



The Influence of Perceived Greenwashing on Consumer Purchase Intention in Europe

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Abstract

Growing awareness of environmental issues has resulted in increased demand for products that are environmentally sustainable. While some companies have developed genuine sustainability strategies, others rely on deceptive marketing strategies. The upcoming implementation of the Corporate Social Responsibility Directive in Europe by 2024 may lead to a more frequent exposure of greenwashing practices. It is hence essential for managers to examine the potential consequences of greenwashing critically. This study aims to investigate the influence of perceived greenwashing on consumer purchase intention in Europe.

The study employed a triangulation approach, which included a comprehensive literature review, an online survey, and qualitative semi-structured interviews with experts. The findings indicate that the perception of greenwashing leads to a notable reduction in consumers' willingness to purchase. This reduction is attributed to a decline in brand trust and loyalty. Additionally, the thesis provides insights regarding the influence of socio-demographic data, as well as consumers' environmental concerns in the context of greenwashing and purchase intention. The experts identified further determinants within the attitude-behavior relationship, such as consumer price orientation, product quality, habits, the extent of greenwashing, and industry-specific dynamics.

The study highlights the risks associated with deceptive marketing and recommends transparent and honest communication.

Keywords: Green Marketing, Greenwashing Perception, Deception, Purchase Intention, Brand Trust, Brand Loyalty, Environmental Concern, Sustainability

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Sumário

O crescente awareness em relação às questões ambientais resultou numa maior procura por produtos ambientalmente sustentáveis. Enquanto algumas empresas desenvolveram estratégias genuínas de sustentabilidade, outras basearam-se em estratégias de marketing enganosas. A iminente implementação da Diretiva de Responsabilidade Social Corporativa na Europa até 2024 pode levar a uma exposição mais frequente das práticas de "greenwashing". Portanto, é essencial que os gestores examinem criticamente as potenciais consequências do "greenwashing". Este estudo tem como objetivo investigar a influência da percepção de "greenwashing" na intenção de compra dos consumidores na Europa.

O estudo utilizou uma abordagem de triangulação, que incluiu uma revisão abrangente da literatura, um inquérito online e entrevistas qualitativas semi-estruturadas com especialistas. Os resultados indicam que a percepção de "greenwashing" leva a uma notável redução na disposição dos consumidores para comprar. Esta redução é atribuída a uma diminuição na confiança e lealdade à marca. Além disso, a tese fornece informações valiosas sobre a influência de dados sociodemográficos, bem como a preocupação ambiental dos consumidores no contexto do "greenwashing" e da intenção de compra. Os especialistas identificaram outros determinantes na relação entre atitude e comportamento, como orientação para o preço do consumidor, qualidade do produto, hábitos, extensão do "greenwashing" e dinâmicas específicas da indústria.

O estudo destaca o risco associado ao marketing enganoso e recomenda uma comunicação transparente e honesta.

Palavras-chave: Marketing Verde, Percepção de "Greenwashing", Engano, Intenção de Compra, Confiança na Marca, Fidelidade à Marca, Preocupação Ambiental, Sustentabilidade

Título: A influência da percepção de "Greenwashing" na Intenção de Compra do Consumidor na Europa

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List of Abbreviations

ABC Theory

B2C

CSRD

SDGs

VIF

Attitude-Behavior-Context Theory

business-to-consumer

Corporate Social Responsibility Directive

Sustainable Development Goals

Variance Inflation Factor

1 Introduction

Ecological concerns about resource exploitation and climate change have become progressively prominent topics in the media. This has resulted in consumer-decision-making becoming more focused on sustainability-related subjects. Societal expectations regarding the conduct of corporations and their role in contributing to society have shifted accordingly (Goldman Sachs, 2013)¹. This has prompted rapid growth of the green market, which includes environmentally friendly products and services, replacing plastic packaging with paper packaging, emphasizing recyclability, etc.

In addition to consumer-driven changes, there have been apparent shifts in firm orientation towards no longer exclusively pursuing maximizing shareholder value and profits, and instead promoting sustainable development (Ryszawska, 2016). Furthermore, Sipiczki (2022) observed that current trends indicate rising support for sustainable business models driven by attentiveness to a broader constituency of stakeholders. Sustainability has thus become one of the most discussed aspects of Corporate Social Responsibility, with extensive research showing that sustainability positively affects a company's competitive advantage (Cantele & Zardini, 2018). Considering this, companies are responding by adopting and communicating green practices to manage stakeholder expectations.

While some companies exemplify desired behavior by taking genuine actions to conserve natural resources and manage their carbon footprints, an increasing number are deceiving consumers about the environmental performance of their products or services (Delmas & Burbano, 2011). This phenomenon is generally referred to as "greenwashing".

One widely recognized greenwashing case surrounds the German car manufacturer Volkswagen. In 2015, the Environmental Protection Agency accused Volkswagen of faking emission testing by equipping diesel engines with software (Plungis, 2015). Textile manufacturer H&M was also accused of greenwashing by the Norwegian Consumer Authority in 2020 for its "H&M Conscious" collection. This collection was marketed as sustainable with supposedly environmentally friendly material. However, the fast fashion manufacturer faced considerable criticism, as it is mainly known for environmentally harmful mass production and supply chains where worker safety and health are not assured (Lee, 2021). Nestlé announced

¹ Source not publicly available

that its entire packaging would be reusable or recyclable by 2025. However, in 2021, a report revealed that the company only pretends to reduce plastic waste by incinerating it in a factory. (Brock et al., 2021; Greenpeace, 2022)

The aforementioned cases are a fraction of numerous greenwashing examples involving high-profile corporations. According to the European Commission's 2020 report, more than half of sustainability claims (53.3%) were found to be either false, vague, or misleading (McGuinn et al., 2020).

Contemporary research on greenwashing has largely focused on defining and elaborating the phenomenon. Studies linking greenwashing to consumer purchase intentions have been conducted almost exclusively in the Asian and Middle Eastern regions (e.g., Setiawan & Yosephani, 2022; Nguyen et al., 2019; Tarabieh, 2021; Zhang et al., 2018). Available literature concerning the European context is scarce and limited in scope. The perceived research gap thus leads to the following Research Question for this dissertation:

How does perceived greenwashing influence the purchase intention of European consumers?

Although green marketing has been extensively studied for its benefits, the harmful consequences of deceptive practices have often been disregarded. However, firms are required to disclose their sustainability practices under the new EU Corporate Social Responsibility Directive (CSRD). The CSRD will be implemented starting in 2024, which could contribute to exposing instances of greenwashing (Hare, 2022). Therefore, it is crucial for managers to understand the significance of perceived greenwashing and its potential effects.

This dissertation is structured as follows: The 2nd Chapter elaborates the *Conceptual Framework*. The first part of this Chapter provides insight into key concepts of green marketing, greenwashing, and purchase intention. The second part presents hypotheses yielding the conceptual framework. Chapter 3, *Methodology*, explains the qualitative and quantitative approaches to answering the Research Question. The *Results* are presented in Chapter 4 and subsequently *discussed* in Chapter 5. This section provides theoretical and practical implications, identifies limitations and provides an outlook for further research in this field. Ultimately, the findings of this research are summarized in Chapter 6, *Conclusion*.

2 Conceptual Framework

This Chapter serves as the conceptual framework of this dissertation. Within the theoretical background, the concepts of green marketing and greenwashing are outlined, focusing on the latter's definition and effects. Subsequently, the concept of consumer purchase intention is described to generate a profound basis for this work. The Chapter concludes by establishing a research model encompassing five hypotheses, which will be statistically tested within this work.

2.1 Theoretical Background

2.1.1 Sustainability

While the concept of sustainability has existed for 130 years, it gained considerable attention after the publication of the Brundtland Report by the World Commission on Environment and Development in 1987 (Alhaddi, 2015). According to the report, sustainability is a “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987, p. 37).

The essence of the concept was originally centered around nature and its preservation, but it is crucial to underline that social and economic dimensions characterize the concept to the same extent. Therefore, the terminologies sustainability and triple bottom line are commonly utilized as synonyms in academic literature. The latter, shaped by Elkington in 1997, relies on three pillars: profit, planet and people (Alhaddi, 2015).

In 2015, the United Nations enacted Agenda 30, encompassing 17 Sustainable Development Goals (SDGs). Among the SDGs are the elimination of hunger and poverty, the promotion of gender equality, the distribution of accessible clean energy, the implementation of climate protection strategies and the encouragement of sustainable consumption. These goals address sustainable development of the aforementioned dimensions (BMZ², 2023) and illustrate the broad scope and complexity of the concept.

² Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung

Consumer Concerns about Sustainability

The extent to which individuals are mindful of environmental challenges, actively support efforts to address them or demonstrate a willingness to personally contribute to solving them is referred to as their level of *ecological concern* (Dunlap & Jones, 2002). These concerns are reflected by the expanding market for sustainable and eco-friendly products, as there is a noticeable shift in consumer behavior towards eco-consciousness, with individuals placing greater emphasis on environmental considerations when making purchasing decisions (Laroche, Bergeon & Barbaro-Forleo, 2001).

Studies show that there is a positive correlation between consumers' environmental concern and pro-environmental conduct (e.g., Hines, Hungerford & Tomera 1987; Ellen, Wiener & Cobb-Walgren 1991; Laroche, Bergeron & Barbaro-Forleo 2001 as cited in Hu, Parsa & Self, 2010). Analogously, environmental concern serves as an important indicator of people's choices to purchase eco-friendly products and engage in recycling (Ellen, Wiener & Cobb-Walgren, 1991). In addition, Pinto et al. (2011) revealed that buying habits are likely to be impacted by environmental concerns. However, Laroche et al. (2009) observed that consumers may exhibit positive attitudes towards the environment but may refrain from taking necessary actions if it entails inconvenience or a change in lifestyle.

2.1.2 Green Marketing

Reaching consumers at the moment when influence best can be exercised upon purchasing decisions is a primary objective of marketing (Govender & Govender, 2016). Therefore, the effect of green marketing on consumer behavior is the basis for this research to better understand the greenwashing phenomenon and its potential implications.

Green marketing is about positioning the sustainability of products and services in a manner that causes them to be regarded as environmentally friendly (Govender & Govender, 2016). According to Polonsky (1994), many people associate words like "recyclable" and "reusable" with green marketing. Despite the common use of these terms in marketing claims, the concept of green marketing encompasses a broader scope. In fact, the concept can be applied to both consumer and industrial goods, along with services. It involves additional activities like modifying products, altering the packaging and adjusting advertising.

As consumers become more concerned about the environment, they are increasingly requesting companies to develop products in line with their values. To meet customer needs, companies are embracing greater environmental responsibility and seeking inventive ways to incorporate green marketing to enhance their reputation. Companies promoting products with sustainable features are likely to gain a competitive edge over those advertising non-environmentally friendly options (Polonsky, 1994; Miles & Covin, 2000). However, in certain instances, firms prioritize financial gain over green claims, disregarding whether these assertions are consistent with their real operations or the genuine greenness of products. In other words, these companies mislead their customers by engaging in deceptive marketing practices (Polonsky, 1994).

2.1.3 Greenwashing

There are various definitions of the term greenwashing. It first appeared in 1986 in an essay by activist Jay Westerveld, criticizing the hotel industry. He sought to illustrate how companies used marketing measures to promote sustainable projects, which ultimately had little or no environmental impact (Pearson 2010, as cited in de Freitas Netto et al. 2020).

Today, the term can be found in several dictionaries: the Oxford English Dictionary (2023) for instance defines greenwashing as "the creation or propagation of an unfounded or misleading environmentalist image". However, the concept seems to have a wider range of meanings than previously delineated. Lyon and Montgomery (2015) state that there is no fixed, all-encompassing definition that adequately describes the multidimensional nature of the term. However, they specify that greenwashing can be seen as an umbrella term covering a broad range of misleading environmental communication practices.

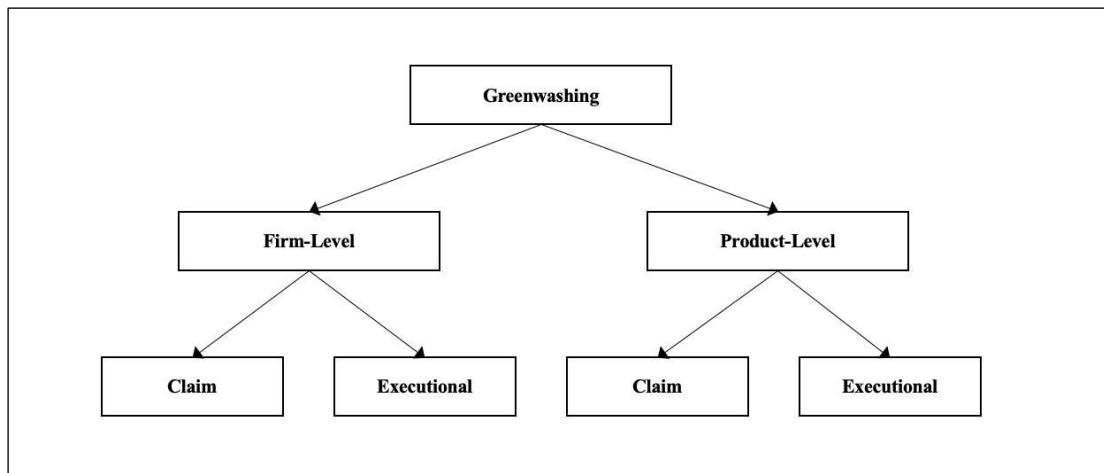


Figure 1: Classification of Greenwashing
 Source: Based on de Freitas Netto et al. (2020)

A more advanced definition by Terra Choice (2007), a Canadian environmental marketing firm, can be used to clarify the term and illustrate it in a structured way. Terra Choice (2007) defines Greenwashing as “(...) the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service”. The aforementioned definition and distinction between greenwashing at the product and company levels based on Delmas and Burbano (2011), were summarized by De Freitas Netto et al. (2020) as depicted in Figure 1. The VW diesel scandal is a prominent case of greenwashing at the product-level, in which German car manufacturer, VW, manipulated software to make diesel engines appear more environmentally friendly. Company-level greenwashing can be illustrated by Coca-Cola, who publicly communicates commitments to reduce plastic pollution while the company is among the world’s largest polluters (Pellegrino, 2023).

