NHH

The Effects of Eco-Labels and Eco-Claims on Consumers' Purchase Intention

The Moderating Role of Regulatory Focus

Helen Zaunbrecher & Katharina Henschel

Supervisor: Magne Supphellen

Master's Thesis, MSc. in Economics and Business Administration

Marketing & Brand Management; Energy, Natural Resources & the Environment

NORWEGIAN SCHOOL OF ECONOMICS

Acknowledgements

Abstract

As consumers increasingly realize the impacts of their consumption patterns on the environment, many try to pursue a more sustainable purchase behavior by dedicating particular attention to environmentally friendly product attributes. In response to the growing interest in sustainable products, brands adjust their marketing strategies accordingly. To persuade consumers to purchase a certain product, companies voluntarily display eco-labels and eco-claims designating environmental friendliness on their packaging. However, due to different foci in how people regulate their behavior, these types of nudges may not be equally effective for all types of customers. Since little research sheds light on that combination of topics, this study aims to fill the gap by investigating the effects of eco-labels and eco-claims as well as the potential moderating impacts of regulatory focus on purchase intentions. It further examines how the suspicion of greenwashing influences the effectiveness of eco-labels and eco-claims.

By collecting quantitative data, the researchers took an explanatory approach to scrutinize the effects of eco-labels and eco-claims on consumers' purchase intentions. Data was obtained from 306 participants in a 2 (no eco-label, eco-label) × 2 (no eco-claim, eco-claim) between-subjects factorial design. Afterwards, the participants were classified and analyzed according to their regulatory focus. The research scope is narrowed down to the MSC eco-label for seafood and German residents.

The key findings reveal that eco-labels and eco-claims have the potential to differently affect consumers' purchase intention. On the one hand, the expected moderating effect between regulatory focus and eco-labels could not be identified in this study. On the other hand, the results show a significant mediation effect of the suspicion of greenwashing on the effectiveness of eco-labels for prevention-focused consumers. The suspicion of greenwashing tends to increase for prevention-focused consumers if exposed to eco-labels alone. Yet, supporting the eco-label with an eco-claim seems to reduce prevention-focused consumers' suspicion of greenwashing.

Keywords: eco-label · regulatory focus · sustainable branding · greenwashing · Marine Stewardship Council · promotion focus · prevention focus

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List of Abbreviations

ASC   Aquaculture Stewardship Council

FMCG   Fast Moving Consumer Goods

MSC   Marine Stewardship Council

NHH   Norwegian School of Economics

SDG   United Nations Sustainable Development Goal

WWF   World Wide Fund For Nature

1. Introduction

"Our biggest challenge in this new century is to take an idea that seems abstract - sustainable development - and turn it into a reality for all the world's people."

- Kofi Annan (2001), former UN Secretary-General

A statement that does not only affect politicians but first and foremost the economy. The world has changed tremendously over the last decades. The awareness for climate change, human rights and impacts of human consumption increased sharply. While humanity's desire for consumption persists, consumers begin to consider ethical and environmental issues in their purchase intentions (De Chiara, 2016; Ginsberg & Bloom, 2004). Therefore, new societal expectations force companies to understand how to integrate sustainability issues into their product development and business strategies so that they are able to reconcile their social, environmental, and economic objectives (Dangelico & Pujari, 2010; Ginsberg & Bloom, 2004). To achieve these goals and to persuade consumers to purchase a certain product, companies utilize eco-labels and eco-claims emphasizing a product's environmental friendliness or high ethical standards to consumers (Grankvist, Dahlstrand, & Biel, 2004; Van Loo, Caputo, Nayga et al., 2015). In line with corporations' direct interests, there is a growing body of academic literature examining the economic and external perception-related benefits of sustainable branding and environmental labeling (e.g., Atkinson & Rosenthal, 2014; Bjørner, Hansen, & Russell, 2004; Gosselt, van Rompay, & Haske, 2019; Testa, Iraldo, Vaccari et al., 2015; Van Loo et al., 2015). Yet, there is a lack of attention concerning the underlying psychological determinants of consumers' reaction to eco-labels which could affect their effectiveness to a vital extent. In fact, this raises the question if environmental labels are equally effective across customer groups.

Looking at different types of consumers reveals that humans follow distinct motivational patterns according to which they regulate their behavior and make decisions(J. L. Aaker & Lee, 2001). While some consumers are more concerned about their obligations and potential losses, others focus mainly on desires and potential gains (Higgins, 1997). These opposed foci are also reflected by different points of attention in the appearance of products. Individuals who seek pleasure are highly inclined to being influenced by visual elements whereas those who avoid pain critically evaluate their choices and thus, might be more suspicious such components (Avnet & Higgins, 2006; Song & Morton, 2016). Ergo, this could affect consumers' reaction to eco-labels and their concomitant purchase intention.

Based on the grounds delineated above, this paper seeks to investigate the effects of eco-labels as well as the moderating impacts of regulatory focus on purchase intentions. More precisely, the primary research question of this study is:

> **RQ1**: *How does the regulatory focus of consumers influence the effectiveness of eco-labels on consumers' purchase intention?*

Human behavior is complex. In view of individuals' intrinsic motivation to exhibit certain behavior, it is essential to question why they intend to act more sustainably: For a brighter future serving the public good. However, one has to take into account that in the end, consumers appreciate perceived private values more than perceived social values in their final decision-making (Hwang, Park, & Kim, 2016). Consequently, highlighting the strength of the core attributes of the product might be beneficial (Ginsberg & Bloom, 2004; Marette, Messéan, & Millet, 2012; Skard, Jørgensen, & Pedersen, 2020).

Hence, it might be compelling to amplify whether the combination of supportive claims and eco-labels influence their effectiveness on consumers' purchase intention.

This yields a second research question guiding this thesis:

> **RQ2**: *How do claims linking environmental friendliness to product benefits influence the effectiveness of eco-labels on consumers' purchase intention?*

In order to answer the stated research questions, this thesis is structured as follows: First, the academic literature currently available on sustainability, branding, nudges, eco-labels and greenwashing is critically reviewed. Furthermore, the regulatory focus theory is explained. Based on those sections, four hypotheses are derived and introduced in section 3. Next, the methodological approach is elucidated. Afterwards, the data analysis and its results are presented. Section 6 discusses how the main insights nuance existing literature and delineates practical implications. Moreover, the validity of this study, its limitations as well as suggestions for future research are addressed before the project culminates in a conclusion.

2. Literature Review

The following chapter represents and critically reviews the relevant literature and builds a theoretical foundation for this study. Furthermore, this chapter aims to set the research project into context and justify its relevance for the research community (Saunders, Lewis, & Thornhill, 2016).

The review is based on both primary and secondary sources, such as peer-reviewed journal articles, books, e-books, websites, as well as reports and conference proceedings (Saunders et al., 2016). Most sources were accessed via academic databases available through the online library provided by the Norwegian School of Economics (NHH). Among the databases consulted were EBSCO, JSTOR, Science Direct, Springer and Wiley. Furthermore, it is essential to highlight only sources available in English were taken into consideration for this literature review. It was also predominantly attempted to consult sources published from 2000 onwards; however, some exceptions were made, especially for fundamental theories. Additionally, it was paid attention to refer to articles published in a range of formidable journals (3 or better) according to the Academic Journal Guide 2018 (Chartered Association of Business Schools, 2018).

The thesis process started with basic research in the field of environmental labels, marketing and branding. Hence, to map the status quo, a combination of keywords such as eco-label, green marketing, branding, sustainable consumption, and greenwashing, was entered into the previously mentioned academic online databases (Hart, 2018). Besides, a selection of high-ranking peer-reviewed journals that are particularly relevant for NHH's majors in Marketing & Brand Management and Energy, Natural Resources & the Environment were scanned for 'hot topics' to narrow down momentous topic ideas. Examples of those journals are Journal of Consumer Psychology, Journal of Marketing, Journal of Consumer Research, Ecological Economics, Environmental & Resource Economics or Journal of Business Ethics. Reoccurring themes across the two domains were the comprehensive sustainability agenda, including environmental labels, green marketing and greenwashing, respectively. Moreover, the researchers of this study wondered about the subjacent constructs that are at the bottom of the observed trends. Hence, additional research in consumer psychology yielded to the conclusion that the regulatory focus theory could be suitable to combine with these distinct research topics.

2.1 Sustainability

2.1.1 Concept and Scope

The term *sustainability* depicts an open, ambiguous concept whose understanding is very context-dependent (Purvis, Mao, & Robinson, 2019). Sustainability is often referred to as sustainable development. While there is no unified definition of sustainability (National Science Foundation, 2000), sustainable development is universally defined as the *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* (United Nations General Assembly, 1987, p. 24). However, there are a few additional definitions of sustainability. For instance, Cambridge Dictionary has a general understanding of the term as *"the ability to continue at a particular level for a period of time"* (Cambridge Dictionary, 2021).

According to the United Nations General Assembly (2005), sustainability consists of three interdependent and mutually reinforcing pillars: environmental (ecological), social and economic. Scherer, Palazzo, and Seidl (2013) expand respective pillars to *"environmental integrity, social equity and economic prosperity"* (p. 259). All three dimension are often incorporated in sustainability frameworks such as the Triple Bottom Line, which was developed by Elkington in the 1990s and serves as a guideline for companies to conduct sustainable business operations and detect bottlenecks (Slaper & Hall, 2011; Żak, 2015).

The United Nations launched its 2030 Agenda for Sustainable Development in January 2016 and concomitantly published 17 Sustainable Development Goals (SDG), which its member states have adopted during a summit in 2015. With less than ten years left to date to achieve the 2030 Agenda, the United Nations have declared this decennium a 'Decade of Action' aiming at *"accelerating sustainable solutions to all the world's biggest challenges"* (United Nations, 2020). The SDGs address a variety of social, environmental and economic needs required to build a sustainable future for everyone, as shown in Figure 1 below. Even though the SDGs are not legally binding, countries are expected to develop their own action plans, follow up on those, and ensure and monitor their implementation (United Nations, 2016a, 2020). The majority of businesses has started to integrate some or all 17 goals into their business activities and strategies. However, foci and depth may differ among organizations (Reuters, 2017).

Figure 1: United Nations Sustainable Development Goals (United Nations, 2016b)

Although all three pillars are indispensable for sustainable development, sustainability is commonly associated with environmental topics; therefore, dictionaries provide additional definitions along the ecological dimension. Hence, according to Cambridge Dictionary (2021), environmental sustainability denotes *"the idea that goods and services should be produced in ways that do not use resources that cannot be replaced and that do not damage the environment"* (Cambridge Dictionary, 2021), while Oxford Dictionary (2021) delineates it as *"the use of natural products and energy in a way that does not harm the environment."*

Due to the variety of definitions, it is of utmost importance to define the scope of sustainability when discussing the topic, this research will focus on the environmental perspective of sustainability. More precisely, it will concentrate on pro-environmental *"behavior that consciously seeks to minimize the negative impact of one's actions on the natural and built world"* (Kollmuss & Agyeman, 2002, p. 240).

2.1.2 Relevance for Business

Sustainability transforms the business landscape as it increasingly depicts a strategic opportunity for organizations (Dangelico & Pujari, 2010; Porter & Reinhardt, 2007). Contrary to popular belief, becoming environmentally friendly can positively affect companies' bottom line (Dangelico & Pujari, 2010; Nidumolu, Prahalad, & Rangaswami, 2009). When businesses

start to increase their environmental sustainability efforts, they may enhance reputation, reduce risks and lower costs, increase revenues and drive innovation (Fraj-Andrés, Martinez-Salinas, & Matute-Vallejo, 2008; Jørgensen & Pedersen, 2018; Miles & Covin, 2000; Miles & Munilla, 1993; Nidumolu et al., 2009; Pujari, Wright, & Peattie, 2003). To achieve that, firms have different possibilities: They can, for instance, minimize their energy and material consumption, prevent pollution (Dangelico & Pujari, 2010) and shift towards more circular (make, use, reduce, reuse, recycle) rather than linear (take, make, use, dispose, pollute) business models (Braungart & McDonough, 2009). Furthermore, incorporating sustainability into their business operations is likely to become unavoidable for firms in the near future to maintain their competitive advantage (Jørgensen & Pedersen, 2018; Nidumolu et al., 2009; Skard et al., 2020). Stakeholder pressure, industry settings and environmental attitudes of decision-makers affect organizations in their ecological investment decisions (Papagiannakis, Voudouris, & Lioukas, 2014). Even though negative feedback on respective decisions tends to diminish environmental efforts, the trend towards positive feedback precipitates future sustainable choices to be oriented at a larger scale (Papagiannakis et al., 2014).

2.2 Branding

Brands are vital for building customer relationships (Tuškej, Golob, & Podnar, 2013). They enable companies to create competitive advantages and differentiate themselves from other competing products designed to satisfy the same need (Chen & Chang, 2013; Keller, 2012). This differentiation represents the nature of the customer's associations related to a brand's name, logo, symbol, identity or trademark (H.-b. Kim & Kim, 2005) and is summarized by Keller (1993) as brand image. Respective individual brand associations held in consumer mind can vary in terms of strength, favorability and uniqueness (Keller, 1993). Consequently, the accumulation of all associations not only defines the emotional meaning of the brand for the individual consumer but also influences their overall evaluation of the brand and its product (Keller, 1993). Thus, for a long time, a positive brand image and concomitantly, branding has been seen as one of the key elements to lead companies to long-term business success (D. A. Aaker, 1996; Keller, 1993, 2019; Tuškej et al., 2013).

In today's digital and interconnected world, the information gap shrinks and search costs decrease, which leads to the fact that branding alone is not the primary quality signal anymore (Swaminathan, Sorescu, Steenkamp et al., 2020). From a consumer's perspective, brands also

play a crucial role in terms of decision-making processes (D. A. Aaker, 1996; Keller, 2019). Implying that successful branding simplifies purchasing decisions by offering a unique set of emotional, functional and self-expressive associations paired with certain quality standards (D. A. Aaker, 1996; Keller, 2019). However, this simplification of decision-making is based on two assumptions: First, it presumes a general information asymmetry paired with high search costs within the decision-making process (Erdem & Swait, 1998; Wernerfelt, 1988). Secondly, it implies familiarity and importance of the brand to the consumer (D. A. Aaker, 1996; Keller, 1993, 2019) paired with a certain amount of trust (Rajavi, Kushwaha, & Steenkamp, 2019). The latter can be enhanced by the different elements of brand management like advertising, innovation, distribution, and price (Rajavi et al., 2019).

2.2.1 Marketing and Branding Trends

In the past, branding strategies consisted of firm-controlled marketing consumers were exposed to (D. A. Aaker, 1996). However, nowadays, within the digital environment consumers actively participate in the communication processes, the way of interaction is not one-sided any longer (Keller, 2019; Swaminathan et al., 2020). Moreover, consumers' attention is spread over various channels, which intensifies competition among the different brands and increases the importance of brand awareness and emotional attachment (Swaminathan et al., 2020). Especially traditional brands compete more and more for consumers' attention with new types of brands (Swaminathan et al., 2020). These latest dynamics lead to many new research areas and uncover boundless possibilities for businesses (Keller, 2019). To ensure that brands continue to stay relevant and work as a differentiator in today's fast-changing marketplace, marketing managers are working on and following various consumer trends.

One of these trends is caused by consumers' rising interest in brand mission and purpose (Parguel, Benoit-Moreau, & Russell, 2015; Swaminathan et al., 2020). More and more clients expect corporations to take more responsibility for tomorrow and the future (Delmas & Burbano, 2011). This responsibility relates to sustainability that goes beyond profit maximization and implies addressing issues like human resource practices, social responsibility, and impacts on climate change (Swaminathan et al., 2020). Furthermore, the latter is closely connected to the pursuit of green marketing activities including *"any form of advertising that states or implies an environmental benefit"* (Szabo & Webster, 2020).

The present research will merely focus on the last mentioned trend of sustainable branding as this is one of the most promising and simultaneously pressing trends that iconic brands should follow nowadays in order to stay economically successful and create new competitive advantages (Banerjee, Iyer, & Kashyap, 2003; Chen, 2010; Nidumolu et al., 2009).

2.2.2 Sustainable Branding

Sustainable branding is an inevitable trend that organizations eager to enjoy a positive and strong brand image in the future must follow (Chen, 2010; Nidumolu et al., 2009).

Latest research depicts that a positive environmental perception can lead to an increase in sales (Bjørner et al., 2004). Furthermore, sustainable marketing can enhance the emotional connection between consumers and brands (Ginsberg & Bloom, 2004). According to scholarly literature, it tends to support organizations to identify new products and markets, leverage emerging technologies, encourage innovation, increase organizational efficiency, and inspire and retain employees (Hopkins, Townend, Khayat et al., 2009). Overall, engagement in sustainability and concomitant sustainable branding efforts increases companies' likelihood to obtain strategic benefits and long-time success (Banerjee et al., 2003; Szabo & Webster, 2020; White, Habib, & Hardisty, 2019). A sustainable corporate focus might not only be beneficial in terms of an enhanced external brand perception but also regarding profitability and the maintenance of competitive advantages (Brown & Dacin, 1997; Luo & Bhattacharya, 2006; Olsen, Slotegraaf, & Chandukala, 2014; Sen & Bhattacharya, 2001; White et al., 2019). Consequently, there is little doubt that companies will continue to meet the growing demand for more sustainable products (Ginsberg & Bloom, 2004) and in this way maintain competitive advantages while combining economic and planetary benefits (Nidumolu et al., 2009; Szabo & Webster, 2020; White et al., 2019). To support this, companies increasingly apply eco-labels on their products (De Chiara, 2016).

However, research also substantiates that the potential to prospectively increase profitability as well as any other external reason of predominantly economic nature should not be the only motivation for companies to get involved in more sustainable actions as this could harm its external perception and consumers' trust (Beverland, 2005, 2009; Holt, 2002; Morhart, Malär, Guèvremont et al., 2015; Moulard, Raggio, & Folse, 2016). Instead, organizations shall develop an intrinsic motivation to take action and promote this passion next to the functional superiority of their products (Chernev & Blair, 2015; Cinelli & LeBoeuf, 2020).

