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Master Thesis

Greenwashing, but make it fashion

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Greenwashing, but make it fashion

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Abstract

The following thesis investigates the fast fashion market and the impact greenwashing has on consumers' perceptions of well-known fashion brands. The participants were faced with a purchase decision where green and non-green options were available in different price ranges. Furthermore, they were asked to evaluate their preferred brand after being provided information regarding the brands' green behavior. The three categories were: greenwashing, green virtue, and a control condition. The results show that there is a significant difference in reactions to greenwashing and green virtue information. Consumers evaluate their preferred fast fashion brand more negatively after reading information regarding greenwashing behavior. However, despite previous findings regarding consumers' reactions to greenwashing (Nyilasy et al., 2014; De Jong et al., 2018; De Jong et al., 2020), this study only finds moderate negative reactions from consumers. When receiving information regarding the brand's positive green behavior, consumers rate the brand more positively. However, the findings also show that consumers prefer greenwashed products over brown products, while true green products had the lowest preference. Consumers who consider themselves green tend to be more skeptical towards a brand when it is accused of both greenwashing and positive green behavior, indicating that true green consumers have a general skepticism towards fast fashion brands. Consumers who are frequent shoppers of a brand tend to evaluate the brand more positively when provided information regarding the brand's greenness, regardless of the condition.

Furthermore, the study finds that greenwashing could potentially have a positive impact on the fast fashion industry. Firstly, consumers are willing to pay a higher price for an item when given information regarding the brand's green behavior. Moreover, consumers value the combination of price and sustainability, and are not severely impacted by credible claims regarding negative green behavior. This is in stark contrast to previous findings using fictional brands (De Jong et al., 2018; Nyilasy et al., 2014; De Jong et al., 2020), which indicate that consumers do not wish to purchase from greenwashing brands.

Keywords: Greenwashing, green virtue, fast fashion, brand evaluation

Content

1   Introduction

Green marketing is becoming an increasingly researched topic as consumers to a larger extent expect companies to take responsibly and act green. According to a study conducted by Nielsen in 2018, 81 percent of global respondents feel strongly that companies should help improve the environment.

Despite the increased environmental interest from consumers, the fashion industry is developing new garments more rapidly than ever before, and trends are changing as often as each week. Research regarding consumers' attitude and behavior in relation to green products has shown that many consumers do not act according to their beliefs. According to a study conducted by Johnstone and Tan (2015), many consumers consider themselves green, yet do not buy products that support the environment, and are not selective in terms of which companies they choose to purchase products from.

With an increased focus on green behavior from firms, there is as well an increase in greenwashing. Greenwashing can be defined as: "misleading consumers about their environmental performance or the environmental benefits of a product or service… [through] … poor environmental performance and positive communication about environmental performance" (Delmas & Burbano, 2011, p. 66). In this paper, greenwashing is used to describe brands, products and behavior that are marketed as green, but have a negative environmental impact. However, these products tend to be greener than a product with no focus on sustainability whatsoever.

Nyilasy et al. (2014) look at the impact of green advertisements on consumers' purchase intentions, and find that green advertisements can in fact do more harm to a company's reputation than good. The research highlights the need to better understand the impact of both green virtue, further on used to address positive green behavior, and greenwashing on consumers, as the findings indicate that greenwashed products and advertisements are a bad investment for firms. Furthermore, De Jong et al. (2018) look at consumers' responses to vocal and silent green firms, as well as greenwashing and brown firms, using hedonic and utilitarian products. Brown firms refer to "firms with poor environmental performance" (Delmas & Burbano, 2011, p. 65). Their findings show that, when revealed, consumers have a lower purchase intention for both greenwashing firms and brown firms. However, the initial findings regarding green claims indicate that consumers perceive greenwashing firms to care about the environment before their true

behavior are revealed. Thus, consumers may actually believe greenwashing claims if they are not made aware of the truth, or if the company is not exposed by a reliable third party, such as Greenpeace or the European Commission. De Jong et al. (2020) looked at the impact of telling the truth, half-lies and lies regarding a firm's environmental impact, and found that only true green firms will receive positive reputational effects. Lies and half-lies negatively impact a firm's reputation, in addition to creating negative perceptions regarding product and service quality. Although the findings indicate that consumers do not support firms that lie, consumers are often not aware of such lies, meaning their perception is only impacted when such lies and half-lies are revealed to the consumers. This strengthens the need to better understand the impact of company lies when the consumers are not made aware of said lies or has to seek information on their own regarding the company's green behavior.

According to a study conducted by the United Nations Environment Programme, the fast fashion industry is responsible for 10 percent of global carbon emissions, and produces 20 percent of global wastewater (2018). This is a significantly larger impact than both international flights and maritime shipping combined (United Nations Environment Programme, 2018), and these industries have met a lot of criticism worldwide from both consumers and green activists for their negative environmental impact. However, consumers do not seem to be as concerned about the fashion industry, as they are purchasing new items of clothing at a rapidly increasing rate. In addition, the number of times a garment is worn has declined by 36 percent in 15 years (Ellen MacArthur Foundation, 2017). This highlights the need to further look into the fast fashion industry, and the impact greenwashing has within this market. Fast fashion can be defined as: "inexpensive clothing produced rapidly by mass-market retailers in response to the latest trends" (Oxford Languages, 2021).

The underlying aim of this paper is to explore why consumers continue to support large firms that have clearly acted both unethically and non-environmentally friendly, despite the growing concern for the environment. Building on the studies of Nyilasy et al. (2014), De Jong (2018) and De Jong (2020), I wish to explore consumers' reactions both to green and greenwashing brands and products, to measure actual reactions and purchase behavior. By focusing primarily on fast fashion brands, which in general operate with an affordable price level, I also wish to test to what extent consumers actually consider sustainability when purchasing

clothing. As the fashion industry is responsible for a continuously increasing carbon footprint, and fast fashion is based on mass-production of clothing, the industry is highly relevant to explore in connection with green consumption. Finally, I wish to see if greenwashing can in fact have an overall positive impact on the fast fashion industry, as suggested by Lee et al. (2018).

The contribution of this research will help companies better understand the purchase decisions of consumers, and their actual interest in green products. Furthermore, it will help brands understand consumers' motivation to be able to more efficiently meet demand, and develop products that satisfy their green needs. It is of great interest to explore if heavily investing in green marketing has an overall positive impact, or if there is only a particular customer segment that responds to such marketing messages. It is of great significance to explore if green marketing has a greater or lesser impact in a low-priced market segment, as it will help businesses make better decisions regarding their marketing investments.

Throughout this paper, the words green and sustainable are used interchangeably, and refer to brands, actions and products with a positive environmental impact.

2   Literature review

"Greenness" has seen an increase in popularity over the past decade, with more and more research being conducted within the field. Due to the increased interest from the general population, firms are heavily investing in developing new, sustainable products, and the market for low carbon environmental goods and services is currently estimated at €4.2 trillion (European Commission, 2019). Carbon reduction activities can provide a positive return on investment, underlining the importance for businesses to increase focus on the impact of both production and consumption of their products (CDP, 2013). Despite the positive impact of a green business strategy, firms tend to simply talk more about their positive impact, while hiding the polluting behavior of their firm. Due to the increased cost a green strategy may bring, many businesses intentionally mislead consumers regarding their green initiatives, rather than implementing new strategies and changing their business model.

