ERASMUS UNIVERSITY ROTTERDAM

Master thesis Business and Economics in Marketing
Erasmus School of Economics

The impact of perceived greenwashing in the fashion industry

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12-08-2022
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Acknowledgements

During the process of writing my thesis, I have received some great support of several people.

First, many thanks to my supervisor Ana Scekic. Thank you for giving me your clear feedback and guidance. You were always willing to meet when I encountered challenges and you have always provided valuable answers to my questions. I could not imagine a better supervisor.

In addition, I would like to thank my classmates Anouk Gaastra and Matthijs Harthoorn. We helped each other when we got stuck and kept each other motivated when times were tough.

Lastly, many thanks to my family and especially my father who also kept me motivated and cheered me up when it was a bit harder sometimes. Thank you for always believing in me.

Abstract

This study focuses on the effect of perceived greenwashing in the fashion industry. Today, more and more people are becoming aware of the impact of their purchasing behaviour on the environment. The fashion industry in particular has a major negative contribution to our environment.
There is no knowledge about the effect of perceived greenwashing in the fashion industry on purchase intention and green word of mouth. In addition to that it is not known whether environmental concerns reinforce this effect and whether brand trust explains the effect of perceived greenwashing on purchase intention. The aim of this research is to fill these gaps in knowledge. The following research question has been formulated:

"What is the effect of perceived greenwashing and having environmental concerns on purchase intention and green word-of-mouth in the fashion industry?"

Based on various literature five hypotheses were tested. During this study, an online experiment was carried out. During this experiment 160 respondents were divided into two groups, one of which observed greenwashing of a clothing brand and the other did not. Based on this, questions were asked about their purchase intention and green word of mouth.

The results of this study show that perceived greenwashing in the clothing industry has a negative effect on purchase intention and that people spread negative green word of mouth. When people have environmental concerns, they will spread even more negative green word of mouth. Lastly, the effect of perceived greenwashing on purchase intention is explained by brand trust.

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1. Introduction

Already in 2001, the concerns about the environment were increasing which resulted in a marketplace which was getting more conscious (Laroche et al., 2001). Over the years, consumers are becoming more aware of the detrimental effects of their purchase decisions on the environment. As a result, consumers have been purchasing more ecologically compatible products (Laroche et al., 2001). Also, people are more prepared to spend extra for ecologically friendly items than for those that are not. (Laroche et al., 2001). Consumers who are environmentally conscious are more likely to purchase green products (Mishal et al., 2017a). To satisfy the requirements of consumers, companies are offering green products and use green marketing to promote these products (Wu & Chen, 2014). By using green marketing companies claim that the whole lifecycle of a product only will have a small impact on the environment (Wu & Chen, 2014). Using green marketing is an essential strategy to compete on the market today (Wu & Chen, 2014).

Because of the increase of green marketing people are getting more sceptical about all the environmental claims made by companies (Nyilasy et al., 2013). Today, several fashion brands advertise with misleading environmental claims (Butler, 2022). This can be defined as greenwashing. This term is introduced by Jay Westerveld in 1986 (Motavalli, 2011). The effect of green advertising is depending on the level of corporate environmental performance (Nyilasy et al., 2013). When a company is claiming to comply to ethical standards and they make an ethical mistake, the attitudes of consumers will decrease further compared to a company which is not claiming to follow ethical standards (Nyilasy et al., 2013). A ''perceived greenwashing effect'' results when consumers become sceptical when there are contradictions between talk and action by companies (Nyilasy et al., 2013). These customers could begin to form negative opinions about the company's intentions, attributing them of ulterior motives (Nyilasy et al., 2013). Although the society discourages greenwashing activities, there is still a lot of greenwashing present in the retail market (Chen et al., 2013). The many false green claims on the market create an obstacle for further development of green marketing (Chen et al., 2013).

Research proves that the fashion industry is responsible for a global carbon emission part between 2% and 8% (Butler, 2022). As the demand for green products grows among consumers, more companies want to be seen as green regardless of whether it is true. Fashion brands claim to be green without qualifying how (Horton, 2022). According to Cecilia Parker Aranha, who is the director of consumer protection of Competition and Markets Authority, more people are becoming conscious of how bad

the fashion industry is for the environment. According to her, the fashion industry should take another look to their messages which they tell their customers and change these if this necessary in order to comply with the law (Butler, 2022). A quarter of the world's carbon budget may be accounted for by the global fashion industry by 2050 (Butler, 2022).