Furthermore, one should bear in mind that the effects of proactive communication might differ depending on the company and industry. Ginsberg and Bloom (2004), for instance, state that if implementing sustainable procedures internally does not increase sales and market share or enhance corporate reputation, it could backfire. J. L. Aaker, Vohs, and Mogilner (2010) explain that this effect is partly based on a shift in the external perception away from competent towards namby-pamby. Besides, socially responsible firms tend to be seen as warmer, more compassionate and ethical (J. L. Aaker et al., 2010) and consequently, as less capable of producing functionally inferior products unless the company's intention matches consumers' moral values (Chernev & Blair, 2015).

2.3 Nudges

Today's world is complex, while human's cognitive resources are limited. Behavioral sciences agree that all situations, which individuals face, automatically constitute some choice architecture (Thaler & Sunstein, 2008). Choice architecture denotes *"the informational or physical structure of the environment which influences the way in which choices are made"* (Lehner, Mont, & Heiskanen, 2016, p. 167). In uncertain situations that naturally involve a certain amount of risk, people tend to subconsciously make probability assessments in their decision-making process that rely on heuristics, intuition, mental shortcuts and biases (Schmidt, 2017; Tversky & Kahneman, 1982). However, with the knowledge that people tend to *"make predictable errors"* (Thaler, 2018, p. 1266), especially marketers have found ways to influence these individual choice architectures, for example, through nudges.

In general, *nudges* are a set of carefully framed information (Croson & Treich, 2014; Sudarshan, 2017). According to the most prominent definition, a nudge can be described as *"any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives"* (Thaler & Sunstein, 2008, p. 6) or as *"purposeful changes of people's [choice architecture] that steer their behavior in certain directions without significantly changing their monetary incentives or coercing them"* (Schubert, 2017, p. 330). Hansen (2016) summarizes a nudge as *"any attempt at influencing people's judgment, choice or behavior in a predictable way (1) made possible because of cognitive biases in individual and social decision-making posing barriers for people to perform rationally in their own interest, and (2) working by making use of those biases as an integral part of such attempts"* (p. 159). According to Thaler & Sunstein's

nudging theory (2008), the ultimate objective of nudging people is to improve their overall welfare while maintaining their freedom of choice. Nudges can be subdivided into distinct categories depending on their objective: On the one hand, nudges can aim to benefit the individual (paternalistic), or the society on the other hand (non-paternalistic; Schubert, 2017; Thaler & Sunstein, 2008). Overall, nudges utilize flaws in individuals' decision-making processes (Hausman & Welch, 2010).

Even though there is a growing variety of nudges, Sunstein (2014) identified ten very important nudges, a selection of which is summarized in Table 1.

Table 1: Selection of Important Nudges according to Sunstein (2014)

Nudge	Brief Example
Default rules	Making the seemingly better choice the default option, e.g., energy from renewable rather than fossil fuels for energy consumers
Simplification	Reducing the complexity of something, e.g., access to education or healthcare
Use of Social Norms	Emphasizing what the majority of people does, e.g., by using high percentage numbers
Increase in Ease and Convenience	Reducing ambiguity and difficulty, e.g., affordable vegan food options in supermarkets
Disclosure	Providing comprehensible information, e.g., carbon footprint of a product on its packaging
Warning, Graphic or otherwise	Using eye-catchers such as bold texts or bright colors, e.g., warnings on cigarettes

Green nudges focus specifically on the environmental facet and *"aim at encouraging pro-environmental behavior [and] encouraging people to voluntarily contribute to a public good, namely, environmental protection"* (Schubert, 2017, p. 331). If one takes into consideration the table above, green nudges can adopt many facets, too. A typical green nudge, for example, is to motivate consumers to choose plant-based alternatives for ordinary food by disclosing information about lower carbon footprint and impact on climate change. Green nudges are a promising device to encourage consumers to make more environmentally friendly choices and thus, increase demand for such products or services (Schubert, 2017; Wensing, Caputo, Carraresi et al., 2020). Eco-labels, belonging to green nudges (Demarque, Charalambides, Hilton et al., 2015; Schubert, 2017), are further elaborated in chapter 2.4.1.

Product claims are among the tools to steer consumers towards certain product choices as they are increasingly used to convey information about a product's benefits, for example, its taste (K. Kim, Cheong, & Zheng, 2009) or *"environmental superiority"* (Hussain & Dae-Wong, 2000, p. 174). Claims about environmental benefits are denoted as *eco-claims* and are often self-declared by brands (Hussain & Dae-Wong, 2000).

Beyond doubt, claims play a vital part for consumers when assessing potential product benefits as they evaluate its credibility and the extent to which it supports them in their objectives, such as environmental protection (Lähteenmäki, 2013). However, to maximize their effect, it tends to be advantageous for claims to be framed positively, among other things highlighting environmental benefits (United Nations Environment Programme & GRID Arendal and Behavioural Insights Team, 2020).

Finally, nudges also have their disadvantages (Sunstein, 2017). For example, research by Wensing et al. (2020) has found that nudging consumers becomes most effective if nudges match with consumer's beliefs. Moreover, Sunstein (2017) argues nudges may also not be effective if they confuse consumers or are wrongly constructed or misunderstood by choice architects, while Schubert (2017) recommends green nudges, in particular, to be transparent in order to be trustworthy. Additionally, many researchers, for instance, Shaw (2016), criticize the notorious use of nudges as a marketing tool in order to have consumers act in a way that benefits corporations.

2.4 Environmental Labels

2.4.1 General Definition and Application

Environmental labels, often referred to as *eco-labels*, are market-based mechanisms frequently used as part of environmental policies and sustainable branding (Arton, Leiman, Petrokofsky et al., 2018; Bellchambers, Phillips, & Pérez-Ramírez, 2016; Thøgersen, 2000).

Since their objective is to generate more sustainable purchase behavior, eco-labels constitute a subcategory of green nudges (Demarque et al., 2015; Schubert, 2017). Furthermore, environmental labels find themselves rather on the non-paternalistic side of the spectrum of nudges because overall, they encourage sustainable purchase behavior, which tends to have

more positive effects on environmental protection and, hence, the public good (Thaler & Sunstein, 2008).

When making decisions, environmental labels provide the consumer with relevant and timely information and allow them to consider ethical and ecological aspects of products (Brécard, 2014; Cason & Gangadharan, 2002; Grunert, Hieke, & Wills, 2014; Thøgersen, 2000; Van Loo et al., 2015). They tend to *"mak[e] product characteristics more salient"* (p. 331) as they visibly emphasize specific environmentally friendly aspects of a certain product through the logo and its meaning (Schubert, 2017). Thus, eco-labels are a convenient tool for consumers to spot sustainable products, which also increases the ease of sustainable purchase behavior (Sunstein, 2014). Figure 2 depicts the version of MSC's environmental label that is often found on eco-labeled seafood. It is also the one used for the empirical part of this thesis (cf. section 4.4).

Figure 2: Environmental label issued by Marine Stewardship Council (2021d)

Environmental labels can be distinguished into two distinct categories: Endogenous and exogenous labels (Kirchhoff, 2000). While endogenous labels refer to self-declared environmental claims awarded by any manufacturer or company, exogenous labels require the fulfilment of specific ecological standards, payment of a license fee and are provided by independent labeling authorities (Cason & Gangadharan, 2002; De Chiara, 2016; Kirchhoff, 2000; Pancer, McShane, & Noseworthy, 2017). Researchers also refer to private or corporate labels when talking about endogenous labels and third-party certifications as a synonym for exogenous labels (Kirchhoff, 2000; Pancer et al., 2017). Consumer's confidence in environmental labels generally increases if awarded through independent labeling authorities as exogenous labels are seen as better indicators in terms of trustworthiness and credibility (Atkinson & Rosenthal, 2014; Cason & Gangadharan, 2002; De Chiara, 2016; Grolleau, Ibanez, & Mzoughi, 2009; Horne, 2009; Sønderskov & Daugbjerg, 2011).

The German label Blauer Engel, introduced in 1977, was the first environmental label. As the second environmental label globally and the first one in Nordic countries, Nordic Swan was

introduced in 1989 (Thøgersen, 2000). Nowadays, there is a wide range of eco-labels based on different criteria available covering nearly all product categories (Caputo, Nayga Jr, & Scarpa, 2013; Dangelico, 2017; Fischer & Lyon, 2014; Giannoccaro, Carlucci, Sardaro et al., 2019; Loureiro & Lotade, 2005). The largest global directory of environmental labels, Ecolabel Index, tracks 455 labels across 25 industries and in 199 countries to date (Brécard, 2014; Ecolabel Index, 2021). Research found that for many product categories, eco-labels designating organic nature are preferred (Giannoccaro et al., 2019), while for coffee, labels highlighting ethical and environmental benefits are most desired (Loureiro & Lotade, 2005).

Besides, eco-labels are an essential tool to reduce information asymmetries (Codagnone, Veltri, Bogliacino et al., 2016; Costanigro, Kroll, Thilmany et al., 2014; Rousseau & Vranken, 2013). Several studies show that using eco-labels substantially increases consumer's willingness to pay higher prices (Giannoccaro et al., 2019; Loureiro & Lotade, 2005; Pancer et al., 2017; Wensing et al., 2020). Paying attention to eco-labels is the initial barrier to making sustainable product choices (Grunert, 2011; Takahashi, Todo, & Funaki, 2018). Besides, *"attention to and use of eco-labels depends on how highly the consumer prioritizes environmental protection, and how strong his or her beliefs are in the purchase of eco-labeled products as a strategy towards achieving this goal"* (Grankvist et al., 2004, p. 215). Furthermore, the more attention consumers pay to and trust in environmental labels, the better their attitudes towards eco-labels, and vice versa (Grankvist et al., 2004; Samant & Seo, 2016; Van Loo et al., 2015). Reliable environmental labeling further benefits truly green consumerism as it supports consumers deciding between truly environmentally friendly products and the rest of the market (Asche & Bronnmann, 2017; Sønderskov & Daugbjerg, 2011). According to Teisl, Roe, and Hicks (2002) and De Chiara (2016), environmental labels can be beneficial for product sales, in particular for the segment of low involvement shoppers (Ricci, Banterle, & Stranieri, 2018), and can further be an effective tool to disadvantage competitors (Grolleau, Ibanez, & Mzoughi, 2007). Moreover, the application of credible third-party eco-labels tends to increase the market shares of companies that sell eco-friendly products as they positively affect brand choices (Bjørner et al., 2004).

2.4.2 Criticism

Despite their multifarious application, environmental labels face several kinds of criticism. For instance, they are among the marketing tools that are increasingly used in sustainable branding to *"manipulate market power"* (Bruce & Laroiya, 2007, p. 275) and give credence

to vague environmental claims (De Boer, 2003), consumers frequently associate respective eco-labels with greenwashing (Pancer et al., 2017). When it comes to the function of eco-labels for stakeholders, no generalizable conclusions on their effectiveness can be made and disagreements among researchers in terms of the credibility of eco-labels occur (De Boer, 2003). Private labels tend to be viewed more suspiciously than third-party labels as they are often self-awarded and thus do not have to comply with a certain set of standards (Cason & Gangadharan, 2002; De Chiara, 2016; Kirchhoff, 2000; Pancer et al., 2017). Gosselt et al. (2019) criticize that some 'naïve' consumers do not question the credibility of environmental claims and labels. Furthermore, assessing the credibility and effectiveness of environmental labels is challenging as both attributes are influenced by the perceived brand credibility and additional information provided on the packaging (Atkinson & Rosenthal, 2014; De Chiara, 2016; Gosselt et al., 2019; Ricci et al., 2018; Sønderskov & Daugbjerg, 2011). In addition, as consumers tend to have difficulties understanding the messages different eco-labels intend to transmit (Brécard, 2014; Grankvist et al., 2004), consumers' likelihood to pay attention to environmental labels declines (Samant & Seo, 2016; Van Loo et al., 2015). The same might happen in case of information overload (Grankvist et al., 2004; Thøgersen, 2000). Moreover, a mismatch regarding a product's highlighted environmental features and the consumer type is likely to result in eco-labeled products being unsuccessful (Grolleau et al., 2009). Finally, a study conducted by Horne (2009) concludes that eco-labels alone may not be a sufficient driver for sustainable consumption and therefore suggests that governments need to play a critical role, develop regulations and strategies that provide additional support to environmental labels.

2.4.3 Marine Stewardship Council

Among the most well-known environmental labels is the *Marine Stewardship Council (MSC)* (Asche & Bronnmann, 2017; Bellchambers, Phillips, et al., 2016; Gutiérrez, Valencia, Branch et al., 2012). It is an international non-profit organization that sets specific voluntary sustainability standards, including an environmental labelling scheme for wild-capture seafood (Arton et al., 2018; Bellchambers, Fisher, Harry et al., 2016; Bellchambers, Phillips, et al., 2016) and used in this research. MSC was initially established in 1997 by the World Wide Fund For Nature (WWF) and Fast Moving Consumer Goods (FMCG) giant Unilever (Marine Stewardship Council, 2021e) to push for good governance and regulate the overexploitation of seafood stocks (Wijen & Chiroleu-Assouline, 2019). However, MSC is

now independent of both organizations. Modern societies face several challenges of severe magnitude connected to sustainability, for instance, climate change and concomitant biodiversity loss (Tol, 2019). Therefore, its mission today is to *"contribute to the health of the world's oceans by recognizing and rewarding sustainable fishing practices, influencing the choices people make when buying seafood and working with our partners to transform the seafood market to a sustainable basis"* (Marine Stewardship Council, 2021f). In 2017, approximately twelve per cent of wild-caught seafood was certified under MSC (Wijen & Chiroleu-Assouline, 2019).

In line with the United Nations Sustainable Development Goals, MSC mainly targets SDG 14 – Life Below Water. Besides, its framework promotes SDG2 – Zero Hunger, SDG8 – Decent Work and Economic Growth, SDG12 – Responsible Consumption and Production, and SDG17 – Partnerships for the Goals (Marine Stewardship Council, 2021b).

MSC is divided into two programs: The MSC Fisheries Standard and MSC Chain-of-Custody Standard. Receiving an eco-label through MSC requires thorough assessment by an independent third-party (Bellchambers, Fisher, et al., 2016) according to MSC Fisheries Standard's three principles: Principle 1 – Sustainability of stocks, Principle 2 – Impacts of the fishery on ecosystem and biodiversity and Principle 3 – Governance and effective management of the fishery (Bellchambers, Fisher, et al., 2016; Marine Stewardship Council, 2020). The MSC Chain of Custody, on the other hand, ensures full traceability along the entire supply chain of certified sustainable seafood, *"from ocean to plate"* (Arton, Leiman, Petrokofsky et al., 2020, p. 2; Arton et al., 2018; Marine Stewardship Council, 2021c). Furthermore, it shall be emphasized that the MSC label is issued for wild-caught seafood only, i.e., farmed seafood is excluded. The certification can be received worldwide and is valid for five years with annual audits (Marine Stewardship Council, 2021a; Wijen & Chiroleu-Assouline, 2019).

MSC has been criticized for its certification process inter alia accessibility of the program for small-scale fisheries and fisheries from developing nations due to the license fees of the environmental label as well as substantial technical knowledge required prior to assessment processes (Bellchambers, Fisher, et al., 2016; Gutiérrez, Defeo, Bush et al., 2016). For instance, license fees range between US$ 20,000 to US$ 300,000 depending on the size (Wijen & Chiroleu-Assouline, 2019). In addition, further criticism is expressed as fisheries certified under MSC are usually not located in ecologically vulnerable areas (Kalfagianni & Pattberg,

2013). Besides, MSC received significant criticism, especially from environmental activists, for several cases of undetected incompliance (Gulbrandsen & Auld, 2016; Opitz, Hoffmann, Quaas et al., 2016; Wijen & Chiroleu-Assouline, 2019).

2.5 Greenwashing

As briefly mentioned in section 2.2.2 and 2.4.2, sustainable branding in general and eco-labels are increasingly being associated with potential *greenwashing*. Nyilasy, Gangadharbatla, and Paladino (2014), as well as Parguel, Benoît-Moreau, and Larceneux (2011), criticize the lack of attention greenwashing has received among researchers, in particular concerning greenwashing perceptions (Gosselt et al., 2019; Szabo & Webster, 2020). Concomitant to consumers' growing environmental consciousness, the term and practice of greenwashing emerged over the last few decades (Delmas & Burbano, 2011; Gosselt et al., 2019; Laufer, 2003; Parguel, Benoît-Moreau, & Russell, 2015; Szabo & Webster, 2020). As a neologism, the term was first defined in 1986 (Parguel, Benoit-Moreau, et al., 2015; Seele & Gatti, 2017). On the one hand, greenwashing is to date understood as *"the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service"* (TerraChoice Environmental Marketing, 2007). On the other hand, perceived greenwashing, has no universal definition but is strongly related to consumers' environmental beliefs and green trust. As such, consumers who have stronger environmental beliefs also tend to be more sensitive and skeptical towards environmental advertising claims and thus, have higher perceptions and suspicion of greenwashing (Chen & Chang, 2013; Szabo & Webster, 2020). Regardless of its scope and perception, greenwashing reflects the disparity between an organization's claims and its actual conduct (Szabo & Webster, 2020) or as Delmas and Burbano (2011) put it *"poor environmental performance and positive communication about environmental performance"* (p. 65). Thus, it tends to be intentional deceit (Seele & Gatti, 2017).

According to Kangun, Carlson, and Grove (1991), greenwashed advertising can be distinguished into three categories: 1) very vague or ambiguous claims, 2) claims that leave out information that is essential to assess the veracity of an environmental claim, and finally, 3) false claims and fundamental lies. Furthermore, TerraChoice Environmental Marketing (2007) developed the Seven Sins of Greenwashing to guide in detecting truly environmental products from greenwashed ones. The sins are summarized in Table 2.