2.1   Greenwashing and consumer behavior

"Greenwashing is defined as the intersect of two firm behaviors: poor environmental performance and positive communication about environmental performance" (Delmas & Burbano, 2011, p. 66). Gleim et al. (2013) investigated

the different barriers to green consumption, and found that price accounted for 42 percent of the cases. This indicates that consumers are not willing to pay the additional cost of green products, leading firms to shift their focus towards less green and lower-priced products. TerraChoice's latest report shows that the number of "green" products increased 77 percent over a one-year period, but found that 95 percent of these products used greenwashing-tactics in their marketing (2010). These findings emphasize the need to better understand why consumers continue to buy products despite being aware of the greenwashing these firms are guilty of.

There has been a large increase in research regarding green purchase behavior, green marketing, and greenwashing over the past few years. However, there is a need for research regarding greenwashing and consumer purchase behavior from an experimental perspective.

When looking at consumers' purchase decisions and brand evaluations, how consumers wish to be perceived is of significant importance. Greenwashing can be considered unethical as it entails fooling consumers and creating false impressions regarding green behavior. It is therefore expected that consumers will not want to support such behavior in order to avoid being considered an unethical person. Alem et al. (2018) look at the impact revealed and stated behavior has on unethical behavior, and find that people tend to act quite differently from how they wish to regard themselves. The findings highlight the importance of looking at how consumers consider themselves in terms of greenness, while also looking at actual behavior. Asking consumers what they would do in a fictional situation, enables them to create false and unrealistic perceptions, reflecting their wanted self-image. However, measuring actual purchase behavior provides consumers' revealed self-image. LaPiere (1934) discusses the usefulness of questionnaires, and to what extent they are able to actually measure social behavior. Building on this, it is important to not only ask consumers what they think, but to look at what decisions they make, and which characteristics they value, in order to measure their revealed self-image.

Chen et al. (2014) investigates the effect of greenwashing on green word-of-mouth by analyzing Taiwanese consumers' reactions to greenwashing. The researchers find that greenwashing has a negative impact on consumers in three different ways. Firstly, it negatively impacts consumers' green word-of-mouth directly. Secondly, it negatively impacts consumers indirectly through lowered perceived quality. Thirdly, consumers' green satisfaction has a negative impact on green word-of-

mouth. The study highlights the overall negative impact greenwashing has in a post-purchase situation, while underlining the need of more extensive research within the field of green marketing and greenwashing.

Jones (2019) analyses the difference in advertising techniques of companies with both good and weak social and environmental behaviors. The author's findings indicate that responsible firms tend to focus on political as well as systematic issues, with the intention of creating consumer empowerment. This is also the case for weaker firms, who tend to focus more on scientific and philanthropic implications of a lower price-level. The major issue discussed is the lack of information available to consumers, making it difficult for consumers to know whether a firm is indeed acting ethical or is in fact greenwashing.

Ekstrand and Nilsson (2011) discuss the implications of the strict marketing restrictions regarding green products in Denmark, and the negative impact this may have on the development of green products overall. However, strict regulations are necessary to ensure consumers that products marketed as environmentally friendly are truly green, rather than claiming 'greenness' for polluting products.

Nyilasy et al.'s (2014) focus on measuring purchase intention is somewhat unrelated to the true purchase habits of consumers, and does not accurately reflect the interaction between brands and consumers. The research should therefore be adapted to a market where spending is high, and consumers are regularly faced with the contradicting green advertisements of large corporations with little focus on a circular business model.

2.2   *The use of fictional brands in greenwashing research*

The use of fictional brands is persistent in the current greenwashing literature. Nyilasy et al. (2014) use fictional brands to measure the effect of green advertisement and corporate environmental performance on consumer brand attitudes and purchase intentions. The use of fictional firms, and focus on the corporate level, is useful for measuring consumer perception, but does not have a significant impact on consumers general purchase behavior. Due to the use of a fictional firm, consumers' existing knowledge regarding the brand, as well as their reputation, do not impact the responses, which does not accurately reflect how consumers interact with green advertisements and large brands in their daily lives. De Jong et al. (2020) use fictional corporations to measure consumers reactions to lies and half-lies. Thus, the responses reflect a hypothetical situation rather than an

actual decision-making process, and do not provide results regarding consumers actual reaction to greenwashing as there is no brand-relationship or existing knowledge to impact this reaction.

2.3 The fast fashion industry

The fashion industry is currently valued at $1.34 trillion (CO Data, 2018). According to Statista, Norway has the highest spending per capita on clothing in Europe, with a value of $1.246 per person per year (Sabanoglu, 2020). Furthermore, the production of clothing is expected to increase by 13 percent by 2021 (CO Data, 2018), underlining the immense impact the fashion industry has on both consumers and the planet. Within the fashion sector, there are 20 companies accounting for 97 percent of the global economic profit, including fast fashion retailers Inditex (owner of Zara) and H&M (Hanbury, 2018). The fast fashion industry is primarily based on a use-and-toss mentality where consumers are continuously being offered cheap versions of high-fashion brand designs, and a continuously expanding selection. New items of clothing are introduced to stores as often as every week, and new products go from the design table to the stores within only two weeks (Peterson, 2014). Due to the extreme turnover within this industry, as a result of the excess production of products, it is an exceedingly relevant industry to look into when researching greenwashing. As consumers are buying more clothing while using them less, the demand for cheap alternatives is increasing.

A vast amount of consumers emphasize the importance of green products and indicate they do not wish to support and buy from companies that greenwash or do not contribute positively to the environment. However, the amount of products consumed is drastically increasing with consumers purchasing on average 60 percent more garments each year (Remy et al., 2016), while continuing to support large corporations that have been proven to actively greenwash. This indicates that the research conducted used methods where consumers 'wanted self-image' is reflected, rather than their true intentions and actions. Building on this, the current research aims to measure actual purchase behavior, rather than purchase intention. The objective of this research is to address the following research question: *"to what extent does greenwashing impact consumers in the fast fashion industry?"*

Although fast fashion is one of the sectors where greenwashing is continually being talked about, there is little research done regarding the impact greenwashing has on this specific industry. Many studies rather look at large corporations due to the focus

on corporate social responsibility (CSR) investment (de Jong et al., 2020; Nyilasy et al., 2014). Although the findings of these studies indicate the negative impact greenwashing has on both the brand and its reputation, as well as the attitudes and purchase intentions of consumers, large fashion retailers who face a lot of criticism for active greenwashing do not seem to be particularly impacted by negative consumer attitudes. Thus, there seems to be a mismatch between consumers wanted self-image and their actual purchase behavior.

Joy et al. (2012) look at the shopping habits of consumers in Hong Kong and Canada, and examines to what extent sustainability actually impacts their purchase habits. The findings show that consumers imply that they care about sustainability, but do not consider the implication of purchasing fast fashion products that are directly linked to a large carbon footprint. They merely separate the two distinctions, and consider them as unconnected aspects. Thus, fast fashion consumers who indicate that they care about the environment and consider themselves conscious consumers do not actually purchase green products, despite their indicated beliefs. This is in accordance with the study of Johnstone and Tan (2015) regarding consumers green self-identity and lack of green purchase behavior. These findings emphasize the need to look into the impact of greenwashed products, and to better understand if such products increase consumers' interest in and spending on what they perceive to be green products, as they generally are of a lower price point than actual green products.