In addition, greenwashing may be divided between claim greenwashing and executional greenwashing. Most of the literature focuses on the former at the product-level, such as misleading texts and statements explicitly or implicitly intended to create false impressions of being environmentally friendly (De Freitas Netto et al., 2020). The Seven Sins of Greenwashing, developed by Terra Choice (2007), is a framework that helps define the fundamental characteristics and forms of claim greenwashing at the product-level (Delmas & Burbano, 2011).

The “sin of the hidden trade-off” entails statements highlighting a few product attributes and omitting less green or sustainable factors. The “sin of no proof” includes environmental

statements that are not substantiated. The “sin of vagueness” comprises claims that are prone to being misunderstood by consumers due to their broad or nonspecific formulations. If symbols appear on a product that suggest an ecological certification, although such a certification does not exist, this is referred to as the "sin of worshipping false labels". Furthermore, companies often make statements that are correct yet unhelpful or insignificant to consumers desiring to purchase environmentally superior products. This falls into the category of the "sin of irrelevance”. The "sin of lesser of two evils" applies to environmental statements about a product that are true but merely distract from more significant environmental factors attributable to that product. Finally, the "sin of fibbing" describes environmental statements that are entirely false. (Terra Choice, 2007)

These examples refer to marketing claims or statements made by firms. Pragué, Benoit-Moreau, and Russel (2015), however, proved that greenwashing can take on different forms that are independent of misleading labels or statements. The authors presented executional greenwashing, which, unlike claim greenwashing, refers to the presentation of marketing messages. This includes visual effects, images, colors, or sounds that convey environmental friendliness or closeness to nature to elevate a brand’s image. An example at the firm-level is McDonald's, who, in 2009, changed the background color of its logo from red to green to make its brand appear more environmentally friendly (Jackisch, 2009; see Figure 2).



Figure 2: Executional greenwashing example
Source: Lola, 2022

Effects of greenwashing

There is some macro- and micro-level research on the impact of greenwashing. While macro-level researchers focus on the effects of greenwashing on corporate financial performance, micro-level studies mainly examine the effects of greenwashing claims on consumers. Macro-level studies found that greenwashing does not positively affect the company's overall

performance (De Jong, Harkink, & Barth, 2017). This study focuses on the micro-level perspective of greenwashing as it is more closely related to our postulated Research Question. Most research suggests that greenwashing does have an indispensable effect on consumer buying intention.

Spack et al. (2012) investigated whether green advertising influences consumers and found that buyers are receptive to unsubstantiated green cues. The mere presence of a green reference influences consumer purchase intentions, irrespective of the modality, format, or quality of the environmental claims. Lim et al. (2013) underline that consumers are unable to recognize which products are truly eco-friendly and are incapable of evaluating the authenticity of green marketing claims. Nevertheless, consumers react with distrust, caution, skepticism and negative word-of-mouth when being exposed to greenwashing.

Chen and Chang (2013) examined the relationship between greenwashing and green trust, with the latter defined as “a willingness to depend on a product or service based on the belief or expectation resulting from its credibility, benevolence and ability about environmental performance” (Chen, 2010, p. 309). This study likewise showed the negative effects of greenwashing on consumers' green trust. While studies focused on the implications of greenwashing on trust towards products, Wu and Liu (2022) revealed that perceived greenwashing also weakens the effect of green marketing on consumers' trust in a brand. Continually being confronted with greenwashing could damage consumers' faith in brands that have made similar green claims.

In addition to these negative effects of greenwashing on brand trust, brand loyalty was also seen as negatively influenced by greenwashing initiatives. Xiao et al. (2021) conducted a survey of 500 consumers in China that found that greenwashing damaged consumer brand loyalty. Another study, with participants from Pakistan, identified brand loyalty as mediator for the relationship between greenwashing and purchase intention, whereby the latter was also negatively affected by consumer greenwashing perceptions (Ahmad & Esposito, 2022). Tarabieh (2021) had similar findings in a study of Jordanian food and beverage corporations and confirmed that perceived greenwashing had a harmful impact on consumer buying intentions.

2.1.4 Consumer Purchase Intention

Consumer purchase intentions are supposed to predict consumer behavior so its determinants have been a highly relevant topic among researchers (Morwitz, 2014). O'Brien (1971) characterized purchase intention as "(...) the extent of commitment to a future action, self-prediction of anticipated behavior, or more simply, plans" (pp. 283, 284).

The "Theory of Planned Behavior" developed by Ajzen in 1985, extends the "Theory of Reasoned Action" and has been widely adopted to describe individuals' intentions to perform a certain behavior. Intentions represent a behavioral motivational indicator that measures how much effort is invested or planned to be expended to perform an action. Thus, the intention to perform a behavior positively correlates with the probability of executing the behavior (Ajzen, 1991).

Apart from clarifying the link between intention and behavior, the model also describes which factors influence individual intention. Determinants are attitude, subjective norms and perceived behavioral controls. Attitude represents the extent to which a person has a positive or negative assessment of the corresponding behavior. Subjective norms refer to the perceived social pressure an individual experiences to perform the behavior in question (Ajzen & Madden, 1986). The third predictor of intention is perceived behavioral controls, which indicates the degree of difficulty in conducting a certain behavior (Ajzen, 1991). Figure 3 illustrates the Theory of Planned behavior.

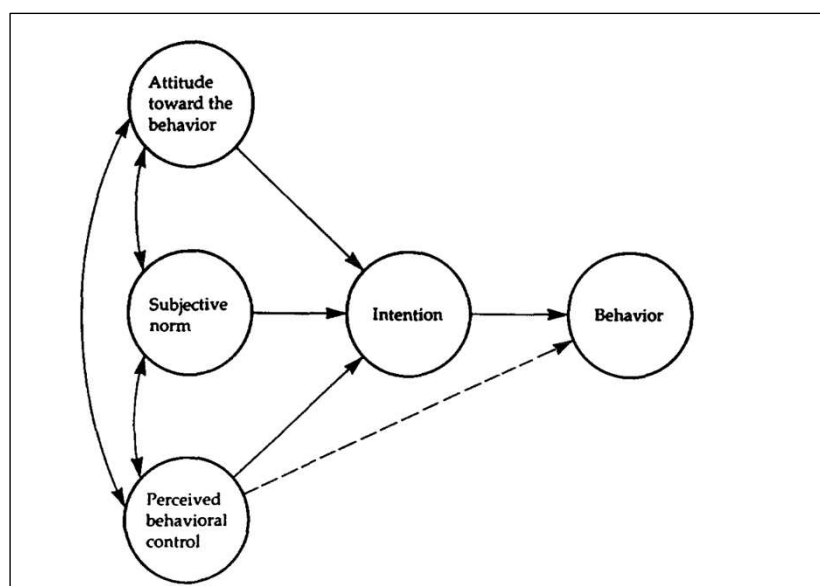


Figure 3: Theory of Planned Behavior
Source: Ajzen, 1991

The model has limitations as some disparities between intentions and actual behavior were discovered (Joshi and Rahman, 2015). This could be attributed to the absence of situational or environmental determinants in the Theory of Planned Behavior (Carrington et al., 2010; Foxall, 1993; as cited in Joshi Rahman, 2015), as well as various other personal factors (Joshi & Rahman, 2015).

Price, for instance, can be considered one such determinant. An elevated price of sustainable goods might serve as a significant barrier to purchase for certain individuals (Gleim et al., 2013). Consumers are often not willing to pay a premium for sustainability (Neff, 2012). Additionally, a study by Cranfield et al. (2010) demonstrated that the price of a product outweighs green marketing claims when forming purchase preferences.

Furthermore, an individual's consumption habits should be considered when examining purchase intentions towards green products. Individuals frequently adopt habits as a result of repeated purchases and consumption within familiar settings. These patterns of behavior can become ingrained and may be triggered by environmental cues, even in the absence of a conscious decision-making process. Occasionally, despite the intentions to behave in a certain way, individuals may find themselves maintaining habitual patterns and subsequently deferring their initial behavioral objective (Ji & Wood, 2007; Chiu et al. 2012). Therefore, habits may hinder the purchase of green products, as consumers tend to prefer sticking to familiar products. In addition, restricted availability of a product may deter potential buyers from purchasing it, while high quality of green products leads to high purchase intention (Joshi & Rahman, 2015). However, determining purchase intention and subsequent behavior, especially for green products, is a multifaceted problem influenced by a variety of contextual factors beyond those previously mentioned.

In 1995, Guagnano, Stern and Dietz introduced the Attitude-Behavior-Context (ABC) Theory, which focuses upon attitude as a factor determining purchase behavior, with contextual factors also being relevant. The latter encompasses external circumstances, such as trends or the availability of a product, that additionally influence purchase behavior (Feldman & Hamm, 2014). According to Stern (2000), the relationship between attitude and behavior is strongest when contextual factors are neutral. Highly positive or negative contextual influences can either drive or hinder the behavior. In other words, the relationship between attitude and behavior is mediated or moderated by contextual factors.

The ABC Theory serves as the conceptual framework for this work. Attitude is represented as consumers' assessment of perceived greenwashing. The behavioral intention measured is consumer purchase intention. The framework includes situation and context-based variables as mediators and moderators.

Based on existing literature, the subsequent section presents potential mediators and moderators of the attitude-behavior relationship. Considering the limited scope of this work, it was not feasible to incorporate all factors potentially impacting consumers' purchase intention within the conceptual model. This paper therefore focuses on moderators and mediators that, according to the current state of research, are strongly related to greenwashing and purchase intention. Finally, hypotheses were derived describing the presumed interaction among all selected variables.

2.2 Hypotheses

In this section, the hypotheses for the underlying research model of this work are developed. There is a paucity of empirical research in Europe on whether perceived greenwashing affects consumer purchase intention. Therefore, the proposed relationship between the variables mentioned below is derived from studies conducted in regions other than Europe, as well as in specific industries. This approach provides insights into previously established correlations among variables.

Numerous research has indicated a negative correlation between customers' impression of greenwashing and their desire to make a purchase, as implied in section 2.1.3. For instance, Tarabieh's analysis of the Jordanian food industry (2021) showed that perceived greenwashing has a negative impact on consumers' intentions to purchase. Similarly, Nguyen et al. (2019) surveyed more than 400 Vietnamese consumers on their intentions to buy green vegetables and found that greenwashing practices had an adverse effect on customers' purchase intentions. Additionally, an empirical study in the fast fashion sector has shown that young Chinese consumers' impression of greenwashing had a negative impact on their propensity to perform green purchases (Lu et al., 2022). In line with these findings, Goh and Balaji (2016) highlighted that consumers may discontinue purchasing from a brand if they are suspicious of the veracity and implementation of green claims or green strategies. Consumers who perceive greenwashing assume companies do not have genuine motives. This potentially disrupts attitude formation

and consequently negatively influences purchase intentions, as explained by Nyilasy, Gangadharbatla and Paladino (2014). Hence, the following hypotheses are postulated:

H1: Perceived greenwashing has a negative effect on consumer purchase intention.

H2: Perceived greenwashing has a direct negative effect on consumer purchase intention.

As previously mentioned, consumers tend to let environmental concerns affect their consumption habits (Pinto et al., 2011). Joshi and Rahmann (2015) identified environmental concern, along with product attributes, to be the key determinant of both purchase intention and subsequent purchase behavior. Additionally, in a study of the Chinese battery market, Zhang et al. (2018) identified that the negative effect of perceived greenwashing on purchase intention was amplified when consumers expressed concerns about environmental challenges. Further findings by McDonald and Oates (2016) indicate that heightened consumer engagement in environmental topics corresponds to stronger reactions to greenwashing. Therefore, it is suggested that the influence of greenwashing on purchase intention is dependent on the level of environmental concern a consumer possesses. Hence, the third hypothesis reads:

H3: The relationship between perceived greenwashing and consumer purchase intention is moderated by consumers' environmental concerns.

Brand equity is a crucial concept that refers to the value a brand name or symbol adds to a company's product or service (Aaker, 2009). A positive brand reputation holds multiple benefits, including increased revenue and profits, as well as the ability to charge premium prices (Keller, 1993). According to Aaker (2009), brand equity can serve as a barrier to competition and a source of competitive advantage. Further research has revealed a positive correlation between brand equity and consumers' intention to purchase (Ashil & Sinha, 2004; Chang & Liu, 2009). Aaker's brand equity model comprises several components such as brand awareness, perceived quality, and brand loyalty. The latter is regarded as the key component of brand equity (Aaker, 2009; Tong & Hawley, 2009).

