 1992, p. 220), and attribution of responsibility refers to how individuals use such thought processes to assign responsibility to such events.

However, attribution of responsibility does not only apply to finding causality for an event. Social psychologists also point to attribution of responsibility for a solution, also called treatment attribution (Yang, Se, Rickard, & Harrison, 2015). Treatment attribution is centralised around “who or what has the power to alleviate the problem” (Yang et al., 2015, p. 732). This suggests that in terms of sustainability and environmental problems, individuals may attribute responsibility both in terms of who or what has caused the problem, but also who or what is responsible for fixing the problem.

Shaver (1985) describes five levels of responsibility, which perceivers will consider before attributing responsibility; association, causality, foreseeability, intentionality, and justifiability. Shaver (1985, p. 88) describes the *association level* as “the most primitive level of attribution of responsibility”, and it occurs when someone is held accountable for an event even though there is no causality connected to the person. Meaning, it occurs when perceivers merely use an association they have between a person and an event as a means of attributing responsibility. In the context of sustainability and environmental responsibility, an example could be that consumers attribute

responsibility of an environmental issue to a brand because they associate that brand with unsustainable practices, although the brand has nothing to do with that specific problem.

At the *causality level*, anything a person causes is attributed to him or her (Shaver, 1985). If we were to apply this to an environmental setting, an example could be that the production of a brand's product is causing pollution, hence consumers attribute responsibility of the pollution to the brand. Followingly, at the *foreseeability level*, responsibility is attributed to someone if they could have foreseen the possible outcome and can under these circumstances be viewed as negligent or careless, even though the intention was not present. This may be illustrated with an example. Consider a firm that experiences a non-environmentally friendly consequence of their operations which was not intended, but consumers attribute responsibility to the brand as they believe the firm should have foreseen it. Thus, this level is different from the fourth *level of intentionality*, where the actor is thought to have intended the specific outcome. Lastly, at the *justifiability level* of responsibility, the perceiver will evaluate if the actor could have been coerced by other forces, therefore making the action excusable and justifiable to some degree.

With respect to factors that can influence how we attribute responsibility, Gailey and Lee (2005) point to three possible factors which can influence some aspect of the attributions: actor characteristic, respondent characteristics, and social or organisational context. In the context of making sustainability claims, this suggests that humans attribute responsibility based on the characteristics of the brand or the firm and the organizational context, which can be linked to aspects of source credibility and characteristics of the claims. Additionally, there are characteristics of the perceiver, in this case the consumer, which also affects the way responsibility is attributed.

2.5 Conceptual Model

With help from the above-mentioned literature, we conceptualise a model demonstrating the different variables and interconnections between them. In the following sections, we present our conceptual model, as well as the hypotheses and the theoretical foundation for their development.

To start, firms will have different motivations for positioning their brands along the sustainability dimension. Firstly, their motivations may be normative, where they have a desire to do good by ensuring sustainability efforts within their area of operations (Branco & Rodrigues, 2006). Secondly, the firm may feel a responsibility to contribute due to its resources making them more capable of solving sustainability issues compared to its competitors (Supphellen, 2020). The first motivation is, therefore, more centralized around an ethical aspect, whereas the second one focuses on the resources of the firm. When making claims about their sustainability efforts, brands will often back these up with an explanation of their motivations for engaging in a more sustainable operation. Hence, these explanations can roughly be categorised as being resource-based or ethical-based. A resource-based explanation is when a brand argues that the motivation behind their sustainability efforts relates to the company being more able to fulfil what they claim. Whereas, an ethical-based explanation is when the brand uses moral arguments, where they are sustainable because it is perceived as “the right thing to do”. In addition, a brand can have an explanation that is a combination of the two, and they may also offer no explanation for their claimed sustainability efforts.

In our thesis, we want to link these explanations to different factors that may affect perceived credibility, in order to determine what affects the perceived credibility of sustainability claims. As previously described, research has shown that the perceived credibility of a claim is influenced by the credibility of the source and the content of the message. Additionally, we suspect that the explanations provided by the brands may affect the perceived credibility, as well as the consumers’ regulatory focus. Therefore, in our model, we attempt to connect these different variables, as illustrated in Figure 2.

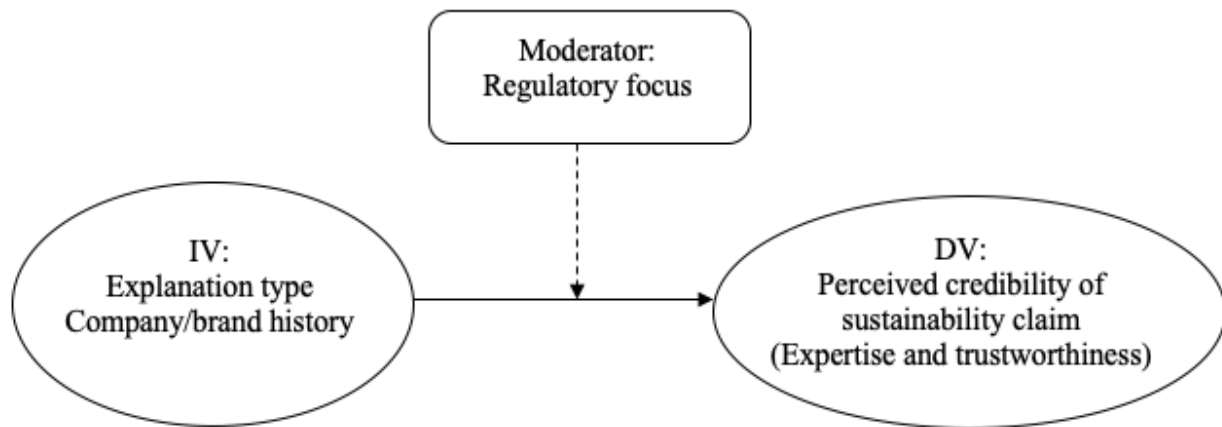


Figure 2: The conceptual model.

As illustrated in Figure 2, the manipulated variables i) explanation type and ii) brand history will be utilized, to enable measurement of the effect on the perceived credibility of sustainability claims. Through the stippled line, the conceptual model illustrates the moderating factor of regulatory focus.

2.5.1 Hypothesis: Resource-Based vs. Ethical Explanations

In the context of brands making claims about sustainability efforts, *expertise* involves the extent to which the firm is considered to have the necessary resources and capabilities to support these claims. *Trustworthiness*, on the other hand, involves the extent to which consumers believe the sustainability claims made by the brand are truthful. Overall, many factors can potentially affect the consumers' perception of a brand's expertise and trustworthiness. Davis (1994) found that previous feelings towards the brand's environmental activities can affect the reaction consumers will have towards future messages on this topic. These pre-existing perceptions of the brand's environmentalism may be due to the industry it operates in, e.g., firms operating in industries that are known for having less environmentally friendly operations due to the nature of the products. Another potential explanation is previous brand crises, e.g., firms being found guilty of unsustainable practices or greenwashing. Therefore, when comparing two brands where one is likely to have disadvantageous pre-existing perceptions, we would expect to find more negative attitudes toward sustainability claims from the brand with the disadvantageous pre-existing perceptions compared to the other brand. However, as expertise is an important component of the

source credibility, the perceived credibility may be affected if a brand is able to argue their sustainability efforts in terms of their ability to fulfil what they claim with their resources. This could potentially make consumers perceive the brand as more credible in terms of expertise, even though the trustworthiness dimension may still be compromised.

Additionally, if the claim has a resource-based explanation for their sustainability efforts, it may also be viewed as more specific. According to EOI theory, the more specific the claim is, the more credible consumers will perceive it. Although consumers are likely to have some scepticism of any green marketing claims, the scepticism decreases when the message is more specific and substantive as opposed to posturing and general green claims (Musgrove et al., 2018). Further, claims that are product- or process-oriented can be categorised as substantive claims (Chan, 2000). These types of claims concern the firm's resources, which may also suggest that resource-based explanations for sustainability efforts are perceived as more specific, and thus more credible. In contrast, as consumers have become more sceptical towards sustainability claims due to an increasing amount of greenwashing, ethical explanations may not be perceived as credible because consumers arguably find it difficult to trust the brands' true intentions.

By connecting resource-based explanations to the expertise dimension of source credibility, and characteristics of specificity in the claim, we propose the following hypothesis:

H1a: Consumers will perceive brands with a resource-based explanation as more credible compared to an ethical explanation.

H1b: The difference in effect between resource-based explanations and ethical explanations will be larger for brands with disadvantageous pre-existing perceptions.

We expect that brands that are likely to have disadvantageous pre-existing perceptions concerning their sustainability efforts and environmentalism may still be able to be perceived as credible in their sustainability claims, if these are backed up by resource-based explanations (H1b). This suggests that they can attempt to strengthen the expertise dimension of source credibility by using specific claims in their communication.

Although a resource-based explanation may have an increased effect on the perceived credibility of brands that do not have disadvantageous pre-existing perceptions, we do not expect the effect

to be as strong as it will for brands that have such pre-existing perceptions (H1b). This can be explained by the perceived fit. Brand fit is the extent to which consumers perceive there to be a similarity or compatibility between sustainability efforts and the brand. Du, Bhattacharya, and Sen (2010, p. 12) claim that low fit between social issues and a firm's business will "increase cognitive elaboration and make extrinsic motives more salient, thereby reducing stakeholder's positive reactions to a company's CSR activities". This could suggest that consumers may not see the compatibility between sustainability efforts and brands with disadvantageous pre-existing perceptions. Additionally, for brands without disadvantageous pre-existing perceptions, there may be a higher possibility of consumers perceiving it as a fit, and thus perceive the claim as not having an ulterior motive, making it more credible. However, explaining their sustainability efforts with their resources may help consumers see the fit when the brand has disadvantageous pre-existing perceptions. On the other hand, following the attribution of responsibility theory, consumers may also attribute a larger portion of responsibility to companies with a prior history of unsustainable operations, for either causing or resolving the problems concerning sustainability. If this is the case, the fit between sustainability and the company may be perceived as low, and consequently this may affect the perceived credibility.

2.5.2 Hypothesis: Regulatory Focus as Moderating Factor

With respect to regulatory focus, an individual's focus will guide them from an actual state to a desired end-state. Furthermore, the regulatory focus influences an individual's information processing, consideration sets, evaluation, and choice between different alternatives (Codini et al., 2018). The desired aim for a promotion-oriented individual is the presence of positive outcomes, whereas for a prevention-oriented individual, it is the absence of negative outcomes. In terms of ethical consumption, the payoff for promotion-oriented consumers "comes in the shape of the satisfaction and fulfilment of knowing that they are contributing to an environmental cause" (Codini et al., 2018, p. 7). For a prevention-oriented consumer, the payoff may come from avoiding environmental damage and environmental footprints.

Notably, consumers, regardless of their regulatory focus, are likely to view buying products from a brand that greenwashes as a mistake, considering that consumers are being misled by the sustainability claims. However, it may be of greater importance for prevention-focused consumers to avoid being misled by sustainability claims as their behaviour is motivated by avoiding

mistakes. Consequently, we assume prevention-focused consumers are more critical of a brand's sustainability claims as opposed to promotion-focused consumers. With a more critical view, we also suspect that prevention-focused consumers will evaluate claims made by brands more carefully, compared to promotion-focused consumers. This aligns with previous research, which shows that prevention-focused individuals are more active during their pursuit of the desired end-state (Codini et al., 2018). Therefore, we argue that prevention-focused consumers will appreciate factually based arguments with the characteristics of specificity to a larger extent. As this arguably is more likely to be present in a claim with a resource-based explanation for sustainability efforts, we expect to find resource-based explanations to have a larger impact on prevention-focused consumers' perception of the credibility of the sustainability claims, compared to ethical explanations. In other words, we expect the regulatory focus to moderate the relationship between resource-based explanations and the perceived credibility of the sustainability claims, making the relationship stronger if the consumer has a prevention focus.

H2: Regulatory focus will have a moderating effect on the perceived credibility in terms of strengthening the relationship if a) the explanation is resource-based and b) the consumer is prevention-focused.

Promotion-focused consumers are more eager to achieve positive outcomes and are more risk-seeking in their approach (Zou & Chan, 2019). Due to their openness to risk and uncertainty, they are more comfortable with taking chances (Codini et al., 2018). Furthermore, Codini et al. (2018) argue that there may be a tendency for promotion-oriented consumers to be more willing to purchase green products compared to prevention-oriented consumers. Therefore, we suspect that promotion-focused consumers are more likely to perceive sustainability claims, regardless of the explanation, as more credible compared to prevention-focused consumers. Additionally, we expect to find that sustainability claims with an ethical explanation have the strongest effect on perceived credibility on promotion-focused consumers.

H3: Promotion-focused consumers will perceive sustainability claims as more credible compared to prevention-focused consumers, regardless of the explanation.

H4: Sustainability claims with an ethical explanation will have the largest effect on the perceived credibility of sustainability claims on promotion-focused consumers.

We base H4 on theory describing how promotion-focused consumers will act and behave to fulfil the goals associated with their “ideal self”. We suspect explanations with an ethical aspect will to a larger degree speak to the “ideal self” of the consumers compared to other types of explanations.

3 Research Methodology

The objective of our thesis is to determine which factors may influence the perceived credibility of sustainability claims, depending on what type of explanation brands use and the consumers' regulatory focus. We also want to see the difference in effects these variables have depending on the history of the brand. To reach this objective, we used an explanatory design, as we were attempting to establish a causal relationship between different variables and the perceived credibility of sustainability claims (Saunders, Lewis & Thornhill, 2019). Further, the research design was quantitative, given how quantitative designs measure relationships between different variables numerically, and thus allowed us to use both statistical and graphical techniques (Saunders et al., 2019). In this chapter, we will further elaborate on the research design employed, the procedure used in our thesis, including the recruitment process of participants, treatment and measures used.

3.1 Research Design

Our thesis can be classified as experimental research, which has the objective to determine how a treatment affects an outcome (Creswel, 2014). According to Malhotra, Nunan and Birks (2017), experimental design is a procedure that consists of specifying different elements in the research. These elements include the test units used, the independent variable manipulated, the dependent variable measured and how one will attempt to control extraneous variables. Furthermore, our experiment can be classified as a cross-sectional study, as we only investigated the effects of the different variables at one particular point in time (Saunders et al., 2019). With a cross-sectional approach, we were limited to the respondents' perceptions at the specific time of the study. Hence, we cannot draw conclusions regarding whether the perceived credibility of respondents would have changed over time if they would have been exposed to the brands' claims more often. However, with a cross-sectional approach, we might reduce potential threats of extraneous variables, such as maturation, history and mortality (Malhotra et al., 2017; Saunders et al., 2019).

3.1.1 Factorial Design

As presented in the conceptual model in Figure 2 (chapter 2.5), we wanted to investigate the potential influence that different variables could have on the perceived credibility of sustainability claims. The variables manipulated were the types of explanations the different brands gave to their sustainability efforts and the history of the brand presented to the participants. In our experiment, the respondents were exposed to these different explanations through an ad. Further explanation of the ads is presented in the subsequent chapter.

To find the influence of the independent variables on the perceived credibility of sustainability claims, a factorial design was utilized. This type of design allows us to “measure the effects of two or more independent variables at various levels”, and also allows “for interaction between variables” (Malhotra et al., 2017, p. 322). In our case, there were two independent variables; the type of explanation and company, where each contained different levels, making a factorial design suitable. The participants were exposed to one of the two different companies. In addition, there were four different levels of explanation type within each company, resulting in a 2x2 factorial design. The four levels within each company were a resource-based explanation, an ethical-based explanation, a combination of the two or no explanation. The treatment group that was offered no explanation is consequently considered a control group. Therefore, we have a between-subject design where each participant is exposed to only one treatment (Charness, Gneezy & Kuhn, 2012). By taking this approach we were ensuring that there would be no carry-over effects from having participants view both fictional companies. The factorial design is presented in Figure 3 below.

| | | Brand | |
|--------------------|-----------------------|---|--|
| | | <i>Disadvantageous pre-existing perceptions</i> | <i>Advantageous pre-existing perceptions</i> |
| Explanation | <i>Resource-based</i> | <i>Treatment group 1</i> | <i>Treatment group 5</i> |
| | <i>Ethical-based</i> | <i>Treatment group 2</i> | <i>Treatment group 6</i> |
| | <i>Combination</i> | <i>Treatment group 3</i> | <i>Treatment group 7</i> |
| | <i>None</i> | <i>Treatment group 4</i> | <i>Treatment group 8</i> |

Figure 3: The factorial design

3.2 Sampling Process

The sampling process aims to obtain the necessary information about characteristics of a population (Malhotra et al., 2017), but reduce the amount of data that needs to be collected to draw conclusions about a larger population (Saunders et al., 2019). In this section we will define and explain our choices in this process.

The sample should be recruited from a subset of the population we want to draw conclusions about (Saunders et al., 2019). This subset is called the target population, where our *target population* consists of both male and female UK residents within the age range of 18 to 80. The age range can be considered broad. However, we argue the energy industry is relevant for most age groups and does not specifically target consumers within a certain age. We also argue individuals within this age range use products or services supplied by companies within the energy industry. Although younger age groups may also use these products and services, individuals above the age of 18 are more likely to pay for these products and services themselves, e.g., fuel for vehicles and electricity supplied to their homes. Further, we chose to investigate UK residents as the UK is a large actor within the energy industry, both in terms of oil extraction and wind power (Department of

Business, Energy & Industrial Strategy, 2020). Therefore, it is likely that UK residents have previous knowledge and associations connected to the industry, specifically to oil and wind power. This may help to enforce the treatment of one of the brands having a disadvantageous position in the consumers' minds in terms of sustainability.