I wish to better understand consumers' actual evaluation of some of the largest fashion brands internationally when faced with either green or greenwashing information, and analyze the extent to which this impacts consumers' overall evaluation of the brand. Furthermore, I wish to look at how consumers of these brands evaluate the companies' greenness, considering they all operate using unsustainable fast fashion business models. The purpose of this research is to look into the impact brand relationships has on consumers' evaluation of their preferred fast fashion brand when faced with information regarding greenwashing, as well as positive green actions. As consumers' knowledge regarding a brand and previous purchase history play an important role in purchase decisions, the use of real brands that the consumer prefers will help test if greenwashing actually has a significant impact on purchase intention and if the effect is as significant as previous studies have stated. It is assumed that consumers who frequently purchase from a selected fast fashion brand will not care significantly about the brand's greenwashing as

other characteristics are of higher importance. The following hypothesis is developed:

H1: Fast fashion consumers are not strongly impacted by greenwashing

2.4 Greenwashing's potential positive impact

Greenwashing literature has strongly highlighted the negative impact greenwashing has on a brands reputation, and consumers' willingness to purchase from the brand. However, Nyilasy et al. (2014) highlight an interesting aspect of green advertising and the impact it has, by concluding that green advertisements can bring more harm than good to certain companies. This is particularly due to consumers' awareness of greenwashing and general skepticism towards green marketing messages, and the author concludes that staying silent about greenness is sometimes a better alternative.

Despite the large focus on the negative impact greenwashing has on both brand reputations and consumers (Nyilasy et al., 2014; TerraChoice, 2010; De Jong et al., 2020; De Jong et al., 2018; Chen et al., 2014; Delmas & Burbano, 2011), many studies have revealed the potential positive impact greenwashing may bring. As De Jong et al. (2018) discovered, greenwashing brands are initially considered good by consumers before their knowledge regarding their true environmental impact is uncovered. On the contrary, according to Nyilasy, "green advertising can in fact *harm* companies [and they may be] better off staying silent" (2014, p. 700). Considering the immense implications of this claim on marketing and the increasing development of green products, a better understanding of actual implications of green marketing is necessary.

Despite the authors' conclusion that greenwashing is "a useless, myopic strategy" (De Jong et al., 2018, p. 100), the findings of their study creates an opportunity for further research regarding the potential positive contribution greenwashing may have on certain industries, and to what extent exposure of greenwashing behavior impacts actual purchase behavior of consumers.

De Jong et al. (2018) study the impact of four different marketing messages: Green, greenwashing, silent green and silent brown. Silent green and brown refer to firms' (un)sustainable actions not being revealed to consumers through different marketing strategies. Using a hedonic product (perfume) and a utilitarian product (detergent), they study the impact these different types of messages have on consumers' purchase intention, perceived integrity and perceived environmental

performance. Their findings show that consumers are more willing to purchase from green firms than from greenwashing or brown firms. However, consumers had a positive impression of the greenwashing firm before receiving information regarding their poor environmental performance, indicating that greenwashing may in fact lead to positive connotations from consumers as long as the brand is not 'exposed'. The authors did however reveal to study participants that the company was in fact greenwashing, leading to participants indicating a lower purchase intention for products from the greenwashing brand. De Jong et al.'s (2018) use of perfume as a product category may not be of particular relevance as it is a product consumers tend to use in its entirety, rather than something that is exposed of or replaced by other products.

Moreover, De Jong et al. (2020) look into lies and half-lies related to greenwashing, and the differentiating effects of taking credit for implementing required green initiatives, compared to a firm taking initiative on its own. Using an experimental design, they found that firms who tell lies and half-lies regarding their sustainable behavior experienced negative effects on corporate reputation. Only when firms told the truth was there a significant difference between own initiative and following regulations. This study provides an interesting finding regarding the impact of greenwashing, and the type of green implementation a corporation should choose to focus on.

Jones (2019) discusses how a company or a product is only categorized as greenwashing once contradicting information regarding the negative environmental behavior of the firm is revealed. It is therefore important to look at the impact of brands that have already been accused of either acting green or greenwashing to accurately measure the impact such information has on consumer behavior, as many find it difficult to categorize these brands without the necessary knowledge.

Wu et al. (2020) look at the impact of CSR investments related to greenwashing. Their game-theoretic model is used to test the impact of greenwashing and information transparency, and find that greenwashing can hinder consumers in making conscious decisions, while motivating CSR investment. However, increased transparency diminishes greenwashing practices and increases motivation for a responsible firm to make additional sustainable investments. These findings indicate that greenwashing can help motivate green investments for companies, in line with the findings of Lee et al. (2018) regarding the positive external impact of greenwashing within an industry.

Although the study of De Jong et al. (2018) primarily emphasizes the negative impact advertisement greenwashing has on consumer purchase intention (PI), their findings also reveal that greenwashing, when not revealed, has a significantly positive impact on a brand's reputation and consumer PI. They specifically found that respondents indicated a good score on environmental performance for greenwashing firms compared to brown firms, indicating that green claims, no matter if true or not, create a positive green image for the brand. The purchase intention scores of the research as well indicate that silent green firms generate the highest purchase interest, while vocal green and greenwashing firms create lower, yet significant interest. Building on this information, the authors conclude that greenwashing firms indeed generate a more favorable image than brown firms who put no effort into being perceived as environmentally friendly. Furthermore, the authors suggest that firms may use greenwashing to manage their brand image and guide consumer perception.

Furthermore, as suggested by Lee et al. (2018), I wish to look at the overall reaction and attitudes fast fashion consumers have towards greenwashing, in order to determine if it could potentially have a positive impact on the fast fashion industry. I wish to further explore the overall impact of greenwashing, and green and brown products on the industry as a whole. That is, if consumers support and wish to purchase from greenwashing brands, the demand for green products will increase, causing an overall positive impact on the fast fashion industry.

Based on the previously conducted studies regarding the negative implications of greenwashing, I wish to look into the potentially positive impact of greenwashing on consumers of fast fashion, and to what extent it can increase green consumption. The following hypothesis is formulated to address the impact of greenwashing on the fast fashion industry:

H2: Greenwashing can have a positive impact on the greenness of the fast fashion industry

3   Methodology

To be able to answer the abovementioned hypotheses, an exploratory study design is necessary. Due to the current Covid-19 situation, it was not possible to conduct an in-person experiment. However, designing an online survey with an experimental approach should be able to reveal consumers' actual purchase

behavior and reaction to brands' green behavior without revealing the purpose of the study.

3.1 Survey design

A comprehensive survey was designed and distributed using the Qualtrics Survey Software, in accordance with BI standards. The survey firstly presented participants with the following statement: "This survey is designed to gather information regarding consumers' perception of advertisements and product perception, and is in no way related to the brands presented. The collected data will be anonymized and only stored until the 1st of July 2021 at latest. By proceeding, you agree to your data being stored for the purpose of this study."