1.1 Problem statement and research question

Today, it is unknown what the effects of perceived greenwashing in the fashion industry will be on purchase intention and green word-of-mouth. Currently, there is no knowledge about these effects and if these will be different if people do or do not have environmental concerns. For these reasons the following research question has been formulated:

"What is the effect of perceived greenwashing and having environmental concerns on purchase intention and green word-of-mouth in the fashion industry?"

Today greenwashing is a common topic and especially in the fashion industry greenwashing is very common. Many news articles show that fashion brands are guilty of greenwashing. These articles reveal the huge negative impact of these fashion brands having on the environment. For instance, the Daily Mail posted an article about the allegations of greenwashing at very well-known fashion brands like H&M, Primark, and ZARA (Morrison, 2021). When H&M had launched their "Conscious Collection", they said that these clothes were made from more sustainable fabrics such as organic cotton and recycled polyester. It turned out that the clothes of their "Conscious Collection" ultimately contained even more out of damaging synthetic materials compared to the clothes of their regular main line (Morrison, 2021). This while H&M have made many claims towards their customers that their "Conscious Collection" was sustainable (Morrison, 2021). In addition, also another very well-known fashion brand like ZARA keeps giving public statements of commitment to sustainability (*ZARA: Stop Fast Fashion and Greenwashing, NOW!*, 2021). This despite the fashion brand creates a mass production of clothes which are made of damaging synthetic fabrics. Their mass production creates a lot of CO2 in the atmosphere as well and they create massive landfills (*ZARA: Stop Fast Fashion and Greenwashing, NOW!*, 2021). Also, well known climate activists like Greta Thunberg speaks out about this and says that ethical fast fashion is nothing more than pure greenwashing (Elan, 2021).

There is a lot of talk about greenwashing today which makes it a very actual and relevant topic. Today, there are a lot of online websites that expose fashion brands who are guilty of greenwashing. Online websites such as The Big Issue, Eco-business, and Eco Watch are reporting frequently about greenwash within the fashion industry. In addition to that, online newspapers such as The Guardian have been publishing several articles which were about greenwashing in general and fashion brands

which are guilty of greenwashing. In this way people can easily uncover fashion brands which are guilty of greenwashing and then spread negative green word-of-mouth about them.

The research question will reveal the effect of perceived greenwashing in the fashion industry on purchase intention and green word-of-mouth with the moderated effect of environmental concerns. This will make it possible to verify the specific effects and whether the effects will differ if people have environmental concerns or not. In addition, the explanatory role of brand trust will be investigated.

1.2 Academic relevance

The importance and relevance of this study is based on several reasons. If we look first at the academic relevance the first reason is based on the fact that not that many studies are done about the effect of greenwashing on consumer behaviour. About specific the effect on purchase intention or green word-of-mouth there is not that many literature to be found. The outcome of the studies that are done showed the negative impact on purchase intention caused by greenwashing (Akturan, 2018). Another study learned that once consumers found out that companies were involved with greenwashing, these consumers were likely to warn other people about this (Zhang et al., 2018). However, these studies were not specifically about the fashion industry. This is the second reason why this study is relevant for academic reasons. The studies that are been done did not look into a specific industry or looked at the retail industry where experiments were carried out on, for example, batteries or refrigerators. Sustainability is becoming increasingly important among consumers in the fashion industry, but it is still difficult for a group of them to act accordingly (Pereira et al., 2021). Partly due to a lack of knowledge and information, consumers find it difficult to apply the sustainable approach to their consumer behaviour in the fashion industry (Pereira et al., 2021). It could be that when consumers see that a fashion brand is guilty of greenwashing, it is easier for them to act according to their intention to be sustainable. They then receive the information that a fashion brand is not honest about their sustainable practices, which may make it easier for them to choose not to buy their clothes here or to spread negative green word-of-mouth. However, this effect is unknown. The fashion industry is one of the largest industries there is, but also one of the most polluting. It would be interesting to know what people's reaction will be when they see greenwashing in it while they really need clothes. Will their reaction then still be the same as for example in the retail industry or will it have a less negative impact, and will people keep buying their clothes simply because they need them.

Third, no studies have been done so far about the effects of greenwashing on purchase intention and green word-of-mouth when people have environmental concerns and if so, if these will differ from people who do not have environmental concerns. At last, all these studies did not look at the potential explaining role of brand trust.