The *sample size* amounted to 400 participants. As previously mentioned, in section 3.1.1, our experiment consists of eight treatment groups. By having a between-subject design, a sufficient and equal number of participants within each group is needed in order to compare the groups and draw valid conclusions from our findings. We set the sample size to 50 participants for each group, equalling 400 participants in total. Subsamples containing over 30 participants are deemed as acceptable sample sizes (Saunders et al., 2019).

To distribute our questionnaire to the target population, we used a UK-based company called PanelBase, who offers sampling of participants for research as one of their services (PanelBase, n.d.a). Consequently, our *sampling frame* was any UK resident within the age group 18 to 80 who was a member of PanelBase's panel at the time of the experiment. Their overall panel consists of approximately 300,000 people in the UK. Based on our target population, PanelBase ensured that the qualified participants were reached, and through their systems the questionnaire was distributed until 400 participants had responded to the questionnaire. PanelBase either compensates participants with £3 or a prize-draw entry for completing the questionnaire (PanelBase, n.d.b). Anyone within their panel who qualifies has an equal chance of participating in the experiment. However, since they have to be a member of PanelBase, our whole target population did not have a fixed probabilistic chance of being recruited for the sample. Thus, our *sampling technique* can be considered as a non-probability sampling (Malhotra et al., 2017). More specifically, it can be categorized as a convenience sample, considering whether the participants would partake in the experiment or not relied on their availability and willingness.

3.3 Treatment

To test our hypotheses, we decided to focus on two fictional companies within the energy industry. This is an industry where consumers are likely to have associations and perceptions about considering its large presence in the UK (Department of Business, Energy & Industrial Strategy, 2020). At the same time, they may not feel a strong loyalty towards existing companies. The industry also consists of different companies which represent both more and less sustainable operations, which makes it easier to create fictional brands with a clearer distinction between the two.

3.3.1 Brand 1: Disadvantageous Pre-Existing Perceptions

We wanted one of the fictional brands to represent a company with disadvantageous pre-existing perceptions due to its history of unsustainable operations. Thus, we devised one company with long experience in extraction and production of oil and gas. Further, this company would have recently moved towards more sustainable operations of wind power, while additionally still operating with oil and gas. For the brand to seem realistic to the respondents, the name used for the company was EcoOil. This brand name was meant to represent both a greener shift with the word “Eco”, but also their previous focus on unsustainable energy operations with the word “Oil”. The reason behind the name can also be explained in terms of creating pre-existing perceptions. These perceptions may not exist as the brand is fictional. However, “oil” may be a word that consumers associate as less sustainable, and thus may affect their perception of the brand in a disadvantageous direction when first introduced to it. In order to make the respondents acquainted with the brand, they were given a brief introduction to the company and its history. This introduction was based on descriptions found on websites of real companies within the energy industry. The following introduction was presented to the respondents exposed to EcoOil:

“EcoOil is an international energy company with a long history of extraction, production, refining and marketing of oil and natural gas. They supply oil and gas globally in order to provide energy to industries, communities and homes. In more recent years, EcoOil has developed solutions within renewable energy where they actively invest in offshore wind, solar energy and geothermal energy.”

3.3.2 Brand 2: Advantageous Pre-Existing Perceptions

The other brand aimed to represent a newer company that produced only renewable energy (i.e., wind power), and had no previous history in less environmental energy production. To make the respondents associate this brand with more sustainable operations, the brand was named EcoWind. Therefore, the name is very similar to EcoOil, but we suspected the word “wind” to be perceived as more sustainable and not have the same negative associations as the word “oil”. The following introduction was given to the respondents exposed to EcoWind:

“EcoWind is a new company that produces renewable energy. The company supplies renewable energy in Europe, and is a global actor within energy trades. They produce water power, wind power, solar power and gas power. Additionally, they deliver district heating and buy and sell energy used in industries, communities and homes.”

3.3.3 The Ad

Half of the respondents were exposed to a poster ad from EcoOil, whereas the rest were given the same ad but from EcoWind. These posters were identical within each treatment group, so they were given the same brand name and explanation. This way we were ensuring that no other factors within the ad could influence the variables we were trying to measure. To make the ads more realistic, we used a background that was representative of both brands within the industry, and we created logos for both EcoOil and EcoWind. The logos were identical except for the words “oil” and “wind”. The sustainability claim was presented at the top of the ad:

“Our products provide clean energy, and the CO₂ emissions from the production of our products are approaching zero”.

This claim was a combination of product- and process-orientation, as these were deemed the most specific from previous research (Carlson et al., 1993). Moreover, this claim was the same for every respondent regardless of the type of explanation. The different types of explanation used had the wordings as presented in Table 1 below.

| Type of explanation | Explanation |
|---------------------|--|
| Resource-based | “We have the competences to make a difference.” |
| Ethical-based | “All businesses must contribute to a cleaner planet. We do our part.” |
| Combination | “All businesses must contribute to a cleaner planet, and we have the competence to make a difference.” |
| None | *No explanation presented in the ad* |

Table 1: The explanations presented in the questionnaire.

As a result, we were left with eight different ads; four ads for EcoOil and four ads for EcoWind. Below is an example of ads for EcoOil and EcoWind that were shown to respondents exposed to resource-based explanations, meaning treatment group 1 and treatment group 5.



Figure 4: Ads for EcoOil and EcoWind with resource-based explanations.

Illustrations for all eight ads can be found in Appendix A.

3.4 Questionnaire and Measurements

To enable us to test our hypotheses and answer our research questions, different variables needed to be measured. First and foremost, we had to measure our dependent variable of perceived credibility, consisting of the two constructs (1) expertise and (2) trustworthiness. Additionally, we needed to map the regulatory focus of our respondents in order to connect this variable to perceived credibility. Additionally, we suspected other variables could potentially affect the perceived credibility, so we wanted to measure the respondents' green values as well as the perceived fit between the company and the claim. To form our questionnaire, we used established scales utilized in previous research that have measured similar constructs. Hence, we found scales for perceived credibility (expertise and trustworthiness), perceived fit, personal values (green consumer values) and regulatory focus. In this section, we will describe the established scales used and adjustments made in order to present the finalized questionnaire used in the experiment.

The initial items in the questionnaire that were related to the expertise and trustworthiness of EcoWind and EcoOil were adopted from Newell and Goldsmith's (2001) perceived credibility scale. The eight items reported a Cronbach's alpha between 0.84 and 0.92. However, we performed a pilot test on six acquaintances, which revealed that some questions were perceived as confusing. This included the questions "I believe the company does not have much experience" and "I believe the company has great expertise". These were deemed too similar, and thus confusing. Hence, we left out the latter item in our final questionnaire and therefore only adopted seven items from Newell and Goldsmith (2001). Additionally, two items were adopted from Lock & Seele (2017) to assess trustworthiness in the form of sincerity. Once again, we had originally adopted three items that had a reported Cronbach's alpha of 0.82. Nevertheless, once more the pilot-test revealed that the questions "I think the text reflects the genuine intentions of the company" and "I think that the company's intentions correspond with the text" were too similar, hence we chose to omit the last item. Furthermore, the pilot test revealed some of the questions adopted were confusing due to their reversed wording. With this in mind, we changed some of the questions, such as from "I believe the company does *not* have much experience" to "I believe the company has much expertise".

We also included three items that allowed us to assess the perceived fit between the fictional companies and the sustainability claim. Again, we chose to use items from Lock and Seele (2017), who had reported a Cronbach's alpha of 0.65. The items were originally formulated with the aim of measuring the perceived appropriateness between a company and their CSR reports, hence we adapted the scale by making small adjustments in the formulation to fit sustainability related to the energy sector. These items were included as previous research has illustrated that the level of compatibility may affect the perceived credibility (Breves et al., 2019). Therefore, it is important to include this measure as a low perceived fit could potentially explain differences in perceived credibility. Consequently, this enabled us to draw more precise conclusions from the data collected in terms of what factors actually affect the perceived credibility.

Furthermore, we wanted to include questions related to the personal values of the participants. We chose to follow this line of inquiry because values, especially green consumer values, could influence how the participants perceived the green claims. Similarly, as with the questions concerning the fit, it was necessary to measure the green consumer values of the respondents, to allow us to draw correct conclusions from the data collected. Thus, we adopted six items from Haws, Winterich and Naylor (2014), with a reported alpha of 0.89, to determine the participants' green personal values.

The scales adapted from Newell and Goldsmith (2001), Lock and Seele (2017), and Haws et al. (2014), were 7-point Likert Scales. Hence, we employed a 7-point Likert scale format to measure the participants' level of agreement on a metric scale. A Likert scale is the most frequently used psychometric tool among psychological measurements that require self-reporting (Wakita, Ueshima, & Noguchi, 2012). The seven points allowed for a neutral anchor, enabling the participants to give a neutral response so they could choose to respond in a balanced and symmetric manner. Having a variety of options increased the probability of meeting the objective reality of the participants (Joshi, Kale, Chandel & Pal, 2015), as they could select the 'exact' option that fits their opinion rather than having to pick an option that was 'close' to it. The 7-point Likert scale provided seven response categories 1) Strongly disagree, 2) Disagree, 3) Somewhat disagree, 4) Neither agree nor disagree, 5) Somewhat agree, 6) Agree, and 7) Strongly agree.

Moreover, we had to uncover the participants' regulatory focus. To do so, a composite regulatory focus scale by Haws, Dholakia & Bearden (2010) was utilized, reporting a Cronbach's alpha of

0.79 for promotion-focus and 0.74 for prevention-focus. This scale used items from three earlier scales. These were the RFQ scale developed by Higgins et al. (2001), the Lockwood scale developed by Lockwood, Jordan and Kunan (2002), as well as the BIS/BAS scale developed by Carver and White (1994). The composite scale consisted of a ten-item 5-point scale where five items related to promotion-focus, and five items related to prevention-focus. The advantage of using this scale compared to any of the other three is that it covers the principles of regulatory focus and includes both emotional and cognitive measures, in addition to using items that are future, present, and past-oriented (Haws et al., 2010).

As the scale delivers two individual scores for promotion- and prevention-focus, we had to decide how to classify a respondent as either prevention- or promotion-focused. To classify the respondent as belonging to one of these orientations, they were assigned as having a regulatory focus based on their highest score. This meant that a respondent who had a promotion-score higher than the prevention-score was classified as being promotion-focused, and a respondent with a prevention-score higher than a promotion-score were classified as prevention-focused.

Apart from the questions designed to measure the above-mentioned constructs, we asked the participants demographic questions related to their age, gender and nationality. These questions were necessary to gain information about our sample, and to ensure we had collected data from a sample representative of the target population. Additionally, information concerning age and gender can be used in the analysis to gain a deeper insight into differences in age groups and between genders, as well as being able to account for these variables.

The participants were given a total of 32 questions, starting with questions regarding social demographics. They were then presented with the introduction to the company and the ad, followed by nine questions measuring perceived credibility and three questions measuring perceived fit. These questions specifically concerned the treatment they were exposed to and requested the respondents' opinion about the ad and information being presented to them. Malhotra et al. (2017) argues that opinions are suitable opening questions as most individuals like to express their point of view. Consequently, this may increase the cooperation of the participants from the start of the questionnaire. The questions concerning the consumers' regulatory focus were given at the end of the questionnaire. These questions can be deemed as more sensitive as they aim to

tap into the respondents’ personal life, e.g., experiences from their childhood and personal ambitions in life. Placing sensitive topics at the end of the questionnaire may increase their willingness to participate in the experiment (Malhotra et al., 2017). Table 2 below summarizes the number of items within each of the constructs we measured.

| Construct | Items | Reference |
|-----------------------|--|--|
| Perceived credibility | Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9 | Newell & Goldsmith, 2001. Lock & Seele, 2017. |
| Perceived fit | Q10, Q11, Q12 | Lock & Seele, 2017. |
| Personal values | Q13, Q14, Q14, Q16, Q17, Q18. | Haws, Winterich & Naylor, 2014. |
| Regulatory focus | Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28 | Haws, Dholakia and Bearden, 2010. |
| Social demographics | Q29, Q30, Q31 | |
| Manipulation checks | Q32 | |

Table 2: A summary of the number of questions within each construct.

The items utilized is presented in Appendix B, whereas illustrations of the questionnaire presented to the respondents can be viewed in Appendix C.

3.4.1 Manipulation Check

A vital part of experiments is to ensure that you are testing the variables as intended. Manipulation checks can be used as a method to verify this (Hauser, Ellsworth & Gonzalez, 2018). In our experiment, there were some threats that could affect our results. First and foremost, we had to ensure respondents paid attention to the ad and information presented to them. Therefore, we included a question which aimed to ensure that we measured what we had intended and that the manipulations in our experiment worked correctly. Therefore, the respondents were asked whether the brands had given an explanation for their sustainability efforts. Respondents within treatment

groups that were presented with an explanation should answer “yes”, whereas respondents in the treatment group with no explanation should answer “no”. The manipulation check question aimed to clarify whether the respondents had looked at, comprehended and understood the ads and information presented to them.

3.4.2 Qualtrics

The questionnaire was made in Qualtrics, where all participants were asked the same questions, but were only presented with one poster ad. By using the randomization function in Qualtrics, we were able to ensure that participants responding to the questionnaire were evenly and randomly assigned to one of the treatments. We made all the questions as “force response”, meaning the participants could not move forward in the questionnaire without answering all questions. In addition, we disabled the opportunity to move backwards in the questionnaire, as we did not want the respondents to be able to change previous answers as they progressed in the questionnaire. This was also important to make sure they could not go back and look at the ad when asked the manipulation check question. These functions were necessary to increase the validity of our data, which will be further discussed in chapter 5.4.

4 Analysis

In this chapter, we will go through the analysis of the data collected. We will start by describing how the dataset was cleaned and give descriptive statistics of the final data used in the analysis. Afterwards, we will look at the scale reliability of our measurements and check the extent to which our data meets the assumptions for our analysis. Finally, in section 4.4 we will conduct an ANCOVA analysis to test all the hypotheses (H1a, H1b, H2, H3 and H4), and present additional findings observed in our analysis.

4.1 Cleaning the Dataset

Before moving forward with analysing the data, we cleaned the dataset for responses that should not be included in the analysis. The total number of respondents equated to 411. As shown in the chart below (Figure 5), the 411 respondents were distributed amongst eight groups.

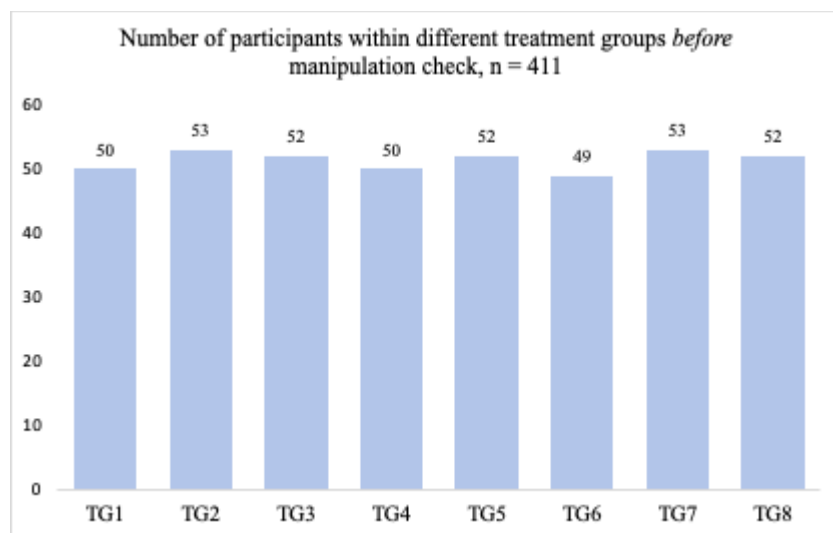


Figure 5: Number of participants within each treatment group pre-manipulation check.

Although the questionnaire was set to be randomly and evenly distributed, some respondents dropped out before completing the questionnaire, thus some treatment groups had more respondents than others; making the distribution somewhat uneven. Nonetheless, the distribution of respondents within the different treatment groups was deemed acceptable.

Data that needed to be excluded from the analysis included answers from respondents outside of our target population, as well as respondents who did not pass the manipulation check. The target population consisted of UK residents, both male and female, between the ages of 18 and 80. Although PanelBase’s system should have ensured only people within our target population were reached, we did have one respondent who claimed to be under 18 years old and did not live in the UK. Therefore, this respondent’s answers were excluded from the dataset. Furthermore, the respondents should pass the manipulation check, where they were asked whether they could recall seeing an explanation for EcoOil or EcoWind’s sustainability focus. Respondents within treatment group 1, 2, 3, 5, 6 and 7 should have answered “yes” to this question, whereas respondents within treatment groups 4 and 8 should have answered “no” to pass the manipulation check. Unfortunately, a great number of participants did not pass the manipulation check, as shown in Table 3 below.

| | TG1 | TG2 | TG3 | TG4 | TG5 | TG6 | TG7 | TG8 | N |
|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|----------|
| <i>Quantity</i> | 21 | 18 | 17 | 36 | 18 | 17 | 14 | 24 | 175 |

Table 3: Number of participants who failed the manipulation check according to their respective treatment group.