As defined by Oliver (2014), brand loyalty is a “deeply held psychological commitment to repurchase a product or repatronize a service in the future despite obstacles or disincentives to

achieve the consumption goal” (p. 23). Another brand's marketing strategy to change consumers' buying behavior could be for instance a consideration that could be referred to as an obstacle or disincentive (Guo et al. 2017; Oliver 2014).

Most literature suggests that brand loyalty has a positive effect on consumers' willingness to buy (e.g., Guo et al., 2017; Malik et al., 2013; Chi, Yeh & Yang, 2009). More (2019) found that becoming aware of a company's greenwashing practices detrimentally affects consumers' brand loyalty, which aligns with the findings of Chen et al. (2020). Studies conducted on environmentally conscious consumers have revealed that individuals exhibiting high brand loyalty tend to display an ingrained purchase habit for eco-friendly products and services. Despite perceived greenwashing, they frequently look for reassuring facts to preserve their psychological investment (Dobers & Wolff, 2000; Tugade & Frederickson, 2004; Iles, 2008; Albino, Balice & Dangelico, 2009; as cited by Wang, Walker & Barabanov, 2020). Hameed et al. (2021) found that while consumers' purchase intentions are positively influenced by brand loyalty, greenwashing has a negative impact on the latter.

Based on these findings, it is suggested that greenwashing might affect consumers' intentions to purchase through brand loyalty. It is hypothesized that:

H4: Consumers' brand loyalty mediates the relationship between perceived greenwashing and consumer purchase intention.

Delgado-Ballester, Munuera-Aleman and Yague-Guillen (2003) consider trust as the most important attribute any brand can own. They define brand trust as a “feeling of security held by the consumer in his/her interaction with the brand that it is based on the perceptions that the brand is reliable and responsible for the interests and welfare of the consumer” (p. 11). As per the Edelman Trust Barometer Special Report published in 2020, brand trust was identified as one of the most significant reasons consumers purchase products. Moreover, the trust consumers place in a brand is a key factor that drives their decision to purchase eco-friendly goods (Rahbar & Wahid, 2011). Therefore, it is imperative to include brand trust when examining the relationship between greenwashing perceptions and purchase intentions.

More (2019) sampled 500 Indian consumers and found that the perception of greenwashing produced a detrimental effect on consumer brand trust. Kahraman and Kazançoğlu (2019)

found similarly, indicating that greenwashing will reduce consumers' enduring trust in a brand and will damage their connection to it (Policarpo et al., 2023). According to Zhang et al. (2018), a lack of trust induced by greenwashing may result in decreased consumer purchase intention. This premise considers trust as a mediating element in the relationship between the impression of greenwashing and the intention to make green purchases (Guerreiro & Pacheco, 2021).

In other words, consumers exhibit a lower probability of trusting a company if they suspect it is greenwashing, and this lack of trust negatively affects their desire to purchase. Hence, it is theorized that:

H5: The relationship between perceived greenwashing and consumer purchase intention is mediated by consumers' brand trust.

Figure 4 depicts the postulated regression paths and represents the research model for this work.

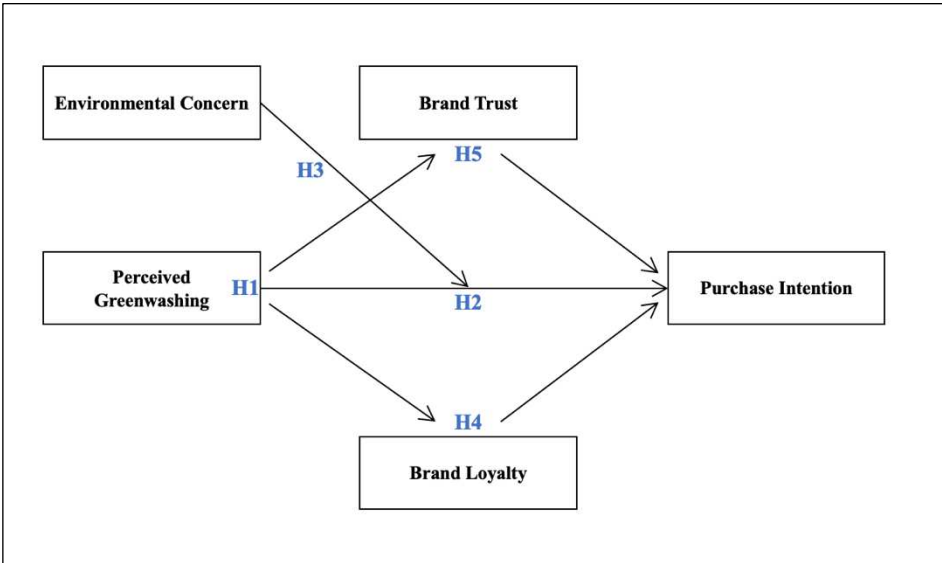


Figure 4: Research Model

3 Methodology

This work uses methodological triangulation whereby several different forms of data collection or methodologic approaches are combined and applied to the same study (Denzin, 1970; Kimchi, Polivka, & Stevenson, 1991; as cited by Thurmond, 2001). The approach potentially reveals information or differences that would have remained obscured if only one research methodology had been applied (Thurmond, 2001).

Specifically, in this study, qualitative and quantitative techniques were chosen to gain primary data to answer the Research Question. Semi-structured interviews were conducted with 8 experts, and an online survey was conducted with 218 participants. Chapter 4 presents the results of each method, and Chapter 5 analyzes the findings with reference to the literature collected in Chapter 2.

This section outlines the exact procedure for each methodological approach in further detail.

3.1 Qualitative data collection

Semi-structured interviews were conducted with sustainability experts. These are a valuable addition to mixed methods research by providing greater depth and amendment to other approaches (Adams, 2015). Semi-structured interviews are typically based on an interview guide containing 6 to 12 questions (Rowley, 2012) with questions selected and formulated to allow a degree of adaptability in the interviewing process. Semi-structured interviews thus allow latitude for exploring emerging perspectives during the interview (Brinkmann, 2014).

Open-ended questions were utilized to gain insight into the relationship between greenwashing and purchase intent, without leading experts in any specific direction (Reja et al., 2003). As recommended by Rowley (2012) the guide contains 9 open-ended questions (Appendix II). Each interview lasted approximately 30 minutes and took place via Microsoft Teams or phone. Table 1 lists the experts who participated and their current job positions. Finally, the results were evaluated using the thematic analysis approach.

Code	Platform	Job
Expert A	Microsoft Teams	Senior Consultant leading Sustainability Projects
Expert B	Microsoft Teams	Director Sustainability at German Global Player
Expert C	Phone	Principal focused on Sustainability and ESG
Expert D	Phone	Senior Consultant involved in ESG projects
Expert E	Phone	Sustainability Consultant
Expert F	Phone	Sustainable Finance Executive
Expert G	Microsoft Teams	Executive Director of BCorp movement in Germany
Expert H	Phone	Founder of NGO

Table 1: Overview Sustainability Experts

3.2 Quantitative Data Collection

An online survey was used to measure consumers' responses to greenwashing and their intention to purchase. Applying online questionnaires enables rapid participant recruitment and enhances the overall generalizability of results (Rowley, 2012). The survey was generated with Qualtrics and analyzed using paired t-tests, linear regression, and causal mediation analysis in R Studio.

Survey Design and Measures

The conceptual framework established based on the literature review in Chapter 2, provided the foundation for the structure of the survey. The design was based on the "within-subjects" approach. Participants were guaranteed anonymity as well as confidentiality of their data and encouraged to answer honestly and intuitively.

The survey consisted of four sections. The initial section gathered information on consumers' environmental concerns. The following two sections included one scenario each: The first showcased Greenfiction, a fictional retail firm, as a sustainable brand, while the second exposed Greenfiction's greenwashing practices. More precisely, the type of greenwashing within the second scenario could be categorized as "sin of no proof" (Terra Choice, 2007; see Chapter 2.1.3), as Greenfiction failed to sustain its sustainability promises.

Following each scenario, well-established constructs were deployed to measure perceived greenwashing, brand trust, brand loyalty and purchase intention. This procedure was intended

to enable direct comparison and detection of significant and relative differences between the conditions. Subsequently, consumers were asked to answer 8 questions regarding their demographic data.

The study solely used validated scales that had all been examined in prior research and found to be appropriate for mapping the latent components employed in the scientific research paradigm. The study model incorporated a total of five constructs.

The construct to measure participants' environmental concerns included six items and was initially developed by Kilbourne and Pickett (2008). Perceived greenwashing was assessed via three items adapted from Torelli, Balluchi and Lazzini (2019), following De Vries et al. (2015). Chaudhuri and Holbrook (2001) formulated the constructs for brand loyalty and brand trust, each comprising four items. For consistency with the scenario context one item from the brand loyalty construct was altered from “I will buy this brand the next time I buy [product name] “ to “I would choose this brand for my next purchase”. Ultimately, purchase intention was assessed by deploying four items published by Rizwan et al. (2014). Apart from the constructs, a qualifying question was asked to test participants' attention.

All respondents were asked to rate each item on a 7-point likert scale according to their level of agreement or disagreement (7= Strongly agree – 1 = Strongly disagree). Appendix I presents the structure and design of the survey.

Data Collection

The survey was conducted over a period of ten days. Within this frame, participants were recruited via social and professional networks, as well as via e-mail and messenger. Overall, 366 survey responses were recorded, of which 218 completed the survey to the end. Participants who did not complete the survey were excluded from the sample. A total of 15 participants were removed for answering the qualifying question incorrectly. Considering the Research Question, 18 additional participants were excluded since they were not located in Europe. The remaining sample size amounted to 185.

4 Results

4.1 Qualitative Results

Figure 5 shows a summary of the results and information collected in the interviews (Appendix III). These were divided into corresponding categories and subcategories. The number behind each term indicates how many experts mentioned the respective term directly or indirectly.

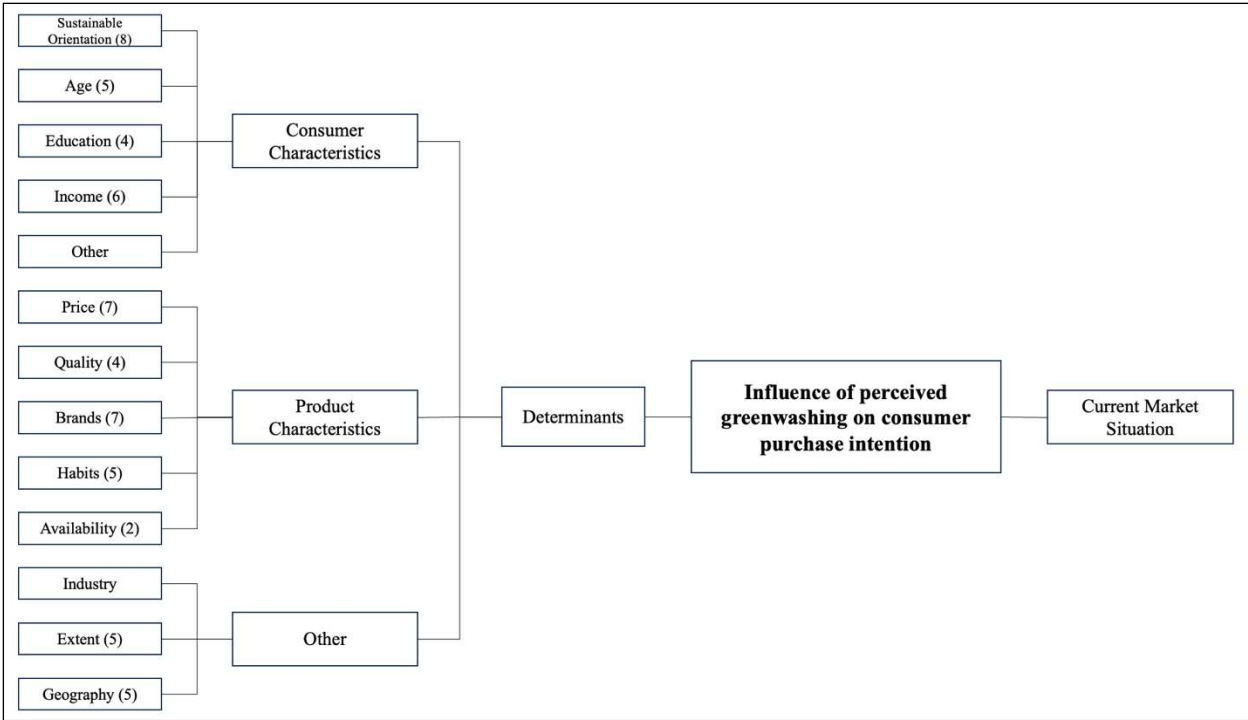


Figure 5: Overview Interview Results

4.1.1 Current Market Situation

All experts stated that greenwashing is presently a very common and widespread phenomenon. The business-to-consumer (B2C) and especially the consumer goods sector are mentioned to be particularly affected. According to Expert F, the main reason for the rapid spread of Greenwashing in the B2C segment is consumers' responsiveness to green marketing claims. Expert E perceived the business-to-business sector as less susceptible to greenwashing due to its price-driven nature which is accompanied by a reduced willingness to pay a premium for green products. Further industries mentioned as frequently encountering greenwashing are, for instance, energy, fashion, and steel (Expert A and D). These industries face great difficulty in modifying resource-damaging business practices and therefore often tend to embellish them (Expert A).

4.1.2 Influence of Greenwashing on Consumer Purchase Intention

In general, only a minority of consumers were significantly influenced by perceived greenwashing when forming purchase intentions. For the majority, this perception had no impact on their willingness to buy a product or brand.