Participants were first presented with purchase behavior questions where they had to make a selection of two different clothing items. The items differed in price and greenness, with the greener alternatives being more expensive than non-green options. The products were not displayed, but described as being of similar design. There was a total of 6 alternatives for each purchase decision:

T-shirt options	Jeans options	Category
49kr - made from 100% cotton	199kr - made from 89% cotton, 10% polyester and 1% elastane	Brown
100kr - made from at least 50% organic cotton	399kr - made from 98% cotton and 2% spandex	Brown
149kr - made from organic cotton	599kr - made from at least 50% organic cotton	Greenwashing
249kr - made from organic cotton and water reduction manufacturing techniques	999kr - made from organic cotton	Greenwashing
399kr - made using 100% recycled materials	1299kr - made from 100% organic cotton and water reduction manufacturing techniques	Green
599kr - made from 100% recycled materials and water, electricity and emission reduction manufacturing techniques	1599kr - made from 100% organic cotton and water, electricity and emission reduction manufacturing techniques	Green

The different options were divided into three different categories: brown, greenwashing and green. These categories may not be obvious to participants, but are based on existing products in the market from a selection of fast fashion and sustainable brands. The brown category corresponds to the cheapest products available from the included fast fashion brands, where no sustainable efforts were marketed. The greenwashed clothes corresponds to products where vague language

was used regarding the product sustainability, and consumers were not made aware of how much organic materials the product actually consisted of. The use of organic cotton has as well faced some criticism due to the increased need of land (The Pretty Planeteer, 2020), and higher water usage compared to regular cotton (Bain, 2017). The green clothing options were the most sustainable alternatives found among the included brands, and the use of recycled materials added an additional sustainable aspect, with a more sustainable and circular impact compared to organic materials. The aim of the purchase decision questions were to measure consumer's actual greenness through their product selection, as each product indicates what consumers value and are willing to spend, when faced with brown, greenwashing and green products. These responses were be further used to indicate consumer greenness in both H1 and H2.

After a selection was made, participants were required to indicate why they chose the selected products to reveal the driver behind their purchase decision. The aspects included price, sustainability, quality and materials, and were ranked on a scale of 1 to 5 ranging from "not at all important" to "extremely important". The responses were used to indicate to what extent consumers value price and sustainability in a purchase decision, and were used to measure what clothing characteristics are most important for fast fashion consumers.

Furthermore, participants were to select their familiarity with the 5 largest fast fashion brands internationally. To measure the actual effect of greenwashing, the experiment used real brand names. The use of existing brands was strongly impacted by consumers' existing perception and knowledge of the brand, as well as their brand-relationship. However, previous studies have shown that reactions to fictional brands are consistently negative when participants are made aware of their greenwashing (De Jong et al., 2018; Nyilasy et al., 2014). Thus, it was necessary to use brands that have previously been exposed for greenwashing to be able to measure the extent to which consumers recognize the true green behavior of a company, and whether they actually care.

To account for the effect of existing consumer-brand relationships, participants indicated their knowledge of each included brand, and further indicated their consumer-brand relationship through previous purchases. This was done to help reveal whether loyalty towards a brand impacts the way consumers consider both green and greenwashing claims, and to what extent consumers believe the claims of greenwashing firms. Participants then ranked the brands according to their

preference, and their 1st choice was further used in the study. Consumers who indicated that they frequently purchased products from their preferred brand, were further categorized as brand fans. Participants were only presented information and questions regarding their chosen brand to ensure that they could be considered a consumer of the given brand. The included brands were H&M, Zara, Levi's, the Gap and UNIQLO. These brands were selected based on an analysis of the fast fashion market and the recent sustainability report published by Business of Fashion (Kent, 2021).

Participants were placed in one of three categories, with two experimental conditions. The three conditions were 1. Green virtue, 2. Greenwashing, and 3. Control. In the green virtue condition, participants were presented with an article regarding their preferred brand, praising the company for their green initiatives. This included increased usage of recycled materials and decreasing the usage of hazardous chemicals in their production, as well as decreasing their water usage and bettering workers' conditions (Appendix 1). The greenwashing condition presented an article condemning the selected brand and their greenwashing behavior. Using the European Commission as a reputable third-party, the article underlined how the company provides unsatisfactory information to consumers (Appendix 2). Both the green virtue and the greenwashing condition presented an advertisement including the selected brand's logo, and general sustainability statements (Appendix 3). The control condition provided an article regarding the selected brand winning a design award for a creative marketing campaign, but provided no information regarding the brands' green behavior (Appendix 4).

After reading the provided article, participants were asked to indicate their opinions based on the provided information regarding the brand's environmental friendliness, honesty, attractiveness, their willingness to purchase from the brand, and willingness to recommend the brand to others. The assessments were ranked on a scale from 1 to 5 ranging from "Much worse after information" to "much better after information". The responses to these questions were coupled to indicate brand evaluation after receiving either information regarding green or greenwashing behavior, or no information regarding green behavior whatsoever (control).

Participants were further asked to indicate the price they would expect to pay for a t-shirt from the selected brand. This information was used to calculate consumers' willingness to pay when faced with either positive green information, greenwashing accusations, or no information regarding greenness.

To account for the effect of consumer self-greenness, participants were asked to indicate their greenness through a series of statements. There were 7 statements indicating consumer greenness, and 3 contradicting questions regarding non-greenness. Respondents indicated their level of greenness on a scale from 1 to 5 ranging from "strongly disagree" to "strongly agree". This was done to underline if the responses participants gave to the other sections of the study were in line with their wanted self-image, or if there is in fact a large difference between how consumers wish to be perceived and how they act. The non-green statements were reversed and included as an indicator of consumer greenness, combined with the 7 green statements.

3.2   Data collection

The survey was distributed through the authors own social media platforms in April 2021, as all forms of physical participation was strongly discouraged due to the pandemic. The link was left open to participants for a period of one week, and 163 people had participated and completed the survey by the end of this period. Participants were not made aware of the purpose of the study, but were told it would be looking at consumers' reactions to different brands and advertisements. They were also made aware that all data would be deleted by 1st of July 2021, and that all collected data would be anonymized. During the sharing of the survey, a prize incentive was used. After the data was collected, a prize winner was randomly picked amongst the participants.

The collected data was analyzed using the statistical program SPSS. The first step in the process was to clean the data and ensure all included results were complete. After cleaning, 161 complete responses remained. There was an equal distribution of responses for each condition, with over 50 respondents within each test condition, ensuring equal distribution and reliability.

3.3   Participants

There was a wide range of ages among the participants, with ages ranging from under 20 to over 70. The median age of participants was 41-50, with a mean age between 31-50. 72 percent of the participants were female, while 28 percent were male. As the aim of this research was to test the general population, no specific demographics or psychographic characteristics were considered when distributing

the survey. There was an equal distribution of participants amongst the three different test-conditions: green virtue, greenwashing and the control condition.