As can be seen from the table above, the treatment groups that were not presented with an explanation, TG4 and TG8, had the largest number of participants failing to answer the question correctly. A possible explanation for this might be that making the distinction between the introduction to the company, the claim itself and the explanation may be easier for the groups that were given an explanation in the poster ad, that clearly stated why the company wanted to focus on sustainable operations. Hence, participants in TG4 and TG8 may have answered “yes” to the question because they thought the claim and introduction perhaps provided some type of explanation, not because they did not pay attention to the ad. Moreover, removing these participants from the data would minimize the sample in TG4 to only contain 14 respondents, whereas TG8 would only contain a sample of 28. Additionally, all of the groups would lose a big portion of the sample if they were excluded based on this recall question. Thus, we decided to double-check the participants who failed the manipulation check, by focusing on their answer to

the question “I feel that the claim addresses sustainability issues well”. This question could pinpoint whether we have been able to correctly manipulate what we intended. In this case, the claim would be identical for all groups, and if some participants did not find the claim to be sustainable, this could be the reason for potential low scores, and we may not be measuring what we had intended. Thus, participants who failed the recall manipulation question were checked against the question concerning the sustainability claim. Participants who both failed the recall manipulation check and also gave a score of 3 or less for the question concerning the claim addressing the sustainability issues well, were left out of the dataset. This included a total of 13 participants; 4 from TG1, 4 from TG2, 1 from TG3, 2 from TG4 and 3 from TG5. Note that giving a low score to item F3, would not result in exclusion if the recall question was answered correctly. As a part of the fit scale, this item is first and foremost meant to measure the perceived fit between the claim and the company due to its potential for being a covariate. Removing all respondents giving low scores to this question could influence our analysis where perceived fit could be artificially high.

After this step, the 411 responses were reduced to 398. Additionally, we noticed that 69 participants had the same promotion- and prevention-score. These participants were classified as neutral, and we decided to exclude these participants from our research as they could not be placed into one of the two categories. Hence, the total number of participants in our research amounted to 329 with the following division between treatment groups (see Figure 6).

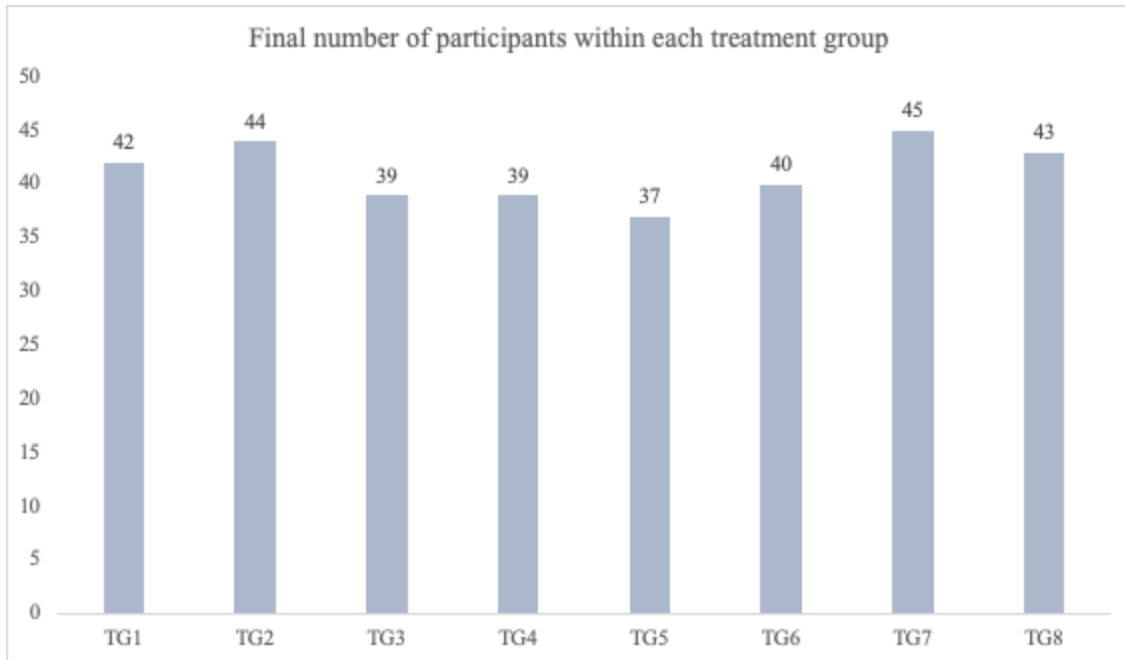


Figure 6: Final number of participants within each treatment group post data clean up, $n = 329$.

As illustrated in Figure 6, the number of participants within each treatment group ranges from 45 in TG7 to 37 in TG5. However, we deem the sample size within each treatment group as acceptable, as the recommended amount of 30 (Saunders et al., 2019) is met, although our aim of 50 within each group was not reached.

4.2 Descriptive Statistics

To gain a deeper insight into our sample, we looked at descriptive statistics concerning the participants. This included social demographics in terms of age and gender, and the participants' regulatory focus. By assessing the descriptive statistics concerning these variables, we were able to look at how the participants were distributed amongst different treatment groups. We deemed this as important in order to establish whether the groups could be regarded as equal in terms of demographics and regulatory focus.

4.2.1 Social Demographics

Overall, the division of males and females were approximately 43 per cent males and 57 per cent females. As presented in Table 4 below, all the groups had a majority of female respondents, apart from TG6 where the number of males and females within the treatment group was equal with 20 respondents from each gender.

| <i>Treatment group</i> | <i>Female</i> | | <i>Male</i> | |
|------------------------|---------------|-------------------|---------------|-------------------|
| | <i>Amount</i> | <i>Percentage</i> | <i>Amount</i> | <i>Percentage</i> |
| <i>TG1</i> | 23 | 55% | 19 | 45% |
| <i>TG2</i> | 25 | 57% | 19 | 43% |
| <i>TG3</i> | 24 | 62% | 15 | 38% |
| <i>TG4</i> | 21 | 54% | 18 | 46% |
| <i>TG5</i> | 22 | 59% | 15 | 41% |
| <i>TG6</i> | 20 | 50% | 20 | 50% |
| <i>TG7</i> | 27 | 60% | 18 | 40% |
| <i>TG8</i> | 26 | 60% | 17 | 40% |
| <i>N=329</i> | 188 | 57% | 141 | 43% |

Table 4: Distribution of gender between different treatment groups.

Furthermore, most of the participants were within the age groups of 45-54 and 55-64, making up 47 per cent of the sample in total, where the lower and upper tier of the age groups contained the least number of participants. Table 5 below provides an overview of the distribution of age groups.

| Age group | 18-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75-80 | N=329 |
|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Quantity</i> | 15 | 51 | 56 | 63 | 93 | 44 | 7 | 329 |
| <i>Percentage</i> | 5% | 16% | 17% | 19% | 28% | 13% | 2% | 100% |

Table 5: Distribution of participants by age group, given in quantity and percentage.

In addition, Table 6 below illustrates the age distribution between the two genders. All age groups, apart from 65-74, contain a majority of females.

| Age group | 18-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75-80 | N=329 |
|------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Female</i> | 10 | 33 | 32 | 35 | 55 | 19 | 4 | 188 |
| <i>Male</i> | 5 | 18 | 24 | 28 | 38 | 25 | 3 | 141 |

Table 6: Distribution of participants by age group and gender.

Table 7 below, shows the different age groups within the different treatment groups.

| Age group | TG1 | TG2 | TG3 | TG4 | TG5 | TG6 | TG7 | TG8 |
|------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 18-24 | 2 | 2 | 2 | 1 | 0 | 3 | 2 | 3 |
| 25-34 | 7 | 4 | 7 | 10 | 9 | 5 | 5 | 4 |
| 35-44 | 7 | 6 | 2 | 4 | 10 | 7 | 11 | 9 |
| 45-54 | 6 | 8 | 6 | 10 | 5 | 7 | 11 | 10 |
| 55-64 | 14 | 12 | 15 | 7 | 9 | 14 | 11 | 11 |
| 65-74 | 5 | 9 | 6 | 7 | 4 | 4 | 4 | 5 |
| 75-80 | 1 | 3 | 1 | 0 | 0 | 0 | 1 | 1 |
| N=329 | 44 | 39 | 39 | 37 | 40 | 45 | 45 | 43 |

Table 7: Distribution of participants by age group and treatment group.

4.2.2 Regulatory Focus

We wanted to investigate the distribution of the participants' regulatory focus, which was found by creating individual promotion- and prevention-scores for each participant. These scores were calculated based on promotion-questions and prevention-questions, which individually generated an average score. Participants with a promotion-score greater than their prevention-score were categorized as promotion-focused, and vice-versa for prevention-focus. If the participant's promotion-score was equal to their prevention-score, they were categorized as neutral and removed from the research as explained in the clean-up section. 38 per cent of the participants were prevention-focused, and 62 per cent were promotion-focused. This distribution was even amongst males and females, as presented in Table 8 below.

| Regulatory Focus | <i>Female</i> | | <i>Male</i> | | <i>Total</i> | |
|-------------------------|---------------|-------------|-------------|-------------|--------------|-------------|
| | <i>n</i> | <i>%</i> | <i>n</i> | <i>%</i> | <i>n</i> | <i>%</i> |
| Promotion-focused | 115 | 61% | 88 | 62% | 203 | 62% |
| Prevention-focused | 73 | 39% | 53 | 38% | 126 | 38% |
| <i>N=329</i> | <i>188</i> | <i>100%</i> | <i>141</i> | <i>100%</i> | <i>329</i> | <i>100%</i> |

Table 8: Distribution of regulatory focus by gender and in total.

In terms of regulatory focus within the treatment groups, Figure 7 below illustrates that most treatment groups had more promotion-focused participants, except for TG6 where 21 out of 40 participants were prevention-focused.

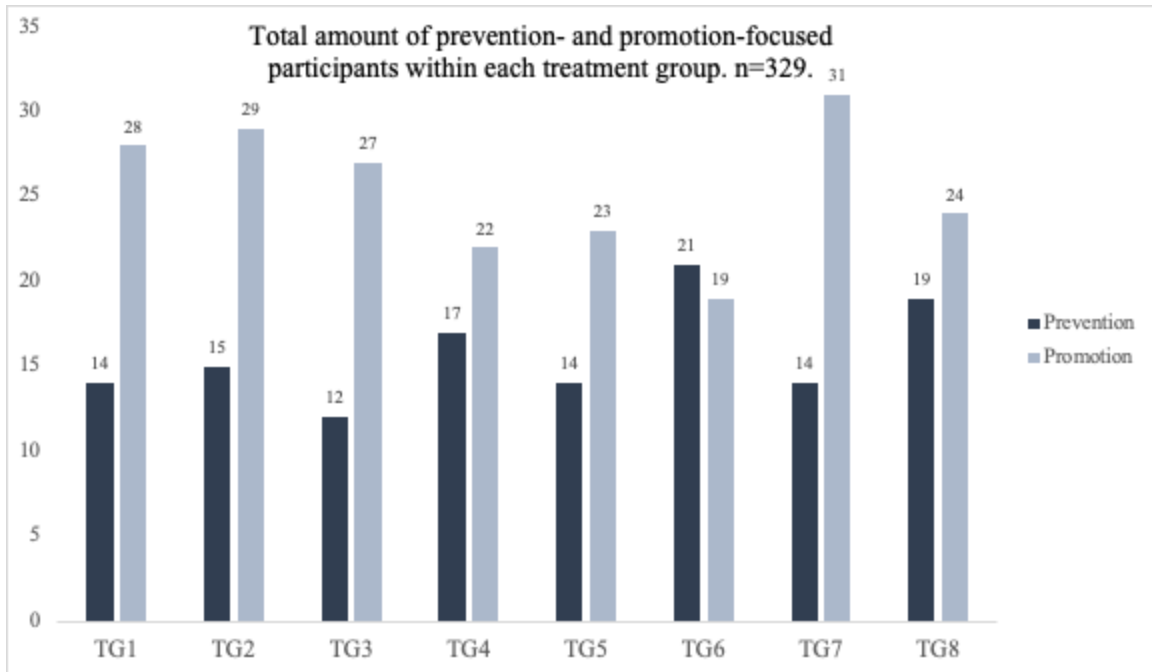


Figure 7: Regulatory focus of participants within the treatment groups.

4.2.3 Green Values and Perceived Fit

To gain a deeper understanding of our participants, we wanted to assess their level of green values and the score they gave of the perceived fit. Examining the number of participants giving low, moderate and high scores to these questions, may help us later when interpreting the results. As described in chapter 3.4., green values and perceived fit were measured using a 7-point Likert scale. By creating summated average scores for each participant, we decided to classify their green values as either low, moderate or high. Low scores were less than 2.5, moderate scores were between 2.5 and 5.5, and high was a score between 5.5 and 7. With this classification, 254 participants would be classified as having “high” green values, 67 with “moderate” green values, and 8 participants generated a green-value score classifying them as having “low” green values. This is illustrated in Figure 8.

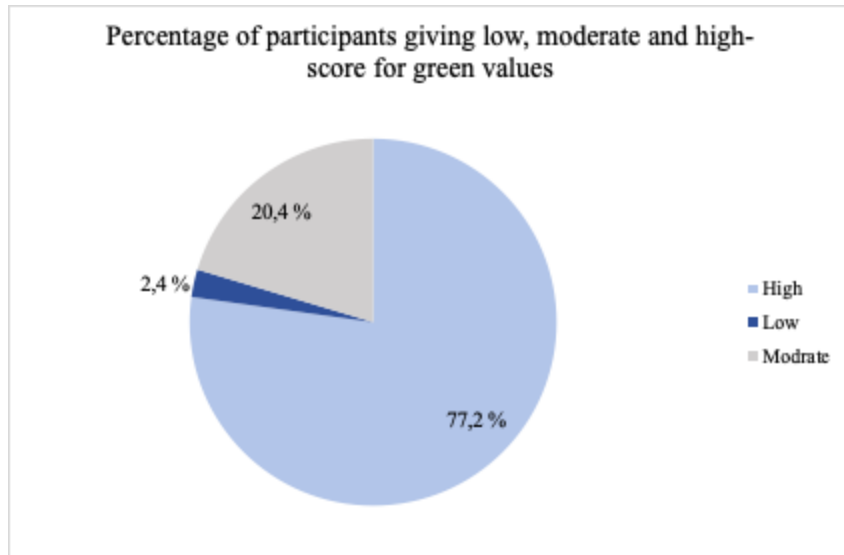


Figure 8: Percentage of participants classified by their green values score as either low, moderate or high.

Using the same logic for the level of perceived fit, Figure 9 illustrates the percentage of participants giving low, moderate and high scores. We found that 130 of the participants were in the high-fit category, 196 revealed moderate scores, and only 3 participants gave a low score to the perceived fit between the brand and the claim.

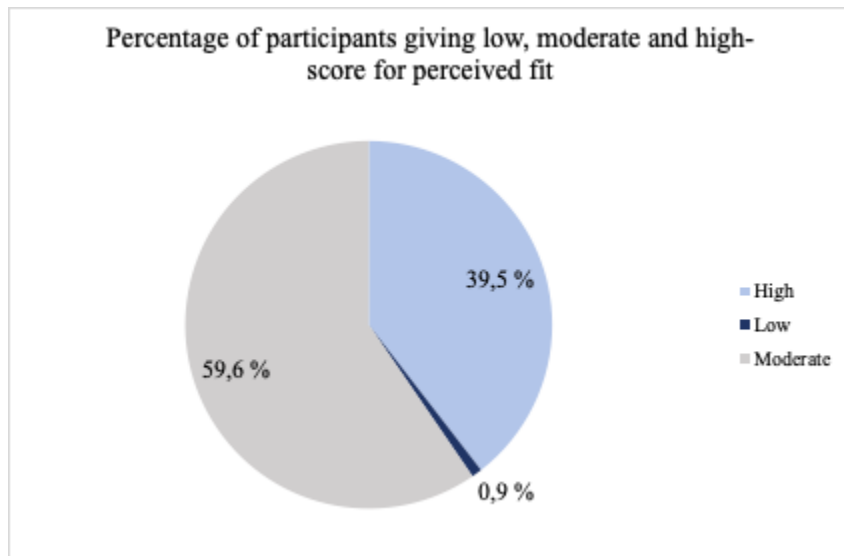


Figure 9: Percentage of participants classified as given low, moderate or high score for perceived fit.

4.3 Measurements

The questionnaire created for our research, utilized previously established scales to measure the different constructs of interest. As described in chapter 3.4 this included (1) scales measuring perceived credibility, consisting of an (a) expertise scale and (b) a trustworthiness scale, (2) scales measuring green values, (3) scales measuring perceived fit, as well as individual (4) promotion and (5) prevention scales. We used the answers from the items to create summated average scores for each scale, which the table below illustrates.

| Construct | Score |
|---|--|
| <i>1. Perceived Credibility (PERCRED)</i> | $(E1 + E2 + E3 + T1 + T2 + T3 + T4 + T5 + T6) / 9$ |
| <i>a. Expertise (E)</i> | $(E1 + E2 + E3) / 3$ |
| <i>b. Trustworthiness (T)</i> | $(T1 + T2 + T3 + T4 + T5 + T6) / 6$ |
| <i>2. Green values (G)</i> | $(G1 + G2 + G3 + G4 + G5 + G6) / 6$ |
| <i>3. Fit (F)</i> | $(F1 + F2 + F3) / 3$ |
| <i>4. RF_Promotion</i> | $(Pro1 + Pro2 + Pro3 + Pro4 + Pro5) / 5$ |
| <i>5. RF_Prevention</i> | $(Pre1 + Pre2 + Pre3 + Pre4 + Pre5) / 5$ |

Table 9: Calculating the summated scale and the different items used.