The experts base their assessments on multiple factors influencing the extent of the attitude-behavior relationship. These factors were divided into three categories: Consumer Characteristics, Product Characteristics, and Other, and are presented subsequently.

Consumer Characteristics

Consumers' **sustainable orientation** is a key factor determining the strength of the attitude-behavior association, according to all experts. The experts argued that consumers who are particularly aware, interested, or concerned about environmental aspects react more strongly to greenwashing and are more likely to refrain from purchasing. The negative reaction to greenwashing is expected to be strongest among consumers who embrace an eco-friendly lifestyle. These consumers base their entire purchase intention on the sustainability aspect (Expert E). Conversely, individuals with reduced interest in environmentalism will base their purchase intention on different factors than sustainability or perceived greenwashing. Accordingly, perceived greenwashing will not influence their purchase intention.

Consumer's income could greatly influence the attitude-behavior relationship. Since sustainable products are usually more expensive than non-organic alternatives, a higher income is necessary to access eco-friendly products. Individuals with a lower monthly income are unable to prioritize environmental aspects in their purchase decisions due to financial limitations (Expert D). Those who were willing to pay a higher price for environmental friendliness will accordingly react more strongly and negatively when perceiving greenwashing (Expert F).

Furthermore, the experts noted that younger consumers exhibit greater sensitivity towards environmental issues. This is evident in movements like Fridays for Future. Therefore, younger consumers may react more negatively to perceived greenwashing than older consumers. Accordingly, **consumers' age** is a factor that potentially shapes the strength of the attitude-behavior connection (Experts B and C).

In addition, the **level of education** has an impact on the attitude-behavior relationship, as there is currently little education and transparency within the green market (Expert E). Individuals with high environmental knowledge might have a higher competence in identifying greenwashing (Expert B). Therefore, their greenwashing perception could be stronger compared to individuals with lower environmental knowledge. Accordingly, environmental knowledge and purchase intention are negatively correlated if greenwashing is perceived (Experts B, C, D, and E).

The following aspects were included in Figure 4 as "Other" because they were less frequently mentioned. If individuals care about how they are perceived by their social environment, they may be more reluctant to buy greenwashed products if this behavior is disapproved by their peers (Experts E and G). Furthermore, ethical, ideological consumers who believe that their purchasing decisions shape the economic environment might be more likely to respond strongly to greenwashing and refrain from purchasing (Expert B).

Product Characteristics

According to seven out of eight experts, the **price** of a product is the most decisive factor in forming consumers' purchase intention. Since the majority of consumers are price-oriented, they attach less importance to other product features, which might result in them rejecting more expensive, sustainable options. Hence, greenwashing perception will not significantly influence their purchase intention.

Besides the pricing, consumers' purchase intentions are most significantly influenced by the **quality** of a product. Consumers who are satisfied with a product's quality will not refrain from purchasing when recognizing greenwashing (Experts B, E, G, and H). Sustainability-focused consumers may devalue greenwashed products, associating them with lower quality. Thus, greenwashing perceptions indirectly influence the purchase intention negatively through product quality (Expert E).

Brands were mentioned as a major determinant in the attitude-behavior relationship. Brands face a high risk of reputational damage considering greenwashing, which results in consumers disengaging from the brand and its products (Expert B). Greenwashing erodes brand trust, especially among environmentally conscious consumers, since it can appear as a broken promise to them (Experts D, E and H). If brand trust is damaged, consumers may desist from

buying the brand in the future (Expert E). Since consumers are often attached to consistency, brand loyalty should be examined in more detail (Expert G). Experts were unanimous that consumers will continue purchasing a brand despite greenwashing if the brand appeals to them (Experts A and F).

Most consumers tend to purchase the same products repeatedly out of **habit** (Expert D). This tendency could be due to consumers' unwillingness to question everyday decisions out of convenience (Experts D and H). Thus, consumers with strongly established shopping routines will not be affected by greenwashing perceptions. The same applies to very impulsive buyers (Expert A).

Furthermore, product **availability** significantly influences consumer willingness to purchase. According to Experts D and G, the availability of a substitute for the greenwashed product is a prerequisite for consumers' reluctance to purchase.

Other Factors

The experts suggested that certain **industries** are more reactive to greenwashing than others. The ecological sector for organic products, for instance, since consumers in this sector are explicitly looking for greater sustainability (Expert C). Similarly, consumers in the health or nutrition sector might react profoundly to greenwashing, considering consumers' heightened sensitivity about products they ingest or are very close to (Experts B, F, and G). Thus, consumers' purchase intentions concerning these industries could be affected more intensely and negatively if greenwashing is perceived.

Moreover, the experts considered the **extent of greenwashing** as a crucial influence within the attitude-behavior connection. Consumers' perceptions of deception could be more distinct in a scenario involving substantial fraud (Experts F, G, and H). Reciprocally, in instances of minor deceit, consumers could prefer the company's sustainability efforts to none (Expert A). Experts B and D add that more emotional scandals elicit stronger reactions regarding purchase intentions. Thus, high severeness and emotionality of perceived greenwashing can result in a greater adverse effect on consumers' purchase intentions.

Furthermore, individuals **geographically closer** to the greenwashing incident can feel more affected than consumers who are farther distant. Consequently, consumers experiencing greenwashing at their doorstep are more likely to refrain from purchasing (Experts C, D and H).

4.2 Quantitative Results

4.2.1 Demographics

The sample (n=185) included 84 participants identifying as female, 99 identifying as male, and 3 who preferred not to disclose their gender. The majority of respondents, 91%, were located in Germany, while 6% lived in Portugal and the remaining 3% were situated in Belgium, Hungary, Italy, Spain, and Sweden. Furthermore, 63% of the participants fell within the age bracket of 25 to 34 years old. A smaller proportion (16%) was aged between 18 and 24 years. The age distribution of the respondents is depicted in detail in Figure 6.

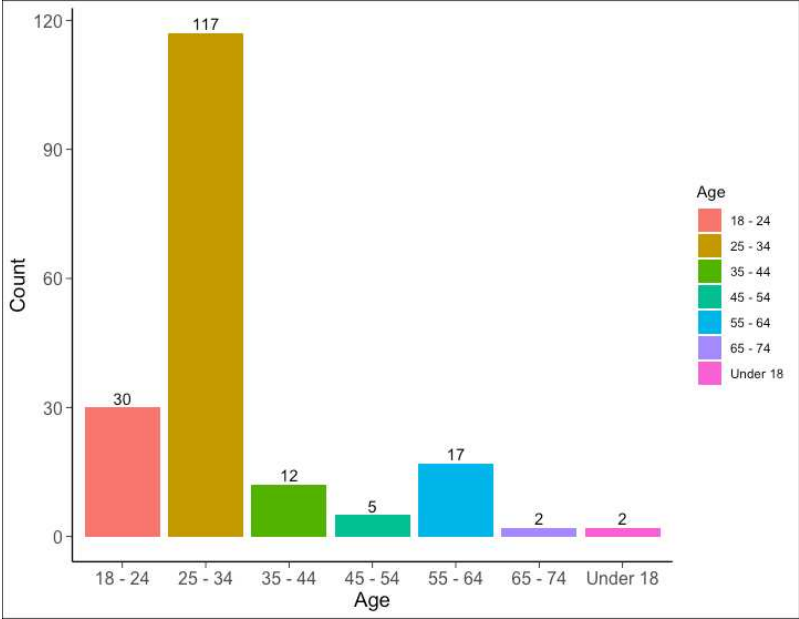


Figure 6: Age Distribution (n=185)
Source: R Studio

The educational backgrounds of the respondents can be categorized as follows: 38% had completed a bachelor's degree, while 36% obtained a master's degree. Additionally, 15% have completed a high school education, while 4% did not complete their high school education. 2% of the participants have achieved a Ph.D., and 4% have obtained a different degree, for example by completing the bar examination.

Figure 7 presents the distribution of monthly income among the participants. 51 individuals reported earning between €2,000-€2,999, followed by 38 participants earning €1,000-€1,999, and 32 individuals earning between €3,000-€3,999. In addition, 30 respondents stated an income of over €4,000 per month, while 15 reported earning less than €1,000 per month. 19 participants chose not to disclose their monthly income.

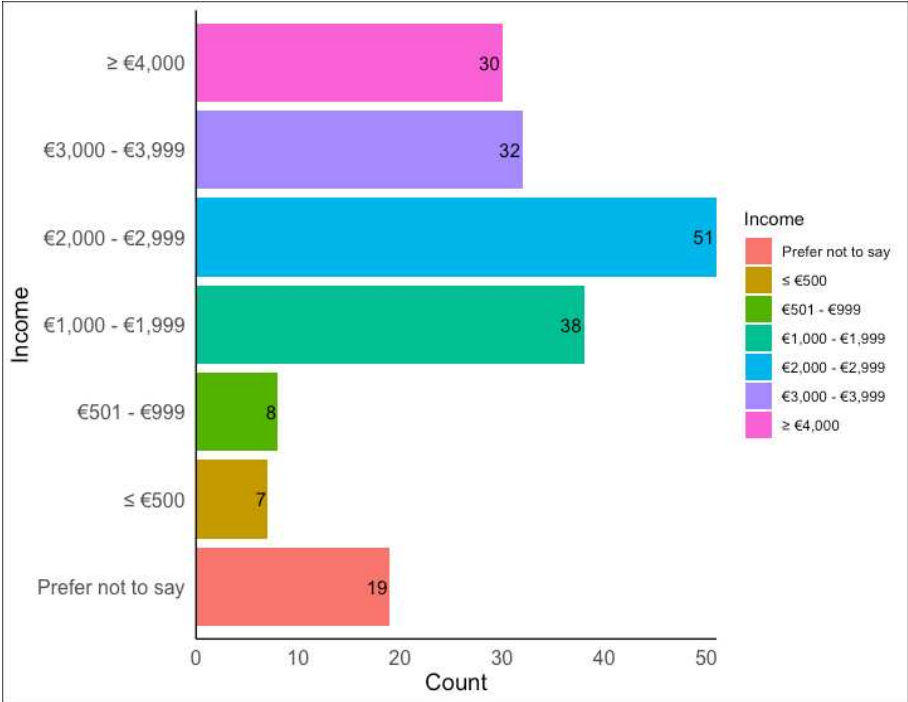


Figure 7: Income Distribution (n=185)
Source: R Studio

In addition, consumer shopping habits were surveyed as part of the demographic data. Figure 8 illustrates the frequencies at which consumers engage in sustainable purchases (Shopping Habit 1) and consciously select sustainable products (Shopping Habit 2). 42% of respondents stated that they sometimes purchase eco-friendly products either or intentionally. Additionally, 31% of participants stated that they buy sustainable products half of the time. Meanwhile, 25% of participants reported choosing eco-friendly products most of the time or when shopping consciously, while only 2% of people never purchase sustainable products.

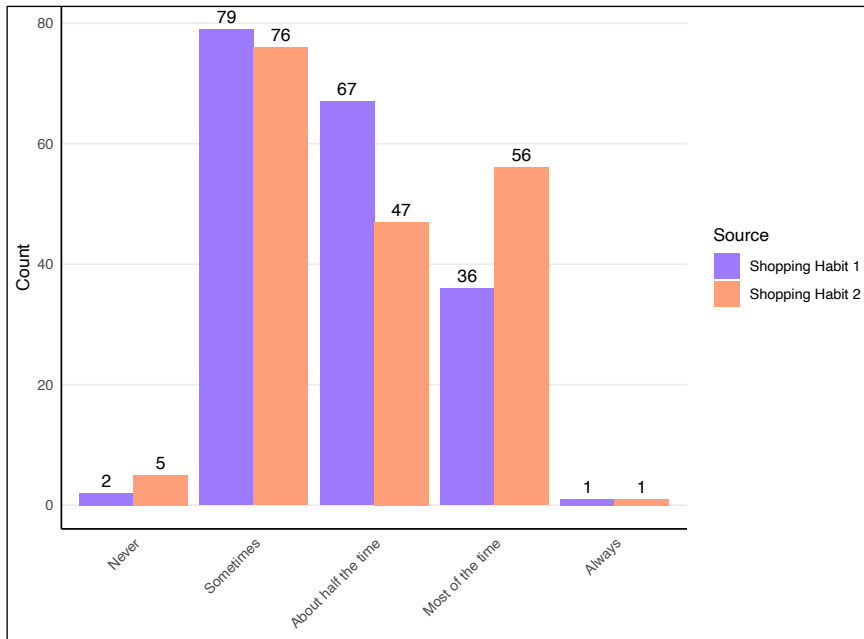


Figure 8: Green Shopping Habit (n=185)
Source: R Studio

4.2.2 Reliability Test

To assess the sample's reliability, Cronbach's alpha test was deployed (see Table 2). According to Cortina (1993) and Cronbach (1951) an alpha value larger than 0.7 is regarded as acceptable. An appropriate alpha value could be calculated for all except one construct (Perceived Greenwashing =0.69). However, since the deviation from the acceptable score is minimal and the given sample size is between 100 and 300, the value represents no exclusion criterion (Ponterotto & Ruckdeschel, 2007). Hence, all constructs show a fair degree of reliability; therefore, the dataset remains unchanged.