Table 2: Seven Sins of Greenwashing adapted from TerraChoice Environmental Marketing (2007)

Sin	Explanation
Sin of the hidden trade-off	Emphasis of environmental benefits to cover up other ecological concerns
Sin of no proof	Lack of reliable information and provable evidence
Sin of vagueness	Lack of specific information
Sin of worshipping false labels	Creation of fake labels
Sin of irrelevance	Emphasis on unrelated/irrelevant environmental aspects
Sin of lesser of two evils	Environmental claims on products without any ecological benefits
Sin of fibbing	False claims and blunt lies

Among the primary motivations for organizations to greenwash is the potential to gain competitive advantage from respective claims (Chen & Chang, 2013; Szabo & Webster, 2020) and the pursuit to increase market share (Dahl, 2010). Other drivers are external pressure mainly arising from stakeholders (Delmas & Burbano, 2011) and the desire to conceal guilt and unethical behavior (Laufer, 2003). However, with companies seizing opportunities and taking advantage, consumers become more suspicious of corporate activities, especially once they doubt that companies deliver on their promises (Chen & Chang, 2013; Pomering & Johnson, 2009; Zhang, Li, Cao et al., 2018). Perceived greenwashing is further suspected to yield to a negative impact on firm reputation and financial performance (C. N. Leonidou & Skarmeas, 2017; L. C. Leonidou, Kvasova, Leonidou et al., 2013) as well as conflicts among different stakeholders (Du, 2015). Besides, observed greenwashing has negative effects on consumers' satisfaction and brand loyalty (Braga, Martínez, Correa et al., 2019). Finally, the damage that greenwashing does to consumers' trust in brands' environmental friendliness is assumed to have overarching negative impacts on the society as a whole and can damage market demand (Chen & Chang, 2013; Zhang et al., 2018). To date, the lack of regulation for greenwashing is often criticized (Delmas & Burbano, 2011; Laufer, 2003).

2.6 Regulatory Focus Theory

There are various theories according to which psychologists may determine and predict actions performed by consumers. One of them is the *Regulatory Focus Theory* developed by Higgins in the 1990s, examining two socio-cognitive dispositions (Higgins, Roney, Crowe et al., 1994). This concept is particularly relevant for this specific research project as it helps to gain

a more profound understanding of the impacts of non-verbal cues, such as most eco-labels (Hoek, Roling, & Holdsworth, 2013; Tang, Fryxell, & Chow, 2004), in persuasion scenarios (American Psychological Association, 2021). The starting point for the theory was the hedonic principle according to which people seek pleasure and avoid pain; however, Higgins (1997) moves beyond pleasure and pain suggesting that *"the hedonic principle should operate differently when serving fundamentally different needs, such as the distinct survival needs of nurturance (e.g., nourishment) and security (e.g., protection)"* (p. 1281).

The regulatory focus, as a fundamental principle according to which people regulate their behavior to achieve certain goals, classifies individuals into having either a promotion (nurturance-related regulation) or a prevention focus (security-related regulation; Förster, Grant, Idson et al., 2001; Higgins, 1997; Higgins et al., 1994). It is crucial to emphasize that individuals usually possess aspects of both foci, yet one tends to come forward stronger in their self-regulation than the other (Higgins et al., 1994). The theory argues that individuals contrast along three dimensions that are *"(1) the underlying motives people are trying to satisfy, (2) the nature of the goals or standards that they are trying to attain, and (3) the types of outcomes that are salient to people"* (Brockner, Higgins, & Low, 2004, p. 204). Figure 3 illustrates the input and simultaneous output of both foci. While promotion-focused individuals concentrate on their ideal self and are more oriented towards positive outcomes (gains, accomplishment, growth, advancement and attainment), prevention-focused individuals concentrate on their ought self and are more concerned with security, safety as well as their duties, responsibilities and obligations (Crowe & Higgins, 1997; Förster et al., 2001; Higgins, 1987, 1997, 2000, 2002; Higgins et al., 1994; Higgins, Shah, & Friedman, 1997). Hence, individuals with a stronger notion on promotion tend to focus on maximizing *"pleasurable presence of positive outcomes (i.e. gains)"* (p. 4) and minimizing *"the painful absence of positive outcomes (i.e. non-gains)"* (p. 4) in their desired end-states (Higgins, Friedman, Harlow et al., 2001), and vice versa non-losses and losses for prevention-focused people. Moreover, individuals self-regulate their behavior towards certain end-states (Higgins, 2000; Liberman, Molden, Idson et al., 2001). While a prevention-focused consumer's salient outcome tends to concentrate around *"insure correct rejections and insure against errors of commission"*, promotion-focused individuals tend to *"insure hits and insure against errors of omission"* (Crowe & Higgins, 1997, p. 131). In simple terms, prevention-focused consumers are more concerned with avoiding losses and promotion-focused consumers with achieving

gains (Higgins, 1997). Thus, consumers who adopt a prevention focus also tend to be more risk-averse (Zhou, Hirst, & Shipton, 2012).

Furthermore, depending on their self-regulatory focus, individuals have different approaches to the mentioned desired end-states. On the one hand, people with a promotion focus aim to approach matches. On the other hand, people with a prevention focus seek to avoid mismatches (Higgins, 1997). Moving on to emotions felt by individuals, studies conducted by Idson, Liberman, and Higgins (2000) reveal that promotion-focused individuals feel greater pleasure while prevention-focused individuals feel more tremendous pain. In more detail, the pleasure felt in the event of positive outcomes by promotion-focused persons tends to be cheerfulness-related as opposed to quiescence-related for prevention-focused individuals. Also, agitation-related pain was the response to negative outcomes of those with a prevention focus while it was dejection-related for promotion-focus individuals (Higgins, 1987; Idson et al., 2000). Research finds that the parenting style, i.e., nurturance or security-oriented, is likely to have a significant influence on whether children develop a promotion or prevention focus (De Bock & Van Kenhove, 2010; Higgins & Silberman, 1998).
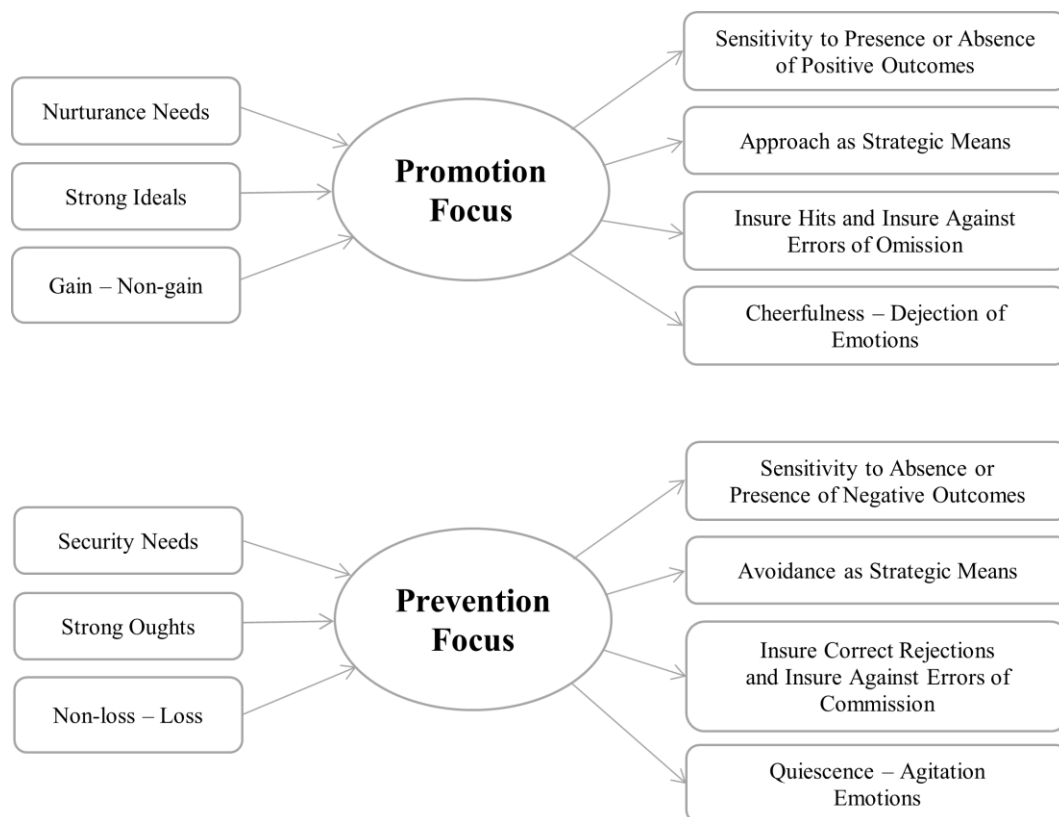
Figure 3: Psychological Variables with Distinct Relations to Promotion Focus and Prevention Focus according to Higgins (1997, p. 1283)

2.7 Identified Research Gap

The present literature review highlighted the origins and extent of the distinct research fields and constitutes the theoretical foundation of this research. However, the authors were able to identify an emerging research gap, which should be addressed over the course of this study. On the one hand, while research on eco-labels and eco-claims focuses predominantly on the implications for marketing in terms of consumers' attention to and trust in those as well as their associated risk for greenwashing, literature on psychological influences on purchase intentions still seems sparse. On the other hand, psychological variables related to the regulatory focus theory and its implications for marketing and advertising is profoundly researched. However, to the best of the authors' knowledge, no research on the relationships between eco-labels and eco-claims, consumer's purchase intention, suspected greenwashing and regulatory focus exists.

Hence, to fill the research gap and make a literary contribution, the researchers developed a conceptual framework based on the theoretical motivation. The conceptual model will be elucidated in the upcoming chapter.

3. Hypotheses

This chapter introduces four hypotheses that were derived from the review of relevant academic literature. These hypotheses will serve as the base for the research project.

3.1 Conceptual Model

The objective of this study is to gain an understanding of the relationships between eco-labels, claims and consumers' purchase intentions while considering the regulatory focus and the influence of suspected greenwashing. Figure 4 below illustrates the conceptual model that underlies this master's thesis and serves as the base for the empirical research.

Based on the literature review outlined in the previous chapter and an eminent research gap, it is assumed that eco-labels and product claims influence consumers' purchase intentions. It is also assumed that this effect moderated by the regulatory focus and mediated by the suspicion of greenwashing.
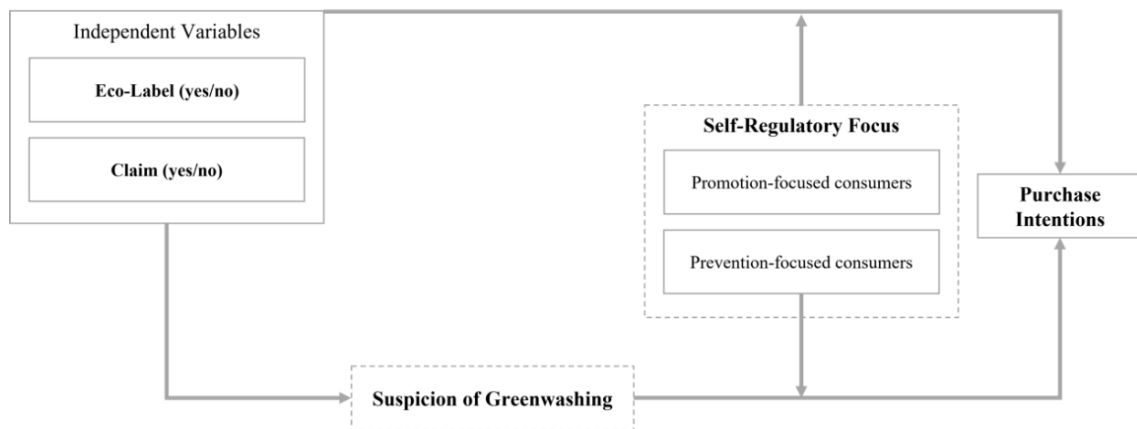
Figure 4: Conceptual Model

3.2 Regulatory Focus

Relatively little is known in academia about how the regulatory focus affects consumers response to sustainable branding practices (Ku, Kuo, Wu et al., 2012). In general, environmental labels tend to increase consumers' purchase intentions and allow them to adopt a more sustainable behavior (Testa et al., 2015). Higgin's Regulatory Focus Theory (1994) outlines that promotion-focused individuals are concerned with achieving gains while those

with a prevention focus concentrate on avoiding losses. Hence, individuals with a promotion focus are attracted to benefit-seeking appeals, whereas those exhibiting a prevention focus find risk-avoidance appeals more persuasive (Choi, Yoo, Hyun Baek et al., 2013; Feng & Park, 2018). The regulatory focus also affects individuals' reaction to product characteristics and messages (Avnet & Higgins, 2006; Mishra, Mishra, & Nayakankuppam, 2010). Promotion-focused consumers tend to find extrinsic product cues, such as its origin or the display of a label on the packaging, appealing. Furthermore, their concern regarding ambiguity and less precise advertising cues is lower compared to prevention-focused consumers who are more hesitant to making decisions (Song & Morton, 2016) because they focus on secure options (Cesario, Grant, & Higgins, 2004; Lee & Aaker, 2004). Additionally, environmental cues generally tend to be associated with goal-attainment and the achievement of benefits (Kareklas, Carlson, & Muehling, 2012) thus, pointing in the promotion direction. Promotion-focused consumers also value natural product attributes, while prevention-focused consumers tend to need additional information (Pula, Parks, & Ross, 2014). Therefore, as environmental labels in general tend to increase the purchase intention of consumers and promotion-focused consumers may identify eco-labels as additional gains in their product choices compared to products without labels, it can be assumed that:

> **H1**: *The effect of eco-labels on purchase intentions depends on the self-regulatory focus of consumers. The effect is more positive for promotion-focused consumers than for prevention-focused consumers.*

3.3 Claiming

Marketing strategies are crucial to increasing the demand for sustainable products (Takahashi et al., 2018). While other studies indicate that already single attributes on the packaging, like a label designating environmental friendliness, are negatively correlated to the perceived effectiveness of a product (Obermiller, Burke, Talbott et al., 2009; Pancer et al., 2017; Skard et al., 2020), additional straightforward claims highlighting product attributes can enhance consumers' reaction to labeled products (Marette et al., 2012). Research also suggests to highlight the strength of the core attributes of the product (Ginsberg & Bloom, 2004; Skard et al., 2020), as in the end, consumers appreciate perceived private values more than perceived social values (Hwang et al., 2016).

Wensing et al. (2020) recommend nudging consumers by highlighting green attributes, which is in line with Verplanken and Holland (2002) who concluded that even values that consumers declare as vital in their life have to be part of their attention focus in order to be activated. Besides, Caputo et al. (2013) highlight the increasing expectation of consumers for claims to be a reliable source of information regarding the product's sustainability. However, they tend to choose a product based on its functionality and taste rather than on its sustainability characteristics (De Pelsmacker & Janssens, 2007; Ginsberg & Bloom, 2004; Skard et al., 2020; Van Loo et al., 2015). Therefore, it is assumed that:

> **H2**: *The presence of claims that link environmental friendliness to product benefits increases the effect of eco-labels on purchase intentions.*

3.4 Suspicion of Greenwashing

In the past, many scholars have investigated a negative correlation between perceived greenwashing and consumers' green purchasing intention (Chen & Chang, 2013; Goh & Balaji, 2016; Newell, Goldsmith, & Banzhaf, 1998; Szabo & Webster, 2020; Zhang et al., 2018). However, authors such as Zhang et al. (2018) highlight that the underlying mechanisms leading to this effect are unexplored. Hence, this research aims to start closing this gap by identifying potential reasons. Based on previous research (Croson & Treich, 2014), the self-regulatory focus of consumers could be one of those.

According to De Bock and Van Kenhove (2010), a prevention focus relates to higher ethical standards, which leads to a lower tolerance for greenwashing. In addition, prevention-focused consumers tend to focus on the downside risk and avoidance of losses (Liberman et al., 2001) which, in return, may also make them more concerned about greenwashing. Hence, it can be presumed that according to the regulatory focus of customers, suspicion of greenwashing plays a mediating role within the effectiveness of eco-labels. More specifically, it is assumed that:

> **H3:** *For prevention-focused consumers, the effect of eco-labels on purchase intentions is negatively mediated by suspicion of greenwashing.*

Taking into consideration the sections above as well as the tendency of prevention-focused consumers to need additional information, e.g., sensory claims (Pula et al., 2014) to reduce

potential concerns and their attraction to messages highlighting the uniqueness of the product (Song & Morton, 2016), an emerging research gap lead to the assumption that:

H4: *For prevention-focused consumers, claims that link environmental friendliness to product benefits reduce the suspicion of greenwashing.*

4. Methodology

An initial step when conducting research is to identify an appropriate methodological approach and justify its choice (Burrell & Morgan, 1979; Crotty, 1998; Saunders et al., 2016). Saunders et al.'s book *Research Methods for Business Students* (2016) serves as the primary source for this chapter complemented by additional literature. This chapter elaborates how this research will be conducted. First, the research design is described, followed by the empirical context. Furthermore, the data collection method and the sample is delineated succeeded by questionnaire design and measurements. Finally, this chapter culminates in an evaluation of quality criteria and validity concerns.

4.1 Research Design

Since, to the best of the researchers' knowledge, little is known about the effects of eco-labels and claims on consumers' purchase intentions according to their regulatory focus, this study aims at contributing to fill the research gap and thereby adding to prevailing scholastic literature. Hence, the research project seeks to examine relationships between the different variables, which, in return, emphasizes explanatory research. As this research project is based on a set of hypotheses logically derived from theory (cf. section 2 and 3), the methodological choice followed a deductive approach to theory development. A deductive research approach is further characterized by the aim of developing generalizations from the specific primary data collected. Consequently, suitable analysis and rigorous testing of the data enabled the researchers to evaluate the hypotheses. Finally, the deductive approach that was adopted for this study will either verify or refute the theory developed., i.e., accept or reject the hypotheses. (Blaikie, 2010; Saunders et al., 2016)

Moreover, for research projects of deductive nature, Saunders et al. (2016) recommend a quantitative research design that typically consists of numeric data. An experiment that generates and collects numerical data through a questionnaire was found to be the most suitable research strategy for this project. It can therefore be described as a mono-method quantitative study (Denzin & Lincoln, 2005; Oppenheim, 2000; Saunders et al., 2016). Although the researchers acknowledged the advantages of multi-method approaches and triangulation, they refrained from conducting, for instance, follow-up interviews with participants due to the scope of this project (Easterby-Smith, Thorpe, & Jackson, 2008).