When using summated scales with several items forming a score, it is vital to check the internal consistency of the entire scale. The reasoning behind this is that different items within the scales aim to measure different aspects of the construct (Malhotra et al., 2017). Therefore, we conducted a scale reliability analysis in SPSS. An overview of the findings from the analysis is provided in the table below.

| Scale | Cronbach's alpha |
|--|--|
| <i>Perceived Credibility (PERCRED)</i> | 0.946 |
| <i>Expertise (E)</i> | 0.932 |
| <i>Trustworthiness (T)</i> | 0.934 |
| <i>Green values (G)</i> | 0.927 |
| <i>Fit (F)</i> | 0.894 |
| <i>RF_Promotion</i> | 0.663 improved to 0.758 when deleting item 1 |
| <i>RF_Prevention</i> | 0.618 improved to 0.679 when deleting item 1 |

Table 10: Findings from the scale reliability analysis.

It is apparent from Table 10 that most of the scales have a high internal consistency. According to Malhotra et al. (2017), a Cronbach's alpha between 0.6 and 1 is considered satisfactory. Thus, all the scales can be considered acceptable. However, from the scale reliability analysis, we found that removing some items would improve the Cronbach's alpha for RF_Promotion and RF_Prevention. Both of these scales indicated the lowest alpha with 0.663 for promotion and 0.618 for prevention, but they could both be improved by removing the first item for each scale. By doing this, the prevention-score would improve to 0.679, and the promotion-score would improve to 0.758. Thus, we removed the first items from both of these scales. Note that this would change the prevention-scores and promotion-scores of the participants. Consequently, this step was done prior to cleaning up the data, in order to categorize the participants correctly in terms of their regulatory focus.

4.3.1 Checking Assumptions for ANCOVA

For our data analysis, we conducted an ANCOVA, measuring the effects of a) explanation, b) company and c) regulatory focus on the dependent variable; perceived credibility. The ANCOVA allows us to control for possible covariates which may affect the results (Malhotra et al., 2017). These covariates included age, gender, the respondents' green values, as well as the perceived fit between the company and the claim. An imperative step when conducting an ANCOVA is to check whether the assumptions for this type of analysis are met. The assumptions include independent observations, normality, homogeneity of variance, homogeneity of regression slopes and linearity (van den Berg, n.d.).

The assumption of independent observations was met, as the respondents were only exposed to one treatment. Further, we analysed the normality of the groups consisting of the levels within the type of company and explanations, by using the Shapiro-Wilks test of normality. The results of this test are presented in Table 11.

| Shapiro Wilk – Test of Normality | Level | N | P-value |
|---|--------------|----------|----------------|
| Company | EcoOil | 164 | 0.003 |
| | EcoWind | 165 | <0.001 |
| Explanation | Resource | 79 | 0.003 |
| | Ethical | 84 | 0.003 |
| | Combination | 84 | 0.017 |
| | None | 82 | 0.003 |

Table 11: Shapiro-Wilks Test of Normality.

To determine that the subgroups are normally distributed, the p-value should indicate non-statistically significant results. However, as Table 11 points to, all the subgroups have a p-value of less than 0.05. Nonetheless, this assumption is mostly relevant for subgroups of $n < 20$ (van den

Berg, n.d.). As illustrated in Table 11, all of the subgroups have a sample larger than 79. Therefore, we do not deem the normality of our subgroups as an issue for the analysis.

Moving on, we had to check for homogeneity of regression slopes and variance. The results for testing the homogeneity of regression slopes is provided in Table 12, which looks at each independent variable in relation to the covariates.

| Homogeneity of regression slopes | RF*covariates | Explanation*covariates | Company*covariates |
|---|----------------------|-------------------------------|---------------------------|
| P-value | 0.878 | 0.379 | 0.912 |

Table 12: Checking for homogeneity of regression slopes between IVs and covariates of age, gender, green values and perceived fit.

Assessing the significance level, we see that the tests reveal only non-statistically significant results, which indicates that the assumption of homogeneity of regression slopes is met. To assess the homogeneity of variance, Levene's test was utilized and revealed a non-statistically significant result ($p = 0.640$). Consequently, we can assume we have met the assumption of homogeneity of variance.

The last assumption relates to the linearity between the covariates and the perceived credibility. To check for this, we conducted a linear regression analysis between green values, perceived fit and perceived credibility. Both of these regressions showed a p-value of less than 0.001. Consequently, the assumption of linearity between the covariates and the dependent variable is met. Additionally, we investigated the multicollinearity between the covariates of green values and perceived fit. This indicated a VIF-value of 1.163. A VIF-value close to 1 is considered acceptable, as this is deemed as the covariates not being heavily correlated to one another (Menard, 2001). To conclude, our data meets the assumptions related to ANCOVA, and we can thus move forward with the analysis.

4.4 Test of Hypotheses

4.4.1 Testing Hypothesis 1a and 1b

Our first hypothesis (H1a and H1b) concerns the effects of the independent variables, explanation and company, on the dependent variable, perceived credibility. More specifically, we hypothesized that resource-based explanations would have a stronger effect compared to ethical explanations (H1a), and this effect would be even larger for EcoOil than EcoWind (H1b).

H1a: Consumers will perceive brands with a resource-based explanation as more credible compared to an ethical explanation.

H1b: The difference in effect between resource-based and ethical explanations will be larger for brands with disadvantageous pre-existing perceptions.

When testing the hypotheses, we included the covariates age, gender, green values and perceived fit in the model to control for these effects. By looking at the differences in means for the various types of explanations, we see that, contrary to our expectations, ethical explanations (M = 4.994) overall produce a higher mean than the resource-based explanations (M = 4.993). However, this difference is very small, and the overall differences between the explanations are minor, as demonstrated in Table 13 below.

| <i>Explanations</i> | Resource | Ethical | Combination | None |
|---------------------|-----------------|----------------|--------------------|-------------|
| <i>Mean (M)</i> | 4.993 | 4.994 | 4.964 | 4.956 |

Table 13: The mean differences in perceived credibility between the types of explanations.

When testing for between-subjects effects, we get the following output for the independent variables of explanation, company and the interaction between the two.

| <i>DV: Perceived credibility</i> | <i>P-value (F)</i> | <i>Partial eta squared (η_p^2)</i> |
|----------------------------------|--------------------|--|
| Explanation | 0.972 (0.070) | 0.067 |
| Company | 0.085 (6.482) | 0.685 |
| Explanation*Company | 0.269 (1.318) | 0.012 |

Table 14: Testing for between-subjects effects of explanation, company and the interaction, with perceived credibility as the dependent variable.

From these findings, we observe no significant results ($p > 0.05$). However, the variable of company type would be significant at a p-value of 0.1. 68.5 per cent of the variance in the model can be explained by the type of company making the claim ($\eta_p^2 = 0.685$), whereas only 6.7 per cent is explained by the type of explanation used with the claim ($\eta_p^2 = 0.067$). As the variable of explanation type is not statistically significant [$F(3) = 0.070$, $p = 0.972$] we do not find support for H1a. Additionally, with no statistically significant effect detected in the interaction between the type of company and explanation [$F(1, 3) = 1.318$, $p = 0.269$] our findings reveal no support for H1b.

However, we wanted to investigate the interaction between the type of company and explanation further by specifically looking at the difference between the companies when given resource-based and ethical-based explanations. This revealed that EcoOil ($M = 5.058$) has a mean of 0.13 (see Table 15 below) more than EcoWind ($M = 4.928$) with a resource-based explanation, and for ethical-based explanation this difference is 0.197 (M EcoOil = 5.092, M EcoWind = 4.895).

| <i>Explanation</i> | <i>(I) Company</i> | <i>(J) Company</i> | <i>Mean difference (I-J)</i> | <i>P-value (F)</i> |
|--------------------|--------------------|--------------------|------------------------------|--------------------|
| Resource | EcoOil | EcoWind | 0.130 | 0.327 (0.963) |
| | EcoWind | EcoOil | -0.130 | 0.327 (0.963) |
| Ethical | EcoOil | EcoWind | 0.197 | 0.125 (2.371) |
| | EcoWind | EcoOil | -0.197 | 0.125 (2.371) |

Table 15: The mean difference of perceived credibility between the companies when given resource-based and ethical-based explanations.

However, these results are not statistically significant [resource $F(1, 317) = 0.963$, resource $p = 0.327$; ethical $F(1,317) = 2.371$, ethical $p = 0.125$]. Consequently, we do not find support for H1a and H1b.

4.4.2 Testing Hypothesis 2

The second hypothesis of this study concerns how regulatory focus has a moderating effect on the explanations' influence on perceived credibility. We predicted that the relationship between the explanations and the perceived credibility would be strengthened when the explanation was resource-based, and the consumer was prevention-focused.

H2: Regulatory focus will have a moderating effect on the perceived credibility in terms of strengthening the relationship if a) the explanation is resource-based and b) the consumer is prevention-focused.

To test H2, we examined the two-way interaction between resource-based explanations and the control group, as well as the consumers' regulatory focus. The covariates of age, gender, perceived fit and green values were included in the model. Table 16 below, compares the mean value for perceived credibility for promotion and prevention-focused consumers who were presented with either a resource-based explanation or no explanation at all.

| <i>Regulatory Focus</i> | <i>(I) Explanation</i> | <i>(J) Explanation</i> | <i>Mean difference (I-J)</i> | <i>P-value (F)</i> |
|-------------------------|------------------------|------------------------|------------------------------|--------------------|
| Promotion | Resource | None | 0.118 | 0.299 (1.086) |
| | None | Resource | -0.118 | 0.299 (1.086) |
| Prevention | Resource | None | -0.048 | 0.732 (0.118) |
| | None | Resource | 0.048 | 0.732 (0.118) |

Table 16: Comparison of the mean values of perceived credibility based on regulatory focus and explanation type.

The observed effects are the opposite of what we hypothesized, as we predicted the relationship between resource-based explanation and perceived credibility would be stronger for prevention-focused consumers. Prevention-focused consumers presented with resource-based explanations have a lower mean ($M = 4.976$) compared to that of the promotion-focused consumers ($M = 5.030$). Additionally, the mean for respondents who were not given any explanation was also less for promotion-focused consumers ($M = 4.912$) compared to prevention-focused consumers ($M = 5.024$). Further, it is evident that for prevention-focused consumers being presented with a resource-based explanation has a lower mean as opposed to prevention-focused consumers within the control group, contradicting H2. However, the observed overall interaction between regulatory focus and explanation type is not significant [$F(1,1) = 0.847$, $p = 0.359$]. This also applies to the interaction of the explanation types with each level of regulatory focus [promotion $F(1, 153) = 1.086$, $p = 0.299$; prevention $F(1, 153) = 0.118$, $p = 0.732$, see Table 16]. Consequently, the null hypothesis cannot be rejected, and we cannot find support for H2.

4.4.3 Testing Hypothesis 3

Our third hypothesis explores the difference between the perceived credibility of promotion-focused and prevention-focused consumers. We hypothesized that promotion-focused consumers will, in general, perceive the claims as more credible, regardless of the explanation type used.

H3: Promotion-focused consumers will perceive sustainability claims as more credible compared to prevention-focused consumers, regardless of the explanation.

Thus, we are only looking at the difference between the regulatory focus and not at the independent variables concerning explanations and company type. Our findings reveal that promotion-focused consumers tend to give a higher score of perceived credibility ($M = 5.009$) than prevention-focused consumers ($M = 4.923$, see Table 17 below).

| <i>Regulatory Focus</i> | <i>Mean</i> | <i>Mean difference</i> | <i>P-value (F)</i> |
|-------------------------|-------------|------------------------|--------------------|
| Promotion | 5.009 | 0.86 | 0.204 (1.623) |
| Prevention | 4.923 | -0.86 | 0.204 (1.623) |

Table 17: The mean difference of regulatory focus on perceived credibility.

Overall, promotion-focused consumers tend to give a score on perceived credibility of 0.86 more than prevention-focused consumers. However, no significant difference was found between promotion- and prevention-focused consumers ($F = 1.623$, $p = 0.204$). Again, the null hypothesis cannot be rejected, and we do not find support for our third hypothesis.

4.4.4 Testing hypothesis 4

With respect to the fourth hypothesis, it was predicted that ethical explanations have a larger effect on the perceived credibility when the consumer is promotion-focused. Hence, the fourth hypothesis concerns the effect of ethical explanations and the consumers' regulatory focus.

H4: Sustainability claims with an ethical explanation will have the largest effect on the perceived credibility of sustainability claims on promotion-focused consumers.

To test H4, we analysed the two-way interaction between regulatory focus and explanations. We specifically looked at the ethical explanations compared to the control group of no explanation. The findings are presented in Table 18.

| <i>Regulatory Focus</i> | <i>(I) Explanation</i> | <i>(J) Explanation</i> | <i>Mean difference (I-J)</i> | <i>P-value (F)</i> |
|-------------------------|------------------------|------------------------|------------------------------|--------------------|
| Promotion | Ethical | None | 0.183 | 0.129 (2.324) |
| | None | Ethical | -0.183 | 0.129 (2.324) |
| Prevention | Ethical | None | -0.101 | 0.465 (0.535) |
| | None | Ethical | 0.101 | 0.465 (0.535) |

Table 18: The mean difference between the ethical explanation compared to the control group with perceived credibility as the dependent variable.

As predicted in H4, ethical explanations have a larger effect on the promotion-focused consumers ($M = 5.020$) compared to prevention-focused ($M = 4.815$). Furthermore, the promotion-focused consumers presented with ethical explanations have a perceived credibility mean that is larger than the promotion-focused consumers in the control group ($M = 4.837$). However, the interaction of regulatory focus and the explanation types was not significant [$F(1, 158) = 1.083, p = 0.486$], and there was no significant difference between the two levels of explanation types for promotion-focused consumers [$F(1, 158) = 2.324, p = 0.129$] and prevention-focused consumers [$F(1, 158) = 0.535, p = 0.465$].

Additionally, we assessed whether there was a positive interaction effect between ethical explanations and promotion regulatory focus. This was done by looking specifically at promotion-focused consumers and comparing the ones presented with ethical explanations to the other types of explanations.

| <i>Regulatory focus</i> | <i>(I) Explanation</i> | <i>(J) Explanation</i> | <i>Mean Differences (I-J)</i> | <i>P-value (F)</i> |
|-------------------------|------------------------|------------------------|-------------------------------|--------------------|
| Promotion | Ethical | Resource | 0.062 | 1.000 (0.784) |
| | | Combination | 0.050 | 1.000 (0.784) |
| | | None | 0.179 | 0.842 (0.784) |

Table 19: Comparison of promotion-focused consumers presented with an ethical explanation vs. the other types of explanations with perceived credibility as the dependent variable.

The results, as shown in Table 19, indicate a positive relationship between promotion-focus consumers and ethical explanations. When the consumer is promotion-focused, ethical explanations have a higher mean ($M = 5.079$) compared to all the other types of explanations, where the largest difference is between ethical and no explanation ($M = 4.90$). Nonetheless, this observed effect is not significant [$F(3, 317) = 0.784, p = 1.00; p = 1.00; p = 0.842$], and we cannot reject the null hypothesis. Meaning, H4 is not supported.

4.4.5 Summary of Hypothesis Testing

The results indicate that there is no support for our four hypotheses. With respect to H1a and H1b, we cannot conclude that there is an effect between explanations and perceived credibility. Nor can we determine whether there is a positive relationship in the interaction of resource-based explanations and EcoOil on the perceived credibility, compared to ethical-based explanations. The investigation of H2 has shown that we cannot identify any significant effect to support our prediction of regulatory focus' moderation on the perceived credibility of the sustainability claim. Specifically, we cannot determine whether perceived credibility will increase when the consumer is prevention-focused, and the explanation is resource-based. For H3, regulatory focus made no significant difference to the perceived credibility. Although the findings implied that promotion-focused consumers overall perceived the claims as more credible, the effect was not significant. Our prediction in H4 pointed to whether ethical explanations would have the largest effect on the perceived credibility for promotion-focused consumers. Once more, our analysis revealed no

significant relationship between the interaction of regulatory focus and explanation on the dependent variable. As a result, the findings illustrate no support for our hypotheses.

4.5 Additional Results

Although our analysis did not reveal any support for our hypotheses, we continued to analyse the data in light of our research questions. RQ1 revolved around the potential effect different types of explanations may have on the perceived credibility. RQ2 concerned the role of regulatory focus and how it may affect the influence of explanations covered in RQ1. The decision to conduct additional analysis stems from two reasons. Firstly, our hypotheses looked at the effect of specific explanations type and regulatory focus. Therefore, by conducting an additional and broader analysis, we might reveal effects not covered in our hypotheses testing, but that would still help to answer our research questions. Secondly, the perceived credibility consists of two constructs; expertise and trustworthiness. Measuring the effect of explanations and regulatory focus on these constructs individually may reveal findings that can be valuable for brands and companies to use in practice and for future research to build upon. Thirdly, as the research on the topic is limited, exploring the issue further may bring about valuable insight. Thus, in this section, we will look at our additional findings with both the perceived credibility, expertise and trustworthiness as the dependent variable.

4.5.1 Perceived Credibility as the Dependent Variable

Although we did not find support for H1a or H1b when comparing the perceived credibility between the two companies and resource-based and ethical explanations, we did observe an effect when there were no explanations.

| <i>Explanation</i> | <i>(I) Company</i> | <i>(J) Company</i> | <i>Mean difference (I-J)</i> | <i>P-value (F)</i> |
|--------------------|--------------------|--------------------|------------------------------|--------------------|
| None | EcoOil | EcoWind | 0.388* | 0.003 (9.026) |
| | EcoWind | EcoOil | -0.0388* | 0.003 (9.026) |

Table 20: Comparison of the interaction between explanation and company with perceived credibility as the dependent variable.

As illustrated in Table 20, there is a significant interaction in the control groups [$F(1, 317) = 9.026$, $p = 0.003$], where EcoOil ($M = 5.150$) is perceived as more credible compared to EcoWind ($M = 4.762$). Thus, when there is no explanation given to their sustainability claim, the type of company making the claim seems to have a significant effect.