	Construct	Cronbach's Alpha
Scenario 1	Environmental Concern	0.86
	Perceived Greenwashing (1)	0.69
	Brand Trust (1)	0.88
	Brand Loyalty (1)	0.82
	Purchase Intention (1)	0.89
Scenario 2	Perceived Greenwashing (2)	0.75
	Brand Trust (2)	0.94
	Brand Loyalty (2)	0.94
	Purchase Intention (2)	0.95

Table 2: Overview - Cronbach's Alpha per Construct

4.2.3 Descriptive Statistics

A glance at the descriptive data per construct reveals initial implications (see Table 3). It is striking that the participants show a very high level of environmental concern (Mean = 6.0315) with a low standard deviation of 0.7875. In addition, participants indicated a high level of perceived greenwashing (Mean = 4.6613) in the first scenario, even though the latter presented a genuinely sustainable brand. Nevertheless, greenwashing was perceived as stronger in the second scenario (Mean = 5.8955). The averages of Brand Trust, Brand Loyalty, and Purchase Intention were higher in the first scenario than in the second.

	Construct	Mean	Standard Deviation
	Environmental Concern	6.031532	0.7875444
Scenario 1	Perceived Greenwashing (1)	4.661261	0.9954460
	Brand Trust (1)	4.494595	0.9440736
	Brand Loyalty (1)	4.428378	1.0141352
	Purchase Intention (1)	4.370270	1.1250277
Scenario 2	Perceived Greenwashing (2)	5.895495	0.9579997
	Brand Trust (2)	2.578378	1.2059939
	Brand Loyalty (2)	2.520270	1.2177614
	Purchase Intention (2)	2.537838	1.2467025

Table 3: Mean and Standard Deviation per Construct

4.2.4 Hypotheses Testing

The prerequisite for a successful scenario manipulation in the survey is that participants perceive a significantly higher level of greenwashing in scenario 2 than in scenario 1. For this purpose, a paired t-test was conducted (see Table 4). Based on the results, it can be rejected that the greenwashing perception was equal in both scenarios ($p < 0.01$). The negative mean difference value indicates that greenwashing perception was lower in the first scenario than in the second. Thus, it can be concluded that there was a successful manipulation within the scenarios.

	t_value	df	p_value	conf_interval	mean_difference
t	-12.49615	184	< 2.2e-16	-1.4291 -1.03937	-1.23423

Table 4: Paired T-test – Treatment
Source: R Studio

To investigate the first hypothesis, a paired t-test was performed to compare the variables of Purchase Intention (1) and Purchase Intention (2). The null hypothesis that Purchase Intention (1) is equal to Purchase Intention (2) was rejected. The particularly small p-value provides strong evidence against the null hypothesis (see Table 5). As implied in section 4.2.3, the positive mean difference of 1.832432 evidences a lower mean purchase intention in the second scenario with greenwashing than in the first scenario without greenwashing.

	t_value	df	p_value	conf_interval	mean_difference
t	16.77503	184	6.31e-39	1.6169 - 2.0479	1.832432

Table 5: Paired T-test – Purchase Intention
Source: R Studio

Table 6 includes two regression models each associated with one scenario. Perceived greenwashing, brand trust, and brand loyalty served as independent variables, and purchase intention as dependent variable.

In the first scenario, without greenwashing, the respective p-values of perceived greenwashing and brand trust are greater than 0.1, exhibiting a relationship with purchase intention that is not statistically significant. However, brand loyalty demonstrates a highly statistically significant impact on purchase intention with a p-value below 0.01. An increase in brand loyalty by one unit leads to an increase in purchase intention of 0.813 units.

After exposure to greenwashing in scenario 2, the dynamics among the variables shifted. Notably, the model highlighted a statistically significant association between brand trust and purchase intention, as evidenced by a p-value below 0.01. An increase in brand trust by one unit indicates an increase in purchase intention by 0.241. Brand loyalty remains a highly significant predictor of purchase intention ($p < 0.01$). According to the model, perceived greenwashing has a p-value larger than 0.1. Hence, the null hypothesis stating that perceived greenwashing has no effect on purchase intention cannot be rejected. Thus, hypothesis 2, which stated a significant direct negative effect of greenwashing on purchase intention, remains unsupported.

	Dependent variable:	
	Purchase_Intention1 (1)	Purchase_Intention2 (2)
Perceived_Greenwashing1	0.034 (0.061)	
Brand_Trust1	0.013 (0.084)	
Brand_Loyalty1	0.813*** (0.077)	
Perceived_Greenwashing2		0.029 (0.063)
Brand_Trust2		0.241*** (0.090)
Brand_Loyalty2		0.654*** (0.089)
Constant	0.552 (0.484)	0.096 (0.460)
Observations	185	185
R2	0.537	0.705
Adjusted R2	0.529	0.700
Residual Std. Error (df = 181)	0.772	0.682
F Statistic (df = 3; 181)	69.846***	144.427***
Note:	*p<0.1; **p<0.05; ***p<0.01	

Table 6: Multiple Linear Regression Scenario 1 and 2
Source: R Studio

To test whether perceived greenwashing and purchase intention are moderated by environmental concern, a new regression model was created (see Table 7). In addition to the established independent variables, this model contained an interaction term consisting of environmental concern and perceived greenwashing, drawn from scenario 2. However, none of the included variables can be classified as significant when explaining purchase intention. The null hypothesis indicating that the interaction of perceived greenwashing and environmental concern has an influence on purchase intention cannot be rejected. Consequently, Hypothesis 3 cannot be supported.

Dependent variable:	
Purchase_Intention2	
Perceived_Greenwashing2	-0.100 (0.678)
Environmental_Concern	0.561 (0.678)
Perceived_Greenwashing2:Environmental_Concern	-0.080 (0.112)
Constant	2.606 (4.086)
Observations	185
R2	0.201
Adjusted R2	0.188
Residual Std. Error	1.123 (df = 181)
F Statistic	15.190*** (df = 3; 181)
Note:	*p<0.1; **p<0.05; ***p<0.01

Table 7: Regression Model – Moderation
Source: R Studio

Table 8 shows the results obtained by testing the fourth hypothesis via causal mediation analysis. For this purpose, the parameters derived from the second scenario were applied. The average causal mediation effect (ACME) is extremely significant, as it implies a p-value below 0.01. The ACME suggests that a one-unit increase in perceived greenwashing will result in a 0.5749 decrease in purchase intention. As already determined in the previous regression models, this analysis underlines that perceived greenwashing has no significant direct influence on purchase intention, as the average direct effect (ADE) demonstrates a p-value above 0.1. The sum of ACME and the ADE results in a total effect of greenwashing on purchase intention that is extremely significant ($p < 0.01$). The proportion mediated conveys that 99.72% of the total effect can be explained by mediation.

Thus, the significant negative effect of greenwashing on purchase intention can be partially explained by the mediation of brand loyalty or the reduction of brand loyalty. Ergo, Hypotheses 4 can be supported.

	Estimate	95% CI Lower	95% CI Upper	P-Value
ACME	-0.57490	-0.72635	-0.44	<2e-16 ***
ADE	-0.00159	-0.12058	0.12	0.91
Total Effect	-0.57649	-0.77201	-0.40	<2e-16 ***
Prop. Mediated	0.99724	0.82627	1.25	<2e-16 ***

Table 8: Results Causal Mediation Analysis - Brand Loyalty (2)
Source: R Studio

To test the fifth hypothesis, the derived parameters from scenario 2 were again employed and analyzed using causal mediation analysis (see Table 9). The ACME suggests that an increase in perceived greenwashing yields a 0.5436 decrease in consumer purchase intention. Additionally, the ACME was identified as highly significant as a p-value of under 0.01 is evidenced. As before, the ADE of greenwashing on purchase intention is classified as not significant. The resulting significant ($p < 0.01$) total effect of greenwashing on purchase intention via brand trust is estimated at -0.5321. It emerged that approximately 95% of the total effect is attributable to the mediation with brand trust. Consequently, the strong adverse effect of greenwashing on purchase intention is partially explained by brand trust as a mediator since greenwashing negatively influences the latter. Accordingly, Hypothesis 5 is supported.

	Estimate	95% CI Lower	95% CI Upper	P-Value
ACME	-0.5436	-0.6831	-0.42	<2e-16 ***
ADE	-0.0329	-0.1903	0.11	0.65
Total Effect	-0.5765	-0.7625	-0.39	<2e-16 ***
Prop. Mediated	0.9429	0.7254	1.24	<2e-16 ***

Table 9: Results Causal Mediation Analysis - Brand Trust (2)
Source: R Studio

Sociodemographic Implications

In addition to the evaluation and measurement of the conceptual model, sociodemographic factors such as gender, age, green shopping habits, income, and education were tracked for their potential influence on greenwashing perception and purchase intention.

Table 10 illustrates one regression model per scenario. The sociodemographic variables that were incorporated were transformed into dummy variables, which allows for easier analysis and interpretation of the data³. The results of the regression for the first scenario suggest that identifying as female prompted a significant positive influence on the purchase intention of sustainable products ($p < 0.05$). On average, women had a higher purchase intention than men. Moreover, a green shopping habit was found to be a significant predictor of purchase intention. Respondents who purchased sustainable products half of the time or more frequently exhibited a higher purchase intention than individuals who rarely purchased green products. In the second greenwashing scenario, gender or purchasing habits did not appear as significant predictors of purchase intention. However, we found that participants under 35 tended to hold a lower purchase intention than older participants. Age appears to be a significant influence on purchase intention, demonstrating a p-value below 0.01.

Apart from the demographic data, the regression reveals that greenwashing contributes significantly to the explanation of purchase intention. The increase of greenwashing by one unit leads to a decrease in purchase intention by 0.2 units. In the second scenario, this effect appears to be amplified, as the increase of greenwashing by one unit leads to a decrease in purchase intention by 0.5 units.

³ Gender was divided into Female and Male; missing values were imputed with the median

Education was divided into Academics and High School or less

Age was divided into: Under 18 – 34 (Gen Z, Millennials) and 35 and older

Income was split into participants earning more than €3,000 and individuals earning less; missing values were imputed with the median

Shopping Habit 1 and 2: Scores from 1-5(Never-Always) were allocated and added up. Participants with a score of 6 and higher were assigned to Green_Habit_Mostly

	Dependent variable:	
	Purchase_Intention1 (1)	Purchase_Intention2 (2)
Perceived_Greenwashing1	-0.234*** (0.079)	
Perceived_Greenwashing2		-0.584*** (0.089)
Female	0.409** (0.166)	0.095 (0.181)
Education_Academics	0.119 (0.209)	-0.267 (0.220)
Age_under_18_34	0.009 (0.211)	-0.465** (0.222)
Over_3000	0.246 (0.178)	0.008 (0.187)
Green_Habit_Mostly	0.646*** (0.162)	-0.033 (0.169)
Constant	4.773*** (0.451)	6.544*** (0.582)
Observations	185	185
R2	0.149	0.231
Adjusted R2	0.120	0.205
Residual Std. Error (df = 178)	1.055	1.112
F Statistic (df = 6; 178)	5.177***	8.909***
Note:	*p<0.1; **p<0.05; ***p<0.01	

Table 10: Multiple Linear Regression – Sociodemographics
Source: R Studio

Multicollinearity

Since brand loyalty and brand trust may exhibit interdependencies, the models for scenario 1 and scenario 2 were tested for multicollinearity. For this purpose, variance inflation factors (VIF) were calculated. According to Bowerman and O'Connell (1990) and Myers (1990), a VIF above 10 is of concern (Niresh & Thirunavukkarasu, 2014). However, all calculated values in both models were found to be significantly lower than the critical value. Therefore, multicollinearity must not be regarded as a problem in this study.

5 Discussion

This dissertation explored the relationship between perceived greenwashing and consumer purchase intention. For this purpose, contextual factors were identified as potential mediators and moderators based on the ABC theory and existing research. As previously elaborated, the attitudes and reactions of consumers were determined based on two different scenarios within the scope of a survey. Additionally, experts were asked to assess the connection between greenwashing and consumers' purchase intention and to describe possible determinants. The results of both examinations showed partial agreement but there were also distinctions. In addition, the interviews yielded supplementary information that provided perspectives for future research. Within this Chapter, the results gained in Chapter 4 will be discussed and potential reasons for differences will be outlined. In addition, the limitations of this work are elaborated and avenues for future research are highlighted.

5.1 Interpretation of the results

The survey found that greenwashing has a significant negative impact on consumer purchase intentions in Europe. According to the results of a paired t-test, the mean purchase intention in the second scenario was significantly lower than in the first scenario without greenwashing. These results are in line with the literature presented in Chapter 2, which equally attributed a negative effect to perceived greenwashing on purchase intention. Additionally, the creation of two scenarios allowed us to identify a decrease in purchase intention of approximately 42%⁴ where there was greenwashing as opposed to a scenario without greenwashing.

A closer examination of the data revealed that perceived greenwashing has no significant direct effect on purchase intention. This observation is not consistent with previous research: Lu et al. (2022), for instance, found a direct negative effect of perceived greenwashing on purchase intention in their investigation concerning the fast fashion industry. Tarabieh (2020) found similar results in a study on the Jordanian beverage and food market. Discrepancies may have arisen because both studies refer to a specific industry, while this dissertation takes a more general approach. In addition, the studies were conducted in different regions than Europe and examined a larger sample.

⁴ Relative difference between purchase intention 1 and purchase intention 2; calculated using the respective means from Table 3.