A factorial design was considered to be among the most efficient constructions for experiments. It divides the experiment into *a* and *b* levels where all possible combinations will be tested (Montgomery, 2017). For the experiment, this study adopted a 2×2 between-subjects factorial experimental design manipulating label type (no label, label) and claim type (no claim, claim) to test the combined effect of eco-labels and claims on purchase intention (Bradu, Orquin, & Thøgersen, 2014; Wei, Kim, Miao et al., 2018). Thus, participants were assigned to either an experimental or a control group (Charness, Gneezy, & Kuhn, 2012; Saunders et al., 2016). Due to the 2×2 between-subjects factorial design, this research project consisted of four groups of participants. Hence, four distinct advertisements for one fictitious brand were created by the researchers for the sole purpose of this study, as illustrated in Table 3 and further elaborated on in section 4.4.

Table 3: 2 × 2 Between-Subjects Factorial Design

2x2 Design		Independent Variable 1 - Claim	
		No Claim	Claim that links environmental friendliness to product benefits
Independent Variable 2 - Eco-label	No Label		
	MSC Label		

Finally, a suitable time horizon for this research needed to be chosen. Considering that the research project aims to investigate the current effect of eco-labels and claims on consumers' purchase intention, the study should be representative of a specific point in time. Thus, a cross-sectional time horizon was adopted. This was further supported by the fact that the participants answered the questionnaire only once, implying the data generated represents merely a

'snapshot' and that the scope of this thesis naturally constrained the time horizon. (Saunders et al., 2016)

4.2 Data Collection and Procedure

Since a between-subject design requires a relatively large sample size (cf. section 4.3), the researchers chose an online questionnaire as the suitable data collection method to investigate the relationships between eco-labels, claims, consumers' purchase intentions, their regulatory focus and the suspicion to greenwashing. Furthermore, questionnaires are well suited for quantitative methods and explanatory research projects (Saunders et al., 2016).

On the one hand, a web-based questionnaire improved the efficiency as it may easily be distributed to a large sample; on the other hand, it enabled the authors to confront all participants with an identical set of standardized questions. Adopting a web-based questionnaire also allowed for self-completion through the participants (Saunders et al., 2016).

The respective survey was created on Qualtrics™, the standard platform for data collection at NHH, and distributed via hyperlinks and QR codes in two ways: First, a participation request was sent to 309 people within the researchers' private network by email and text messages. Second, to reach a broader population and generate more robust findings (Brewer, 2000), the survey was disseminated through social media with the remark that it is solely addressed to German residents who consume fish. Furthermore, it was distributed in a community of graduate researchers based in Germany. Taking into account the cross-sectional scope of the study and the aim to obtain data from a specific point in time, the questionnaire's status was changed to 'open for completion' on March 19th, 2021 and closed on March 26th, 2021.

The questionnaire consisted of different sections (cf. Appendix A). First, the participants were provided with a brief introduction about general aspects such as contact information of the publishers, the estimated duration for completion and encouragement that there are neither right nor wrong responses. The latter should reduce the common method bias (C. N. Leonidou & Skarmeas, 2017; Podsakoff, MacKenzie, Lee et al., 2003). Subsequently, a screening question was implemented to prevent participants who do not consume fish from wasting their time (Brace, 2018). If the screening question was declined, the poll terminated automatically for respective participants. Afterwards, fish consumers were prepared to be exposed to an advertisement for a new brand on the next page. Then, participants were randomly assigned

to either of the groups. Consequently, they were exposed to one stimulus that was recommended to be reviewed carefully as they shall base the remainder of the questionnaire on that specific advertisement.

Hereinafter, participants were asked for their initial reaction to the product, their purchase intention as well as their likeliness of the advertisement. The consecutive section confronted participants with questions concerning the perceived environmental friendliness or greenwashing. Subsequently, data about the expected taste of the salmon advertised, the participants' feeling when eating salmon, and the frequency of personal fish consumption was collected. The following section inquired about the consumers' familiarity with MSC, attention to and trust in environmental labelling. Moreover, the participants were informed that the next section would ask questions about themselves. Hence, a set of six statements (thereof, three promotion-focused and three prevention-focused) concerning one's regulatory focus were presented to the participant. As sensitive data should be collected towards the end of a questionnaire (Brace, 2018), the last section contained socio-demographic data such as age, gender and primary role. Finally, upon completion, the researchers expressed their written gratitude for participation and repeatedly provided their contact information (Saunders et al., 2016).

Generally, it is recommended to keep questionnaires as short as possible as the probability for boredom, fatigue, inattention and concomitantly the mortality rate increases with prolonged duration. Thus, the questionnaire for this study was designed to be completed within a time frame of five to ten minutes to reduce the risks mentioned above (Brace, 2018; Saunders et al., 2016). Moreover, the questionnaire encompassed solely closed-end questions, which is beneficial for the data analysis as the data collection can be structured more easily (Saunders et al., 2016).

Before distributing the final version of the questionnaire, two pilot tests were conducted to receive feedback on clarity and comprehensiveness as well as omissions, ambiguity and functionality (Bell, 2014; Saunders et al., 2016). After the first pilot test, minor adjustments were made according to the feedback received by five independent reviewers. For example, the graphics' resolution was reduced after the first pilot test since, unless adjusted, loading the photo required more time than expected. To verify its improvement, the questionnaire was distributed a second time. Once the final review was completed, it was distributed to the target population as outlined above.

4.3 Sampling and Preparation for Data Analysis

Taking into consideration that this study is part of a master's thesis submitted to NHH by students who have spent considerable parts of their lives living in Germany, convenience sampling as a subcategory of non-probability sampling was chosen for the purpose of this study (Saunders et al., 2016). The main reason behind this choice was the comparably easy access to participants from the researchers' point of view due to the broad network they possess in Germany. More precisely, this study collected primary numerical data from individuals of the adult population (above 18 years) who are currently living in Germany or have lived there for a considerable part of their adult lives.

According to Charness et al. (2012), between-subjects designs tend to require larger sample sizes than within-subject designs to achieve credibility. Considering this project's scope, a minimum sample size of 40 participants per condition should suffice, implying that in total, at least 160 valid responses were required. However, the response rate among participants was higher than expected, resulting in a larger sample size (Easterby-Smith et al., 2008).

Initially, the questionnaire was accessed 491 times; Yet, merely 395 participants completed their entire questionnaire and provided valid responses. Thereof, additional 65 participants were excluded because they declined the screening question concerning fish consumption. Thus, the final dataset consisted of 330 participants (aged 18–65 or older years, M_{age} = 25-34 years, 66.97 % female) who completed the full scope of the questionnaire. After a first data inspection, it became apparent that according to the measurements chosen 24 participants did not exhibit a stronger promotion or prevention focus on their self-regulation. Therefore, those people could not be assigned to either of the classified study groups and will thus, no longer be considered. Hence, the remaining sample of *N = 306* participants (aged 18–65 years or older, M_{age} = 25-34 years, 66.6 % female) was used for the analysis and hypothesis testing (cf. section 5 and 7.1). Of the sample, 111 participants were aged 18-24 years old, 127 participants were between 25-34 years old, 33 participants were aged 35- 44 years, 22 participants were between 45-54 years old, 11 participants stated to be between 55-64 years old and finally, two belonged to the category of 65 or older. Moreover, 204 participants considered themselves female, 100 participants were male, while two preferred not to disclose information about their gender. Concerning their primary role, 157 participants were employed, 127 were primarily occupied with their studies, 14 were self-employed, three were unemployed looking for work and unemployed not looking for work, respectively, and two were retired.

The questionnaire on Qualtrics™ was administered in a manner to randomly assign and equally distribute subjects to either of the four conditions. Thus, in total 76 participants (24.83 %) completed the control condition, i.e., exposed to neither an environmental label nor a claim. 78 participants (25.49 %) finished the second condition, i.e., exposed to the MSC environmental label. 82 participants (26.79 %) were exposed to the third condition, i.e., the claim only. In addition, Finally, 70 individuals (22.87 %) completed the fourth condition and were thus, exposed to both the MSC label and the claim.
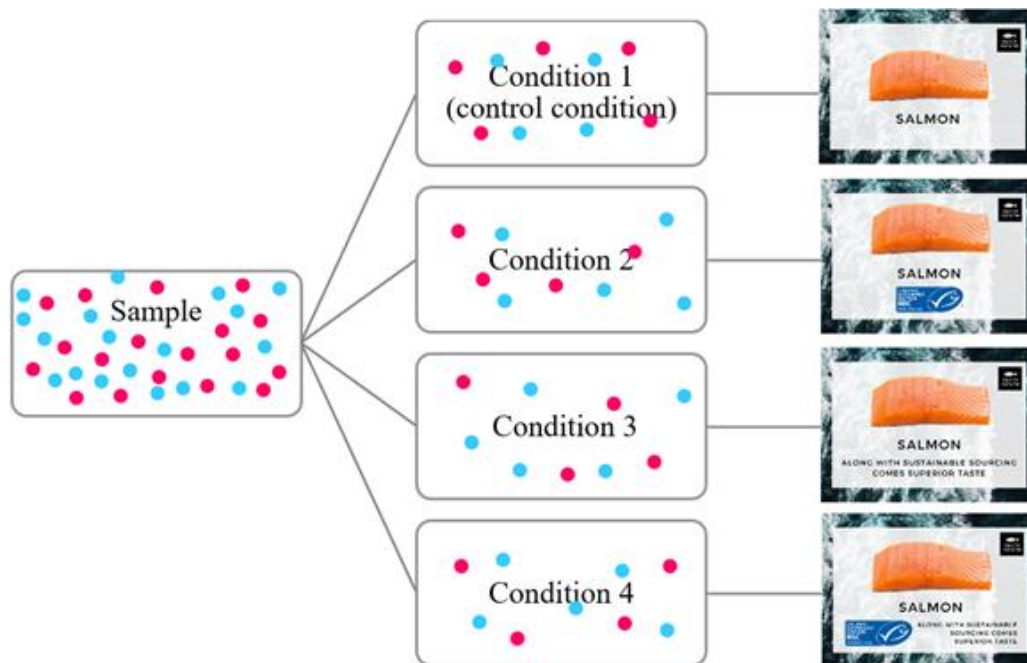
Figure 5: Illustration of Sampling in a Between-Subjects Design

Furthermore, instead of classifying participants according to their regulatory focus before being exposed to one of the stimuli, individuals' orientation was tested afterwards through the questions posed at the end of the questionnaire. A skewed distribution became apparent because the majority of participants was more oriented towards promotion (81.05 %) while only 18.95 % of participants could, according to the measurements of the study, be classified as prevention-focused. Table 4 illustrates how the regulatory foci spread across the different conditions.

Table 4: Distribution of Conditions according to Regulatory Foci

Stimuli	Prevention Focus	Promotion Focus	TOTAL
Control condition	13	63	76 (24.84 %)
Condition 2	13	65	78 (25.49 %)
Condition 3	16	66	82 (26.79 %)
Condition 4	16	54	70 (22.88 %)
SUM	58 (18.95 %)	248 (81.05 %)	306 (100.00 %)

4.4 Choice of Product Category and Stimuli

Various factors influenced the decision-making process for the product category selected. First of all, this master's thesis will be submitted in Norway. Thus, it seemed appealing to choose a product for the study that is relevant for both Norway and Germany. Moreover, Norway is a significant exporter of seafood to Germany. For instance, the export value of salmon products from Norway to Germany amounted to approximately 1.78 billion Norwegian kroner in 2015 (Norsk Fiskerinæring, 2016). In addition, the maritime industry is of particular interest for the researchers and their supervisor, and the MSC label for seafood is among the most prominent and well-documented environmental labels (Bellchambers, Fisher, et al., 2016; Bradu et al., 2014). Therefore, it was considered advantageous to develop a research project that could be utilized in the future inter alia within the scope of in-depth research in the Norwegian market.

For this study, participants were randomly assigned to and equally distributed across the four conditions (cf. section 4.1). Hence, in consultation with supervisor Magne Supphellen, the authors of this research project created four stimuli (Choi, Paek, & Whitehill King, 2012), viz. one without a claim and an environmental label, one with the MSC label only as well as one with the claim linking product benefits to environmental friendliness and the final one including the claim and the MSC label. Since MSC tends to award its label to wild capture rather than farmed salmon (cf. section 2.4.3), a photograph of the ocean was chosen for the background. In addition, the product tag was supposed to be concise concerning the product in focus, i.e., salmon. Therefore, a piece of raw salmon and the word 'salmon' were positioned in the center. Besides, the researchers developed a simple, neutral, one-color icon for the fictitious fishery brand to make the advertisement appeal realistic while avoiding any bias associated with specific brands (Bjørner et al., 2004; De Boer, 2003). Moreover, a claim linking the environmental friendliness of the salmon to its superior taste was developed (Davis,

1993). To avoid the claim being more appealing to either of the foci, the cues used in the claim neither exhibited a promotion nor a prevention focus (Wang & Lee, 2006). All graphics were created on the graphic design platform Canva. Finally, the draft (Figure 6) was multiplicated four times in order to develop individual stimuli according to the 2 (no label, label) × 2 (no claim, claim) between-subjects factorial design (cf. Table 3).

Figure 6: Advertisement Draft excluding Independent Variables

4.5 Questionnaire and Measurements

Overall, it shall be mentioned that the supervisor provided feedback on the questions included in the survey (cf. Appendix A) based on which some adaptations were made to increase validity and reliability. Most questions used a bipolar Likert scale, including a neutral mid-point (Easterby-Smith et al., 2008). Furthermore, some values were recoded for some scales when appropriate for higher values to indicate more benign responses (Kozup, Creyer, & Burton, 2003). Due to the 2 × 2 between-subjects factorial design, this research contains two independent variables which, as they are being manipulated, the researchers determined in advance.

4.5.1 Dependent Variable

Purchase Intention

In order to test the purchase intentions of consumers for the different advertisements, this study adopted a slightly altered question from Kozup et al. (2003) measured at a 5-point Likert scale anchored at 1 = extremely unlikely and 5 = extremely likely.

> *Suppose that you were deciding to go shopping for salmon. Given that this brand is available at your local store at a fair price, how likely are you to buy this product?*

4.5.2 Additional and Control Variables

Attractiveness of the Advertisement

Furthermore, the study measured the attractiveness of the advertisement at a 5-point Likert scale where 1 = not at all and 5 = very much, as well as the initial reaction to the product anchored at 1 = extremely negative and 5 = extremely positive. These two questions were included in the questionnaire to verify that consumers find the advertisement appealing.

> *What is your initial reaction to this product?*
> *How did you like the draft of the advertisement?*

Suspicion of Greenwashing

To assess consumers' suspicion of greenwashing, this research adopted three slightly modified items from Chen and Chang (2013) using a 5-point Likert-scale anchored at 1 = strongly disagree and 5 = strongly agree for the first two statements. In line with more benign responses, the 5-point Likert scale was recoded for the last item and is thus, anchored at 1 = strongly agree and 5 = strongly disagree. For this measurement, it should be highlighted that a high value implies a lower suspicion of greenwashing. To prevent the occurrence of carry-over effects, this set of questions was also shown in a randomized order.

> *I believe that this product is environmentally friendly.*
> *I believe that the producer of this product is honest in its effort to be environmentally friendly.*
> *I believe this producer would mislead consumers regarding the environmental attributes of the product.*

Expected Taste

Since two groups were exposed to a claim that links environmental friendliness to the taste of the product, an item about the presumed taste was included as an additional measurement to identify potential side effects and correlations. Participants were instructed to indicate whether they believe the product tastes 'good' (Raghunathan, Naylor, & Hoyer, 2006) on a 5-point Likert scale where 1 = strongly disagree and 5 = strongly agree.

> *I believe the taste of this product is good.*

Fish Consumption

To explore consumers' personal relation and attitude towards the product and understand potential concomitant side effects, their feeling when consuming salmon was assessed on a 5-point Likert scale anchored at 1 = terrible and 5 = delightful. Furthermore, the frequency of fish meals consumed was assessed using a 5-point Likert scale where 1 = less than one per month and 5 = more than five per month.

> *Which word describes best how you feel when you consume salmon?*
> *How many meals of fish do you have per month?*

Familiarity with the MSC Label

Furthermore, to obtain information about the consumer's familiarity with the MSC label that was used for this study, an additional question was included using a 5-point Likert scale where 1 = not familiar at all and 5 = extremely familiar.

> *How familiar are you with the Marine Stewardship Council (MSC) environmental label?*

Eco-Labels

To assess consumers' trust in eco-labels and their attention, this study adopted two items from Thøgersen (2000) using a 5-point Likert scale anchored at 1 = never and 5 = always.

> *When you are choosing a product, how often do you pay attention to any environmental labelling before deciding to buy?*
> *How often do you trust the environmental labelling on products?*

Regulatory Focus

Individuals usually possess aspects of both the prevention and the promotion focus (Higgins et al., 1994). To test which regulatory focus becomes more eminent for the different participants, this questionnaire adopted six items from the Regulatory Focus Questionnaire developed by Lockwood, Jordan, and Kunda (2002). Readers were instructed to assess their behavior on a 5-point Likert scale depending on the given scenario, where 1 = strongly disagree and 5 = strongly agree for statements addressing a prevention focus. For questions targeting a promotion focus the values were coded oppositional, i.e., 1 = strongly agree and 5 = strongly disagree, in order to be able to merge them together and regard them as one value describing consumer's regulatory focus at a later stage of the analysis (cf. section 4.6 and 5). To prevent the occurrence of carry-over effects, this set of questions was shown in a randomized order.

> *Overall, I am more oriented towards achieving success than preventing failure.*
> *I frequently imagine how I will achieve my goals and aspirations.*
> *I often think about the person I would ideally like to be in the future.*
> *I am frequently anxious that I will fall short of my responsibilities and duties.*
> *I am more oriented towards preventing losses than I am towards achieving success.*
> *I often imagine myself experiencing bad things that I fear might happen to me.*

Age, Gender, Primary Role

Finally, as commonly practiced in research, socio-demographic information about the participants was collected (Saunders et al., 2016; Tumasjan & Braun, 2012).