Our second hypotheses regarding regulatory focus only investigated the effect of regulatory focus alone or in interaction with the explanation type used. From Figure 8, it is evident that promotion-focused consumers perceive all explanations as more credible compared to prevention-focused consumers, except when promotion-focused consumers are given no explanation. However, as discussed in the hypothesis testing, this relationship was not significant.

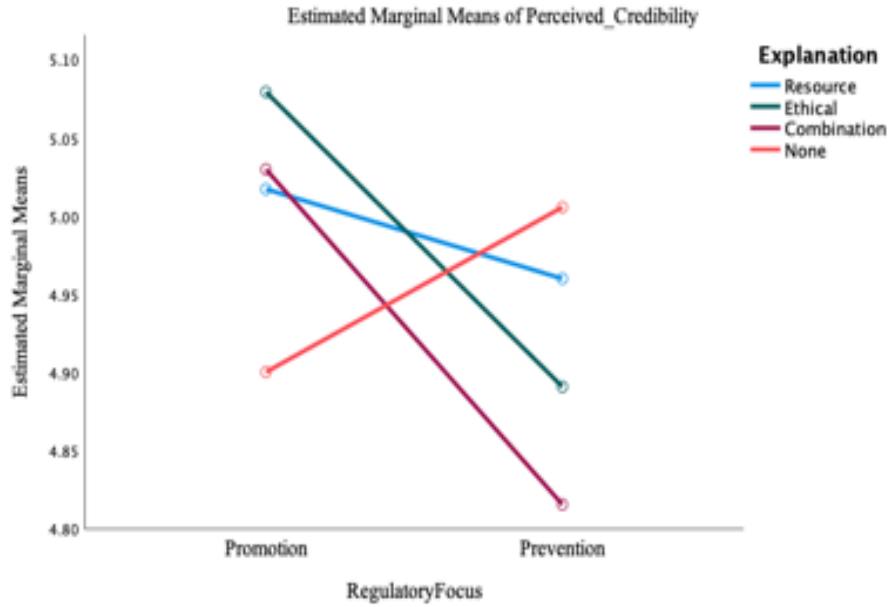


Figure 10: Estimated marginal means of perceived credibility based on regulatory focus.

Nonetheless, by looking at the two-way interaction between regulatory focus and the type of company, demonstrated in Table 21 below, it is revealed that the interaction between regulatory focus at the promotion level and type of company is statistically significant [$F(1, 309) = 11.116$, $p < 0.001$].

| Regulatory Focus | (I) Company | (J) Company | Mean difference (I-J) | P-value (F) |
|-------------------------|--------------------|--------------------|------------------------------|--------------------|
| Promotion | EcoOil | EcoWind | 0.276* | <0.001 (11.166) |
| | EcoWind | EcoOil | -0.276* | <0.001 (11.166) |
| Prevention | EcoOil | EcoWind | 0.023 | 0.829 (0.047) |
| | EcoWind | EcoOil | -0.023 | 0.829 (0.047) |

Table 21: The two-way interaction between regulatory focus and type of company with perceived credibility as the dependent variable.

The findings show that promotion-focused consumers perceive EcoOil’s claims ($M = 5.143$) as more credible than EcoWind’s ($M = 4.867$). These findings suggest that the specific company making the claim may affect the perceived credibility, when the consumer is promotion-focused.

4.5.2 Expertise as the Dependent Variable

As recalled in chapter 2.2, the measure of perceived credibility consists of the two constructs (1) expertise and (2) trustworthiness. Therefore, we want to investigate whether we find any interesting results when perceived credibility is decomposed to its two constructs. With expertise as the dependent variable, the overall model indicates that the independent variable of company type is the only statistically significant effect detected ($F = 15.906$, $p = 0.029$). This is illustrated in Table 22 below.

| <i>DV: Expertise</i> | <i>P-value (F)</i> | <i>Partial eta squared (η_p^2)</i> |
|----------------------|--------------------|--|
| Explanation | 0.405 (1.358) | 0.580 |
| Company | 0.029 (15.906) | 0.842 |
| Explanation*Company | 0.419 (0.945) | 0.009 |

Table 22: Testing for between-subjects effects with expertise as the dependent variable.

From Table 22, it is also evident that the type of company making the claim can explain 84.2 per cent of the variance between the groups’ perception of the level of expertise ($\eta_p^2 = 0.842$).

By further looking at the pairwise comparisons of the type of company, we get the following output.

| <i>(I) Company</i> | <i>(J) Company</i> | <i>Mean Difference (I-J)</i> | <i>P-value (F)</i> |
|--------------------|--------------------|------------------------------|--------------------|
| EcoOil | EcoWind | 0.326* | <0.001 (15.025) |
| EcoWind | EcoOil | -0.326* | <0.001 (15.025) |

Table 23: Pairwise comparisons of the type of company with expertise as the dependent variable.

Table 23 explains the significant difference that company type has on the perceived expertise, where EcoOil (M = 5.330) is perceived as having a higher level of expertise than EcoWind (M = 5.004). This difference is statistically significant [F(1, 317) = 15.025, p < 0.001]. Thus, the null hypothesis concerning no difference in perceived expertise between EcoOil and EcoWind is rejected.

Although the overall interaction of explanation and company did not yield any statistically significant results [F(3, 317), p = 0.419, see Table 22], we investigated this interaction further, to see if some of the levels were statistically significant when the dependent variable was expertise.

| <i>Explanation</i> | <i>(I) Company</i> | <i>(J) Company</i> | <i>Mean Differences (I-J)</i> | <i>P-value (F)</i> |
|--------------------|--------------------|--------------------|-------------------------------|--------------------|
| Resource | EcoOil | EcoWind | 0.337 | 0.051 (3.824) |
| | EcoWind | EcoOil | -0.337 | 0.051 (3.824) |
| Ethical | EcoOil | EcoWind | 0.362* | 0.031 (4.711) |
| | EcoWind | EcoOil | -0.362* | 0.031 (4.711) |
| Combination | EcoOil | EcoWind | 0.107 | 0.519 (0.417) |
| | EcoWind | EcoOil | -0.107 | 0.519 (0.417) |
| None | EcoOil | EcoWind | 0.498* | 0.003 (8.714) |
| | EcoWind | EcoOil | -0.498* | 0.003 (8.714) |

Table 24: Pairwise comparison of the two-way interaction of explanations and company, with expertise as the dependent variable.

Table 24 denotes that there is a statistically significant difference between the two different companies for ethical explanations [F(1, 317) = 4.711, p = 0.031] and the control groups [F(1, 317) = 8.714, p = 0.003]. For both of these explanations, EcoOil has a higher level of perceived expertise than EcoWind (M difference = 0.362; 0.498). Meaning that for these interactions, the null

hypothesis can be rejected. It should also be noted that the interaction of resource-based explanations and the type of company is close to statistical significance [$F(1, 317) = 3.824, p = 0.051$], indicating that there may be an effect.

We further investigated the effect when regulatory focus is introduced into the model, as illustrated in Table 25 below. However, none of the variables or interactions indicates any statistically significant effect on the level of expertise ($p > 0.05$).

| <i>DV: Expertise</i> | <i>P-value (F)</i> | <i>Partial Eta Squared (η_p^2)</i> |
|--------------------------------------|--------------------|--|
| Explanation | 0.622 (0.788) | 0.610 |
| Company | 0.477 (1.093) | 0.505 |
| Regulatory focus | 0.918 (0.016) | 0.016 |
| Explanation*Company | 0.426 (1.261) | 0.556 |
| Explanation*Regulatory focus | 0.458 (1.142) | 0.535 |
| Regulatory focus*Company | 0.116 (4.824) | 0.617 |
| Explanation*Company*Regulatory focus | 0.191 (1.592) | 0.015 |

Table 25: Testing for between-subjects effects when regulatory focus is introduced into the model, with expertise as the dependent variable.

When looking at the two-way interactions of explanation and company, we find similar results as before, where EcoOil is considered as having more expertise than EcoWind when given an ethical explanation or no explanation at all. Further, when investigating the pairwise comparisons of the three-way interaction of regulatory focus, company, and explanations, we get the following results.

| <i>Regulatory focus</i> | <i>Explanation</i> | <i>(I) Company</i> | <i>(J) Company</i> | <i>Mean Difference (I-J)</i> | <i>P-value (F)</i> | |
|-------------------------|--------------------|--------------------|--------------------|------------------------------|--------------------|---------------|
| Promotion | Resource | EcoOil | EcoWind | 0.499* | 0.019 (5.529) | |
| | | EcoWind | EcoOil | -0.499* | 0.019 (5.529) | |
| | Ethical | EcoOil | EcoWind | 0.371 | 0.096 (2.790) | |
| | | EcoWind | EcoOil | -0.371 | 0.096 (2.790) | |
| | Combination | EcoOil | EcoWind | 0.444* | 0.025 (5.049) | |
| | | EcoWind | EcoOil | -0.444* | 0.025 (5.049) | |
| | None | EcoOil | EcoWind | 0.669* | 0.003 (9.168) | |
| | | EcoWind | EcoOil | -0.669* | 0.003 (9.168) | |
| | Prevention | Resource | EcoOil | EcoWind | 0.103 | 0.720 (0.129) |
| | | | EcoWind | EcoOil | -0.103 | 0.720 (0.129) |
| Ethical | | EcoOil | EcoWind | 0.342 | 0.179 (1.815) | |
| | | EcoWind | EcoOil | -0.342 | 0.179 (1.815) | |
| Combination | | EcoOil | EcoWind | -0.640* | 0.031 (4.705) | |
| | | EcoWind | EcoOil | 0.640* | 0.031 (4.705) | |
| None | | EcoOil | EcoWind | 0.265 | 0.294 (1.105) | |
| | | EcoWind | EcoOil | -0.265 | 0.294 (1.105) | |

Table 26: Pairwise comparison of the three-way interaction of regulatory focus, explanation and company, with expertise as the dependent variable.

The findings show that for promotion-focused respondents EcoOil is considered as having more expertise than EcoWind (M difference = 0.499; 0.371; 0.444; 0.669), and significant results are evident for resource-based explanations [F(1, 309) = 5.529, p = 0.019], combination [F(1, 309) = 5.049, p = 0.025] and no explanations [F(1, 309) = 9.168, p = 0.003]. For prevention-focused

respondents, the only statistical significant effect found in the interaction is for the combination explanation [F(1, 309) = 4.705, p = 0.031]. In this case, EcoWind is considered as having more expertise than EcoOil (M difference = 0.640), which is the first time we see any significant indication of EcoWind producing higher scores than EcoOil. This is illustrated in Figure 11 below.

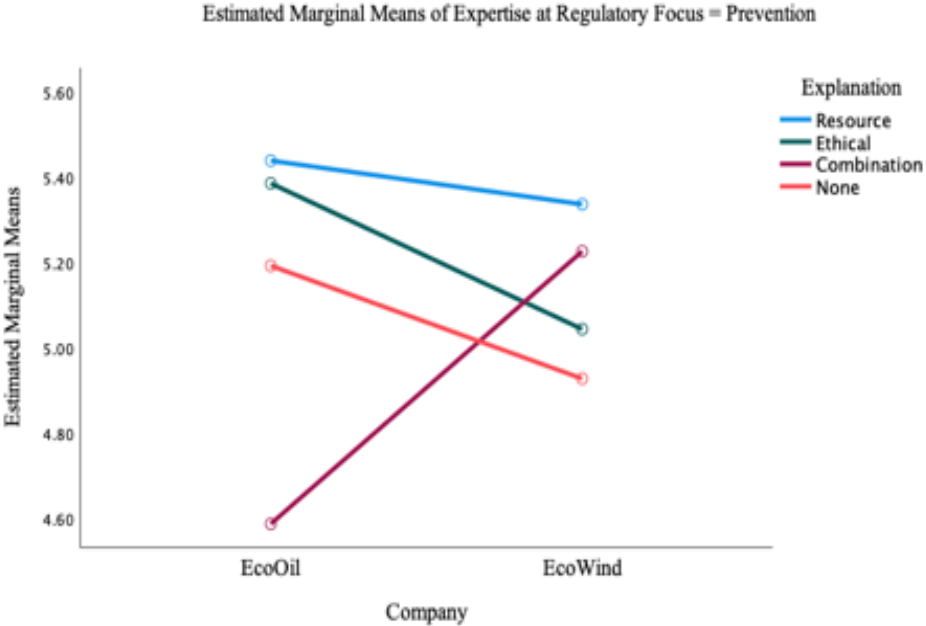


Figure 11: Marginal Means of Expertise for prevention-focused consumers with the interaction of company and explanation.

4.5.3 Trustworthiness as the Dependent Variable

The second component of perceived credibility is the level of trustworthiness. Therefore, we also analysed data with trustworthiness as the dependent variable. As Table 27 below illustrates, there is no statistical significance when investigating the type of company and type of explanation (p = 0.208; 0.972; 0.325).

| <i>DV: Trustworthiness</i> | <i>P-value (F)</i> | <i>Partial Eta Squared (η_p^2)</i> |
|----------------------------|--------------------|--|
| Company | 0.208 (2.571) | 0.463 |
| Explanation | 0.972 (0.071) | 0.067 |
| Company*Explanation | 0.325 (1.161) | 0.011 |

Table 27: Testing for between-subjects effects with trustworthiness as the dependent variable.

Although the two-way interaction of the type of company and explanation is insignificant, and only 1.1 per cent of the variation between the groups can be attributed to this interaction ($\eta_p^2 = 0.011$, see table 27), we find significant results by looking at the pairwise comparison of the interaction. The pairwise comparison is presented in Table 28 below.

| <i>Explanation</i> | <i>(I) Company</i> | <i>(J) Company</i> | <i>Mean Differences (I-J)</i> | <i>P-value (F)</i> |
|--------------------|--------------------|--------------------|-------------------------------|--------------------|
| Resource | EcoOil | EcoWind | 0.026 | 0.856 (0.033) |
| | EcoWind | EcoOil | -0.026 | 0.856 (0.033) |
| Ethical | EcoOil | EcoWind | 0.114 | 0.406 (0.692) |
| | EcoWind | EcoOil | -0.114 | 0.406 (0.692) |
| Combination | EcoOil | EcoWind | 0.005 | 0.971 (0.001) |
| | EcoWind | EcoOil | -0.005 | 0.971 (0.001) |
| None | EcoOil | EcoWind | 0.333* | 0.017(5.774) |
| | EcoWind | EcoOil | -0.333* | 0.017(5.774) |

Table 28: Pairwise comparison of the two-way interaction of explanations and company, with trustworthiness as the dependent variable.

The interaction of company type and explanation used is statistically significant when there is no explanation [$F(1, 317) = 5.774, p = 0.017$]. The results show that when there is no explanation, EcoOil ($M = 5.077$) is perceived as being more trustworthy than EcoWind ($M = 4.743$).

Further, we analysed the three-way interaction with regulatory focus to observe what effect the different variables would have on trustworthiness.

| <i>DV: Trustworthiness</i> | <i>P-value (F)</i> | <i>Partial Eta Squared (η_p^2)</i> |
|--------------------------------------|--------------------|--|
| Explanation | 0.928 (0.142) | 0.127 |
| Company | 0.417 (1.262) | 0.473 |
| Regulatory focus | 0.365 (1.417) | 0.435 |
| Explanation*Company | 0.328 (1.735) | 0.630 |
| Explanation*Regulatory focus | 0.264 (2.253) | 0.697 |
| Regulatory focus*Company | 0.292 (1.635) | 0.355 |
| Explanation*Company*Regulatory focus | 0.617 (0.597) | 0.006 |

Table 29: Testing for between-subjects effects when regulatory focus is introduced into the model with trustworthiness as the dependent variable.

The variables alone and their overall interactions show no statistically significant results at an alpha of 0.05. However, when looking at the pairwise comparisons for the specific interactions, we do find statistical significance between explanation and company [$F(1, 309) = 4.780, p = 0.03$]. This interaction explains 63 per cent of the variation in our model ($\eta_p^2 = 0.630$, see table 29). From the analysis we observed that EcoOil is considered more trustworthy when there is no explanation ($M = 5.070$) compared to EcoWind with no explanation ($M = 4.764$). In addition, by looking at the interaction between the three variables, we find a statistical significance when the respondent is promotion-focused and there is no explanation [$F(1, 309) = 8.190, p\text{-value} = 0.004$]. In these cases, EcoOil ($M = 5.115$) is perceived as more trustworthy than EcoWind ($M = 4.589$).

4.5.4 Summary of Additional Findings

In summary, our study reveals some interesting additional findings which show statistical significance. Firstly, the interaction of company type and explanation shows that EcoOil is perceived as more credible for the control group, i.e. when there is no explanation used. We also find similar results when decomposing perceived credibility into its two components; expertise and trustworthiness. When we solely assess the independent variable of the company type, EcoOil is considered to have more expertise than EcoWind. Moreover, if we look at the two-way interaction of company type and explanation type, ethical-based explanations or no explanations at all will make EcoOil be perceived as having more expertise than EcoWind.

When we include regulatory focus in the model, most of the findings revolve around the promotion-focused respondents who generally perceive EcoOil as more credible than EcoWind. Regarding the different types of explanations, the effect on the level of expertise for EcoOil is detected when there is either a resource-based explanation, a combination explanation, or no explanation. Furthermore, when there was no explanation given, promotion-focused respondents still considered EcoOil more trustworthy than EcoWind. For prevention-focused respondents, the only significant result found was when expertise was the dependent variable. This was in regard to when there was a combination explanation used. In these cases, EcoWind was deemed as having more expertise than EcoOil.