Table 1

Descriptive Statistics

Measure	Item	Frequency	Percentage
Gender	Male	45	28%
	Female	116	72%
	Total	161	100%
Age	under 20	8	5%
	21-30	39	24,2%
	31-40	10	6,2%
	41-50	39	24,2%
	51-60	49	30,4%
	61-70	10	6,2%
	over 70	6	3,7%
	Total	161	100%
Sample group	Greenwashing-condition	53	32,9%
	Green Virtue condition	56	34,8%
	Control condition	52	32,3%
	total	161	100

4   Results

4.1   Hypothesis 1

Fast fashion consumers are not strongly impacted by greenwashing

To analyze if consumers of fast fashion brands are actually impacted by greenwashing, an independent samples t-test was conducted to compare the two experimental conditions: greenwashing and green virtue. The test indicates that there is a significant difference (Sig = 0) between the means of each group, indicating that fast fashion to some extent are impacted by both greenwashing and green virtue information. Looking at the means of each condition, it is apparent that consumers faced with greenwashing information evaluate their preferred brand more negatively (n=53, M=2,29, SD=0,95), while consumers faced with green virtue information evaluate the brand more positively (n=56, M=3,78, SD=0,7).

Furthermore Cohen's d suggests that the effect size for the greenwashing condition is large (d=0,66), while the effect size for the green virtue is medium(d=0,50).

Table 1

Group Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Greenwashing	53	**2,2943**	0,95483	0,13116
GreenVirtue	56	**3,7893**	0,70471	0,09417

Independent Samples T-test					
		Levene's Test		t-test for Equality of Means	
		F	Sig	t	Std. Error
Greenwashing	Equal variances assumed	105,929	**0**	17,493	0,13116
GreenVirtue	Equal variances assumed	129,186	**0**	-40,239	0,09417

Independent Samples Effect Sizes		
Greenwashing	Cohen's d	0,66563
GreenVirtue	Cohen's d	0,50524

Furthermore, to test for the predictors of each condition, a regression analysis was conducted for each of the conditions. The predictors included were greenness, green_consumers, sustainability, Med_price and low_price, purchase_decision, as well as dummies for the two other conditions. Greenness refers to the level of greenness of the consumers, while green consumers include those with a significantly high greenness level. Sustainability refers to the importance consumers put on sustainability when making purchase decisions, while low and high price refers to the consumers who chose the greenwashing and brown product categories, and therefore indicate low levels of greenness. Purchase decision includes all the potential purchases the consumer made, and acts as an alternating measure of greenness. Brand fan refers to the most frequent shoppers of the selected brand.

Table 2 summarizes the regression analysis for the greenwashing condition. The model explains 81,4 percent of the variation of the condition, a satisfying amount for this type of analysis. The analysis is significant (Sig=0) at the 5 percent level. The dummy variables for the green virtue (Sig=0) and control condition (Sig=0) are of high significance, which is expected as the variables are identical. Looking at the other included predictors, there is primarily one variable that has a significant impact on the greenwashing condition within the 0,05 level. This is the green consumers predictor, which includes participants with a greenness score higher than 4 (out of 5). With an unstandardized beta of -0,074, the predictor has a slight

negative impact on the greenwashing condition. Furthermore, the three predictors medium price (sig.=0,052), low price (sig.=0,079) and purchase decision (sig.=0,109) all have a significant impact on the dependent variable as their t-values are higher than 1. All of these predictors have a negative impact on the greenwashing condition, with low price having the strongest impact (beta = -0,553). This indicates that the low price level, representing little to no greenness, is correlated with a low brand evaluation in the greenwashing condition. The medium price level, representing greenwashed clothing purchases, had a higher significance level of 0,052, and a small yet significantly negative impact on the dependent variable. This suggests that consumers in the greenwashing condition are not particularly negatively impacted by greenwashed clothing options, and therefore indicates that true brown products have a much more severe impact compared to greenwashing. The purchase decision predictor had a corresponding impact to greenwashed products, and only had a slight negative impact on the dependent variable. This means that the greener the clothing option a consumer chooses, the more negatively they evaluate a brand after receiving information regarding greenwashing. This corresponds with the impact of true green consumers, indicating that green behavior leads to a more negative brand evaluation. The findings of this regression analysis indicates that consumers faced with greenwashing information regarding their favorite fast fashion brand are only negatively impacted if they are green consumers, or if they purchase low-priced non-green clothing options. This is in support of hypothesis 1, indicating that consumers of fast fashion brands are not strongly impacted by greenwashing.

Table 2

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,903	**0,814**	0,804	0,53632

Predictors: (Constant), Purchase_decision, Med_price, Dummy_C, Brandfan, green_cons, Dummy_GV, Sustainability, Greenness, low_price

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1	191,124	9	21,236	73,827	**0**
	43,434	151	0,288		
	234,558	160			

Dependent Variable: Greenwashing

Predictors: (Constant), Purchase_decision, Med_price, Dummy_C, Brandfan, green_cons, Dummy_GV, Sustainability, Greenness, low_price

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std, Error	Beta	t	Sig.
(Constant)	3,388	0,53		6,391	0
Greenness	-0,061	0,103	-0,031	-0,596	0,552
Brandfan	-0,037	0,091	-0,015	-0,414	0,679
Sustainability	-0,01	0,069	-0,007	-0,148	0,883
green_cons	**-0,074**	0,036	-0,09	**-2,054**	**0,042**
low_price	**-0,553**	0,312	-0,198	**-1,771**	**0,079**
Med_price	**-0,341**	0,174	-0,141	**-1,956**	**0,052**
Purchase_decision	**-0,141**	0,087	-0,151	**-1,612**	**0,109**
Dummy_GV	-2,321	0,105	-0,916	-22,031	0
Dummy_C	-2,323	0,107	-0,9	-21,658	0
Dependent Variable: Greenwashing					

Furthermore, it is necessary to compare consumers' reaction to green virtue information to be able to compare what impacts their brand evaluation when provided with contradicting information regarding their preferred brand. Table 3 summarizes the regression model for the green virtue condition. The model predictors explain a total of 95,4 percent of the green virtue condition, meaning that the included predictors explain most of the dependent variable. The test is significant (sig.=0) at the 5 percent level. The dummy variables for the two other conditions, greenwashing (sig.=0) and control (sig.=0), are both significant predictors at the 0.05 level. This is however expected as these variables are measuring the same Likert-scale questions, and should therefore be somewhat identical. None of the other included predictors have a significance level lower than 0,05. There are however 3 predictors with a t-value higher than 1 that explain a significant amount of the dependent variable. These include sustainability (sig=0,071), brand fans (sig=0,132) and green consumers (0,248). the variable sustainability has an unstandardized beta of 0,097, meaning that the higher a consumer values sustainability, the more likely they are to positively evaluate a firm after receiving information regarding their positive green actions. Furthermore, brand fans had an unstandardized beta of 0,105. This indicates that brand fans are more likely to positively evaluate their preferred brand compared to consumer who do not purchase products as frequently. Finally, green consumers (with the highest greenness score) had an unstandardized beta of -0,032, meaning that true green consumers are less likely to positively evaluate their preferred fast fashion brand after reading information regarding the brand's positive green impact. This may be

explained by general skepticism towards the fast fashion industry, and the consideration of how green a fast fashion brand can actually be.