4.6 Reliability of Construct

Measurement reliability refers to the degree to which measures depict consistency. It is of outmost importance to address reliability concerns when creating indexed variables. Indexed variables arise if several variables are being merged into one variable. In this study, this was the case to individually assess each participant on whether they are more oriented towards promotion or prevention. In addition, the questions concerning different extrema of greenwashing were merged in order to derive a value indicating the degree to which an individual's suspects greenwashing. (Saunders et al., 2016)

Calculating Cronbach's Alpha is a common statistical practice to assess *"the consistency of responses across a set of questions (scale items) designed together to measure a particular concept (scale)"* (Saunders et al., 2016, p. 714). The values for Cronbach's Alpha always lie between 0 and 1 whereby values for the alpha coefficient of *"0.7 or above suggest that the questions in the scale are measuring the same thing"* (Saunders et al., 2016, p. 714).

Table 5 delineates the indexed variables and their respective Cronbach's Alpha. Hence, it becomes obvious that all values for the alpha coefficients were calculated to be 0.7 or above, which leads to the conclusion that these measurements are considered valid. However, it has to be mentioned, in order to ensure a reliable alpha coefficient of 0.7, question RF3 (*"I often think about the person I would ideally like to be in the future"*) got eliminated from further analyses due to violation of convergent validity (Saunders et al., 2016; cf. section 7.1).

Table 5: Reliability of Constructs

Indexed Variable	Cronbach's Alpha	Number of Items
Regulatory Focus	0.7	5
Suspicion of Greenwashing	0.77	3

5. Data Analysis and Results

Within this chapter, the data obtained through the methodological approach outlined in section 4.2 will be summarized and subject to analysis in order to test the proposed hypotheses (Saunders et al., 2016). For this analysis, the software "R" (R Core Team, 2013), version 4.0.4, was used with several extension packages such as "car" (Fox, Weisberg, Price et al., 2020), "probemod" (Tan, 2015), "mediation" (Tingley, Yamamoto, Hirose et al., 2013) and "psych" (Revelle, 2021). This implied vast selection of packages, possibility of analysis adoptions as well as facilitate quality plotting and graphing are some of the main advantages of "R" and simplify the analysis and interpretation of the results.

5.1 Descriptive Statistics and Correlations

A summary of the descriptive statistics for the constructs in terms of their mean and standard deviation, is presented in Table 6.

Table 6: Descriptive Statistics

Construct	Overall		Promotion**		Prevention**	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Attractiveness of Advertisement	**3.71**	**0.93**	**3.74**	**0.92**	**3.60**	**0.99**
Condition 1 (Control)	3.74	0.88	3.70	0.91	3.90	0.80
Condition 2 (Label)	3.67	0.92	3.80	0.91	3.10	0.80
Condition 3 (Claim)	3.70	1.01	3.70	1.00	3.60	1.10
Condition 4 (Label & Claim)	3.76	0.91	3.80	0.85	3.80	1.10
Expected Taste	**3.86**	**0.70**	**3.83**	**0.69**	**3.98**	**0.74**
Condition 1 (Control)	3.91	0.70	3.80	0.71	4.30	0.48
Condition 2 (Label)	3.78	0.83	3.80	0.87	3.80	0.60
Condition 3 (Claim)	3.85	0.69	3.90	0.57	3.80	1.10
Condition 4 (Label & Claim)	3.91	0.56	3.90	0.56	4.10	0.50
Attitude towards Fish Consumption	**4.11**	**0.84**	**4.10**	**0.80**	**4.16**	**1.02**
Condition 1 (Control)	4.12	0.71	4.10	0.61	4.10	1.10
Condition 2 (Label)	4.06	0.90	4.00	0.87	4.20	1.10
Condition 3 (Claim)	4.20	0.91	4.20	0.89	4.30	1.00
Condition 4 (Label & Claim)	4.06	0.83	4.10	0.80	4.00	0.97
Frequency of Fish Consumption	**3.21**	**1.15**	**3.17**	**1.16**	**3.36**	**1.15**
Condition 1 (Control)	3.29	1.14	3.40	1.10	3.00	1.10
Condition 2 (Label)	3.05	1.24	3.00	1.20	3.30	1.20
Condition 3 (Claim)	3.17	1.15	3.10	1.10	3.40	1.30
Condition 4 (Label & Claim)	3.34	1.08	3.30	1.10	3.60	1.00

Construct	Overall		Promotion**		Prevention**	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Familiarity MSC	**2.68**	**1.25**	**2.69**	**1.24**	**2.66**	**1.29**
Condition 1 (Control)	2.83	1.28	2.90	1.20	2.70	1.50
Condition 2 (Label)	2.47	1.17	2.50	1.20	2.50	0.78
Condition 3 (Claim)	2.98	1.28	3.00	1.30	3.00	1.40
Condition 4 (Label & Claim)	2.40	1.20	2.40	1.10	2.40	1.40
General Attention Eco-Labels	**3.56**	**1.00**	**3.60**	**0.96**	**3.34**	**1.13**
Condition 1 (Control)	3.64	0.96	3.70	0.91	3.30	1.20
Condition 2 (Label)	3.44	0.96	3.50	0.97	3.30	0.95
Condition 3 (Claim)	3.52	1.07	3.50	1.00	3.40	1.30
Condition 4 (Label & Claim)	3.63	1.00	3.70	0.92	3.30	1.20
Trust in Eco-Labels	**3.51**	**0.83**	**3.52**	**0.84**	**3.48**	**0.80**
Condition 1 (Control)	3.79	0.77	3.80	0.81	3.60	0.51
Condition 2 (Label)	3.40	0.84	3.50	0.81	3.10	0.99
Condition 3 (Claim)	3.46	0.83	3.50	0.88	3.50	0.63
Condition 4 (Label & Claim)	3.39	0.84	3.30	0.80	3.60	0.96
Suspicion of Greenwashing*	**3.06**	**0.74**	**3.08**	**0.75**	**2.98**	**0.70**
Condition 1 (Control)	2.80	0.59	2.70	0.61	3.10	0.39
Condition 2 (Label)	3.12	0.82	3.20	0.82	2.60	0.58
Condition 3 (Claim)	3.10	0.74	3.10	0.74	2.90	0.75
Condition 4 (Label & Claim)	3.25	0.75	3.20	0.73	3.20	0.83
Purchase Intention	**3.83**	**0.77**	**3.82**	**0.77**	**3.88**	**0.77**
Condition 1 (Control)	3.63	0.78	3.60	0.76	3.90	0.86
Condition 2 (Label)	3.82	0.86	3.80	0.88	3.80	0.83
Condition 3 (Claim)	3.88	0.76	3.90	0.74	3.80	0.86
Condition 4 (Label & Claim)	4.01	0.60	4.00	0.61	4.10	0.57

*   As stated in in section 4.5, a low value indicates an extreme suspicion.
** Does not include the eliminated values of RF3.

Table 6 indicates several differences between the regulatory foci as well as treatment conditions. While the attractiveness of the advertisement scores clearly higher among promotion than prevention-oriented individuals in condition 2, there is no difference between foci when being exposed to condition 4. In fact, within the tested sample label-only advertisements seem least appealing to prevention-focused consumers, while including no additional information or, as in condition 4, an environmental label as well as claim seems most attractive. Regarding taste expectations, it is striking that prevention-focused consumers show significantly higher expectations in the control treatment than in the other conditions and also than promotion-focused consumers. Furthermore, prevention-focused consumers have higher taste expectations in condition 4 than in the other manipulated treatments, promotion-focused consumers, on the other hand, have less deviated and slightly higher taste expectations in both claim conditions. Considering the frequency of fish consumption, all groups have a

relatively high mean ($M_{FishCon.} > 3$), implying an average fish consumption of more than two times a week. The familiarity with MSC reveals the highest standard deviation and thus, the largest spread of respondents' personal estimates, implying that there were various degrees of familiarity while on average a slight up to moderate familiarity was analyzed. Notably, in both regulatory focus groups, participants expressed higher familiarity with the eco-label when they were not exposed to it in the treatment condition. Another striking difference between the regulatory focus groups is the fact that across conditions, promotion-focused consumers have on average a more positive attitude towards eco-labels. With regard to the trust aspect of eco-labels, the low value for prevention-focused consumers in condition 2 is particularly noticeable. This value intimates that prevention-focused consumers could be, as assumed in section 3, more skeptical regarding eco-labels. The observed values regarding "suspicion of greenwashing" also support this assumption. The suspicion of greenwashing decreases with the general presence of eco-labels for promotion-focused consumers while this suspicion initially increases among individuals with a prevention focus. Notwithstanding, the suspicion of greenwashing is lowest in condition 4. When looking at the differences across treatments regarding purchase intention, it becomes apparent that for prevention-focused consumers the purchase intention is, in line with their suspicion of greenwashing, the highest in condition 4 followed by condition 1 and the lowest in condition 2 and 3. Promotion-focused consumers' purchase intention is in line with the expectations of this study; it increases with additional information and is the highest for condition 4.

Moreover, to measure the strength of the relationship between the dependent, independent and influencing variables, a correlation matrix using the Pearson's correlation coefficient was created. The Pearson Correlation varies between -1 and 1, while the more the coefficient differs from 0, the stronger the linear association between the regarded variables. A value > 0 is defined as a positive correlation. It means in other words, that a high value in one variable is associated with a high value in the other variable. A negative correlation (value < 0), on the other hand, implies that a higher value in one variable correlates with a lower value in the other variable and vice versa. (Saunders et al., 2016)

The correlation matrix for the overall sample is illustrated in Table 7, while separate correlation matrices for the different foci are found in the appendices (cf. Appendix B 1 and Appendix B 2).

Table 7: Overall Correlation Matrix

	Purchase Intention	Attractiveness Ad.	Expected Taste	Attitude Consumption	Consumption Frequency	Familiarity MSC	Attention Labels	Trust Labels	Regulatory Focus	Age	Sex	Role	Label	Claim
Purchase Intention	1													
Attractiveness Advertisement	0.45****	1												
Expected Taste of the Product	0.39****	0.36****	1											
Attitude Fish Consumption	0.20***	0.09	0.25****	1										
Consumption Frequency	0.12*	-0.04	0.09	0.27****	1									
Familiarity MSC	-0.12*	-0.10'	0.00	0.11'	0.15**	1								
Attention Environmental labels	-0.03	0.09	0.01	-0.03	0.01	0.32****	1							
Trust Environmental labels	0.06	0.08	0.23****	0.17**	0.07	0.09	0.22***	1						
Regulatory Focus	-0.06	-0.12*	-0.01	-0.05	-0.02	0.00	-0.08	0.00	1					
Age	-0.10'	-0.10'	-0.03	0.05	0.28****	0.12*	0.11'	0.06	0.03	1				
Sex	0.14*	0.09	0.02	0.02	-0.04	-0.04	0.15**	0.07	0.21***	0.01	1			
Role	0.08	0.08	0.09	0.05	-0.13*	-0.13*	-0.13*	-0.17**	-0.02	-0.47****	-0.03	1		
Label	0.10'	0.00	-0.03	-0.06	-0.02	-0.19**	-0.03	-0.14*	0.01	-0.07	0.03	-0.01	1	
Claim	0.14*	0.01	0.03	0.02	0.04	0.02	0.02	-0.10'	0.01	-0.07	0.09	0.02	-0.05	1
Suspicion of Greenwashing	0.45****	0.30****	0.25****	0.22***	0.13*	0.04	-0.05	0.22****	-0.12*	0.05	0.04	-0.05	0.15**	0.14*

****	Correlation is significant at the $p < 0.0001$;
***	Correlation is significant at the $p < 0.001$;
**	Correlation is significant with $p < 0.01$;
*	Correlation is significant with $p < 0.05$
'	Correlation is significant with $p < 0.1$

[1] As stated in section 4.5, measured on a scale from 1 to 5 where a low value indicates an extreme suspicion of greenwashing

Overall, three factors seem to be relatively strongly correlated with the purchase intention: Attractiveness of advertisement (R = 0.45), expected taste of the product (R = 0.39) and green trust (R = 0.45). In fact, only the correlation between age and role (R = -0.47), which could be expected based on the survey distribution, is higher than the previously mentioned correlations. Moreover, although the correlation between each of the two independent variables (label and claim) and purchase intention is weak, they are significant [label (R = 0.1, p > 0.1), claim (R = 0.14, p > 0.05)]. A similar tendency can be observed for dominantly promotion-focused sample (cf. Appendix B 2) but not for the dominantly prevention-focused group (cf. Appendix B 1). Therefore, the researchers conclude that there are valid reasons for a closer examination of the relationships proposed in section 3.

Taking a closer look at other factors that are significantly correlated to the purchase intention, one can notice a positive relation to the attitude towards fish consumption (R = 0.2) and consumption frequency (R = 0.12), which is in line with the researchers' expectations. Another significantly positive correlation, worth mentioning regarding the evaluation of the upcoming analysis, is the one between attention to environmental labels and the familiarity with the MSC label (R = 0.32). This relationship expresses consumers with a stronger focus on eco-labels feel more familiar with MSC and vice versa. However, it is important to take the significantly negative relation between the familiarity with MSC and the purchase intention (R = -0.12) into consideration. Besides, the appearance of the advertisement is negatively related to the familiarity with MSC (R = -0.1). These negative correlations leave room for the assumption that MSC is potentially associated with a negative image.

Moreover, for the following analysis, potentially relevant observations are the negative relations between regulatory focus and attractiveness of the advertisement draft (R = -0.12) and green trust (R = -0.12). These observations indicate, the smaller the promotion and the higher the prevention dominance of a consumer, the higher the suspicion of greenwashing and the smaller the attractiveness of the advertisement (and vice versa).

5.2 Assumptions of Analysis

To test the developed conceptual model and the related hypotheses introduced in section 3 statistically, analyses of variances (ANOVA) and regression analyses, are conducted. While doing so, the analysis will refer to significance levels of 1 %, 5 % and 10 % (corresponding p-values of .01, .05, and .10). A significance level of 1 % implies a 99 % chance that the results

observed did not happen by chance but are related to the analyzed treatment condition (Saunders et al., 2016). For statistical inference of these analyses, several assumptions have to be met: Normality, homoscedasticity, linearity, and independence. (Hair, Black, Anderson et al., 2009; Miller & Chapman, 2001; Montgomery, 2017).

Normality implies a normal distribution of the included variables (Saunders et al., 2016). The distribution shape can be described by skewness and kurtosis. Skewness refers to spread out of the data; a positively skewed distribution is one where the tail is towards the right, the higher numbers. The second distribution shape indicator, namely kurtosis, indicates the pointedness (positive values) or evenness (negative values) of a distribution (Saunders et al., 2016). In general, the further away values of skewness and kurtosis are from zero, the further away are respective points from a normal distribution (Saunders et al., 2016). Reviewing the absolute values of this study, presented in Appendix B 3, shows that the assumption of normality is met for all variables except for the dependent variable, purchase intention, and the additionally measured variable of expected taste. These two variables have a kurtosis value slightly higher than $|2|$, the threshold regarding skewness and kurtosis (Chakrapani, 2004). However, based on the reasonably large sample (N = 306) these two slight deviations shall be less of a concern (Hair et al., 2009).

The assumption of homoscedasticity, also called homogeneity of variance, requires the residuals are normally distributed and exhibit equal levels of variance. To determine whether the data is homoscedastic, i.e., if each of the tested samples comes from populations with the same variance, Levene's test is conducted. (Hair et al., 2009; Saunders et al., 2016)

Thirdly, the assumption of linearity entails that the dependent variable is linearly related to any independent variable (Hair et al., 2009; Saunders et al., 2016). However, as this study relies on categorical independent variables, namely label and claim, which were manipulated and randomly assigned, the assumption of linearity is not applicable.

As a fourth assumption, the problem of multicollinearity has to be tested. Multicollinearity is present if correlations between independent variables are 0.9 or above. In this research, none of the inter-construct correlations exceeded this threshold (cf. Table 7). Additionally, Variance Inflation Factors (VIF), which calculate the influence of correlations among independent variables on the precision of regression estimates, were assessed. None of the VIF indicators, neither within the promotion nor the prevention-focused group, exceed 10. Instead, the values

are very close to one (cf. Appendix B 3). Consequently, the assumption of independence is met. (Hair et al., 2009; Saunders et al., 2016)

5.3 Hypotheses Testing

After examining potential violations of vital base assumptions, the following part will describe how the hypotheses of this research are tested. Within the analyses, represented numbers include the regression coefficients (β) and significance levels. The regression coefficient elucidates the effect of an independent variable on a dependent variable, while all other variables are kept constant (Helgeson & Supphellen, 2004). Is the regression coefficient significant, one talks about an independent effect.

5.3.1 Test of Hypothesis 1

For hypothesis one (H1), it is tested whether the consumers' regulatory focus moderates the effect of environmental labels on their purchase intention. The aim is to investigate whether an environmental label leads to a higher increase in purchase intention for promotion-focused respondents than for prevention-focused ones.

In a preliminary step, it is ensured by a one-way ANOVA analysis that the purchase intention between both label conditions (condition 2 & condition 4) do not differ significantly ($F(1,68)$ = .42, p = 0.52), meaning they can be regarded together as "all label conditions" for the following H1 testing. For the actual hypothesis testing a two-way ANOVA analysis considering environmental label, regulatory focus and their interaction as predictors for consumers purchase intention is conducted. The overall effect of labels reaches significance (β = .16, p < .1), while the effect of regulatory focus (p = .6) as well as the interaction between predictors (p = .79) are not significant. Thus, no significant pairwise differences between the interactions of regulatory foci and treatment condition are revealed (cf. Appendix B 4).

Under consideration of the disproportionate share of promotion-focused participants and no interaction between regulatory foci and environmental labels, additional testing according to focus groups is conducted to examine whether the effectiveness of labels overall actually holds for both groups. To do so, a one-way ANOVA comparing condition 1 and 2 is conducted separately for each regulatory focus group. The results reveal environmental labels in general

increase promotion-focused consumers' purchase intention significantly ($\beta = 0.163$, $p < .1$), while the effect is not significance for prevention-focused respondents ($p > .1$).