5 Discussion

In the sections that follow, we will discuss the main findings of our experiment, both in the light of our hypotheses and research questions, as well as additional findings our study revealed. Further, we will discuss how these findings may contribute to the theory surrounding sustainability positioning, and how it may be used in practice. Lastly, we will discuss possible limitations concerning our experiment, and make suggestions for future research on the topic.

5.1 Main Findings

The absence of significant results calls for an investigation of alternative explanations to rationalize why our result may not reveal any support for the hypotheses. Our first hypothesis (H1) predicted a relationship between the types of explanation used and the perceived credibility. It states that resource-based explanations would have a larger effect than ethical explanations (H1a). Further, we predicted that this effect would be stronger for EcoOil compared to EcoWind (H1b), as we predicted it would be more important that the explanations contained specific details for brands with disadvantageous pre-existing perceptions. The absence of supporting results for H1 could be explained by two aspects. Firstly, the resource-based explanations may not have been specific enough to contribute to the predicted effect. The explanation only states that they have the resources and capabilities to ensure sustainable operations, but not specifically what these resources and capabilities are. Secondly, expertise is an important component of perceived credibility. In the introduction of EcoOil, the company was described as having many years of experience in the energy industry. Thus, EcoOil may have been perceived as having more expertise, and thus being more credible, regardless of the explanation type. By the same token, the resource-based explanation in itself may not have had any effect on the perceived credibility, as the introduction given to EcoOil was the same regardless of the explanation type.

Similarly to H1, the lack of supporting results for H2 also builds on the aspect of specificity. We predicted higher perceived credibility for resource-based explanations when the consumer is prevention-focused. Consequently, we expected that resource-based explanations would provide this specificity, and thus be perceived as more credible for the prevention-focused consumers. As

argued, if these resource-based explanations were not specific enough, it could explain the lack of any detected effect.

H3 was rejected as we did not find any significant results indicating that promotion-focused consumers would perceive sustainability claims as more credible compared to prevention-focus consumers. In H4, we predicted that ethical explanations would have the strongest effect on the promotion-focused consumers. Both H3 and H4 were based on previous research concerning the relationship between regulatory focus and consumer behaviour regarding green products. As existing research on the relationship between regulatory focus and perception of credibility seems to be scarce, our translation of purchase behaviour to the perception of credibility may thus be wrong and could explain the lack of support for H3 and H4.

Moving on, our study revealed some additional findings which can be viewed in the context of our research questions. Our first research question (RQ1) aimed at answering how different types of explanations used with sustainability claims could affect the perceived credibility of the claim. Although we did not observe any effect for the explanation variable alone, the study did disclose some interesting findings for the type of explanation in interaction with other variables. Our study revealed a higher level of *perceived credibility* for EcoOil compared to EcoWind when the participants were not presented with an explanation of their sustainability efforts. This finding was not predicted, as we predicted that explanations would be crucial in making the claims seem more credible. Furthermore, EcoOil was intended to represent a company with disadvantageous pre-existing perceptions due to their history of unsustainable practices, making the observed effects more surprising.

The former finding may be explained by the *expertise* component of perceived credibility. The level of expertise may be more important to consumers in determining the level of perceived credibility than initially predicted. The consumers' view of a brand's level of expertise may outweigh the importance of its past actions regarding unsustainable practices, thus making consumers still perceive the claims as credible. This is evident from the findings showing that EcoOil was perceived as having more expertise than EcoWind when respondents were offered either ethical explanations or no explanation. Apart from the two companies' history of sustainable or unsustainable practices, the years of experience operating in the energy industry is what differentiates the two and might be the reason why EcoOil is perceived as more of an expert.

Following this line of argumentation, the study also revealed some intriguing effects related to the level of *trust*. EcoOil was perceived as more trustworthy than EcoWind when respondents were given no explanation. However, as no explanation produces significant results in favour of EcoOil for both trustworthiness, expertise, and consequently, perceived credibility, we argue that years of experience may be an important factor that outweighs the importance of explanation. Thus, we argue the introduction provided about the companies, emphasizing many years of experience in the industry, might have been central in the perception of credibility, compared to explanation and the companies' history of sustainable or unsustainable operations. With this in mind, one could argue that years of experience within an industry affects the perception consumers have concerning the brands' level of expertise, the trustworthiness of the source, and consequently the credibility of the sustainability claim. Despite these findings, we acknowledge that this may not be the case. Firstly, we have not exclusively tested whether the number of years within the industry is the determining factor for perceived credibility. Secondly, in a real-life setting where real brands will have strong associations and perceptions, they may benefit from different types of explanations. Lastly, in line with previous research concerning sustainability claims (Musgrove et al., 2018), we argue that not only the claims, but also the explanations, would benefit from being more specific. These limitations will be further discussed in section 5.4.

Our second research question (RQ2) aimed at finding the role of consumers' regulatory focus in the perception of credibility of sustainability claims. The regulatory focus may have an effect, but only in certain cases. Firstly, our findings suggest that promotion-focused individuals may perceive companies with more experience as more credible compared to new and sustainable companies, even though the older companies have pre-existing disadvantageous perceptions. Thus, the perceived credibility of companies who have operated in unsustainable industries may not be negatively affected if the consumers are promotion-focused.

We previously argued that expertise seems to be an important component of the perceived credibility, and that the reason EcoOil seems to generate higher scores than EcoWind is due to their many years of experience, and consequently their level of expertise. Therefore, we note that our findings demonstrate that the perceived level of expertise of EcoWind is only superseding EcoOil for prevention-focused consumers and when the explanation is a combination of resource- and ethical-based.

To sum up and answer RQ1, we did not observe any significant findings indicating different types of explanations affecting the perceived credibility in itself. However, different types of explanations may have an effect on the two components making up the perceived credibility, but the effect will also depend on the type of company making the claim. To answer RQ2, our findings show that regulatory focus can have an influence on the two components of perceived credibility, but the observed effect mostly concerns promotion-focused consumers. Our findings indicate that promotion-focused consumers are more open to different types of explanations for companies with prior history of unsustainable businesses, whereas prevention-focused consumers will perceive companies without such history as having more expertise if the explanation is a combination containing both an ethical and resource aspect.

5.2 Theoretical Implications

As present research on the effect of explanations on the perceived credibility of sustainability claims and consumers' regulatory focus seems to be scant, our thesis is intended to enrich the literature on this topic. More specifically, we have studied the effect of explanations used with sustainability claims, in order to help brands that genuinely want to position themselves as sustainable to avoid being blamed for greenwashing. The lack of support for our hypotheses, as well as our additional findings, may contribute to the research on the topics concerning perceived credibility of sustainability claims and regulatory focus. In this section, we will discuss how our findings may contribute to the theory, and more specifically the characteristics of the claim and explanations, the source making the claim, and the regulatory focus of the consumers.

5.2.1 Characteristics of the claim and explanations

Previous research has highlighted the importance of the characteristics of the claim, such as the claim type (Carlson et al., 1993), perceived fit between the brand and the claim (Lafferty, 2007), and specificity in the claim (Musgrove et al., 2018). Although these criteria were kept fixed in our experiment, and were not tested, our findings indicate that characteristics of the claim might be important. Firstly, these criteria may be transferred to the explanations used with the claim, and secondly, these criteria may explain why there were no observed effects in our findings.

We predicted that resource-based explanations would be beneficial to brands, especially those with a history of unsustainable operations. The prediction was grounded by theory suggesting that a brand's decision to position itself as sustainable arises from one of two reasons; an ethical aspect with a desire to do good (Branco & Rodriguez, 2006) or their superior capability due to its resources and competencies (Supphellen, 2020). What's more, the theory surrounding perceived greenwashing illustrated the reduced effect of sustainability claims (Zinkhan & Carlson, 1995; Szabo & Webster, 2020), due to the growing number of corporations misleading customers with green claims that hold no truth. However, Musgrove et al. (2018) argued that perceived credibility may increase in line with the level of specificity offered to the consumers. Therefore, the above-mentioned literature suggests that explanations based on the brands' resources may increase the perceived credibility due to its level of specificity concerning *how* the brand will be able to fulfil its claim. The analysis did not detect this effect in the explanations used. However, we argue that the importance of specificity, as illustrated by previous research (Musgrove et al., 2018), may be the reason for lack of support, and thus emphasizes the importance of specificity not only in the claim, but also in the explanation provided. We suspect the explanations provided were not specific enough, and the fictional brands might have benefited more from specifying what resources they possess that will enable them to fulfil their claim. By the same token as sustainability claims, the explanations provided by brands may also fall into the different sins of greenwashing, such as the sin of vagueness (Carlson et al., 1993).

Further elaborating on the level of specificity provided, EOI theory argues that consumers will continue to look for information as long as it is more beneficial than it costs (Musgrove et al., 2018). The cost associated with information searching depends on numerous factors, yet the more difficult and time consuming it is for the consumers to verify the information, the chances of the claim being perceived as misleading or deceptive increases. Although we attempted to ensure specificity in the claim and the explanation, we might have underestimated the level of information required given the nature of the products and services provided by companies within the energy industry. Even though it may be safe to assume most people will, to an extent, have knowledge about the energy industry and be familiar with the services and products they provide, the average consumer may not possess the technical expertise to verify the information concerning whether the operations are sustainable or unsustainable. One could argue that this industry may be too abstract for the consumers to grasp. Thus, the importance of explanations used could have

generated different results if it was investigated in an industry or product category that does not require the same amount of technical knowledge.

It should be noted that the overall mean scores for perceived credibility were relatively high, regardless of the explanation used. As our experiment used the same type of claim for all participants, these high scores could indicate support for the theory surrounding claim type. The claim used in our experiment was a combination of a product and process-oriented sustainability claim, as Carlson et al. (1993) argued process-oriented and product-oriented claims were often perceived as more credible. However, using other types of claims could have had a different impact on the effect of the explanations used. Furthermore, the perceived fit between the claim used and the company or industry also generated high scores. According to Breves et al. (2019), a high perceived fit will mean the consumers believe there is a congruence between the content of the claim and the source delivering the claim. Following this argument, the characteristic of fit might also have been attributed to the relatively high scores for perceived credibility, regardless of explanation type.

5.2.2 The Source

The source making a claim is an important part of the perceived credibility. The perceived credibility consists of the trustworthiness and perceived expertise connected to the source making the claim (Belch & Belch, 2018; Sternthal et al., 1978). In our experiment, two companies were meant to represent two opposites on the sustainability dimensions in terms of their history, but with a similar objective for their future operations of sustainable business. We argue our findings illustrate the importance of the expertise component, and that the years of experience can play a role in determining whether the claims made by the company are perceived as credible. This means that even though a company has participated in unsustainable operations in the past, their years of experience may represent a level of competence, which can potentially make them be perceived as more credible.

The credibility of the source may also be viewed in the light of the attribution of responsibility theory. Causal attribution is based on humans attempting to form explanations for cause and events, and who or what is responsible for an event occurring (Gailey & Lee, 2005; Sims & Lorenzi, 1992). Treatment attribution, on the other hand, entails attributing responsibility to who

or what has the solution to fix the event or problem (Yang et al., 2015). Viewing causal attribution in the context of sustainability issues, we assumed brands with a history of unsustainable practices would be perceived as less credible due to individuals attributing more responsibility to these actors in terms of environmental issues. For instance, we suspected this could have happened at the level of association (Shaver, 1985), where the consumers would associate the word “Oil” with environmental issues, and thus attribute environmental issues concerning the petroleum industry to EcoOil. We did not find this to be the case, as EcoOil was perceived as more credible than EcoWind. Therefore, we argue that the responsibility of environmental issues connected to the energy sector may be attributed to other actors than the companies operating in the industry. If this is the case, it could be in accordance with individuals placing the responsibility at the justifiability level (Shaver, 1985), where the unsustainable actions of the company are excusable due to the influence of other forces.

However, our findings may also be explained by treatment attribution, as defined by Yang et al. (2015). If the move from unsustainable to sustainable operations is viewed as a way of fixing the problem concerning the environmental issues of the energy sector, it may play a role in the perception of credibility. Consumers may perceive claims as more credible if they are made by companies or brands they deem as being responsible for fixing the problem. If they believe that companies within the energy industry, with a history of unsustainable practices, are responsible for resolving the sustainability issues in the industry by becoming more sustainable, they may also, to a degree, perceive these claims as more credible. However, it should be noted that our experiment did not measure who the consumers viewed as responsible for environmental issues connected to the energy sector, and thus this should be further investigated in future research in order to reach these conclusions.

5.2.3 Regulatory Focus – Prevention-focused consumers

Previous research into consumer behaviour related to regulatory focus illustrates how prevention-focused consumers tend to be more active in their evaluation process due to their risk-averse nature (Codini et al., 2018). These consumers will attempt to prevent losses (Brockner & Higgins, 2001), thus believing in a potentially false claim would be viewed as a mistake by prevention-focused consumers. We argued this behaviour would result in a larger appreciation for specificity in the explanation, as this would help the consumers in their search for information confirming they are not making a mistake. Consequently, we argued that explanations involving the brands' resources would have an effect on the perceived credibility of the claim.

As previously discussed, if the level of specificity in the explanation was not met, the explanation might have been too vague. According to research on prevention-focused consumers, their frugality in the evaluation process and pursuit for desired end-state (Codini et al., 2018) might make the explanations' specificity even more important when the consumers are prevention-oriented. Our research shows that prevention-focused consumers will perceive brands with no prior history of unsustainable business as having more expertise if they are given an explanation that both contain their resources and their ethical considerations. A combination of the two may be deemed as more specific, as it entails numerous aspects of the brand's decision to be sustainable. Although we cannot conclude that this will result in perceived credibility, it does illustrate specificity's importance of increasing the level of expertise. Therefore, we argue that using explanations that entail more information with sustainability claims, might enhance perceived credibility when the consumers are prevention-focused, and the brand has no prior history of unsustainable practices.

Further, we observed that prevention-focused consumers perceived EcoWind, the company with no prior history of unsustainable operations, as having more expertise than EcoOil when combination explanations were utilized. Thus, one could argue that prevention-focused consumers are more sceptical towards companies with a disadvantageous history. This aligns with theory suggesting that prevention-oriented individuals are more risk-averse and careful in their approach (Codini et al., 2018). Even though EcoWind does not have many years of experience within the industry, not having done any harm in the past may be a testament to the prevention-focused consumers that the company is better equipped to operate more sustainably. By the same token,

one could argue that past actions of the company seem to be a contributing factor in the prevention-focused consumers' perception of the level of expertise.

5.2.4 Regulatory focus – Promotion-focused consumers

In terms of promotion-focused individuals, research suggests such consumers may be more willing to purchase green products (Codini et al., 2018). Additionally, they would have a more risk-seeking approach to achieve their ideal self (Zou & Chan, 2019; Brockner & Higgins, 2001). However, we cannot argue that promotion-focused consumers will perceive sustainability claims as more credible compared to prevention-focused consumers. Although Codini et al. (2018) argued that promotion-focused consumers may have a higher willingness to purchase green products, they may not have lower standards for what characteristics make sustainability claims more credible. Codini et al. (2018) studied the purchase intentions for both car-sharing services and laundry detergents, whereas our experiment studied the perceived credibility of sustainability claims within the energy industry. Additionally, even though Codini et al. (2018) argued that promotion-focused consumers seem to show a higher willingness to purchase green products, their research provides no statistically significant difference between the two orientations. To understand the lack of support for our prediction of promotion-focused consumers perceiving the claims as more credible, we must also distinguish between purchase intentions and perceived credibility. Purchase intentions may not be translatable to perceived credibility. However, there may also be no relationship between purchase intention and perceived credibility for promotion-focused consumers. Meaning, even though they do not perceive a claim as credible, they could still be more willing to purchase green products, due to their willingness to take on risk in their search for the ideal self (Zou & Chan, 2019).

5.3 Managerial Implications

Several managerial implications can be explored from the findings of this study. We aimed to further investigate the mechanism affecting the perceived credibility of green claims, both from the brand's side and the consumer's side. The objective was for our findings to help brands successfully position themselves as sustainable. We argue that from our findings, we have gained more insight into this issue, which can guide companies in their positioning strategy and marketing communications of sustainability.

One of the practical implications brought forth from this thesis is how the company's previous history with unsustainable operations may affect the perceived credibility. Such companies can be considered to have the necessary expertise due to their long experience within the industry. Expertise is an important component of perceived credibility (Belch & Belch, 2018; Sternthal et al., 1978), and companies with an unsustainable past might still be perceived as credible in their sustainability claims if they can emphasize their years of experience within the industry. Hence, companies who are moving from unsustainable practices to more sustainable practices within the same industry, e.g., the energy sector, may benefit from focusing their communication on their expertise and competencies in order to be perceived as credible. We argue that consumers believe the knowledge gained from unsustainable business practices can be transferred when moving in a direction of more sustainable business practices. This may also include specific resources, such as partnerships, which enables them to become more sustainable in the future. Communicating the years of industry-specific experience the company has can therefore be a valuable marketing tool to boost the impression of expertise, and consequently, increase the perceived credibility.

An important part of any marketing strategy is to market the brand and its product to the right consumers at the right point in time (Belch & Belch, 2018). We argue that our contribution to research on consumers' regulatory focus demonstrates possibilities regarding how brands may employ big data to optimize their perception of credibility in their positioning strategy. By using big data, companies might be able to detect the regulatory focus of different consumers. As noted by Cesario, Grant, and Higgins (2004), the match between consumers' regulatory focus and the way the ad is framed, reinforces its credibility and the attitude towards the ad. Hence, we argue that companies can adjust the explanations they present to consumers based on their detected

regulatory focus. Meaning, promotion-focused consumers will be shown explanation types that have the largest effect on them, and vice versa for the prevention-focused consumers. This is especially applicable for online marketing, where companies can track consumers' behaviour online and display specific ads to individual consumers. Adopting such an approach may help to increase the perceived credibility of the company for each individual exposed to their customised ad.