Considering that a significant negative influence of greenwashing was proven, which was not directly caused by greenwashing perception, leads to an initial conclusion that greenwashing influences consumers' purchase intention indirectly through mediators and moderators. This finding is supported by the interview results, as the experts generally predicted a negative effect of greenwashing on purchase intention. However, the experts viewed this impact as dependent on various factors that affect consumers' purchase intentions for sustainable goods.

The most frequently mentioned influential factor was the level of sustainable orientation. The experts emphasized that a higher sustainable orientation leads to a greater negative effects on purchase intention from perceived greenwashing. The notion of sustainable orientation encompasses the degree of environmental concern of a consumer. As presented in Chapter 2.2, the scholarly literature elaborates this relationship in similar terms. However, our study found that there is neither a significant relationship between environmental concern and purchase intention nor does a high level of environmental concern significantly increase the negative greenwashing effect on purchase intention. In other words, the moderating role of environmental concern could not be supported within the attitude-behavior relationship (Hypothesis 3).

However, the high mean and low variance (0.6202) of the environmental concern construct, as shown in Table 3, indicates low variability and strong similarity, which presents a challenge for determining potential correlations. Further, the study's discrepancy could be caused by the ceiling effect, which emerges when participants' responses accumulate at the high end of a measurement scale (Garin, 2014). This may be due to the insensitivity of the measurement scale for environmental concern levels (Taylor, 2012). Additionally, sampling bias could have caused a high level of environmental concern. Possibly, a larger sample would have revealed more diverse environmental attitudes (Hair et al., 2010; see Chapter 5.2). Despite the unsupported hypothesis, we remain convinced that environmental concern has a moderating effect upon the attitude-behavior relationship based on expert assessment and the academic literature.

Moreover, the mediating role of brand trust within the attitude-behavior relationship was supported. Causal mediation analysis has demonstrated that greenwashing perceptions negatively influence brand trust, which in turn significantly impacts consumers' purchase intentions. A beta of -0.5436 at a p-value below 0.01 was found for the indirect negative influence of greenwashing on purchase intention.

The survey results were corroborated by the experts, who concurred that greenwashing perceptions by customers can lead to a loss of trust in the brand and consumers refraining from purchasing in the future. In addition, they described greenwashing as causing reputational damage which could inhibit purchase intention.

Similar behavior was identified for brand loyalty within the study. The mediating role of brand loyalty in the attitude-behavior relationship could be proven to be highly significant ($p < 0.01$), in accordance with Hypothesis 4 and previous academic research. This implies that greenwashing negatively influences purchase intention indirectly through brand loyalty. Furthermore, regression showed that brand loyalty generally has a significant positive influence on purchase intention. An increase in brand loyalty by one unit leads to an increase in purchase intention by 0.6 units. Supplementary expert opinion suggests that consumers with high brand loyalty are less susceptible to greenwashing.

Beyond the conceptual framework established, experts provided insights into other consumer characteristics that could influence the attitude-behavior relationship. Younger consumers, people with higher incomes and/or with higher levels of education are thought to react more strongly to greenwashing, as these groups are particularly receptive to buying green products. Our research found that younger consumers aged 18 to 34 demonstrated a significantly lower purchase intention in the greenwashing scenario than those older than 34. However, the study did not find any significant difference between higher and lower levels of education or income.

Moreover, experts maintained that price-oriented consumers may be less responsive to greenwashing since sustainable products are usually more expensive and therefore not considered options for purchase, regardless of greenwashing. Existing research has recognized that price is an important factor influencing purchase intention for sustainable products (see Chapter 2.1.4). Neff (2012) found that consumers are often unwilling to pay a premium for sustainable products, and Cranfield et al. (2010) suggested that price usually carries more weight in the purchase decision than marketing claims. Therefore, this thesis supports the expert opinion that buyers whose most important purchase criterion is price will not react to greenwashing.

Furthermore, the attitude-behavior relationship is influenced by quality since consumers who are highly satisfied with a product's quality may not refrain from purchasing solely due to

greenwashing perceptions. In addition, consumer habits are an important factor when examining the attitude-behavior relationship since consumers often maintain their established buying routines regardless of greenwashing cognition. Product availability is another important factor that can influence the relationship between perceived greenwashing and purchase intentions.

As presented in Chapter 2, these factors are important when referring to purchase intention of sustainable products, as they embody very significant barriers or drivers for the willingness to buy green products. However, to the best of our knowledge, there is currently no research on how price-oriented shoppers, high satisfaction with the quality of a product, purchasing habits, and the availability of green products relate to the attitude-behavior connection. Further research will be necessary on these in the future (see Chapter 5.2).

In addition, experts noted that the extent of greenwashing is an important indicator of the strength of the attitude-behavior relationship. The second scenario in this study could be classified as "sin of no proof", involving unsubstantiated marketing claims (Terra Choice, 2007). Compared to the "sin of vagueness" or the "sin of lesser of two evils", the scenario used entailed total deception of the consumer. Thus, our study depicted a strong instance of greenwashing, which could have contributed to the significant negative impact on consumers' purchase intention. Since most studies refer to strong greenwashing cases, further research on different levels of greenwashing would be instructive.

The results show that greenwashing represents a serious risk for companies, as brand trust, brand loyalty and purchase intention are significantly reduced. Managers should therefore focus on developing strategies for substantial and honest firm actions with respect to green practices while avoiding marketing that presents environmental responsibility that is not consistent with actual practices.

5.2 Limitations and future research

This work has a number of limitations. First, the generalizability of our results for Europe needs to be treated with caution since 91% of the participants in the survey were from Germany and 6% from Portugal. In addition, less than 200 individuals participated in the study, with a large proportion of respondents aged between 18 and 34. It is therefore very unlikely that the spectrum of European society was surveyed in a representative manner. A larger scale study is

needed. It might be instructive as well to conduct the study within various European countries for comparative purposes as well as to validate the findings or identify potential discrepancies.

Although valuable insights were gained from the eight interviewees, with the quality of the experts particularly high, the majority were from the consulting industry which might present a skew in the opinions expressed. Engaging more experts from different industries would have potentially enhanced the depth of our insights. Unfortunately, this was not possible due to limited time and resources. Future studies should involve experts who can provide additional perspectives on the relationship between greenwashing and purchase intention.

Due to the scope of this paper, only a limited number of variables related to the relationship between perceived greenwashing and consumer purchase intention could be statistically tested. Further studies could take advantage of the results and explore other factors impacting the attitude-behavior relationship. Future statistical investigations could incorporate determinants such as price, quality, habits, and availability, as identified by experts. Additionally, it would be interesting to conduct the study in different industries (e.g., the food and beverage industry, etc.). As indicated by the experts, consumers might react more strongly to greenwashing in certain sectors over others. Finally, different levels of greenwashing could be investigated in further experimental approaches. As experts suggested, the extent of greenwashing influences the strength of consumers' reactions. Contrary to our experiment, companies may sometimes find themselves in a gray area, which can have an impact on the effectiveness of greenwashing for influencing customers' purchasing decisions. Furthermore, the example we used demanded a response to an immediate confrontational greenwashing scenario. For future research, it would be interesting to examine more subtle cues, and also explore consumer reactions over time to continuous firm greenwashing actions.

6 Conclusion

This thesis aimed at examining the influence of perceived greenwashing on consumers' purchase intention in Europe. As consumers become more concerned about the environment, pressure is mounting on companies to supply sustainable products or alternatives. While some companies are taking substantial steps to minimize their environmental footprints, others embellish their sustainable actions or even mislead customers. Due to the increasing number of companies making false and exaggerated green marketing claims, it has become crucial to address the phenomenon of greenwashing. With the implementation of the CSRD in 2024, companies will be held accountable for their non-substantive sustainable practices. As a result, consumers will also become more aware of deceptive corporate practices. Therefore, it is important to research perceived greenwashing and its effect on consumer purchase intention in the European region.

To achieve its research objective, this paper discussed sustainability, greenwashing, and purchase intention. Hypotheses were formulated on the basis of the current state of research relating to the influence of perceived greenwashing on consumer purchase intention. The conceptual framework of the research was centered around the ABC theory, which takes into account the attitude toward perceived greenwashing, the purchase intention as behavioral intention and the contextual factors including the level of concern for the environment, brand loyalty and brand trust.

An online survey was conducted in which 185 individuals participated. The design of the survey had two scenarios, one with greenwashing and the other without. The objective was to explore the relative difference in purchase intentions. Eight semi-structured expert interviews were also conducted to amplify the attitude-behavior relationship. While interviews were assessed qualitatively using thematic analysis, the survey data was analyzed using paired t-tests, regression analyses and causal mediation analyses.

The research found that greenwashing has a significant negative effect on consumer purchase intention. However, this effect does not occur due to a direct correlation but indirectly through a reduction in brand trust and loyalty. In addition, people younger than 18 and up to 34 showed a stronger negative reaction in terms of purchase intention than older people. Environmental concern could not be identified as a moderator by the study, but it nevertheless remains a crucial

factor within the relationship between greenwashing and purchase intention. The experts further identified numerous other factors that strengthen or weaken the attitude-behavior relationship. These include the price orientation of the consumer, the quality and availability of the product, the habits of individuals, the extent of the greenwashing scandal and the industry in which greenwashing occurs.

This work contributes to existing theory because it is one of the first studies in Europe to examine the attitude-behavior relationship relative to greenwashing. Additionally, it provides insights for managers since it established that inappropriate marketing claims may cause negative effects on purchase intent. It further determined that both brand trust and loyalty are compromised by greenwashing perceptions. Managers should, therefore, communicate and advertise as transparently and honestly as possible to avoid the risk of losing customers.

7 References

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8 Appendices

I. Survey Design

Dear participant,

Thank you very much for your interest in my survey! This is a questionnaire on the topic of greenwashing, which is being conducted as part of my master's thesis. With your participation, you make a valuable contribution to my research project.

Some important information in advance:

1. Please answer all questions **intuitively** and **honestly**. There are no wrong or right answers.
2. Do not be confused if some questions sound very **similar**. This is due to methodological reasons and is **intentional**.
3. Please fill out the questionnaire **completely until the end**.
4. The evaluation of your answers will be completely **anonymous and strictly confidential**. Your data will only be used for scientific purposes. Conclusions about your person are excluded.
5. All scenarios, as well as the brand included in them, are fictional.

If you have any questions or suggestions, please do not hesitate to contact me:
s-nberhorst@ucp.pt

Thank you very much!

Nina Berhorst

Construct	Items
Environmental Concern	I am very concerned about the state of the world's environment.
	Humans are severely abusing the environment.
	I am willing to reduce my consumption to help protect the environment.
	Major social changes are necessary to protect the natural environment
	Major political change is necessary to protect the natural environment.
	Anti-pollution laws should be enforced more strongly.

Scenario 1:

Please carefully read the text on this page before proceeding to answer the survey.

Greenfiction, a leading retail brand, has recognized the urgent need to address climate change. Therefore, the company has developed and launched a new program that targets minimizing its environmental impact. As part of the new program, Greenfiction is investing in developing innovative, eco-friendly products primarily made from renewable and plastic-free materials. In addition, the products are designed in a way that minimizes waste throughout their life cycle. To ensure the transparency and credibility of its sustainability claims, the company makes sure to disclose detailed information about the manufacturing process, supply chain, and material usage.

Construct	Items
Perceived Greenwashing (1)	The company presents itself as environmentally friendly in order to improve its reputation.
	The company has hidden intentions and interests.
	The company presents itself as more environmentally friendly than it actually is.
Brand Trust (1)	I trust this brand.
	I rely on this brand.
	This is an honest brand.
	This brand is safe.
Brand Loyalty (1)	I will consider this brand for my next purchase.
	I intend to keep purchasing this brand.
	I am committed to this brand.
	I would be willing to pay a higher price for this brand over other brands.
Purchase Intention (1)	I intend to buy Greenfiction products.
	My willingness to buy Greenfiction products is high.
	I am likely to purchase any Greenfiction product.
	I have a high intention to buy Greenfiction products.

Scenario 2:

Please carefully read the text on this page before proceeding to answer the survey.

Environmental authorities and activists expressed doubts about the veracity of the sustainability claims: Greenfiction is accused of not taking significant steps to support the environmentally friendly image it has created. Investigators found that the company's marketing messages and actual environmental practices did not align. According to the report, the materials used were neither plastic-free nor more environmentally friendly than conventional options. Besides, an environmentally damaging production process was used to manufacture the supposedly eco-friendly products. Greenfiction has been unable to provide evidence to support its advertising claims and is now facing unfair competition charges in court.

Construct	Items
Perceived Greenwashing (2)	The company presents itself as environmentally friendly in order to improve its reputation.
	The company has hidden intentions and interests.
	The company presents itself as more environmentally friendly than it actually is.
Brand Trust (2)	I trust this brand.
	I rely on this brand.
	This is an honest brand.
	This brand is safe.
Brand Loyalty (2)	I will consider this brand for my next purchase.
	I intend to keep purchasing this brand.
	I am committed to this brand.
	I would be willing to pay a higher price for this brand over other brands.
Purchase Intention (2)	I intend to buy Greenfiction products.
	My willingness to buy Greenfiction products is high.
	I am likely to purchase any Greenfiction product.
	I have a high intention to buy Greenfiction products.

Sociodemographics

Do you buy sustainable/ eco-friendly products?

Option	Always
	Most of the time
	About half the time
	Sometimes
	Never

Do you consciously select sustainable products when purchasing?

Option	Always
	Most of the time
	About half the time
	Sometimes
	Never

What gender do you identify as?