In sum, the findings support the prediction that eco-labels significantly impact promotion-focused consumers' purchase intention. However, the lack of interaction between eco-labels and purchase intention suggests that regulatory foci do not affect the effectiveness of environmental labels directly, implying that H1 is rejected.

5.3.2 Test of Hypothesis 2

For hypothesis two (H2), it is tested whether the presence of a claim linking environmental friendliness to product benefits increases the effect of environmental labels on consumers' purchase intention. After confirming that the assumption of homoscedasticity is met, a two-way ANOVA analysis considering the different treatment conditions, regulatory foci and their interaction as predictors for consumers purchase intention is conducted (cf. Appendix B 5). The results reveal a statistically-significant difference in average purchase intention by treatment ($F(3, 298) = 3.145$, $p < 0.01$), though the effect of regulatory focus as well as the interaction between both aspects does not reach significance. A Tukey HSD post-hoc test reveals significant pairwise differences between condition 1 and 4 (+ .379 purchase intention under condition 4, $p < 0.05$), yet all other comparisons are not significant. This finding supports H2, in a way that condition 4 actually has a significant effect, while all other conditions do not, implying that it makes a different if consumers are exposed to either eco-claims or eco-labels or a combination of both.

Given that the sample used is subject to a disproportionate share of promotion-focused participants and no interaction between regulatory foci and treatment condition is proven, additional testing according to focus groups is conducted to ensure that the remaining results of H2 are actually generalizable for both customer groups. More specifically, an ANOVA including the treatment conditions and an according post-hoc analysis are run separately for each regulatory focus group after confirming the respective base assumptions (cf. Appendix B 5). The analysis of promotion-focused individual is in line with the overall testing and confirms that promotion-focused participants exposed to condition 4 show on average a significantly higher purchase intention than in the control condition (condition 1) (+ .426 purchase intention under condition 4, $p < 0.05$) (cf. Appendix B 6). For prevention-focused consumers no significant difference between treatment conditions is observed ($p > .1$) (cf.

Appendix B 7), meaning that the results of the overall testing concerning a significant difference between treatment conditions effectiveness is not generalizable.

In total, the findings of H2 testing and the differences of the means of the different treatment groups support the predicted positive effect of a claim linking environmental friendliness to product benefits combined with an environmental label on consumers' purchase intention. Separate testing according to regulatory foci reveal that this effect is only significantly uphold for promotion-focused group, while the result of the prevention-focused group does not reach significance, meaning that H2 is only partly supported.

5.3.3 Test of Hypothesis 3

The aim of the third hypothesis (H3) is to examine the mediating role of suspicion of greenwashing and the effect of eco-labels among dominantly prevention-oriented consumers.

An according analysis reveals, as illustrated in Figure 7, a statistically significant regression between eco-labels and suspicion of greenwashing as well as between suspicion of greenwashing and purchase intention. The indirect effect is, thus, $(-.499)*(.4763) = -.2377$. The significance of this mediation effect is examined by using the bootstrapping method through the "mediation" package for R (Tingley et al., 2013). Unstandardized indirect effects for each of 1,000 samples and the bootstrapped confidence interval (95%) are computed. The according unstandardized indirect effects is -.2377, while the 95% confidence interval ranges from -.559 to -.01. Therefore, the indirect effect is statistically significant ($p < .05$). The results of this analysis can also be reviewed in Appendix B 8.

Signif. codes: 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
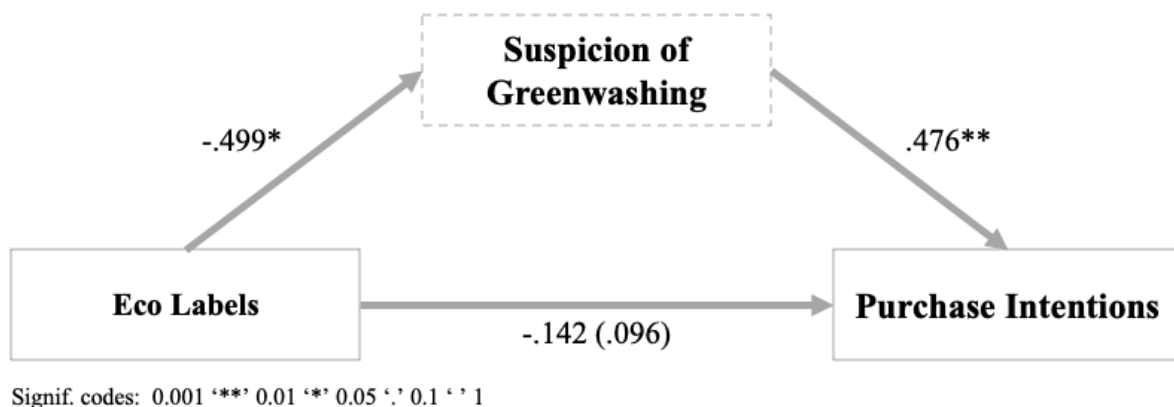
Figure 7: Mediation Effect of Suspicion of Greenwashing for Prevention-Focused Consumers

To sum up, a causal medition analysis reveals that H3 gets acceptected. Suspicion of greenwashing fully mediates the effect of environmental labels on prevention-focused consumers' purchase intention, whereby the eco-label has a negative effect on the suspicion of greenwashing. That implies, the appearance of an environmental label significantly increases the suspicion of greenwashing and, in this context, has a negative impact on the purchase intention of prevention-focused consumers.

5.3.4 Test of Hypothesis 4

The purpose of the fourth hypothesis (H4) is to investigate whether an additional claim that links environmental friendliness to product benefits in the label condition reduces suspicion of greenwashing for prevention-focused consumers, which in turn stimulate purchase intentions. In the case of hypothesis four, the first step was to see the respective data and illustrate resulting overall tendencies in a boxplot (cf. Figure 8).
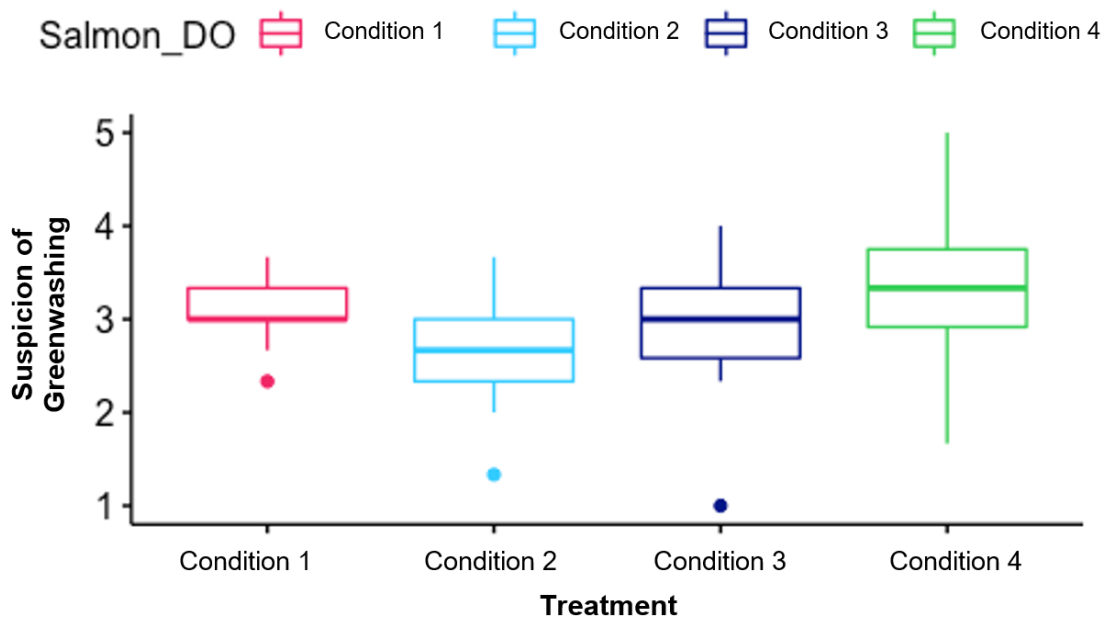
*Figure 8: Boxplot – Suspicion of Greenwashing across Treatment
Conditions for Prevention-Focused Consumers*

This first analysis addresses the expected tendency concerning a decrease in suspicion of greenwashing. By looking at the corresponding means (cf. Appendix B 9), it becomes evident that the suspicion of greenwashing is lowest on average in condition 4, followed by the control condition. Moreover, the suspicion of greenwashing is the strongest in the label only condition.

To investigate this tendency statistically, based on a one-way ANOVA revealing a significant difference between the suspicion of greenwashing of prevention-focused consumers among the different treatment groups ($p < .1$), a Tukey HSD is computed (cf. Appendix B 9). Only the difference between condition 2 and condition 4 reached significance (diff = 0.66, $p = .05$), indicating that the suspicion of greenwashing is significantly smaller for dominantly prevention-focused consumers exposed to condition 4 than for those exposed to condition 1. Thus, H4 is supported; for prevention-focused consumers, an additional claim linking environmental friendliness to product benefits (paired with an environmental label) reduces the suspicion of greenwashing significantly.

Based on the results of hypothesis testing 3, i.e., the suspicion of greenwashing having a mediating effect on consumers' purchase intention, paired with a significant relation between condition 4 and suspicion of greenwashing ($\beta = .377$, $p < .1$), it can be concluded that the purchase intention of prevention-focused consumers is stimulated by additional claims that link environmental friendliness and product benefits. Consequently, H4 is significantly supported.

6. Discussion

6.1 Main Insights

The purpose of this thesis was to shed light on the relationship between environmental labels and claims linking environmental friendliness to product benefits and consumers' purchase intentions. Moreover, the study examined how the regulatory focus affects this relationship and whether the suspicion of greenwashing influences the effectiveness of eco-labels for prevention-focused consumers. The objective was to develop an understanding of potential psychological influence in purchase intentions and how eco-labels can effectively be used in marketing. Hence, thesis was guided by the following research questions:

>   **RQ1**: *How does the regulatory focus of consumers influence the effectiveness of eco-labels on consumers' purchase intention?*

>   **RQ2**: *How do claims linking environmental friendliness to product benefits influence the effectiveness of eco-labels on consumers' purchase intention?*

To the best of the authors' knowledge, the present research project seemed to be the first one examining this combination of topics. Thus, it aims to complement contemporary literature whereby the findings also have implications for marketing practice. Besides, the insights should serve as a point of departure for future research. Taking the findings into consideration, the magnitude of effects of environmental labels and claims linking environmental friendliness to product benefits on purchase intention can be understood.

With regard to the research questions, the general presence of eco-labels has, under certain circumstances, an effect on the purchase intention of different types of consumers. However, the expected significant moderating effect between consumers' regulatory focus and eco-labels could not be detected. In addition, there seems to be significant differences for the overall sample and promotion-focused consumers on whether they are exposed to neither a label nor a claim (condition 1) or to the combination of eco-label and eco-claim (condition 4). A respective non-significant difference for prevention-focused consumers indicates that the effect of eco-labels, as well as the combination of eco-labels and claims on their purchase intention, does not seem directly allegeable. Therefore, one can assume that the prevailing differences among test groups are the result of additional causal relationships. Indeed, a closer

examination yielded a mediating role of the suspicion of greenwashing in the causal relationship between eco-labels and consumers' purchase intention for prevention-focused consumers. In fact, environmental labels increase the suspicion of greenwashing and thus reduce the purchase intention of prevention-focused individuals. Nonetheless, if eco-labels are presented in combination with claims linking environmental friendliness to product benefits, the suspicion of greenwashing decreases significantly and prevention-oriented consumers' purchase intention is stimulated accordingly.

To sum up, eco-labels can affect consumers' purchase intention. Yet, it should be highlighted that the effectiveness of eco-labels on purchase intention is highly dependent on the presence of additional information such as eco-claims. Therefore, it can be concluded that eco-labels should be supported by claims linking environmental friendliness to product benefits in order to reduce the suspicion for greenwashing for prevention-focused consumers and to have a positive effect on purchase intentions for both consumer groups.

6.2 Contribution to Literature

The literature review (cf. section 2) provided an overview of fundamental theories. This explanatory research nuances and complements existing literature in several points. As it thoroughly examines their relationships, this study bridges the overall gap between eco-labels and claims linking environmental friendliness to taste on purchase intentions, as well as the influence of consumers' suspicion of greenwashing and the potential moderating impacts of regulatory focus. Hence, this study provides initial guidance to understand the distinct relationships among these variables.

First, this study expands literature about the role of regulatory foci in decision-making (e.g., Avnet & Higgins, 2006; Crowe & Higgins, 1997; Higgins, 2002) and combines both the marketing and the behavioral research agenda. Within the marketing and advertising domain, it adds especially to academic literature with particular regard to the sustainability and eco-label context where regulatory focus theory does not seem to have gained momentum yet. In contrast, even though there is vast research available on various aspects related to eco-labeling, among other things willingness to pay, understanding, attention, credibility and preferences (e.g., Atkinson & Rosenthal, 2014; Bjørner et al., 2004; Cason & Gangadharan, 2002; De Boer, 2003; Giannoccaro et al., 2019; Grunert et al., 2014; Loureiro & Lotade, 2005; Marette et al., 2012; Sønderskov & Daugbjerg, 2011; Thøgersen, 2000; Van Loo et al., 2015),

behavioral literature is limited. The component eco-label is scarcely addressed within regulatory focus research. Hence, the findings of this study contribute to the extent that ecolabels are not always equally effective and that their effectiveness is moderated according to the regulatory focus, for example by the suspension of greenwashing.

Second, literature examining factors that may influence perceived greenwashing among consumers is rather scarce (e.g., Laufer, 2003). Unlike previous research focusing primarily on how greenwashing can be utilized to gain advantage or its impacts on trust and product or brand perceptions (Berrone, Fosfuri, & Gelabert, 2017; Chen & Chang, 2013; Nyilasy et al., 2014; Szabo & Webster, 2020; Testa et al., 2015; Zhang et al., 2018), this study tackles psychological determinants. More specifically, the main theoretical contribution of this research is concerning the suspicion of greenwashing regarding prevention-focused consumers. Since a label alone increases their suspicion of greenwashing, this coincides with, e.g., Liberman et al. (2001) or Higgins (2002) who claim that prevention-focused consumers are more risk-averse and careful in their product choices. However, the combined presence of eco-labels and eco-claims significantly reduces the suspicion of greenwashing for prevention-focused consumers, which leads to the next theoretical contribution: Insights about the reduction of information asymmetries.

The findings extend literature about the reduction of information asymmetries (e.g., Costanigro et al., 2014; Rousseau & Vranken, 2013). On the one hand, considering the theories by Marette et al. (2012) who argue that labels tend to be more effective in combination with additional information and Pula et al. (2014) who state that prevention-focused consumers tend to find additional information appealing, this study supports their research. On the other hand, this study also broadens their findings as it provides insights about claims specifically combining the dimensions of environmental benefits and taste. The insights from this study extend above-mentioned research particularly in the context of prevention-focused consumers.

Therefore, this study contributes to current literature on the effectiveness of eco-labels and concomitant effects on purchase intentions. It further serves as an initial step to understand the effectiveness of labels depending on one's self-regulation and how the effectiveness may differ among the foci. Furthermore, while De Pelsmacker and Janssens (2007) as well as Obermiller et al. (2009) argue that consumers are likely to prefer taste over eco-label, the present study rather suggests that labels and claims have the potential to complement each other (e.g., Sønderskov & Daugbjerg, 2011).

Several unanswered questions awaiting future research are delineated in section 7.2.

6.3 Practical Implications

Apart from theoretical implications, there is also a range of practical implications that can be inferred from this research project and provide valuable insights for marketing practitioners.

As businesses dedicate more attention to sustainable branding and how they could utilize cues hinting at environmental friendliness, including environmental labels as a marketing tool, it is crucial for them to gain a profound understanding of how environmental labels can be integrated effectively. Thereby, organizations should be aware of the potential negative effects an eco-label can have on consumers' purchase intention, at least indirectly due to the suspicion of greenwashing by certain types of consumers. The fact that the majority of people exhibits either a promotion or a prevention orientation, according to which they self-regulate their behavior and consider potential gains or losses, emphasizes the practical importance for marketing managers on how to manage and mitigate the risk of suspected greenwashing for prevention-focused consumers and effectively stimulate consumers' purchase intentions.

More precisely, when considering the common practice of manipulating regulatory foci in commercials towards a promotion focus, the findings of this study propose that this is a good thing to do. However, marketing managers also have to consider chronically more prevention-focused consumers for whom claims as positive drivers for their choices are important to reduce their concerns. Consequently, these insights provide directions for marketing practitioners on how to differentiate their products on the market which could in return enhance their competitive advantage.

7. Limitations and Future Research

This section addresses internal and external validity, construct and conclusion validity as well as a few general limitations. Finally, directions for future research are suggested.

7.1 Limitations

7.1.1 Internal Validity

Internal validity refers to the degree to which the researchers can confidently assume the relationships between the tested variables are not influenced by any other variables or aspects, viz. a trustworthy cause-effect-relationship between the independent variables eco-label and claim and the dependent variable purchase intention (Saunders et al., 2016).

To prevent participants from altering their responses due to bias, the questionnaire's introduction did not disclose any information about the research topic and its aim. In addition, the research design itself allows for greater control through manipulation of the independent variables. To avoid a systematic bias, participants were randomly assigned to either of the four conditions through Qualtrics™. These aspects allowed to blind participants as they were not aware of the existence of four different conditions. (Carmines & Zeller, 1979; Saunders et al., 2016)

A drawback lies in the self-reporting of individuals' regulatory foci. Self-reporting carries the risk of contradicting stated versus actual behavior (Carrington, Neville, & Whitwell, 2010; Carrington, Zwick, & Neville, 2015; Sun & Morwitz, 2010). Therefore, there is the possibility for people who tend to focus on promotion when analyzed on paper to exhibit a prevention focus in real-world scenarios. Moreover, when self-reporting their behavior, individuals tend to overstate their intentions in approximately 50 % of the cases (Whitehead, Weddell, & Groothuis, 2016).

The fact that this study did not conduct any further analyses for control variables limits its internal validity as potential influences of other extraneous variables cannot be excluded.