Furthermore, specific regulatory focus can be activated through regulatory focus priming in brands' marketing communication (Bullard & Manchanda, 2013). With this in mind, we argue our findings indicate that companies and brands may benefit from priming their consumers into the appropriate regulatory focus and followingly increase the perceived credibility of the sustainability claim. For instance, if the company is relatively new with no prior history of unsustainable practices, our findings suggest that if they utilize prevention-focused priming, they can use a combination explanation to be perceived as having more expertise. This may again influence the perceived credibility of the sustainability claim.

5.4 Limitations

In this section, we will make judgments about the quality of our thesis and experiment. This step is imperative, as any experiment aims to draw valid conclusions about the independent variable's effect and "make valid generalisations to a larger population of interest" (Malhotra et al., 2017, p. 310). Hence, this aim concerns the accuracy of the measure, also referred to as validity. In addition, consistency of measurements, referred to as reliability, is vital to experiments (Malhotra et al., 2017). The two concepts, validity and reliability, indicate the level of quality associated with the experiment in terms of its method and measures. Therefore, we need to evaluate the reliability and validity. A reliable experiment means that data is collected consistently, whereas a valid experiment means that data collected measures the concepts you intend to measure (Saunders et al., 2019).

5.4.1 Reliability

Reliability concerns the consistency and replication of the research. We can distinguish between internal and external reliability, where internal reliability relates to ensuring consistency within the experiment, whereas external reliability refers to whether the results from our data collection techniques and analytic procedures would be the same if we repeated the research on another occasion, or if the research was replicated by different researchers (Saunders et al., 2019).

The Cronbach's alpha indicates the internal consistency of the scales used in our experiment. As described in chapter 4, the scales used to measure perceived credibility, expertise, trustworthiness, green values and fit, all had a Cronbach's alpha of more than 0.89. This is considered a very good level in terms of internal consistency (Malhotra et al., 2017). The scales measuring promotion and prevention had a Cronbach's alpha of 0.663 and 0.618, which is considered an acceptable level. However, by removing Q1 for promotion and Q1 for prevention, the Cronbach's alpha was improved to 0.758 for the promotion scale and 0.679 for the prevention scale. By doing this step, we deem our scales to have an acceptable, and in parts very good, level of internal consistency.

Nonetheless, there are four large threats to take into account when discussing reliability. These are participant error and bias, as well as researcher error and bias. These can all lead to errors in the measurements. Participant error refers to factors that influence how a participant completes the

questionnaire, e.g., if the participants feel rushed to complete the survey it may alter the way they respond (Saunders et al., 2019). We do not deem this threat to be an issue. As the questionnaire was self-administered, we presume the participants found an appropriate time to complete it. Moreover, the length of the questionnaire was designed to last no longer than 10 to 15 minutes, which is the recommended time for a survey by Qualtrics (Qualtrics, n.d.). From our reports in Qualtrics, the majority of the participants finished the questionnaire in less than 15 minutes and more than 5 minutes. Therefore, we expect that the majority of the participants took the time to understand the questionnaire, look at the ad and respond appropriately.

Participant bias concerns factors that can influence participants to give false responses (Saunders et al., 2019). Participants may choose to answer in a way they think the researcher desires, even if the answers are not truthful. Furthermore, social desirability can also influence how participants respond to the questionnaire. When asked questions about their green consumer values they might answer falsely and be more optimistic because they feel some of the response options are more socially acceptable. The large number of participants that produced high green values scores (77.2 per cent), as described in chapter 4.2.3, may indicate the potential problem concerning social desirability. However, the respondents were not told what we were measuring, and members of PanelBase have ensured anonymity through anonymous IDs for conducting the questionnaire. This may have reduced the chances of participants responding based on their social desirability. Nonetheless, we cannot know if they responded truthfully, especially regarding their green consumer values.

The last two issues, researcher error and researcher bias, are not considered as big of a threat in relation to self-administered questionnaires. Researcher error refers to factors which change the researcher's interpretation, whereas researcher bias involves factors that lead to bias in the researcher's recording of responses (Saunders et al., 2019). We employed Qualtrics to record the responses, and we used Likert scales to measure our constructs, where participants responded with their level of agreement to the different statements. This approach left little room for misinterpretation. In addition, using a third party, such as PanelBase, to distribute our questionnaire could help eliminate issues concerning researchers' error and bias. We also avoided having leading questions that could potentially confirm our hypotheses.

5.4.2 Validity

Validity is the extent to which the findings coincide with findings among similar individuals outside of the study. Internal validity is established when the findings can be explained by the research's variables, rather than flaws in the research design, whereas external validity refers to “whether the cause-and-effect relationships found in the experiment can be generalised” (Malhotra et al., 2017, p. 311).

5.4.2.1 Internal Validity

A large threat to any experiment is the existence of extraneous variables (Malhotra et al., 2017). Extraneous variables are any variables, other than the independent variables, influencing the response from the participants (Malhotra et al., 2017). Normal extraneous variables are maturation, history, testing effects, instrumentation, selection bias and mortality threats. We deem the threat of history, instrumentation, maturation and testing as small in our experiment, as we conducted the experiment at only one specific point in time, as opposed to an experiment over a period of time. Hence, there was a small chance for large changes “within” the respondents to occur while participating in the experiment.

Selection bias could have been a potential threat to our experiment. This bias is concerned with the improper assignment of participants to treatment groups, where the result is that the groups differ on the dependent variable prior to the exposure to the treatment (Malhotra et al., 2017). This threat was overcome by using a third-party to sample our participants, as well as using a randomizer in terms of which treatment group each respondent would be assigned to. Using randomization is a recommended method to control for extraneous variables (Malhotra et al., 2017).

Furthermore, mortality was a potential threat to our experiment. Mortality refers to “the loss of participants while the experiment is in progress” (Malhotra et al., 2017, p. 313). Initially, 443 respondents participated in the experiment. However, 32 respondents dropped out of the experiment, meaning they did not complete the questionnaire. Thus, our drop-out rate was 7.2 per cent. This mortality could affect our results, as we do not know if these participants would have responded the same way to the treatment as those who completed the experiment. This is also referred to as non-response bias (Malhotra et al., 2017). We attempted to improve the response

rate by indicating how long the questionnaire would be in advance, giving the respondents an indicator for how much time they would have to spend on the experiment. Additionally, the questionnaire was designed to take 10 minutes, which is within the recommended time length for questionnaires (Qualtrics, n.d.). We also made sure the questionnaire was appropriate for mobile devices.

With respect to the loss of participants, and as discussed in chapter 4.1, there were 175 respondents who did not pass the initial manipulation check concerning whether they could remember being presented with an explanation to the sustainability claim. Nonetheless, we decided to not exclude these respondents because most of these were respondents in the control groups who had not been presented with the explanation. Thus, the incorrect response to the manipulation check question could be due to the wording not being clear enough or the respondent misunderstanding the difference between the claim itself, the introduction to the company and the explanation. Moreover, the exclusion of 175 respondents would negatively affect the sample size. However, respondents who both failed the manipulation check and did not deem the claim as sustainable were excluded. Additionally, respondents who were categorized as neutral in terms of their regulatory focus were excluded. These steps were meant to ensure that we were testing what we intended to. This means that respondents who firstly failed the manipulation check and also deemed the claim as not sustainable, could not be used to draw conclusions concerning the effect of different variables on the perceived credibility of sustainability claims. Additionally, we wanted to see the difference in the promotion and prevention-focused consumers, and the neutral consumers could therefore contaminate the data and findings.

Another way to attempt to control for extraneous variables is to use the method of statistical control (Malhotra et al., 2017). When using this method, one measures the extraneous variables and, through statistical analysis, adjusts for their effect (Malhotra, et al., 2017). We suspected that the perceived fit between the company and the claim, and the respondents' green values, could affect their perceived credibility of the sustainability claim. Additionally, gender and age could also affect our dependent variable. Therefore, we included scales and questions intended to measure these extraneous variables and later controlled for them through statistical analysis, using ANCOVA. "In ANCOVA, the effects of the extraneous variable on the dependent variable are removed by an adjustment of the dependent variable's mean value within each treatment

condition” (Malhotra et al., 2017, p. 314). However, we recognize that other variables could affect the perceived credibility and could have been valuable to have included in the questionnaire. For instance, their associations and attitudes towards the energy industry could affect the way they perceive sustainability claims from companies within the energy sector. Thus, our internal validity could have been weakened by this threat.

Content validity refers to the extent to which the questions of our questionnaire ensure that the investigative issues are adequately covered, whereas criterion-related validity refers to the ability of the questions to form precise predictions (Saunders et al., 2019). Considering we used previously established scales and items sourced from existing research, the items had already been validated. However, we chose to use fictional brands in our questionnaire. Compared to real brands that people have pre-existing knowledge and awareness of, it is difficult to assess fictional brands to the same degree. Participants were only given a short introduction to EcoWind and EcoOil, hence it could be difficult for them to form an assessment given the limited information they were provided. Due to these potential issues, we conducted a pilot test to receive feedback from respondents who volunteered to take the questionnaire prior to its launch. This way we were able to get feedback concerning what was perceived as confusing, both in terms of the questions, the introduction to the companies and the overall layout of our questionnaire. This step was valuable, as the feedback allowed us to create a final questionnaire that was more user friendly. However, there may be some issues concerned with the use of fictional brands. The introduction to the brands was relatively short, although precise, and it could have led to the respondents “guessing” rather than basing their answers on their actual opinions.

Lastly, it is important to be aware of other biases which could have affected the data collected. By using PanelBase to reach our respondents, we have to be aware of the financial gain for the respondents by taking this survey. The respondents receive compensation by PanelBase for partaking in the experiment. Some respondents may only have participated to get this compensation “fast” and may consequently have responded randomly to the questions in the questionnaire.

5.4.2.2 External Validity

External validity concerns to what extent our findings can be generalized to a larger population, setting and situations (Saunders et al., 2019). Consequently, the external validity is affected by the sample and to what degree the sample is representative of the population as a whole. Our sample only included residents in the UK, which limits the external validity. The thoughts and opinions of UK residents regarding our questions may differ from the thoughts and opinions of people from other countries. Hence, the findings can only be generalised to populations who share the same characteristics as the UK residents, and therefore the conclusions may not be transferable to some countries. Nonetheless, research shows that the UK has many similarities to Western European countries such as Austria, Belgium, France, Germany, Netherlands, and Switzerland, in terms of the countries' economies and geography (Phillis, Grigoroudis, & Kouikoglou, 2011). Thus, the findings of our thesis could potentially apply to residents of these countries as well.

Another limit to the external validity of this thesis is the choice of non-probability sampling. More specifically, we utilized convenience sampling which is the least time-consuming and least expensive sampling technique (Malhotra et al., 2017). We acquired the help of PanelBase to acquire participants for our experiment. However, the help from PanelBase lowers the external validity as the risk of selection bias increases considering we only had respondents who are members of PanelBase. Furthermore, there may be certain characteristics associated with individuals who decide to be a member of PanelBase which is not relevant for the target population as a whole. Accordingly, the results gathered from convenience sampling are not representative of any definable population (Malhotra et al., 2017). However, to try to get an accurate representation from the population, we chose to include all genders, as well as people between the age range of 18 to 80. Hence, we argue that the conclusions of our thesis should be relevant for the larger population.

5.4.2.3 Statistical Conclusion Validity

An important part of any research process is to consider the statistical conclusion validity, which Austin, Boyle and Lualhati (1998, p. 164) define as “an integrated evaluation of statistical power, significance testing, and effect size”. In other words, it concerns the extent to which we have employed adequate statistical methods to draw conclusions that avoid Type I and Type II errors. Type I errors (α errors) occur when the null hypothesis is rejected when it is true (Austin et al., 1998). Operating with a significance level of 0.05, our probability of committing a Type I error is 5 per cent. Accordingly, we argue this strengthens the statistical conclusion validity of our research.

Type II errors (β -errors) will occur if we fail to reject a false null hypothesis. Such errors are influenced by the sample size, significance level and the effect size (Austin et al., 1998). As recalled in our hypothesis testing in chapter 4.4, we concluded that there was no support for our hypotheses, as the null hypotheses could not be rejected. Therefore, we deem it vital to consider the probability of us making a Type II error in these cases. With an overall sample size of 329 and the division between groups meeting the minimum requirements for between-subject design, we reviewed the sample size as satisfactory. However, by assessing the power, we may find an indication of our statistical conclusion validity. As the power is calculated by $1-\beta$ we can find the probability of committing a Type II error.

Using the observed power produced in our results (see Appendix D) to calculate the beta, the probability of us making a Type II error in the testing of our hypotheses, ranges from 64.9 per cent to 94.5 per cent. The observed powers were relatively low, making the probability of Type II errors high. On the other hand, committing a Type I error is deemed as more critical (Austin et al., 1998), and by retaining the null hypothesis at a significance level of 0.05, we have ensured that the probability of a Type I error in the conclusions are low. However, it is important to be aware of the threats of Type II errors in our results. This means that there might be an effect which we cannot conclude with from our findings. However, future research into the area may be able to produce results finding such effects. Recommendations for future research will be discussed in the subsequent section.

5.5 Suggestions for Future Research

Our study has illustrated that there potentially can be a relationship between explanations to sustainability claims and perceived credibility based on the source making the claim. Additionally, we argue that there may be a relationship between regulatory focus and the perception of credibility, although our study revealed no support for our hypotheses. We suspect future research investigating the topics and these relationships may find significant results if adjustments are made. Hence, we will recommend how future research can learn from our study, to further shed light on how brands can become more successful in their positioning of sustainability, without becoming a victim of perceived greenwashing.

Firstly, we argue future research should look at real brands as opposed to fictional brands. We suspect one of the reasons why we did not observe the intended effect was due to the limited amount of pre-existing perceptions of the two companies used. Although we deemed it as necessary for our research, future research should try to use real brands and also measure the associations and attitudes the consumers have towards the brands prior to the experiment. This may help to distinguish between brands that have more negative or positive associations in terms of sustainability. Furthermore, choosing brands within an industry or product category that does not require the same amount of technical knowledge to verify the information given, may also produce different results. Following these recommendations, researchers should be aware of the potential contamination of brand loyalty, which should be measured and controlled for in these cases.

Secondly, future research should investigate brands with the same years of experience. As discussed in our findings, we suspect the number of years of experience could have affected the perception of expertise, and in some cases trust, hence, potentially affecting the perceived credibility. One could, for instance, look at two brands with the same years of experience, where one brand has always positioned its products along the sustainability dimension, and the other brand has newly changed its positioning strategy to focus on sustainability.

Thirdly, we recommend ensuring specificity not only in the claim, but also in the explanations provided. Conducting a pre-test measuring the perceived level of specificity of the claim and the explanation may help to ensure specificity is not a factor affecting the results in the actual

experiment. As discussed in the findings, we argue the lack of specificity that may be required given the industry we investigated, may explain the insufficient support for our hypotheses.

Lastly, we recommend future research to further investigate the topic in relation to other geographical areas. We specifically looked at consumers in the UK. However, investigating other nationalities may produce different results. For instance, Norwegian consumers, who can be considered sustainability conscious (Aasen, Klemetsen, Reed & Vatn, 2019), may be more sceptical towards sustainability claims than other nationalities. Further, one can extend the topic to also include purchase intention. By this, we mean that in addition to investigating the effect of explanations and regulatory focus on perceived credibility, one can also investigate whether this will lead to a larger willingness to pay for the two different regulatory focuses.

References

- Aaker, D.A. & Keller, K.L. (1990). Consumer Evaluations of Brand Extensions. *Journal of Marketing*, 54(1), 27-41.
- Aasen, M., Klemetsen, M. E., Reed, E. U., & Vatn, A. (2019). Folk og klima: Nordmenns holdninger til klimaendringer, klimapolitikk og eget ansvar. CICERO Report.
- Alacanziz, E.B., Cáceres, R.C. & Pérez, R.C. (2010). Alliances Between Brands and Social Causes: The Influence of Company Credibility on Social Responsibility Image. *Journal of Business Ethics*, 96 (2), 169-186.
- Austin, J. T., Boyle, K. A., & Lualhati, J. C. (1998). Statistical conclusion validity for organizational science researchers: A review. *Organizational Research Methods*, 1(2), 164-208.
- Avnet, T. & Higgins, T.E. (2006). How Regulatory Fit Affects Value in Consumer Choices and Opinions. *Journal of Marketing Research*, 43(1), 1-19.
- Belch, G.E. & Belch, M.A. (2018). *Advertising and Promotion - An Integrated Marketing Communications Perspective*. (11th ed.). McGraw Hill Education: New York.
- Branco, M. C., & Rodrigues, L. L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of business Ethics*, 69(2), 111-132.
- Brebbia, C.A. and Pineda, F.D. (2004). *Sustainable Tourism*, WIT Press, Boston, MA.
- Breves, P. L., Liebers, N., Abt, M., & Kunze, A. (2019). The perceived fit between instagram influencers and the endorsed brand: How influencer–brand fit affects source credibility and persuasive effectiveness. *Journal of Advertising Research*, 59(4), 440-454.
- Brockner, J., & Higgins, E. T. (2001). Regulatory focus theory: Implications for the study of emotions at work. *Organizational behavior and human decision processes*, 86(1), 35-66.
- Bullard, O., & Manchanda, R. V. (2013). Do sustainable products make us prevention focused?. *Marketing Letters*, 24(2), 177-189.