Option	Female
	Male
	Diverse
	Prefer not to say

Which category includes your age?

Option	Under 18
	18-24
	25-34
	35-44
	45-54
	55-64
	65-74
	75-84
85 or older	

Which country do you live in?

Option	Free Text Field
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What is the highest degree you have completed?

Option	Less than high school
	High school graduate or equivalent
	Bachelor's degree
	Master's degree
	Doctorate
	Other (Free Text Field)

What is your monthly net income?

Option	≤ €500
	€501 - €999
	€1,000 - €1,999
	€2,000 - €2,999
	€3,000 - €3,999
	≥ €4,000
	Prefer not to say

**Thank you for your time spent taking this survey.
Your response has been recorded.**

II. Interview Guide

1. How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?
2. Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?
3. Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?
4. Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?
If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?
5. Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?
If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?
6. Are there any other factors that you believe should be considered when exploring the relationship between perceived greenwashing and purchase intention? (Factors = characteristics of consumers, products or brands)
7. Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?
8. Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?
9. How likely do you think it is for consumers to switch to another product in the same category if they discover greenwashing practices? And why?

III. Expert Interview Summary

Expert A

How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?

The act of greenwashing is prevalent among companies who aim to present their products or services in a better light than their actual impact. Among the "dirtiest" industries, the textile sector stands out for its significant resource depletion. However, companies in such industries often struggle to swiftly adjust their established business practices, resulting in the tendency to exaggerate their environmental efforts.

Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?

For many consumers, a company's sustainability may not impact their purchasing decisions. Additionally, studies show that few buyers question marketing claims.

Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?

The same applies here as in my previous answer regarding products; that is, the size of the effect depends on how important environmental protection is to the consumer. In the meantime, however, environmental friendliness has become a kind of standard that is very widespread. This means that the effect of acting in an environmentally friendly way is "diluted" for companies and no longer has as strong an effect on consumers as it did a few years ago. It could be that companies no longer get a competitive advantage from environmental protection. Nevertheless, companies could lose customers if they do not act in an environmentally friendly way.

Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?

To answer this question, it depends on how strong the perceived greenwashing is. That is, in cases where the environmental friendliness of a product has been exaggerated, but things have been done to benefit the environment, consumers may retain their positive image because they think that few measures are better than "nothing". In very strong or extreme greenwashing cases, consumers might refrain from buying a product. Our studies in several projects have shown that price and convenience play a much more important role in the purchase of a product than greenwashing. The image damage resulting from greenwashing, or the lowered brand trust appears to be important for the customer only after price and convenience. However, if consumers are 100% convinced of a product, it will not influence their purchase intention. That means if the consumer is satisfied with the price and convenience of a product, greenwashing has no influence on purchase intention. In addition, the consumer's environmental awareness and environmental concern also have a major impact on his or her reaction to greenwashing, as

very environmentally conscious people might be more likely to refrain from buying a product if they perceive greenwashing.

Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?

As with the previous question, it is important to ask "What is the extent of greenwashing?" or How extreme is it? In addition, brand loyalty plays an important role in this relationship. If the consumer particularly likes the brand, he will not let greenwashing stop him from wanting to continue buying it. The intention-behavior gap must also be considered here. This means that consumers might not stop buying a brand only because they have a negative purchase intention in the short term.

Again, the factors of price and convenience should be emphasized. In addition, Shopping Habits, i.e., the routines of a person, could play a significant role, as very impulsive buyers, for example, will not let perceived greenwashing stop them from making a purchase. Furthermore, it could play a role in how materialistic a consumer is or, in contrast, how environmentally conscious a consumer is with regard to his or her purchasing decisions.

Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?

Yes, there are consumers who react more strongly to greenwashing than others. Very environmentally aware consumers for whom sustainability is an important value in their lives. In addition, very critical consumers may react more strongly, as they are more inclined to question offers. The latter may also be associated with a higher level of education. Nevertheless, these are smaller groups, and the majority will not be interested in whether or not a company is greenwashing.

Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?

Greenwashing scandals could have a stronger impact on consumers in industries that are already considered environmentally harmful (e.g. automotive, aviation, energy sectors). If the product itself is not problematic, the greenwashing effect may not be as strong.

Expert B

How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?

Greenwashing is very common; this is partly intentional but often also unintentional. For example, a study by the EU Commission showed that over 50% of green marketing claims are misleading. The B2C sector seems to be more affected than the B2B sector. This is because there are more guidelines in the B2B area and the frequent conduct of risk analyses prior to transactions.

Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?

From anecdotal evidence, it can be concluded that some consumers do indeed inform themselves in advance about the products they buy. This seems to be mainly the younger consumers. In the future, transparency requirements may increase further, as the regulator has drafted new guidelines that require companies to publish more information regarding the origin of their products and human rights issues. Therefore, consumers will also have higher transparency requirements in the future than currently.

Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?

Not all consumers care whether a company actually takes environmentally friendly measures. According to a Eurobarometer survey on environmental awareness, the majority stated that sustainability is important to them. However, a mind-behavior gap exists. This means that although it may be important to consumers, they are not willing to pay more accordingly. The challenge of gaining a competitive advantage through sustainability, therefore requires that customers also honor sustainable products/brands. Most consumers do not avoid products that are known to be greenwashing and continue to buy a brand anyway (e.g., Diesel gate).

Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?

When perceiving greenwashing, there may be a minority who will refrain from buying. However, the majority's purchase intention will probably not be influenced by greenwashing perceptions. Factors such as pricing, quality, and functionality of a product are clearly more important in shaping purchase intention. In addition, reference must again be made to the mind-behavior gap: Consumers may become more skeptical about a product, but they still continue to buy it.

Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?

When it comes to brands, there is a high risk of reputational damage, so consumers might distance themselves from it. Greenwashing practices perceived by consumers can seem like a broken promise by the brand regarding its quality. Brands can have a major impact on a consumer's purchase decision. For example, Tesla owners say they are generally satisfied with the product but feel alienated by Elon Musk and consider switching to another brand.

Greenwashing does not seem to be the decisive factor for a potential purchase. Pricing, quality, functionality, and availability play a much more important role. In addition, the environmental awareness of a consumer is also an important factor that should be considered. In terms of brands, it often comes down to attributability and awareness. For example, Tesla can usually be directly associated with its product, whereas most consumers might not immediately know which products belong to the Nestlé brand. The effect of a brand on the relationship between greenwashing and purchase intentions could vary accordingly. In addition, greenwashing scandals that are particularly emotional have a greater influence on consumers.

Are there any other factors that you believe should be considered when exploring the relationship between perceived greenwashing and purchase intention? (Factors = characteristics of consumers, products or brands)

In this relation, it should also be considered how competent consumers are to recognize greenwashing. In addition, the level of education of the consumer in relation to sustainable issues seems to be a decisive factor. Frequently, false images have become entrenched in the minds of consumers. Example: plastic vs. paper bags: plastic may have a better eco-balance than paper due to its longer shelf life, but most consumers consider paper bags to be the more ecological version. However, consumers often stick to their old images and rarely question them. For companies, this raises the question: How much information can consumers be expected to take in at all? And how can the over-complexity of sustainability be presented in a highly simplified way on packaging and the like? Who must educate consumers and how much must be explained?

Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?

In all areas that are about health, the reaction to greenwashing could be stronger, for example, nutrition, because we ingest these products directly. Furthermore, products that are, for example, for babies are claimed to be free of hazardous substances. These products might also be more likely to be bypassed for protection.

Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?

Consumers who are more educated, interested, and informed about sustainability may be more responsive to greenwashing. In addition, consumers who assume that their purchasing decisions help shape the economy might have stronger reactions (ethical, ideological shoppers). In addition, younger consumers might be more responsive (e.g., Fridays for Future participants).

How likely do you think it is for consumers to switch to another product in the same category if they discover greenwashing practices? And why?

This assumes that there is an existing substitute and depends on how much consumers are affected by a scandal spread in the media. It also depends on what priorities consumers set; if these concern the environment, the willingness to switch is higher.

Expert C

How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?

Greenwashing is very widespread nowadays, mainly because some marketing terms are not protected (e.g., "natural"). This is often exploited to suggest an environmentally friendly image. Greenwashing is particularly widespread in the B2C sector, as awareness and perception of exaggerated marketing claims are significantly lower in this sector.

Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?

The majority do not inform themselves about the actual sustainability of products before making a purchase. This is mainly because they often lack the time or knowledge in this area in their everyday lives. In addition, due to increasing inflation and declining prosperity, the "lower" classes are increasingly prioritizing inexpensive shopping. Higher salary groups, for whom money does not play such a large role in purchasing decisions, may be more likely to pay attention to sustainability. The lower income groups are driven by other factors when making purchases.

Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?

Labels for marketing purposes usually work very well, as consumers do not question them much. Buying a sustainable product results in a good feeling for most consumers. Therefore, most are more willing to pay for good conscience than to deal with their own decision or to deal with potential deception.

Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?

It depends on the product and how directly or indirectly the consumer is affected by greenwashing. Every consumer who buys clothes from Primark, for example, knows that human rights are violated by the production of these clothes. However, this does not happen "on their own doorstep". However, if human rights are violated very close to home (e.g. Tönnies scandal, a German meat producer), the reactions can be stronger, because these events are more tangible.

Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?

If a company deliberately builds a sustainable image to promote its products, consumers might be more shocked by greenwashing because they intentionally bought from the brand to do something good. The importance of the sustainability aspect at the time of purchase and how much the brand is associated with sustainability matters. If this was the decisive point for the purchase of a brand, greenwashing tends to discourage consumers from buying it. The significance depends on how strongly sustainability previously influenced the purchase decision.

Are there any other factors that you believe should be considered when exploring the relationship between perceived greenwashing and purchase intention? (Factors = characteristics of consumers, products, or brands)

Factors that could also be important in the relationship are in any case how important the topic of sustainability is to the consumer. In addition, the monthly available commodity basket size of the buyers should be examined, and the price of the products advertised as sustainable, since not everyone has the financial privilege to pay more money for green products. In addition, it could be investigated how important the individual's own external impact is or how he or she wants to be perceived by other people or social groups. In addition, the expectation the consumer has of himself to contribute to the environment could be significant. For example, some individuals change their diet to vegetarian but still fly 3 times a year on vacation. Thus, it should be included how consistently or strongly consumers follow their own convictions.

Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?

Yes, there are product categories or industries where consumers are more sensitive to greenwashing. These are mainly eco-labels, organic products, or high-priced supermarkets because here people are explicitly looking for "better quality" or "greater sustainability."

Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?

For example, one group of consumers that is more responsive to greenwashing is those that are particularly sensitive to sustainability issues. These are often strata that have a high income and a high level of education. This is due to the fact that less educated groups usually have less knowledge about the topic and are therefore more receptive to greenwashing. For these groups, price is the most important factor when making a purchase decision. In addition, age could have an influence on the reaction to greenwashing: For younger generations, the topic of sustainability seems to be a more sensitive one than for older generations (e.g., Friday for Future movement).

How likely do you think it is for consumers to switch to another product in the same category if they discover greenwashing practices? And why?

A change to another product is very likely if someone is very sensitive to the topic of sustainability and if there is a basic interest in "doing something good". Of course, a prerequisite is whether there is a comparable product.

Expert D

How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?

Greenwashing is a very common phenomenon. It seems to be particularly widespread in industries where it is "hard to avoid", due to established manufacturing processes or lack of alternatives (e.g. steel and cement industries). Furthermore, the B2C market seems to be particularly affected, more specifically the consumer goods industry.

Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?

Most consumers will not inform themselves before making a purchase. Informing oneself as a consumer is a difficult matter since many consumers trust labels, but these sometimes do not deliver what they promise. These information asymmetries due to lack of transparency can contribute to limited sustainable consumption. However, it can be assumed that consumers will increasingly inform themselves in advance when it comes to high-priced products or investments. When buying everyday consumer goods, consumers may be less informed due to time constraints and convenience.

Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?

No, not all consumers care whether a company is greenwashing. While there is a generally high willingness to consume sustainably, not everyone can afford it. This is often dependent on social milieus or strata. Families with lower incomes are usually unable to buy more expensive, sustainable products, so the sustainability aspect is not a consideration in their purchasing decisions.

Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?

Yes, especially consumers who are particularly environmentally conscious could get the feeling of being deceived in extreme greenwashing cases. The lost trust in the product's properties could contribute to this group ultimately refraining from buying the product.

Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?

This question can be answered in the same way as the question relating to purchase intention vis-à-vis products. Perceived greenwashing could damage brand trust, which can lead environmentally conscious consumers to stop buying an entire brand if they find an appropriate substitute.

Greenwashing has a significant impact on purchase intent among environmentally conscious consumers. However, alternatives must be given that can substitute the product in question. If there is no alternative, the consumer might not refrain from buying the misleading product. In addition, log-in effects can have a similar effect on purchase intention as a missing alternative.

Are there any other factors that you believe should be considered when exploring the relationship between perceived greenwashing and purchase intention? (Factors = characteristics of consumers, products or brands)

Absolutely. For consumers who are not so environmentally conscious, factors such as price play a much more significant role in the purchasing decision. Buying habits are also of great importance, as consumers often reach for the same products without giving them much thought in everyday life. In addition, the availability of alternatives is also an important factor that should be considered. Without an alternative, consumers will not refrain from buying it despite greenwashing.

Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?

Here, geographical distance or proximity plays a major role. Deceptions or unsustainable practices that take place far away can be better ignored by the buyer. On the other hand, industries or products that are close (geographically or physically) to the consumer are more affected. These can lead to greater outrage due to identification or emotionality, e.g., food industry and the Tönnies scandal in Germany.

Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?

Yes, of course, consumers who are more concerned about the environment and more educated about this topic react more strongly to greenwashing. This also includes, for example, people who are professionally engaged with the topic of sustainability, are politically green-minded, or have a great degree of intrinsic motivation regarding environmental protection, etc.

How likely do you think it is for consumers to switch to another product in the same category if they discover greenwashing practices? And why?

If there is a product that replaces the one incorrectly portrayed as sustainable, it is very likely that consumers will switch.

Expert E

How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?

Greenwashing is very common but in different forms and manifestations. The B2C segment is most affected, for example, the consumer goods segment or the automotive sector. The B2B sector is very much driven by prices and the willingness to pay a surcharge for sustainability is not yet as great as in the B2C segment.

Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?

A small part of the group to whom sustainable shopping is important will inform themselves in advance. However, this is very complex, as there are various seals and labels that are more or less trustworthy. In the future, however, this will be easier since the green claim initiative of the EU is upcoming, which will help to increase the transparency of the "seal jungle". It can even be observed that dubious seals of some companies are already being withdrawn, as they could expect lawsuits from the competition authorities if the law comes into force.

Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?

In this case, consumers can be divided into different groups. Some are not interested at all, some pay attention to sustainability and those who base their entire purchasing decision on buying environmentally friendly will find it important that a company actually acts sustainably. However, many consumers might have difficulties/be overwhelmed to recognize what is actually environmentally friendly and what is not, due to the complexity of the topic.

Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?

Again, consumers can be divided into groups here: Ecologically/socially interested; convinced/researching and disinterested (price oriented). The latter will not be interested. All consumers who inform themselves about the sustainability of the product will be negatively affected. This group will especially lose trust in the greenwashing brand. In addition, the strength of the greenwashing accusation matters, the more extreme the accusation, the greater the extent.

Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?

Here the keyword brand loyalty and trust is important for those interested in sustainability. If trust has been abused, the consumer may decide against the brand in the long term. Here it should also be considered whether the greenwashing accusation is believed at all.

Those who are disinterested in sustainability only care in the short term, if at all, because in very strong greenwashing cases it is "not seen with pleasure" to buy a certain brand (keyword: social pressure). A discrepancy could arise between what is morally accepted vs. one's own moral views.

The relationship between greenwashing and purchase intention is mainly influenced by the price and quality of the product, as well as the image of the brand. The weight of the respective characteristic is group-specific. For active, convinced people, the sustainability of the product is the significant factor, as this represents a quality feature. For the ecologically interested, there is a tolerance for a higher price. For the disinterested, the price-performance ratio is the decisive factor.

Are there any other factors that you believe should be considered when exploring the relationship between perceived greenwashing and purchase intention? (Factors = characteristics of consumers, products or brands)

Yes, the extent of greenwashing: how severe does the misleading have to be so that it actually leads to a change in the purchase intention?

Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?

Reactions could be especially strong with consumer goods that are very close to the subject. For example, a T-shirt is worn directly on the skin. What is directly on the consumer is perceived as worse because it is more tangible. For instance, whether lithium is built into a car is perceived as less serious. The more abstract it is, the less strong the reaction of the consumer because it is easier for them to suppress it.

Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?

Once again, reference can be made to the three groups: Active, Interested, and Disinterested, with Active reacting most strongly to greenwashing. In addition, the younger generation contains a larger proportion of active people (see Friday for Future movement). In addition, the level of education might play a role here, as there is currently little education and transparency in the green market. In terms of sustainability, very educated people could show stronger reactions. The income is also important because financial privilege must be given to be able to buy sustainably or to pay a premium for these products.

How likely do you think it is for consumers to switch to another product in the same category if they discover greenwashing practices? And why?

This again depends on the group. If sustainability was the deciding criterion for the purchase, then it is very likely. For disinterested people, the price will continue to be the decisive factor.

Expert F

How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?

Greenwashing is a very common phenomenon. For example, to be listed on stock index, ESG criteria must be met - many companies would do anything to overcome this formal hurdle. Greenwashing is particularly widespread in the B2C and consumer goods sectors. This is mainly due to the fact that consumers are very responsive to green claims and are more likely to be influenced.

Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?

Only a few will actively inform themselves about the sustainability of the product. However, those who live their lives according to these standards, i.e. for whom environmental friendliness is important, could also inform themselves about this before making a purchase.

Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?

No, many consumers don't care because they don't value sustainability or similar. However, when people actively look for such products, they have a certain expectation of the product or of the purchase. It is precisely this group that is interested in whether a company acts sustainably or if it does not.

Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?

Yes, greenwashing mainly affects the groups that are ecologically concerned or interested. These people mostly live an eco-friendly lifestyle and would accordingly avoid products that are not as sustainable as they are marketed. The masses, however, will not have much of a reaction to greenwashing. These are, for example, customers of the brand Zara or other mass producers, since for these people the sustainability aspect does not play a significant role in the purchase.

Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?

Here again, we can refer to the answer given before: It all depends on what role the issue of sustainability plays in a purchase. Customers who buy from Patagonia, for example, are particularly interested in the sustainability aspect of their purchase. Customers of Zara are more price-oriented. If Patagonia customers find out that they were deceived by the label, this can have a significant negative impact on the brand's reputation and thus on the consumer's purchase intention.

Are there any other factors that you believe should be considered when exploring the relationship between perceived greenwashing and purchase intention? (Factors = characteristics of consumers, products, or brands)

As just mentioned, the reputation of a brand is a decisive factor, i.e., how loyal consumers are to the brand. If consumers are strongly convinced that the brand and all other product characteristics are suitable for them, then they will not let greenwashing stop them from continuing to buy this product. In addition, the importance of the price in this relationship must also be emphasized. Consumers in the low-price segment are generally less interested in eco-friendly products. Therefore, the reaction to greenwashing will also be lower. However, as soon as there is a willingness to pay a higher price, the reaction to greenwashing will also be stronger.

Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?

Yes, clothing and food could be sectors that could be strongly affected by greenwashing scandals. This is because these sectors and their products are physically very close to people. In addition, claims like "organic," "vegan" or "vegetarian" are often used in these sectors and some brands have their entire strategy focused on being sustainable (e.g., Patagonia). Deception specifically of these types of products could influence consumers more strongly in their decision to buy.

Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?

Ecologically aware or concerned consumers (e.g., vegetarians, vegans) could react particularly strongly to greenwashing. Furthermore, young professionals, as younger generations are often more concerned about ecological issues than older ones and they earn money accordingly to be able to afford green products. Additionally, the income of individuals is an indicator of the strength of the greenwashing response, as many cannot afford the more expensive green products.

How likely do you think it is for consumers to switch to another product in the same category if they discover greenwashing practices? And why?

Switching is very likely if an alternative is available. As soon as the consumer is more willing to pay a higher price, it is easier to switch to another product or brand.

Expert G

How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?

Yes, greenwashing is prevalent everywhere. Most of the time companies do more than nothing, but they often exaggerate their impact and deliver some elements of truth. From this, customers usually derive their own assumptions, which, however, are often unrealistic. Greenwashing is particularly widespread in consumer-related areas and B2C businesses. Often, however, it is

also accidental greenwashing because companies do not know exactly what they are doing. However, greenwashing is deliberately practiced by some companies to protect themselves from losing customers.

Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?

Due to the fast-paced nature of life, individuals often lack the time to thoroughly investigate social and environmental concerns. As a result, reputable brands may come under fire, while dishonest ones go unnoticed and unaddressed.

Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?

German consumers tend to rely on certifications and labels, such as the Bio Label, to inform themselves about products. However, there is often a large discrepancy between what the label signifies and what consumers assume it means (leap of logic). Due to the overwhelming number of decisions, they face each day, most consumers do not conduct detailed research on these issues.

Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?

How consumers react to greenwashing depends on the type of product and the habits of the consumer. Products that are used or bought daily will not be abandoned just because of greenwashing. As an example, Nespresso: few consumers have turned against the product because of habit and "because it tastes good". In addition, many consumers have only limited time to consider their everyday purchase decisions and to examine them against the background of greenwashing.

Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?

For a bubble of people to whom sustainability is particularly important, greenwashing could be a decisive factor in the formation of purchase intentions. These individuals could receive social credits and recognition from their peers if their beliefs are reflected in their purchase intentions. These could refrain from buying a brand that greenwashes because of their beliefs and social pressure. Moreover, greenwashing seems to be influential only if consumers have the privilege to afford sustainable products in the first place. Another prerequisite for the influence of greenwashing is, as mentioned before, the stickiness of the product, meaning that consumers could potentially change the product, and a replacement is available.

Greenwashing will not have a significant impact on purchase intentions in most cases. Factors to consider are the price and quality of a product. In addition, the brand plays a major role, and brand loyalty because individuals frequently have an attachment to consistency. Therefore, the habits of individuals should also be included. Furthermore, as mentioned before, the stickiness of the product plays a major role. Another factor could also be the supermarket shelf space of the product since consumers often grab the first thing they see and do not look around for alternatives or similar due to time constraints.

Are there any other factors that you believe should be considered when exploring the relationship between perceived greenwashing and purchase intention? (Factors = characteristics of consumers, products or brands)

Other factors that could be relevant in this context are the strength of the greenwashing scandal, as well as the recentness and intensity of the negative media coverage. How enduring was the damage?

Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?

Items that we ingest or that are close to us could lead to stronger reactions. In addition, consumers may be more upset about products that they have less control over or the ability to change (due to a lack of alternatives or financial resources). For example, consumers may be more upset about a car they buy that is not as environmentally friendly as advertised. When it comes to a product from the supermarket, consumers might be less upset because they can change more easily.

Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?

One group of consumers who react more sensitively to greenwashing are those for whom environmental friendliness is particularly important. These individuals mainly buy organic and sustainable, i.e. green products. Their self-image is decisively characterized by sustainability and is thus also reflected in their purchase intentions.

How likely do you think it is for consumers to switch to another product in the same category if they discover greenwashing practices? And why?

Switching to another product is considered unlikely because there are usually not enough available alternatives or options. If you look at the diesel gate as an example, you can clearly see that cars are still being bought. Among other things, this can be attributed to the fact that people fundamentally dislike change.

Expert H

How prevalent do you consider greenwashing? Is it more common in certain industries, which ones and why? Why is it not so common in others?

Greenwashing is particularly prevalent in the B2C sector, as marketing claims more easily influence end consumers.

Do customers educate themselves before making a purchase whether the product they want to buy is actually environmentally friendly?

Most consumers will not inform themselves before making a purchase, as most purchases are made as a matter of routine (e.g., grocery shopping, etc.). In cases of larger sums or investment decisions, consumers may also conduct research. This also depends strongly on the environmental awareness of the consumer.

Do all consumers care if a company is taking genuine environmental actions or is greenwashing when purchasing a product?

No, not all consumers care whether companies are greenwashing or not. On the one hand, this is due to the fact that some consumers do not question the purchasing decisions of their everyday life, and on the other hand, this is due to the level of ecological interest or concern that the consumer carries within him.

Do you estimate that there is a connection between perceived greenwashing and consumers' intention to purchase a certain product?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a product? Which other factors influence this relationship?

Greenwashing will not have an impact on the purchasing decisions of the majority of consumers. Only particularly committed or interested consumers in the field of ecology might actually refrain from buying the product in question. For the remaining consumers, the price-performance ratio of products will have a greater influence on the purchase decision than the perceived greenwashing; in other words, they will not base their purchase decision on greenwashing.

Would you say that perceived greenwashing affects consumers' intention to buy from a certain brand?

If yes: How would you describe the connection? Does greenwashing play a significant role in shaping a consumer's purchase intention toward a brand? Which other factors influence this relationship?

Similar effects to the previous answer apply here. Ecologically committed persons could become skeptical of the brand or their trust in the products of a brand could be negatively influenced. Therefore, such consumers might reach for alternatives if available.

Are there any other factors that you believe should be considered when exploring the relationship between perceived greenwashing and purchase intention? (Factors = characteristics of consumers, products or brands)

Other factors that should be considered are, for example, the routines of a consumer: most people buy the same products every day without having a close look at the product, mostly out of convenience. In addition, the price and quality of a product play a much more important role in shaping a purchase decision for most consumers, especially in times of inflation. Greenwashing could have a significant impact only on the purchase decision of ecologically

active consumers who live their lives according to their beliefs. In addition, there are different types of greenwashing: the stronger the scandal, the stronger consumers might react to it. Companies often receive a lot of media attention in very serious cases of greenwashing. This could negatively influence consumers (rather in the short term).

Do you think there are certain branches or product categories where consumers' reactions to greenwashing could be stronger than in others?

Yes, consumers might be more sensitive to greenwashing if it becomes tangible to them. Poor working conditions in India, for example, are not as tangible to the average consumer in Europe as a scandal right on their doorstep (e.g., climate glue in Germany).

Is there a group of consumers that, in your opinion, reacts stronger to greenwashing than others?

Ecologically interested people will react more strongly to greenwashing as described before. In addition, individuals with a higher monthly income may be the ones who can afford green products in the first place. Since they have intentionally paid a premium for sustainability, they may also react more strongly if they discover that they have been deceived. For consumers in the lower income brackets, factors such as price and quality will outweigh other factors when making a purchase.

How likely do you think it is for consumers to switch to another product in the same category if they discover greenwashing practices? And why?

If there is an appropriate alternative, ecologically committed consumers will switch to another product.