Moreover, the graphics that were developed for the advertisements should look as realistic as possible to create an experiment that comes as close to an authentic product packaging as possible. Hence, the instrumentalization threat was also reduced. Additionally, all four

graphics looked similar, apart from the independent variable that was manipulated. Therefore, as the base design of the advertisement did not change, it can be assumed that observed effects between conditions are not connected to the overall design. It was possible to keep the set of questions consistent across the four conditions.

Besides, several threats were considered when designing this study. First, to avoid the risk for testing, the link and QR code are not personalized, and thus, provide the participants with a feeling of security through anonymity. Since participants were only exposed to one stimulus based on which they were asked to provide responses, learning effects are unlikely to occur. Nonetheless, the order of questions was randomized in some blocks of the questionnaire. Although there was a large number of incomplete questionnaires, as the respective data has been removed from the final dataset utilized, the mortality threat, i.e., participants dropping out mid-way, could be circumvented. Lastly, since the questionnaire was distributed solely online, the researchers assume the threat for diffusion and social interaction among participants is negligible. (Saunders et al., 2016)

The common method bias is another threat to internal validity as it may influence how variables interact. However, the introduction assured respondents of anonymity and explained that there are no wrong answers to the questions. This procedure is crucial for self-completed questionnaires. (Podsakoff et al., 2003)

7.1.2 External Validity

External validity mainly refers to whether generalizations can be drawn in a different context based on the current study (Saunders et al., 2016).

Since this study employs convenience sampling, it is questionable to what degree this study is representative of the overall target population and the researchers, thus, acknowledge some external validity is sacrificed. It underlies a sampling bias because part of the overall sample population is naturally excluded from the study since they are by no means connected to the researchers' network. In addition, this study is limited in terms of its geographic dispersion. Germany is the most populated country of the European Union; however, since this study concerns German residents only, it remains to be seen to what extent the findings are generalizable for other geographic areas. Nonetheless, as this research exhibits a very structured methodology, it can easily be replicated in other contexts, such as larger samples or

other geographic areas, which fortifies its external validity. (Easterby-Smith et al., 2008; Saunders et al., 2016)

Besides, the researchers carefully considered inclusion as well as exclusion criteria for this study. For instance, individuals who do not consume fish were excluded via the screening question at the beginning of the study (Brace, 2018)

Furthermore, there are some external validity concerns when it comes to the socio-demographic aspects of the sample. In particular, there were significantly more women than men who participated. Also, the majority of participants was currently below the age of 35. Taking the distribution of participants according to their foci into account, an imbalance between promotion and prevention-focused consumers became obvious as only roughly one-fifth of the participants were promotion-focused, indicating a skewed distribution across foci (cf. section 4.3). This overrepresentation of one focus impacts the overall results of H1 and H2 in which conditions are considered together. It is encountered by proving the results in separate testing according to the regulatory foci. If this study would be replicated, a skewed distribution could be circumvented by testing consumer's regulatory focus ahead of the exposure to the stimulus. Possessing this information would enable the researchers to ensure a more balanced sample and thus, increase external validity. Notwithstanding, in retrospect, the random, equal distribution through Qualtrics™ worked well in light of intra-condition distribution, where the share of prevention-focused participants varied between approximately 17 % to 22 % and the share of promotion-focused consumers between 78 % to 83 %. Hence, no group deviated significantly from the overall distribution of foci.

Even though using student samples is a common practice in early research stages (Bello, Leung, Radebaugh et al., 2009), the large number of participants were students what may negatively affect the external validity of this study.

Moreover, this study was conducted for a single environmental label only, namely the independent MSC label and therefore leaves no room for generalizations to be made for a range of other eco-labels, especially regarding private eco-labels. In addition, taking the negative correlation between participants' familiarity with the MSC label and their purchase intention into consideration, using MSC's label as an example may not have been a perfect choice. Finally, the environmental label of the Aquaculture Stewardship Council (ASC) concentrates on farmed seafood as opposed to the MSC eco-label, which targets wild-capture

seafood. Accordingly, the findings cannot be generalized for all salmon products. Furthermore, the research project worked with a fictitious brand. Since individuals tend to associate greenwashing with either particular brands, industries, or products (De Boer, 2003), no generalizations about the impacts of specific brands on consumers' perceived risk for greenwashing can be derived. Moreover, even though people tend to exhibit a higher willingness to pay for eco-friendly products (Asche, Larsen, Smith et al., 2015; Pancer et al., 2017), this study did not provide participants with any information about the price of a product. Hence, this study assumed the same price for all products and did not take potential price differences between eco-labeled and non-labeled products into account.

Due to its scope, this study refrained from a multi-method approach and did not apply triangulation. To strengthen the scientific rigor of the research, a multi-method approach, e.g., follow-up interviews with the participants, may provide additional support and valuable insights. Alternatively, a within-subjects design, i.e., exposing the same individuals to several stimuli, could be applied to understand whether the same effects would still occur. (Saunders et al., 2016)

Furthermore, the questionnaire's user interface was optimized and tested thoroughly. For example, if the graphics' resolution had not been adjusted after the pilot test, the time required for loading the advertisement might have led to more participants dropping out of the study due to impatience. (Saunders et al., 2016)

Lastly, the researchers acknowledge the trade-off between internal and external validity (Carmines & Zeller, 1979).

7.1.3 Construct Validity

Construct validity denotes the degree to which the chosen measures adequately represent the constructs that they are supposed to measure. It is mainly concerned with using established measurements from academic research. In addition, it is subdivided into face, convergent and divergent validity, all aspects that need to be considered when evaluating research. (Saunders et al., 2016)

For this study, most of the items included in the questionnaire were well-established measurements taken from existing academic and peer-reviewed literature. Moreover, the

questionnaire was pilot tested twice prior to its distribution and adjusted according to the feedback received in order to verify face validity, i.e., non-statistical judgement.

Furthermore, while convergent validity can be described as the degree to which an *"overlap (or correlation) between two different scales that have been used to measure the same construct"* (p. 713) occurs, divergent validity is defined as the *"absence of overlap (or correlation) between different scales used to measure theoretically distinct constructs"* (Saunders et al., 2016, p. 715). Both validities can be assessed via statistical analyses. Contrary to initial plans, this study could not merge the distinct variables concerning fish consumption as well as the variables concerning eco-labels since the correlations were too low. They were therefore separately taken into consideration in the analysis. Additionally, since the responses for one of the regulatory focus statements (RF3) did not strongly correlate to the other RF items, this variable got eliminated, too.

Moreover, even though all individuals supposedly have either of the foci come forward stronger (cf. section 2.6), 24 of 330 valid responses did not exhibit a clear promotion or prevention focus according to the analysis. Thus, it can be assumed that the selected items adopted from Lockwood et al. (2002) were not accurate enough to assess people's regulatory focus for this particular experiment. This limitation is further supported by relatively low values for Cronbach's Alpha (0.7; cf. section 4.6) of the indexed purchase intention variable, even after excluding the question with the highest variance (RF3).

7.1.4 Conclusion Validity

Conclusion validity is mainly concerned with the reasonability of relationships in the data and the potential occurrence of two types of errors: Type I and Type II error. Hereby, Type I errors can be described as *"wrongly coming to the decision that something is true when in reality it is not"* (false positive; Saunders et al., 2016, p. 730), and vice versa for Type II errors (false negative).

Due to the deductive, quantitative approach, there is a certain risk for these errors to prevail because of false statistical decisions and inferences. One threat to the conclusion validity of this study could be the violation of assumptions for testing (cf. section 5.2). Taking into consideration that there the assumptions of analysis were thoroughly examined and did not lead to any issues, the researchers are fairly confident in their results. Yet, regarding the hypotheses, both types of errors may occur in this study as H2 is partially supported and thus,

also partially rejected. Furthermore, since H1 is rejected, a Type II error might have occurred, which would indicate that it would otherwise be supported. Finally, H3 and H4 bear the potential of being subject to Type I error implying it could be rejected if errors are being detected. (Trochim, 2021)

Another threat to the conclusion validity of this study is the fact that potential relationships were not detected due to the relatively low reliability levels (García-Pérez, 2012; Trochim, 2021), which may, in return, result in false negative conclusions of Type II errors.

Taking into account that the share of promotion-oriented consumers was much larger than the share of prevention-focused individuals, the likelihood of this study to be able to deduct significant relationships for prevention-focused consumers is much lower. Nonetheless, while a larger, more balanced sample would increase the confidence in the results, it shall be emphasized that the sample size of this study was nearly twice as large as recommended (cf. section 4.3).

7.1.5 General Limitations

There are a few other limitations worth mentioning. Respective limitations are mainly in regard to the sample characteristics and the data collection process.

Language may be a concern since the study targeted German citizens. However, as the questionnaire was designed in English, individuals who do not possess sufficient knowledge of the language would likely refrain from its completion or show a tendency to misunderstand some items. This may also be among the explanations why the study was accessed 491 times but only completed 395 times, i.e., potential participants might be curios to open the study and withdrew once they realized the questions were not posed in German. Since the introduction indicated an estimated duration to complete the questionnaire, another reason might be that participants read this piece of information and decided to come back at a later, more convenient point in time. Last, network connection issues could be another reason, as every page refresh counts as yet another access. (Saunders et al., 2016)

In spring 2021, the streaming platform Netflix published its documentary 'Seaspiracy' (Andersen & Tabrizi, 2021) that uncovers humans' impact on marine ecosystems and questionable practices of environmental labels, including the MSC. Despite accusations of misleading statements, it has advanced into Netflix' top ten most-watched films (The

Guardian, 2021). Hence, this phenomenon occurred precisely within the time span where the data for this study was collected.

Besides, the researchers themselves follow a predominantly vegan or pescatarian lifestyle, respectively, and try to reduce their personal impact on the environment as best as possible. They have noticed they might be living in a sustainability 'bubble' as this also increasingly applies to their friends and acquaintances. Therefore, they assume this may partly be a reason for the comparably high number of eliminations (65 participants) due to no fish consumption.

Finally, taking the ongoing COVID-19 pandemic into account, neither of the students was allowed to re-enter Norway for the last semester. Thus, physical access to certain literature, in particular books discussing methodological aspects, was limited.

7.2 Future Research

The implications and limitations delineated earlier can offer guidance for future research. Even though the study provides initial insights on the effects of eco-labels on consumers' purchase intention depending on their regulatory focus, additional research verifying its external validity is recommended.

First, this study found a mediator for prevention-focused consumers, namely, the suspicion of greenwashing. Hence, future research could investigate what aspect mediates the relationship between eco-labels and purchase intention for promotion-focused individuals. Taking the absolute numbers before the analysis into account, the results point at a positive trend of the effectiveness of eco-labels on purchase intentions; however, as this study could not confirm a moderating effect of the regulatory focus itself, it might be interesting to examine potential influencing and explaining variables reasoning the differences across regulatory focus groups and conditions.

Second, the scope of the study could be extended in terms of sample size and characteristics as well as geographic dispersion. As such, favorable points of departure could be geographical areas with high seafood consumption, like Norway, and a more diverse sample, for example, in terms of gender distribution. In addition, to achieve more significances, it could be valuable to replicate the experiment with a more balanced distribution of self-regulatory foci, more specifically, a sample that contains a higher share of prevention-focused consumers.

Alternatively, it could be fruitful to explore the effects using a different set of questions to analyze the regulatory focus of an individual, for example, adopting items from the questionnaire developed by Mishra et al. (2010).

Third, as MSC awards its label to different seafood products, further research may examine whether the same effects occur for other product categories, for instance, cod or shrimp. In addition, the study could be extended to explore the phenomenon using other environmental labels, both private and third-party certified labels. An example could be the ASC label which tends to fall short in scholastic literature (Banovic, Reinders, Claret et al., 2019; Bronnmann & Asche, 2017).

Fourth, since the suspicion of greenwashing decreases for prevention-focused consumers, if eco-labels are presented in combination with claims linking environmental friendliness to product benefits, it could be valuable to investigate whether every additional piece of product information increases prevention-focused consumers' confidence and beliefs in the information displayed. Future research will also be needed to examine the degree to which promotion-focused consumers are susceptible to suspect greenwashing.

Finally, as this study used a fictitious brand logo for the advertisement, supplementary research adopting proper brands may provide additional insights. In light of the higher willingness to pay for eco-labeled products (Asche et al., 2015), future research could also investigate whether the effects found in this study pertain if information about the price is disclosed to the consumer.

8. Conclusion

This thesis addresses the effects of environmental labels and claims on consumers' purchase intention. Furthermore, it investigated the potential moderating impact of regulatory focus on this relationship. The study further examined how the suspicion of greenwashing influences the effectiveness of eco-labels for prevention-focused consumers.

Based on the literature reviewed, four hypotheses were derived. To confirm or reject these propositions, quantitative data was obtained from 306 participants in a 2 (no eco-label, eco-label) × 2 (no eco-claim, eco-claim) between-subjects factorial design. Afterwards, the participants were classified and analyzed according to their regulatory focus.

The findings reveal that the general presence of eco-labels has, under certain circumstances, an effect on the purchase intention of different types of consumers. Even though the presumed significant moderating effect between consumers' regulatory focus and eco-labels could not be detected, the analysis yielded another interesting insight: a significant mediation effect of the suspicion of greenwashing on the effectiveness of eco-labels for prevention-focused consumers. In this study, the suspicion of greenwashing tends to increase for prevention-focused consumers if exposed to eco-labels alone. Yet, supporting the eco-label with an eco-claim seems to reduce prevention-focused consumers' suspicion of greenwashing. Therefore, marketing managers who want to utilize eco-labels as a marketing tool should carefully consider potential risks. Additionally, as the overall presence of an eco-label also has a significant positive effect on the purchase intention of promotion-focused consumers, combining eco-label and eco-claim is the only option that has a positive influence for both regulatory foci. Consequently, it can be concluded that eco-labels should be supported by claims linking environmental friendliness to product benefits in order to reduce the suspicion for greenwashing for prevention-focused consumers and appeal to both regulatory foci.

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List of Appendices

Appendices

Appendix A – Questionnaire

Intro Dear Participant,

We are two master's students at NHH – Norwegian School of Economics. This study contributes to a research project chaired by Magne Supphellen and is part of our master's thesis. Your participation is voluntary. You cannot be identified from the information you provide. There are no right or wrong answers and it will take 5 to 10 minutes to complete this study.

Thank you for your time and attention!

Helen & Katharina

Should you have further questions or wish to obtain information about the findings after the thesis has been submitted, please contact us via:
Helen.Zaunbrecher@student.nhh.no
Katharina.Henschel@student.nhh.no

Page Break

Screen Do you consume or purchase salmon?

○ Yes (1)

○ No (2)

Skip To: End of Survey If Screen = 2

AD_Intro You will now see a draft of an advertisement for a new brand followed by some questions.

Condition1_Control Please carefully review the picture below.

Condition2_Label Please carefully review the picture below.

Condition3_Claim Please carefully review the picture below.

Condition4_Label_Claim Please carefully review the picture below.

End of Block: Salmon

Start of Block: Reaction

R1 What is your initial reaction to this product?

○ Extremely positive (5)

○ Positive (4)

○ Neither positive nor negative (3)

○ Negative (2)

○ Extremely negative (1)

R2 Suppose that you were deciding to go shopping for salmon. Given that this brand is available at your local store at a fair price, how likely are you to buy this product?

○ Extremely likely (5)

○ Likely (4)

○ Neither likely nor unlikely (3)

○ Unlikely (2)

○ Extremely unlikely (1)

R3 How did you like the draft of the advertisement?

○ Very much (5)

○ Somewhat (4)

○ Undecided (3)

○ Not really (2)

○ Not at all (1)

Page Break

End of Block: Reaction

Start of Block: Green Wash & Green Trust

RANDOMIZED, SHOW ALL

GW1 I believe that this product is environmentally friendly.

○ Strongly agree (5)

○ Agree (4)

○ Neither agree nor disagree (3)

○ Disagree (2)

○ Strongly disagree (1)

GW2 I believe that the producer of this product is honest in its effort to be environmentally friendly.

○ Strongly agree (5)

○ Agree (4)

○ Neither agree nor disagree (3)

○ Disagree (2)

○ Strongly disagree (1)

GW3 I believe this producer would mislead consumers regarding the environmental attributes of the product.

○ Strongly agree (1)

○ Agree (2)

○ Neither agree nor disagree (3)

○ Disagree (4)

○ Strongly disagree (5)

End of Block: Green Wash & Green Trust

Start of Block: Feeling

F1 I believe the taste of this product is good.

○ Strongly agree (5)

○ Agree (4)

○ Neither agree nor disagree (3)

○ Disagree (2)

○ Strongly disagree (1)

F2 Which word describes best how you feel when you consume salmon?

○ Delightful (5)

○ Good (4)

○ Average (3)

○ Poor (2)

○ Terrible (1)

F3 How many meals of fish do you have per month?

○ More than 5 per month (5)

○ 4 - 5 per month (4)

○ 2 - 3 per month (3)

○ One per month (2)

○ Less than one per month (1)

End of Block: Feeling

Start of Block: Environmental Labels

EL0

EL1 How familiar are you with the Marine Stewardship Council (MSC) environmental label?

○ Extremely familiar (5)

○ Very familiar (4)

○ Moderately familiar (3)

○ Slightly familiar (2)

○ Not familiar at all (1)

Page Break

EL2 When you are choosing a product, how often do you pay attention to any environmental labelling before deciding to buy?

○ Always (5)

○ Often (4)

○ Sometimes (3)

○ Rarely (2)

○ Never (1)

Page Break

EL3 How often do you trust the environmental labelling on products?

○ Always (5)

○ Often (4)

○ Sometimes (3)

○ Rarely (2)

○ Never (1)

I Now, please answer a few questions about you as a person.

RF1 Overall, I am more oriented towards achieving success than preventing failure.

○ Strongly agree (1)

○ Agree (2)

○ Neither agree nor disagree (3)

○ Disagree (4)

○ Strongly disagree (5)

RF2 I am frequently anxious that I will fall short of my responsibilities and duties.

○ Strongly agree (5)

○ Agree (4)

○ Neither agree nor disagree (3)

○ Disagree (2)

○ Strongly disagree (1)

RF3 I often think about the person I would ideally like to be in the future.