Table 3

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,977	**0,954**	0,951	0,41186

Predictors: (Constant), Dummy_C, Greenness, Med_price, Brandfan, Dummy_GW, Purchase_decision, green_cons, Sustainability, low_price

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	526,104	9	58,456	344,617	**0**
Residual	25,614	151	0,17		
Total	551,718	160			

Dependent Variable: GreenVirtue

Predictors: (Constant), Dummy_C, Greenness, Med_price, Brandfan_combined, Dummy_GW, Green_consumers, Sustainability, High_price

Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std, Error		t	Sig.
(Constant)	3,537	0,399		8,855	0
Greenness	0,016	0,079	0,005	0,198	0,843
Brandfan	**0,105**	0,07	0,028	**1,513**	**0,132**
Sustainability	**0,097**	0,053	0,046	**1,818**	**0,071**
green_cons	**-0,032**	0,028	-0,026	**-1,16**	**0,248**
low_price	-0,137	0,240	-0,032	-0,572	0,568
Med_price	-0,067	0,134	-0,018	-0,498	0,619
Purchase_decision	-0,019	0,067	-0,013	-0,287	0,774
Dummy_GW	-3,796	0,081	-0,964	-46,911	0
Dummy_C	-3,802	0,082	-0,96	-46,186	0

Dependent Variable: GreenVirtue

The findings of these models show that fast fashion consumers do not care significantly about greenwashing, and only true green behavior has an impact on negative brand evaluation. Furthermore, brand fans tend to evaluate their preferred brand more positively than non-fans. The findings are in support of H1, indicating that consumers of fast fashion brands are not strongly impacted by greenwashing.

4.2 Hypothesis 2

Greenwashing can have a positive impact on the greenness of the fast fashion industry

To measure the extent to which greenwashing can positively impact the fast fashion industry, the preference for each category of products were analyzed. The three available categories consumers could choose between were brown, greenwashing and true green, with two products available within each category. Each participant had to choose two products in total, within two different clothing product categories.

Table 4

Purchase decision				
	Frequency	Percent	Valid Percent	Cumulative Percent
Brown	40	24,8	24,8	24,8
Greenwashing	82	50,9	**50,9**	75,8
True Green	39	24,2	24,2	100
Total	161	100	100	

Looking at table 4, it is confirmed that fast fashion consumers indeed prefer greenwashed products (*n*=82), with an overwhelming majority selecting products within this category. The category with the least selected product was the green category (*n*=39), with less than one fourth of consumers choosing products within this category. This indicates that fast fashion consumers are not particularly interested in true green products.

Furthermore, consumers were asked how much they would be willing to pay for a t-shirt from their selected brand. The results, presented in table 5, show that when consumers are faced with green virtue information regarding their preferred brand, they are willing to pay a slightly higher price, compared to both greenwashing and the control condition. Consumers faced with greenwashing information were willing to pay the same amount as consumers in the control condition, who did not receive any information regarding the brands' greenness. This further supports H2, indicating that consumers are not discouraged by greenwashing information, and are willing to pay more when being informed that their preferred brand is acting green and sustainable, despite being a fast fashion brand.

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Table 5

Willingness to pay for t-shirt

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	Frequency	Percent	Sum in NOK
Green Virtue	56	33	306
Greenwashing	53	35	259
Control	52	32	259
Total	161	100	

To better understand the impact of greenwashing within the fast fashion market, a regression analysis was conducted. The analysis was conducted using the purchase decision consumers made (ranging from 1 to 6) as the dependent variable, and greenness of consumers, green_cons, quality, price, sustainability, materials, and brand_fans as predictors. The four predictors quality, price, sustainability and materials were collected after the product decision was made to indicate the importance of the characteristics when making a purchase decision. Greenness refers to the greenness score of each participant based on 10 questions covering green and brown personal characteristics and behaviors. Green_cons include participants with a greenness value higher than 4.0, indicating a particularly high greenness level.

The regression model predicts 57,4 percent of the variance when consumers make purchase decisions. The ANOVA analysis indicates that the test is significant (sig=0), with an F score of 29,4.

Looking at the predictors, the most significant ones are price (sig=0) and sustainability (sig=0). These characteristics are therefore the most important ones when consumers make purchase decisions, with price having a negative impact on the decision (beta=-0,392), while sustainability had a positive impact on the purchase decision (beta=0,509). This means that an increased price decreases the likeliness of consumers making a green purchase, while a high level of sustainability increases the likeliness of purchasing a green product.

Furthermore, the predictors quality (sig=0,018, beta=0,285) and materials (sig=0,032, beta=0,238) are significant predictors of purchase decision. Both of these characteristics are within the 5 percent significance level, and both have a positive impact on purchase decision. This means that the more a consumer values product quality and materials, the more likely they are to make green purchase decisions. Greenness (sig=0,031) of consumers is also a significant predictor of purchase decision, with a positive unstandardized beta (=0,354). This indicates that

a higher level of greenness increases the likeliness of a consumer purchasing a green product.

Table 6

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0,758	**0,574**	0,555	0,86648

Predictors: (Constant), green_cons, Quality, Brandfan, Price, Sustainability, Materials, Greenness

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	154,908	7	22,13	29,475	**0**
Residual	114,871	153	0,751		
Total	269,78	160			

Dependent Variable: Purchase_decision

Predictors: (Constant), green_cons, Quality, Brandfan, Price, Sustainability, Materials, Greenness

Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std, Error	Beta		
(Constant)	-0,193	0,673		-0,287	0,774
Greenness	**0,354**	0,163	0,168	**2,178**	**0,031**
Brandfan	0,021	0,143	0,008	0,146	0,884
Price	**-0,392**	0,084	-0,262	**-4,653**	**0**
Quality	**0,285**	0,119	0,149	**2,391**	**0,018**
Sustainability	**0,509**	0,107	0,347	**4,74**	**0**
Materials	**0,238**	0,11	0,15	**2,167**	**0,032**
green_cons	-0,01	0,058	-0,011	-0,171	0,865

Dependent Variable: Purchase_decision

The findings indicate that consumers are more likely to purchase green products when they value characteristics such as quality, good materials and the sustainability of the product. Consumer greenness further increases this likeliness. However, consumers of fast fashion tend to purchase products due to their affordable price level. The model indicates that consumers who highly value price are less likely to make green purchase decisions. It can therefore be assumed that consumers who to some extent value sustainability and price will choose to purchase greenwashed products as these offer both a reasonable level of sustainability and a reasonable price. Thus, one can conclude that greenwashed products can indeed have a positive impact on the fast fashion industry, as

consumers who wish to purchase products that satisfy their need for both sustainability and price, will purchase greenwashed products. In turn, this leads to a higher demand for "green" products, positively impacting the sustainability of the fast fashion industry as a whole, as consumers prioritize greenness when purchasing clothing.

5   Discussion

The aim of this research was to uncover the impact greenwashing has within the fast fashion market, and the extent to which consumers are impacted by such claims. Furthermore, by looking at consumers' reactions to greenwashing, the overall impact of greenwashing on the fast fashion industry is analyzed. The overall aim was to answer the following research question: *"to what extent does greenwashing impact consumers in the fast fashion industry?"*.