In conclusion there is already research done about the effect of greenwashing, however these studies did not fully focus on the fashion industry and did not look at the potentially moderating role of environmental concerns and mediating role of brand trust. So, for the fashion industry there is a lack of data about this subject. With this research, the purpose is to fill in this gap and deliver new academic information.

1.3 Managerial relevance

If we look at managerial relevance you can think about other reasons why this study will be relevant. For most people clothing is one of the necessities of life, so consumption in the fashion industry is high even though the negative impact on the environment which is cause by the same fashion industry. This study will reveal if greenwashing will have any effect on the consumption of clothing. It could be interesting to see what the impact will be on consumers and whether they react the same and care the same when it comes to clothes when greenwashing is perceived in this industry. If the results show that the effect will be the same as in the retail market, fashion brands will know that they cannot continue like that and that they should adjust their way they work otherwise this will affect their profitability. However, when this study reveals that people do not really care, and they are not going to change their purchase intention and will not spread negative green word-of-mouth than this will be a different issue. In that case governments should step in and take care in order to stop the greenwashing activities made by the fashion industry. This study is important for marketing managers as they are responsible for marketing and therefore make decisions on how to promote themselves in a sustainable and green way. If they promote themselves as sustainable or perhaps, they want to do so while knowing that they are not that sustainable, the results of this study will be very valuable for them. If the results will show that greenwashing will have a negative effect on the company, this will most likely discourage them from promoting the company being sustainable or they may want to improve the way the company operates. In this way, the clothing companies will be more honest with the consumers.

2. Literature study and conceptual model

In this chapter relevant literature background will be discussed. It will start with explaining the independent variable, dependent variables and the moderator and mediator variables. After that, several hypotheses will be established based on multiple studies. Finally, to give a clear view, the conceptual model will be outlined.

2.1 Literature background

An introduction about the relevant concepts of this study can be seen in this paragraph. In this way, their meaning and relevance can be explained.

Perceived Greenwashing

Greenwashing is the practice of a corporation misleading its customers about its environmental policies as a whole or the environmental advantages of its products (firm-level greenwashing or product-level greenwashing) (Delmas & Burbano, 2011). A company positively communicates about their own environmental performance but does poor environmental performance (Delmas & Burbano, 2011). TerraChocie has come up with seven sins a company can make regarding to false advertisements about green products (Dixon, 2020). These are: "Sin of the hidden trade-off, Sin of no proof, Sin of vagueness, Sin of worshipping, Sin of irrelevance, Sin of the lesser of two evils and Sin of fibbing" (Dixon, 2020). Because greenwashing is getting more advanced over the years, these kinds of frameworks are developed so that greenwashing in practice can be identified (Dixon, 2020).
What already has been mentioned is that a ''perceived greenwashing effect'' arises when consumers become sceptical when there are contradictions between talk and action by companies (Nyilasy et al., 2013). So, you can say that at this point people are becoming aware that a company does positive communication about their environmental performances, but they also know that their environmental performances are poor. Perceived greenwashing has overall a negative effect on the bottom line of a company and damages all the companies on the long term (Nyilasy et al., 2013).

Purchase intention

Purchase intention is about the preferences of someone willing to buy a product or service (Younus et al., 2015). Researchers have indicated six steps prior to make before making a purchase decision (Armstrong et al., 2014). It all begins once a person becomes aware about missing a product. They will start searching for information in order to gain knowledge. Then they will develop a certain interest in a particular product and they will create a preference. After this they will experience persuasion in order to take the final step of purchasing (Armstrong et al., 2014). During another study the purpose was to investigate the effect of multiple variables on purchase intention (Younus et al., 2015). Many

factors can affect someone's buying intentions of a product (Younus et al., 2015). Perceived value, customer knowledge about the product, packaging and celebrity endorsement all affect the purchasing intention (Younus et al., 2015). For instance, knowledge plays an integral role during the process of purchase decision (Younus et al., 2015). The reason why celebrity endorsement influences the purchase intention is because of the worthiness and reliability in the consumers mind once they have seen that a celebrity has been linked with a product (Younus et al., 2015). Consumers rely on the packaging of a product. So, the product packaging has got an effect on conscious customers and therefore on purchase intention (Younus et al., 2015). Purchase intention, according to Ghosh (1994), is a useful instrument for predicting the buying process.