- Carlson, L., Grove, S.J. & Kangun, N. (1993). A Content Analysis of Environmental Advertising Claims: A Matrix Method Approach. *Journal of Advertising*, 22(3), 27-39. OK
- Carver, C. S., & White, T. L. (1994). Behavioral inhibition, behavioral activation, and affective responses to impending reward and punishment: the BIS/BAS scales. *Journal of personality and social psychology*, 67(2), 319.
- Cesario, J., Grant, H., & Higgins, E. T. (2004). Regulatory fit and persuasion: Transfer from "feeling right.". *Journal of personality and social psychology*, 86(3), 388.
- Chan, R. Y. (2000). The effectiveness of environmental advertising: the role of claim type and the source country green image. *International Journal of Advertising*, 19(3), 349-375.
- Charness, G., Gneezy, U., & Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior & Organization*, 81(1), 1-8.
- Chen, Y.S. & Chang, C.H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. *Journal of Business Ethics*, 114(3), 489-500.
- Codini, A. P., Miniero, G., & Bonera, M. (2018). Why not promote promotion for green consumption? The controversial role of regulatory focus. *European Business Review*.
- Creswel, J.W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. (4th ed.). Sage Publications: USA.
- Dahl, R. (2010). Green washing: do you know what you're buying?.
- Davis, J. J. (1994). Consumer Response to Corporate Environmental Advertising. *Journal of Consumer Marketing*, 11 (2), 25-37.
- de Freitas Netto, S. V., Sobral, M. F. F., Ribeiro, A. R. B., & da Luz Soares, G. R. (2020). Concepts and forms of greenwashing: a systematic review. *Environmental Sciences Europe*, 32(1), 1-12.
- Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California management review*, 54(1), 64-87.

- Department of Business, Energy & Industrial Strategy. (July 30th, 2020). *UK Energy in Brief 2020*. Retrieved from: <https://www.gov.uk/government/statistics/uk-energy-in-brief-2020>
- Du, S., Bhattacharya, C. B., & Sen, S. (2010). Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication. *International journal of management reviews*, 12(1), 8-19.
- Elkington, J. (1994). Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development. *California Management Review*, 36(2), 90-100.
- Freitas, A. L., Liberman, N., & Higgins, E. T. (2002). Regulatory fit and resisting temptation during goal pursuit. *Journal of Experimental Social Psychology*, 38(3), 291-298.
- Gailey, J.A., & Lee, M.T. (2005). An Integrated Model of Attribution of Responsibility for Wrongdoing in Organizations. *Social Psychology Quarterly*, 68(4), 338-358.
- Ganz, B. & Grimes, A. (2018). How Claim Specificity Can Improve Claim Credibility in Green Advertising: Measures that Can Boost Outcomes From Environmental Product Claims. *Journal of Advertising Research*, 58(4), 476-486.
- Harvey, P., & Martinko, M.J. (2010). Attribution theory and motivation. In N. Borkowski (Ed.), *Organizational behavior in health care*, (2nd ed., pp. 147-164). Boston: Jones and Bartlett.
- Hauser, D. J., Ellsworth, P. C., & Gonzalez, R. (2018). Are manipulation checks necessary?. *Frontiers in psychology*, 9, 998.
- Haws, K. L., Dholakia, U. M., & Bearden, W. O. (2010). An assessment of chronic regulatory focus measures. *Journal of Marketing Research*, 47(5), 967-982.
- Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, 24(3), 336-354.
- Herbig, P., & Milewicz J. (1993). The relationship of reputation and credibility to brand success. *The Journal of Consumer Marketing*, 10(3).

- Higgins, E. T., Friedman, R., Harlow, R. E., Idson, L. C., Ayduk, O. N., & Taylor, A. (2001). Achievement orientations from subjective histories of success: Promotion pride versus prevention pride. *European Journal of Social Psychology*, 31(1), 3-23.
- Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *Current Journal of Applied Science and Technology*, 396-403.
- Lafferty, B.A. (2007). The relevance of fit in a cause-brand alliance when consumers evaluate corporate credibility. *Journal of Business Research*, 60(5), 447-453.
- Lock, I., & Seele, P. (2017). Measuring credibility perceptions in CSR communication: a scale development to test readers' perceived credibility of CSR reports. *Management Communication Quarterly*, 31(4), 584-613.
- Lockwood, P., Jordan, C. H., & Kunda, Z. (2002). Motivation by positive or negative role models: regulatory focus determines who will best inspire us. *Journal of personality and social psychology*, 83(4), 854.
- Malhotra, N. K., Nunan, D., & Birks, D. F. (2017). *Marketing research: An applied approach*. Pearson Education Limited.
- Menard, S. (2001). *Applied logistic regression analysis* (2nd ed.). Thousand Oaks, CA: Sage.
- Merriam-Webster. (n.d.). Greenwashing. In *Merriam-Webster.com dictionary*. Retrieved February 15, 2021, from <https://www.merriam-webster.com/dictionary/greenwashing>
- Musgrove, C.F., Choi, P., & Chris, C.K. (2018). Consumer Perceptions of Green Marketing Claims: An Examination of the Relationship with Type of Claim and Corporate Credibility. *Services Marketing Quarterly*, 39(4), 277-292.
- Newell, S. J., & Goldsmith, R. E. (2001). The development of a scale to measure perceived corporate credibility. *Journal of business research*, 52(3), 235-247.
- Newell, S. J., Goldsmith, R. E., & Banzhaf, E. J. (1998). The effect of misleading environmental claims on consumer perceptions of advertisements. *Journal of Marketing Theory and Practice*, 6(2), 48-60.

- Ohanian, R. (1990). Construction and Validation of a Scale to Measure Celebrity Endorsers' Perceived Expertise, Trustworthiness and Attractiveness. *Journal of Advertising*, 19(3), 39-52.
- Orkla (n.d.). Sustainability. Retrieved from: <https://www.orkla.com/sustainability/>
- PanelBase (n.d.a). Adults. Retrieved from:
<https://www.drg.global/divisions/panelbase/panels/adults/>
- PanelBase (n.d.b). Esomar 28. Retrieved from:
<https://www.drg.global/divisions/panelbase/esomar-28/>
- Parguel, B., Benoit-Moreau, F., & Russell, C. A. (2015). Can evoking nature in advertising mislead consumers? The power of 'executional greenwashing'. *International Journal of Advertising*, 34(1), 107-134.
- Phillis, Y. A., Grigoroudis, E., & Kouikoglou, V. S. (2011). Sustainability ranking and improvement of countries. *Ecological Economics*, 70(3), 542-553.
- Qualtrics (n.d.). Survey Methodology & Compliance Best Practices. Retrieved from:
<https://www.qualtrics.com/support/survey-platform/survey-module/survey-checker/survey-methodology-compliance-best-practices/>
- Rahman, I., Park, J., & Chi, C. G. Q. (2015). Consequences of "greenwashing": Consumers' reactions to hotels' green initiatives. *International Journal of Contemporary Hospitality Management*.
- Saunders, M.K.N., Lewis, P. & Thornhill, A. (2019). *Research Methods for Business Students*. (8th ed.). Pearson: UK.
- Schmuck, D., Matthes, J. & Naderer, B. (2018). Misleading Consumers with Green Advertising? An Affect-Reason-Involvement Account of Greenwashing Effects in Environmental Advertising. *Journal of Advertising*, 47(2), 127-145.
- Shaver, K. G. (1985). Attributions of responsibility. In *The Attribution of Blame*. Berlin: Springer.

- Siano, A., Vollero, A., Conte, F., & Amabile, S. (2017). "More than words": Expanding the taxonomy of greenwashing after the Volkswagen scandal. *Journal of Business Research*, 71, 27-37.
- Sims, H. P., Jr., & Lorenzi, P. (1992). *The new leadership paradigm: Social learning and cognition in organizations*. Sage Publications, Inc.
- Sternthal, B., Dholakia, R., & Leavitt, C. (1978). The persuasive effect of source credibility: Tests of cognitive response. *Journal of Consumer research*, 4(4), 252-260.
- Stokes, S. A. (2009). Deception in environmental advertising: consumers' reactions to greenwashing (Doctoral dissertation, Kansas State University).
- Supphellen, M. (2020). Hvorfor og hvordan integrere bærekraft i merkeposisjoneringen. *Magma – Tidsskrift for økonomi og ledelse*.
- Szabo, S., & Webster, J. (2020). Perceived greenwashing: the effects of green marketing on environmental and product perceptions. *Journal of Business Ethics*, 1-21.
- The Coca-Cola Company (April, 2021). *2020 Business and Environmental, Social and Governance Report*. Retrieved from: <https://www.coca-colacompany.com/content/dam/journey/us/en/reports/coca-cola-business-environmental-social-governance-report-2020.pdf>
- UL. (n.d.). Sins of Greenwashing. Retrieved February 16, 2021, from: <https://www.ul.com/insights/sins-greenwashing>
- United Nations. (2015). The 17 Goals. Retrieved from: <https://sdgs.un.org/goals>
- van den Berg, R.G. (n.d.). SPSS ANCOVA. Retrieved from: <https://www.spss-tutorials.com/spss-ancova-analysis-of-covariance/>
- Völckner, F. & Sattler, H. (2006). Drivers of Brand Extension Success. *Journal of Marketing*, 70(2), 18-34.

- Wakita, T., Ueshima, N., & Noguchi, H. (2012). Psychological distance between categories in the Likert scale: Comparing different numbers of options. *Educational and Psychological Measurement, 72*(4), 533-546.
- WCED, World Commission on Environment and Development. (1987). Our common future: Brundtland Report. Retrieved from: <http://www.ask-force.org/web/Sustainability/Brundtland-Our-Common-Future-1987-2008.pdf>
- Yang, J.Z., Seo, M., Rickard, L.N., & Harrison, T.M. (2015). Information sufficiency and attribution of responsibility predicting support for climate change policy and pro-environmental behavior. *Journal of Risk Research, 18*(6), 727-746.
- Zinkhan, G. M., & Carlson, L. (1995). Green advertising and the reluctant consumer. *Journal of Advertising, 24*(2), 1-6.
- Zou, L. W., & Chan, R. Y. (2019). Why and when do consumers perform green behaviors? An examination of regulatory focus and ethical ideology. *Journal of Business Research, 94*, 113-127

Appendix

Appendix A: Poster Ads Presented to Participants



Figure A.1: Ethical-based explanations for EcoOil and EcoWind.



Figure A.2: Resource-based explanations for EcoOil and EcoWind.



Figure A.3: Combination of resource- and ethical-based explanations for EcoOil and EcoWind.



Figure A.4: No explanations for EcoOil and EcoWind.

Appendix B: Scales and Items

| Construct | Concepts | Items | Reference |
|-----------------------|-----------------|--|---------------------------|
| Perceived credibility | Expertise | E1: I believe the company has a great amount of experience. E2: I believe the company is skilled in what they do. E3: I believe the company has great expertise. | Newell & Goldsmith, 2001. |
| | Trustworthiness | T1: I trust the company. T2: I feel that the company makes truthful claims. T3: I feel that the company is honest. T4: I believe what the company tells me. T5: I think The claim reflects the genuine intentions of the company. T7: The claim is NOT misleading. | |
| Perceived fit | Appropriateness | F1: I feel that the sustainability claim fits the energy industry and its social and environmental challenges. ¹ F2: I think the claim rightfully represents the company. ² F3: I feel that the claim addresses sustainability issues well. ³ | Locke & Seele, 2017. |

¹ Original item from Lock & Seele (2017) formulated as "The CSR report fits to the context of the __industry and its social and environmental challenges"

² Original item from Lock & Seele (2017) formulated as "As a reader of this CSR report, I feel that the text addresses CSR issues well."

³ Original item from Lock & Seele, 2017 formulated as "I think the text rightfully represents the company."

| | | | |
|-----------------|-----------------------|--|---------------------------------|
| Personal values | Green consumer values | <p>G1: It is important to me that the products I use do not harm the environment.</p> <p>G2: I consider the potential environmental impact of my actions when making many of my decisions.</p> <p>G3: My purchase habits are affected by my concern for our environment.</p> <p>G4: I am concerned about wasting the resources of our planet.</p> <p>G5: I would describe myself as environmentally responsible.</p> <p>G6: I am willing to be inconvenienced in order to take actions that are more environmentally friendly.</p> <p><i>All used 7-point Likert scale.</i></p> <p><i>Anchors: 1 = strongly disagree,</i></p> <p><i>7 = strongly agree</i></p> | Haws, Winterich & Naylor, 2014. |
|-----------------|-----------------------|--|---------------------------------|

Figure B.1: Scales and items for perceived credibility, perceived fit and green consumer values

| Construct | Items |
|------------------|--|
| Regulatory focus | <p>Promotion Focus:</p> <ol style="list-style-type: none"> 1. When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do. 2. I feel like I have made progress toward being successful in my life. 3. When I see an opportunity for something I like I get excited right away. 4. I frequently imagine how I will achieve my hopes and aspirations. 5. I see myself as someone who is primarily striving to reach my "ideal self" – to fulfill my hopes, wishes and aspirations. <p>Prevention Focus:</p> <ol style="list-style-type: none"> 1. I usually obeyed rules and regulations that were established by my parents. 2. Not being careful enough has gotten me into trouble at times. 3. I worry about making mistakes. 4. I frequently think about how I can prevent failures in my life. 5. I see myself as someone who is primarily striving to become the self I "ought" to be – fulfill my duties, responsibilities and obligations. <p><i>5-point Likert scale, with anchors:</i></p> <p><i>1 = strongly disagree</i></p> <p><i>5 = strongly agree</i></p> <p>Reference: Haws, Dholakia and Bearden (2010).</p> |

Figure B.2: Scales and items measuring regulatory focus.

Appendix C: The Questionnaire in Qualtrics.

Thank you for taking part in our survey.

In the survey, you will be presented with a poster ad from a company. You will then be asked to respond to questions concerning the ad, as well as questions about yourself.

Please make sure you look closely at the ad presented to you before moving forward with the rest of the survey. This is important as you will not be able to navigate backwards in the survey.

The survey consists of 32 questions and should take approximately 10-15 minutes to complete. However, there is no time limit, but we highly recommend that you complete the survey in one sitting.



Before starting the survey, we would like to ask you a few questions about yourself.

What gender do you identify with?

Male

Female

Other

What is your age?

Under 18

18 - 24

25 - 34

35 - 44

45 - 54

55 - 64

65 - 74

75 - 80

80 or older

Do you currently live in the UK?

Yes

No



In this survey, you will be shown a poster ad from a company called EcoWind. Please read the information about EcoWind below, before answering any questions.

EcoWind is a new company that produces renewable energy. The company supplies renewable energy in Europe and is a global actor within energy trades. They produce water power, wind power, solar power, and gas power. Additionally, they deliver district heating and buy and sell energy used in industries, communities, and homes.

Based on the ad presented to you, please indicate the extent to which you agree with the following statements.

Q1

| | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
|---|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| I believe the company has a great amount of experience. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I believe the company is skilled in what they do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I believe the company has great expertise. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q2

| | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
|---|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| I trust the company. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel that the company makes truthful claims. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel that the company is honest. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I believe what the company tells me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think the claim reflects the genuine intentions of the company. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The claim is NOT misleading. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q3

| | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| I feel that the sustainability claim fits the energy industry and its social and environmental challenges. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think the claim rightfully represents the company | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel that the claim addresses sustainability issues well | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

In the ad presented to you, the company made a claim concerning their sustainability efforts. Did the company give an explanation to their sustainability efforts in the ad presented to you?

Yes

No



Please indicate the extent to which you disagree or agree with the following statements.

Q4

| | Strongly disagree | Disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| It is important to me that the products I use do not harm the environment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I consider the potential environmental impact of my actions when making many of my decisions. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My purchase habits are affected by my concern for our environment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am concerned about wasting the resources of our planet. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I would describe myself as environmentally responsible. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am willing to be inconvenienced in order to take actions that are more environmentally friendly. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q5

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel like I have made progress toward being successful in my life. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I see an opportunity for something I like I get excited right away. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I frequently imagine how I will achieve my hopes and aspirations. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I see myself as someone who is primarily striving to reach my "ideal self" – to fulfil my hopes, wishes and aspirations. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q6

| | Strongly disagree | Somewhat disagree | Neither agree nor disagree | Somewhat agree | Strongly agree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I usually obeyed rules and regulations that were established by my parents. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Not being careful enough has gotten me into trouble at times. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I worry about making mistakes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I frequently think about how I can prevent failures in my life. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I see myself as someone who is primarily striving to become the self I "ought" to be – fulfill my duties, responsibilities and obligations. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Appendix D: Central SPSS Output for Hypotheses Testing

| Hypothesis | Variable | P-value (<i>f-value</i>) | Partial Eta Squared | Observed Power |
|------------|--|----------------------------|---------------------|----------------|
| H1a, H1b | Explanation | 0.972 (0.070) | 0.067 | 0.055 |
| | Company | 0.085 (6.482) | 0.685 | 0.418 |
| | Explanation*company | 0.269 (1.318) | 0.012 | 0.351 |
| H2 | RF | 0.786 (0.118) | 0.098 | 0.053 |
| | RF*Explanation | 0.359 (0.847) | 0.006 | 0.150 |
| | RF(prevention)*Explanation (resource and none) | 0.732 (0.118) | 0.001 | 0.063 |
| H3 | RF | 0.204 (1.623) | 0.005 | 0.246 |
| H4 | RF | 0.735 (0.193) | 0.158 | 0.055 |
| | RF*Explanation | 0.122 (2.414) | 0.015 | 0.339 |
| | RF(promotion)*Explanations(ethical and none) | 0.129 (2.324) | 0.014 | 0.329 |

Figure D.1: Numbers used to calculate Type II errors for the hypotheses.