The findings of this research indicates that greenwashing has a significant impact on the fast fashion industry, both positively and negatively. Firstly, the results find support for hypothesis 1, confirming that consumers' of fast fashion are not significantly impacted by greenwashing. The results from hypothesis 1 more specifically show that when consumers are faced with greenwashing information, they evaluate a brand somewhat negatively. As responses were given on a scale of 1 to 5, 3 indicates no change in perception after reading the information. The results from the greenwashing condition provided a mean score of 2,3, meaning that consumers only consider the environmental friendliness, honesty, attractiveness, willingness to purchase and willingness to recommend the brand only slightly worse after the information was provided, compared to their general perception of the brand. This score does indicate that consumers are impacted by greenwashing, but the considerably high score, taking into consideration the gravity of the accusation the greenwashing condition provided, confirms that consumers of fast fashion brands are not drastically impacted by greenwashing accusation regarding their preferred brand. This finding is in contrast with previous studies conducted by De Jong et al. (2018) as well as Nyilasy et al. (2014), who found that providing greenwashing information regarding a brand had a drastically negative impact on purchase intention. It is also interesting to mention that there is more variance in responses when consumers are faced with greenwashing, compared to when they are faced with green virtue information, highlighting that greenness and environmental impact engages consumers in both positive and negative ways. Consumers' weak reaction to greenwashing is in accordance with the findings of

Joy et al. (2012), indicating that fast fashion consumers do not consider greenwashing as an interconnected aspect of fashion.

On the contrary, when faced with information regarding a brand's positive green actions, consumers evaluate the brand more positively. When looking further into what impacted brand evaluation within the two experimental conditions, a better understanding regarding the impact of greenwashing became apparent. Only consumers who considered themselves green were strongly impacted by the greenwashing information in a negative way. The purchase-decision variable confirmed this, showing that the greener the purchase decision they made, the more negatively they would evaluate the brand. Furthermore, consumers who chose brown clothing options were likely to evaluate the brand more negatively after reading about their greenwashing behavior, compared to consumers who purchased greenwashed products. These findings indicate that consumers who purchase greenwashed products care the least when faced with greenwashing information regarding their preferred fast fashion brand.

Furthermore, the findings of hypothesis 1 indicate that consumers who can be considered fans of the brand are more likely to evaluate the brand positively when faced with information regarding the brand's green virtue, compared to others who buy from the brand less frequently. It can therefore be assumed that the stronger the consumer-brand relationship, the more positively a brand will be evaluated when marketing its green products and initiatives.

On the contrary, green consumers evaluate brands more negatively than others when faced with information regarding the brand's positive green actions. This may be explained by green consumers' general skepticism regarding green claims (Gleim et al., 2013), as these brands are unsustainable in nature.

Furthermore, the results find support for hypothesis 2, indicating that greenwashing can have a positive impact on the fast fashion industry. Firstly, the results show that there is a huge preference for greenwashed products when consumers are faced with a purchase decision offering brown, greenwashing and green products. With more than 50 percent of participants choosing products within this category, it is clear that there is a strong demand for such products. By looking more closely at what impacts consumers' purchase decisions, it is apparent that the greenness of consumers have a large impact. This is however expected, as green consumers are more likely to purchase green products. Moreover, price and sustainability have the largest impact on consumers' purchase decision. The findings of H2 show that these

characteristics have a negative correlation through their opposite impact on the dependent variable, meaning that the more a consumer values price, the less they value sustainability, and vice versa. This finding verifies the considerable demand for greenwashed products from general consumers, due to the indicated importance of both price and sustainability when making product purchases. As the greenwashed products offer a combination of both of these characteristics, fast fashion brands are able to meet the demand for low-priced and sustainable products and increase awareness and purchase intention for greener products, while still reaching the fast fashion consumer segment.

The findings of this study indicate that consumers prioritize sustainability to a certain extent, and are willing to spend more money on seemingly greener products. Building on the findings of this study, it is evident that consumers are interested in greenwashed products when faced with a purchase decision. Furthermore, looking at the reactions from consumers when faced with greenwashing claims, the majority did not consider the claims to be particularly negative, and did not react in an extreme manner. This indicates that greenwashing is not a severe issue from a consumer perspective, when analyzing the clothing industry. It can therefore be concluded that greenwashing can to some extent positively impact the fast fashion industry.

6   Managerial implications

The research findings of this paper can have an important impact both on brands and consumers within the fast fashion industry. Firstly, the findings show that consumers are not severely impacted by greenwashing claims when it comes to brands they are familiar with and have purchased products from. This further means that when fashion brands are criticized for greenwashing, consumers' willingness to purchase products is not severely impacted. This is a positive finding for many fast fashion brands who on several occasions have received criticism for their vague and unspecific green investments, and goes to show that consumer loyalty is more important than a brand's green actions within this specific industry. Furthermore, the findings indicate that the majority of consumers are willing to spend more money on sustainable products. This is an important finding for the fashion industry as a whole, with the continuously increased focus on sustainability and greenness. In terms of clothing characteristics, this research reveals that consumers who consider sustainability to be the most important aspect when purchasing clothing, do not care significantly about the product price. It is therefore strategic for clothing

retailers to charge a higher price for true green clothing items, as true green consumers' willingness to purchase is not severely impacted by a high price level. On the contrary, consumers who consider price the most important characteristic when purchasing clothing, do not care particularly about the sustainability of the product. It is therefore still profitable for fast fashion brands to continue to offer brown clothing alternatives at a low price, as there is still a high demand for cheap clothing alternatives. The findings can therefore be used to better adapt the prices of green and non-green clothing alternatives, and strengthen their focus on greenwashed products to satisfy consumer demand for products that offer both sustainability and decent prices.

Finally, the research shows that consumers wish to be perceived as more green than what their purchase habits reveal. This opens up for a huge potential within the fast fashion industry, where prices are still moderately low, with the continuous introduction of new, greener clothing alternatives. Despite the uncertain level of greenness of such products, consumers indicate a great interest to be perceived as green, increasing their willingness to purchase low-priced green clothing alternatives.

7   Future research

The current research reveals the need to explore consumer behavior in relation to real brands, rather than fictional, as reactions differ significantly when a consumer-brand relationship exists. Despite the increasing amount of research conducted within the field of green marketing and greenwashing, little research focuses on the advertisements consumers are faced with on a daily basis, and to what extent green messages impacts their brand perception. Third-party accusations of greenwashing are becoming increasingly common, while consumers indicate a willingness to spend more on green products. However, greenwashing brands are continuously growing, indicating a clear discrepancy between claims and actions. Future research should look into the true impact of fast fashion brands' green messages on consumers and their shopping habits.

An important aspect of conducting research using questionnaires is the discrepancy between how consumers wish to be perceived, compared to the decision they make. Building on this, conducting a qualitative study with regards to why consumers wish to be perceived as green enables one to better understand the discrepancy between how consumers act compared to how they wish to be perceived,

specifically in terms of greenness and sustainability. Such research will as well build on the bias regarding consumers' wanted and revealed self-image.

Furthermore, there is a need to better understand the extent to which consumers recognize greenwashing in real advertisements. Many large corporations use vague language to promote green and sustainable actions, yet fail to provide proof of action. However, many consumers do not seem to care considerably about these forms of greenwashing, urging the need to explore if greenwashing is recognized by consumers, or if it is only understood in a fictional context.