○ Strongly agree (1)

○ Agree (2)

○ Neither agree nor disagree (3)

○ Disagree (4)

○ Strongly disagree (5)

RF4 I frequently imagine how I will achieve my goals and aspirations.

○ Strongly agree (1)

○ Agree (2)

○ Neither agree nor disagree (3)

○ Disagree (4)

○ Strongly disagree (5)

RF5 I am more oriented towards preventing losses than I am towards achieving success.

○ Strongly agree (5)

○ Agree (4)

○ Neither agree nor disagree (3)

○ Disagree (2)

○ Strongly disagree (1)

RF6 I often imagine myself experiencing bad things that I fear might happen to me.

○ Strongly agree (5)

○ Agree (4)

○ Neither agree nor disagree (3)

○ Disagree (2)

○ Strongly disagree (1)

End of Block: Self-regulatory Focus

Start of Block: Demographics

D1 What is your age?

○ Under 18 (1)

○ 18 - 24 (2)

○ 25 - 34 (3)

○ 35 - 44 (4)

○ 45 - 54 (5)

○ 55 - 64 (6)

○ 65 or older (7)

D2 What is your gender?

○ Male (1)

○ Female (2)

○ Non-binary / third gender (3)

○ Prefer not to say (4)

D3 What is your primary role?

○ Employed (1)

○ Self-employed (2)

○ Unemployed looking for work (3)

○ Unemployed not looking for work (4)

○ Retired (5)

○ Student (6)

○ Disabled (7)

End of Block: Demographics

Appendix B – Data Analysis

Appendix B 1: Correlation Matrix (Prevention-Focused Consumers)

	Purchase Intention	Attractiveness Advertisement	Expected Taste	Attitude Consumption	Consumption Frequency	Familiarity MSC	Attention Labels	Trust Labels	Regulatory Focus	Age	Sex	Role	Label	Claim
Purchase Intention	1													
Attractiveness Advertisement	0.44***	1												
Expected Taste	0.37**	0.38**	1											
Attitude Fish Consumption	0.22°	0.11	0.10	1										
Consumption Frequency	0.11	0.04	0.11	0.32*	1									
Familiarity MSC	0.05	0.06	0.07	0.17	0.16	1								
Attention Eco-Labels	-0.05	0.09	0.11	0.00	0.02	0.36**	1							
Trust Eco-Labels	-0.07	0.16	0.31*	0.23°	0.17	0.27*	0.18	1						
Regulatory Focus	0.01	-0.01	0.05	0.10	-0.12	-0.01	-0.08	0.04	1					
Age	-0.10	-0.20	-0.41**	0.11	0.18	0.17	0.10	0.00	-0.01	1				
Sex	0.18	0.15	0.15	0.25°	0.12	-0.06	0.17	-0.01	0.04	-0.03	1			
Role	0.22°	0.29*	0.19	-0.01	-0.10	-0.18	-0.22°	-0.19	0.08	-0.37**	0.04	1		
Label	0.07	-0.12	-0.02	-0.05	0.11	-0.16	-0.03	-0.09	0.15	-0.15	0.12	0.18	1	
Claim	0.04	0.09	-0.07	0.00	0.16	0.06	0.03	0.11	0.15	-0.18	0.03	0.00	0.00	1
Suspicion of Greenwashing[1]	0.42**	0.33*	0.38**	0.20	0.19	0.22	-0.09	0.37**	0.36**	0.05	-0.14	0.19	-0.03	0.17

****	Correlation is significant at the $p < 0.0001$;
***	Correlation is significant at the $p < 0.001$;
**	Correlation is significant with $p < 0.01$;
*	Correlation is significant with $p < 0.05$
°	Correlation is significant with $p < 0.1$

[1] As stated in section 4.5, measured on a scale from 1 to 5 where a low value indicates an extreme suspicion of greenwashing

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Appendix B 2: Correlation Matrix (Promotion-Focused Consumers)

	Purchase Intention	Attractiveness Advertisement	Expected Taste	Attitude Consumption	Consumption Frequency	Familiarity MSC	Attention Labels	Trust Labels	Regulatory Focus	Age	Sex	Role	Label	Claim
Purchase Intention	1													
Attractiveness Advertisement	0.46****	1												
Expected Taste	0.40****	0.37****	1											
Attitude Fish Consumption	0.19**	0.08	0.30****	1										
Consumption Frequency	0.12°	-0.05	0.08	0.26****	1									
Familiarity MSC	-0.16*	-0.14*	-0.02	0.09	0.15*	1								
Attention Labels	-0.02	0.08	-0.01	-0.04	0.01	0.31****	1							
Trust Labels	0.09	0.07	0.21***	0.15*	0.04	0.06	0.23***	1						
Regulatory Focus	-0.14*	-0.13*	-0.12°	-0.14*	-0.09	0.01	0.01	0.01	1					
Age	-0.10	-0.08	0.07	0.04	0.30****	0.10	0.11°	0.07	0.09	1				
Sex	0.13*	0.08	-0.04	-0.07	-0.10	-0.03	0.17**	0.09	0.20**	0.03	1			
Role	0.04	0.03	0.06	0.06	-0.14*	-0.12°	-0.11°	-0.17**	-0.02	-0.49****	-0.05	1		
Label	0.11°	0.03	-0.03	-0.06	-0.05	-0.19**	-0.03	-0.15*	-0.02	-0.05	0.00	-0.05	1	
Claim	0.16*	0.00	0.04	0.03	0.00	0.02	0.02	-0.14*	-0.08	-0.05	0.10	0.03	-0.06	1
Suspicion of Greenwashing[1]	0.47****	0.29****	0.23***	0.22***	0.12°	0.00	-0.05	0.19**	-0.18**	0.05	0.10	-0.10	0.19**	0.14*

**** Correlation is significant at the p < 0.0001;
*** Correlation is significant with p < 0.001;
** Correlation is significant with p < 0.01;
* Correlation is significant with p < 0.05;
° Correlation is significant with p < 0.1

[1] As stated in section 4.5, measured on a scale from 1 to 5 where a low value indicates an extreme suspicion of greenwashing

Appendix B 3: Testing General Regression Assumptions

Skewness & Kurtosis

Construct	Skewness	Kurtosis
Attractiveness of Advertisement	**-0.519**	**-0.254**
Condition 1 (Control)	-0.498	-0.434
Condition 2 (Label)	-0.685	-0.048
Condition 3 (Claim)	-0.565	-0.275
Condition 4 (Label & Claim)	-0.202	-0.847
Expected Taste of the Product	**-1.053**	**2.896**
Condition 1 (Control)	-1.049	3.117
Condition 2 (Label)	-1.054	1.827
Condition 3 (Claim)	-1.164	3.178
Condition 4 (Label & Claim)	-0.035	0.079
Attitude towards Fish Consumption	**-0.999**	**1.350**
Condition 1 (Control)	-1.046	3.241
Condition 2 (Label)	-1.171	1.772
Condition 3 (Claim)	-1.166	1.125
Condition 4 (Label & Claim)	-0.402	-0.772
Frequency of Fish Consumption	**-0.208**	**-0.686**
Condition 1 (Control)	-0.254	-0.643
Condition 2 (Label)	0.026	-0.988
Condition 3 (Claim)	-0.235	-0.573
Condition 4 (Label & Claim)	-0.355	-0.551
Familiarity MSC	**0.047**	**-1.111**
Condition 1 (Control)	-0.098	-1.190
Condition 2 (Label)	0.229	-0.988
Condition 3 (Claim)	-0.272	-1.038
Condition 4 (Label & Claim)	0.308	-0.978
General Attention Eco-Labels	**-0.469**	**-0.495**
Condition 1 (Control)	-0.586	-0.343
Condition 2 (Label)	-0.513	-0.779
Condition 3 (Claim)	-0.303	-0.793
Condition 4 (Label & Claim)	-0.525	-0.172
Trust into Eco-Labels	**-0.267**	**0.077**
Condition 1 (Control)	-0.318	-0.227
Condition 2 (Label)	-0.323	0.387
Condition 3 (Claim)	-0.264	-0.060
Condition 4 (Label & Claim)	-0.078	-0.030
Suspicion of Greenwashing	**-0.297**	**-0.098**
Condition 1 (Control)	-0.330	-0.554
Condition 2 (Label)	-0.456	-0.207
Condition 3 (Claim)	-0.445	0.332
Condition 4 (Label & Claim)	-0.372	-0.357
Regulatory Focus	**0.229**	**-0.100**
Condition 1 (Control)	0.055	-0.103
Condition 2 (Label)	0.087	-0.336
Condition 3 (Claim)	0.299	-0.149
Condition 4 (Label & Claim)	0.373	-0.248
Purchase Intention	**-1.086**	**2.018**
Condition 1 (Control)	-0.435	-0.225
Condition 2 (Label)	-1.443	2.720
Condition 3 (Claim)	-1.299	2.594
Condition 4 (Label & Claim)	-0.398	1.066

Variance of Inflation Factors (VIF)

	Overall	Prevention-Focused	Promotion-Focused
Regulatory Focus	1.019	1.154	1.035
Suspicion of Greenwashing	1.066	1.268	1.111
Condition			
Condition 2 (Label)	1.546	1.734	1.586
Condition 3 (Claim)	1.555	1.675	1.569
Condition 4 (Label & Claim)	1.556	1.674	1.540

Appendix B 4: Analysis H1 – Moderating Effect of Eco-Labels

Label	Condition 2 & 4
RF	Regulatory Focus

Overview Purchase Intention Label Conditions (Overall)

	Median	Mean	SE.mean	CI.mean. 0.95	Var	Std. Dev.	Coef.Var
Label Condition (condition 2 & 4)	4.000	3.912	0.062	0.123	0.57	0.755	0.193
Control (condition 1 & 3)	4.000	3.759	0.062	0.122	0.604	0.777	0.207

Levene's Test for Homogeneity of Variance (center = median)

	Df	F value	Pr(>F)
Group	1.000	0.86	0.35
	304.000		
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			

Two-Way ANOVA (incl. interaction effects) – Label Condition & RF on Purchase Intention (Overall)

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
RF	1	0.15	0.1513	0.256	0.613
Label	1	1.77	1.7652	2.986	0.085 .
RF : Label	1	0.04	0.0422	0.071	0.79
Residuals	302	178.54	0.5912		
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1					

Tuckey HSD – Label Condition & RF on Purchase Intention (Overall)

95% family-wise confidence level Fit: aov(formula = PI~ RF *Label)				
RF	**diff**	**lwr**	**upr**	**p adj**
Prevention-Promotion	0.057	-0.16	0.28	0.61
Label	**diff**	**lwr**	**upr**	**p adj**
1-0	0.15	-0.021	0.33	0.09
RF:Label	**diff**	**lwr**	**upr**	**p adj**
Prevention:0-Promotion:0	0.083	-0.325	0.49	0.95
Promotion:1-Promotion:0	0.163	-0.089	0.42	0.34
Prevention:1-Promotion:0	0.187	-0.221	0.6	0.64
Promotion:1-Prevention:0	0.08	-0.331	0.49	0.96
Prevention:1-Prevention:0	0.103	-0.418	0.63	0.96
Prevention:1-Promotion:1	0.023	-0.388	0.43	1
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				

Appendix B 5: Analysis H2 – Effectiveness of Eco-Claims (Overall)

RF	Regulatory Focus

Levene's Test for Homogeneity of Variance (center = median)(Overall)

	Df	F value	Pr(>F)
Group	3	1.609	0.187
	302		
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			

Two-Way ANOVA (incl. interaction effects) – Treatments & RF on Purchase Intention (Overall)

	Df	Sum Sq	Mean Sq	F value	Pr(>F)	
Focus	1	0.15	0.1513	0.26	0.6103	
Condition	3	5.48	1.828	3.145	0.0255	*
RF : Condition	3	1.68	0.5583	0.961	0.4116	
Residuals	298	173.19	0.5812			
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1						

Two-Way ANOVA (without interaction effects) – Treatments & RF on Purchase Intention (Overall)

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Focus	1	0.15	0.1513	0.26	0.6102
Condition	3	5.48	1.828	3.147	0.0254
Residuals	301	174.86	0.5809		
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1					

Tukey HSD – Treatments & RF on Purchase Intention (Overall)

95% family-wise confidence level Fit: aov(formula = PI ~ RF+Condition)	diff	lwr	upr	p adj
RF				
Prevention_Promotion	0.0567	-0.1620	0.2755	0.6102
Condition				
Condition2_Condition4	0.1954	-0.13	0.519	0.4
Condition3_Condition2	0.0023	-0.31	0.313	1
Condition1_Condition2	-0.1886	-0.51	0.128	0.42
Condition3_Condition4	-0.1931	-0.51	0.126	0.4
Condition1_Condition4	-0.384	-0.71	-0.059	0.01**
Condition1_Condition3	-0.1908	-0.5	0.122	0.39
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				

Appendix B 6: Analysis H2 – Effectiveness of Eco-Claims (Promotion)

PI	Purchase Intention

Levene's Test for Homogeneity of Variance (center = median)(Promotion)

	Df	F value	Pr(>F)
Group	3	1.685	0.171
	244		
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			

One-Way ANOVA – Treatments on Purchase Intention (Promotion)

	Df	Sum Sq	Mean Sq	F value	Pr(>F)	
Condition	3	6.17	2.0573	3.585	0.0144	*
Residuals	244	140.02	0.5739			
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1						

Tuckey HSD – Treatments on Purchase Intention (Promotion)

95% family-wise confidence level Fit: aov(formula = PI ~ Condition)	diff	lwr	upr	p adj
Condition1_Condition3	-0.338	-0.683	0.007	0.058.
Condition2_Condition3	-0.078	-0.421	0.264	0.935
Condition4_Condition3	0.091	-0.269	0.450	0.914
Condition2_Condition1	0.259	-0.087	0.606	0.216
Condition4_Condition1	0.429	0.065	0.792	0.013*
Condition4_Condition2	0.169	-0.192	0.530	0.619
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				

Appendix B 7: Analysis H2 – Effectiveness of Eco-Claims (Prevention)

Levene's Test for Homogeneity of Variance (center = median) (Prevention)

	Df	F value	Pr(>F)
Group	3	0.651	0.586
	56		
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			

One-Way ANOVA – Treatments on Purchase Intention (Prevention)

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Condition	3	0.99	0.329	0.536	0.66
Residuals	54	33.17	0.6142		
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1					

Appendix B 8: Analysis H3 – Mediating Effect of Suspicion of Greenwashing[1]

ANOVA - Condition 2 on Purchase Intention

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	3.769	0.216	17.45	<2e-16***
Condition 2	- 0.142	0.245	0.58	0.57
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Residual standard error: 0.78 on 56 degrees of freedom Multiple R-squared: 0.00594, Adjusted R-squared: -0.0118 F-statistic: 0.335 on 1 and 56 DF, p-value: 0.565				

ANOVA - Condition 2 on Suspicion of Greenwashing[1]

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	2.59	0.187	13.85	<2e-16***
Condition 2	- 0.499	0.212	2.35	0.022*
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Residual standard error: 0.67 on 56 degrees of freedom Multiple R-squared: 0.0898, Adjusted R-squared: 0.0736 F-statistic: 5.53 on 1 and 56 DF, p-value: 0.0223				

One-Way ANOVA - Suspicion of Greenwashing[1] on Purchase Intention

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	2.5357	0.4176	6.07	<0.0001***
Condition 2	0.0959	0.2362	-0.41	0.6865
Suspicion of Greenwashing[2]	0.4763	0.1419	3.36	0.0014**
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Residual standard error: 0.72 on 55 degrees of freedom Multiple R-squared: 0.175, Adjusted R-squared: 0.145 F-statistic: 5.83 on 2 and 55 DF, p-value: 0.00504				

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[1] Suspicion of greenwashing is, as stated in section 4.5, measured on a scale from 1 to 5 where a low value indicates an extreme suspicion of greenwashing

Nonparametric Bootstrap Confidence Intervals with the Percentile Method

	Estimate	95% CI Lower	95% CI Upper	p-value
Total Effect	-0.1419	-0.7119	0.27	0.668
Prop. Mediated	1.6756	-10.2055	22	0.656
Prop. Mediated	1.6756	-10.2055	22	0.656
ACME	-0.2377	-0.6007	-0.01	0.032*
ADE	0.0959	-0.3257	0.49	0.532
Prop. Mediated	1.6756	-10.2055	22	0.656
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Sample Size Used: 58				
Simulations: 1000				

Appendix B 9: Anlaysis H4 – Mediating Effect of Suspicion of Greenwashing[2]

Overview – Suspicion of Greenwashing[2] according to Conditions (Prevention)

	count	mean	Std. Dev.
Condtion 1	13	3.1	0.862
Condition 2	13	2.59	0.832
Condition 3	16	2.92	0.856
Condtion 4	16	3.25	0.574

Tuckey HSD – Conditions in regards to Suspicion of Greenwashing[2]

95% family-wise confidence level				
Fit: aov(formula = GW ~ Condition)				
	diff	**lwr**	**upr**	**p adj**
Condition4_Condition2	0.66	-0.0073	1.33	0.05
Condition3_Condition2	0.33	-0.3407	0.99	0.57
Condition1_Condition2	0.51	-0.1885	1.21	0.22
Condition3_Condition4	-0.33	-0.9655	0.3	0.51
Condition1_Condition4	-0.15	-0.815	0.52	0.94
Condition1_Condition3	0.19	-0.4817	0.85	0.88
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				

One-Way ANOVA – Condition 4 on Suspicion of Greenwashing[2]

	Estimate	**Std. Error**	**t value**	**Pr(>|t|)**
(Intercept)	3.25	0.171	18.96	<2e-16***
Con4	0.377	0.201	-1.87	0.066.
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Residual standard error: 0.69 on 56 degrees of freedom Multiple R-squared: 0.0589, Adjusted R-squared: 0.0421 F-statistic: 3.5 on 1 and 56 DF, p-value: 0.0665				

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[2]Suspicion of greenwashing is, as stated in section 4.5, measured on a scale from 1 to 5 where a low value indicates an extreme suspicion of greenwashing