Finally, the greenwashing literature needs to be expanded to include markets where consumers spend the most money, as these markets have the potential to positively impact green purchase intention. By looking more closely at the consumer goods market and the strong and well established brands within the different product categories, one can better understand how consumers consider greenness when shopping, and what actually impacts their purchase decisions. Expanding the literature in this direction can have a significant impact on marketing strategies for different brands, and help develop products that perfectly suit consumer needs.

8   Limitations

There are several limitations that may impact the reliability of this paper's findings. Firstly, the type of distribution used to gather responses for the survey may impact the responses collected. As the survey was distributed using social media channels, the people who chose to participate may have been familiar with the author and the area of study. However, looking at the large variance in age among participants, some external validity can be assured. Furthermore, the size of the sample (n=161) may not represent the society as a whole. However, as the sample group of this study did not have any specific restrictions or limitations, the findings are still valid for the intended purpose.

Conducting research using online questionnaires enables the researcher to reach a large number of potential participants with a fairly low budget, and gather results in a short amount of time. Disadvantages such as little attention given from each participant, and potential bias caused by choice of distribution channel are important to take into consideration when conducting research using online surveys. The honesty of participants is also difficult to ensure when one cannot see the participants and ensure sufficient attention is given to the different questions. However, the advantages outweigh the disadvantages, and the questionnaire was well adapted to be conducted online. Participants were expected to use no more than

5 minutes responding, decreasing the chances that participants would leave the survey without completing it. Furthermore, the survey did not require specific knowledge regarding the research area, and questions were worded in a way that made it easy for participants to respond. The provided information during the survey did not require participants to read a lengthy article, but was kept to paragraphs no longer than 150 words. This adaption was done to avoid any of the common pitfalls online questionnaires may lead to, and avoid potential limitations to the results.

Moreover, prior knowledge of the intention of the research could have led participants to answer in favor of the intended research. The aim of the research was not disclosed to anyone who received the survey, and information provided to participants indicated that the purpose was to better understand consumers' reactions to advertisements. It can therefore be assumed that prior knowledge did not have a significant impact on the findings of this research.

To ensure that all participants had some knowledge regarding the brands included in this study, only consumers who had bought products from at least one of the included brands were allowed to partake. This ensured that all participants had enough information regarding the market to be able to take part in the survey. Participants who indicated no knowledge of the included brands were immediately excluded from the survey.

When using real brands compared to fictional brands, there are a much larger number of potential external factors to take into consideration. Consumers' knowledge regarding the included brands will impact the way they evaluate the brand, and to what extent they are impacted by the brand's actions. The selected brands are some of the most well-known brands in Europe, ensuring that participants had some awareness of the included brands. Furthermore, participants' shopping habits with the brand were recorded to be able to account for the strength of the consumer-brand relationship. There are however external factors regarding each brand that may have impacted how participants responded to the questions, which in turn may have impacted the results.

The language used in the online questionnaire could to some extent have impacted how participants responded to the different questions. The information was formulated in a way that did not require a substantial level of knowledge regarding greenwashing, and clearly explained the negative aspects in question. A well-known and established third-party was used as reference, specifically the European

Commission. As all potential participants have or are residing in Europe, it is expected that this is a recognizable and trusted third party, and should re-ensure participants regarding the claims made. Furthermore, the green virtue condition used many different aspects of green actions to ensure participants would understand the impact these actions would have. It is therefore considered that the formulation should not have impacted participants' perceptions when responding to the questionnaire. The language used in the questions was not leading, and was based on a Likert scale of either 5 or 7-points, as this is one of the most commonly used forms of measurements when looking at attitudes (Peer et al., 2012). By providing participants with a 'neutral' middle-point, one can ensure that participants are offered a sufficient range of options. The wording of the questions, as well as the range of options, should therefore not have had any significant impact on the results of the study, but ensure some validity due to the method used.

Finally, the number of participants who considered themselves green was a substantially small group compared to the test group as a whole. As the aim of this research was to test the opinions of the general population, such a result is desired. However, due to the data analysis comparing green and non-green participants, it is important to note that the difference in size of these groups could have some impact on the results. This should however not diminish the findings, although a larger sample size may reveal a more or less extreme result.

9   Conclusion

The current research has explored the impact of greenwashing on consumers' perceptions of real brands within the fast fashion industry. Building on the findings of De Jong et al. (2018) De Jong et al. (2020) and Nyilasy (2014), the research provides a new perspective on how consumers react when faced with greenwashing claims, as said claims regards their preferred fast fashion brand. The findings contradict previous research in that consumers are not strongly impacted by greenwashing claims, and purchase intention does not diminish despite consumers regard for greenness. Furthermore, the current research finds that most consumers prefer greenwashed products compared to both brown and green alternatives. Those who prefer cheap alternatives do not consider sustainability to be of great importance, while those who choose green clothing options do not consider price to be of great importance. This indicates that greenwashing is positively impacting the fashion market as it is meeting consumer demand for both sustainability and price, despite previous findings indicating that consumers do not wish to support

greenwashing brands (Nyilasy et al., 2014; TerraChoice, 2010; De Jong et al., 2020; De Jong et al., 2018; Chen et al., 2014; Delmas & Burbano, 2011). The findings of this paper contribute to a better understanding of consumer behavior in regards to greenwashing claims and green products, and provides valuable insight that may be useful to both fast fashion brands and marketeers.

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11 Appendices

11.1 Appendix 1: Green virtue experimental condition

Zara goes green with new eco-friendly collection

Fashion brand Zara is going full speed ahead in leading the pack with their sustainable practices. Through the launch of their new Sustainable Collection, Zara has committed to improve their impact on the environment through four guiding principles: Materials, People, Environment and Process. Their goal is to use 100% recycled materials by 2030. Furthermore, Zara is working on reducing their usage of hazardous chemicals discharged during manufacturing, and ensuring fair treatment of all workers in their supply chain.

11.2 Appendix 2: Greenwashing experimental condition

H&M called out for "greenwashing" in its sustainable collection

H&M has been criticized for misleading marketing of its Sustainable collection. The European Commission (EC), responsible for ensuring consumers in Europe are not subject to false or deceptive environmental claims, said that the clothing retailer provides insufficient information about the sustainable nature of its new eco-friendly collection. EC directors have warned consumers that they might be misled by "greenwashing" statements features in H&M's marketing strategies. Furthermore, the collection makes up only 1% of the brands whole collection, with 1,018,995,911 units being produced this year alone. Despite their efforts to introduce preliminary steps towards sustainability, their business model is still truly unsustainable.

11.3   Appendix 3: Advertising for green virtue and greenwahsing condition

Introducing
Sustainable collection

LOGO

Made with recycled cotton + less water

11.4   Appendix 4: Control condition

Levi's wins award for creative marketing campaign

Winners of the Design & Art Direction award
Levi's expressed gratitude towards the members of the jury for honoring their work for 2020. Marketing executive Jan Michael accepted the award on the brands behalf. "We are grateful for the recognition and will strive to continuously produce creative and innovative advertisements that engage with our customers" Jan told the jury in his acceptance speech. The D&AD awards is one of the most well renowned international advertising awards.