Green word-of-mouth

How customers feel about a brand and what they are prepared to tell others could have a huge influence on the revenues and profits of a brand (*How Valuable Is Word of Mouth?*, 2014). Word of mouth means: "given or done by people talking about something or telling people about something" (Cambridge Dictionary, 2022). Word-of-mouth is the main reason for 20 percent to 50 percent of all purchasing choices (Bughin et al., 2018). When people will buy a product for the first time, word-of-mouth has the greatest influence (Bughin et al., 2018). Because of the digital revolution the impact of word-of-mouth is even getting bigger. By online reviews many opinions are spread through social networks (Bughin et al., 2018). Consumers spread powerful environmental messages through word-of-mouth, and because of this, businesses may be forced to change their marketing tactics. (Chen et al., 2013a). For companies the strong power of word-of-mouth could also be the reason why they would undertake greenwashing. They want consumers to think that they are environmentally friendly, and because of that theymay boost favorable positive word-of-mouth (Parguel et al., 2011).

Due to the environmental trend nowadays, green word-of-mouth is important (Chen et al., 2013a). Green word-of-mouth is defined as: ''the extent of to which a customer would infer friends, relatives and colleagues about positive environmental messages of a product or brand'' (Söderlund, 1998). Sometimes, companies exaggerate the environmental functionality of their products to create green word-of-mouth, however customers then do not believe them anymore (Kalafatis et al., 1999).

Environmental concerns

Various studies give different definitions of environmental concerns. Environmental concern, according to Lee (2008), is the degree of emotional commitment in environmental problems. It is about the affective response of individuals towards environmental protection. It could emotionally express a person's worries, preferences, and objections to the environment (Lee, 2008; Yeung, 2004). According to this study, which is about identifying the most important factors that are

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affecting the adolescent consumers of Hong Kong their green purchasing behaviour, environmental concern is the second best indicator of making green purchases. (Lee, 2008). Based on that you could say that once people have environmental concerns, these concerns will have a major impact on their purchase behaviour when they wish to have only green products only. According to Yeung (2004) environmental concerns are cognitively based on a person's individual knowledge and thoughts about how natural processes work alongside human actions and the related impacts on the environment. Another study is about the various types of environmental concerns that a person develops. According to this study these environmental concerns are based on the perception of how they fit within the natural environment (Torkar & Bogner, 2019). Environmental concerns are about the awareness of an individual about environmental problems and this individual's willingness to tackle these problems. People who have strong environmental concerns are more likely to practice environmentally friendly behaviour and to have a strong sense of environmental responsibility (Zhang et al., 2018). For this reason, you could say that those people who have environmental concerns will react on events that are not environmentally friendly.

Brand trust

Trust referred to as the readiness to rely on a party based on assumptions about that party's traits and actions in the face of risk (Jevons & Gabbott, 2000). The definition of brand trust is similar only this is based on opinions of the brand regardless any danger or uncertainty related to that brand (Becerra & Korgaonkar, 2011; Chaudhuri & Holbrook, 2001, 2002). Brand trust consist of cognitive beliefs and affective perceptions about a brand (Delgado-Ballester et al., 2003; Elliott & Yannopoulou, 2007). The attitudes of consumers, brand related actions like purchases, attitudinal and behavioral loyalty, brand commitment, perceptions of brand value and brand referrals are influenced by brand trust (Chaudhuri & Holbrook, 2001, 2002; Delgado-Ballester et al., 2003; Elliott & Yannopoulou, 2007). Additionally, customers are more willing to recommend a brand when they believe in it and it meets their expectations (*The One Number You Need to Grow*, 2015). A positive interaction with a person or business tends to encourage the growth of trust for that individual or business (Hur et al., 2014). As a result, one of the best ways for a company to earn its customers' trust is by providing them with satisfying experiences (Hur et al., 2014).

A trustworthy brand holds on to its pledge to their customers through the manner the item is designed, made, distributed, supported, and marketed (Delgado-Ballester & Luis Munuera-Alemán, 2005). When consumers feel a brand is trustworthy, competent, honest, and accountable, they develop brand trust (Delgado-Ballester & Luis Munuera-Alemán, 2005). Once customers have developed trust in a brand, they feel less confused in situations where they feel vulnerable because the customers can depend on the trusted brand (Chaudhuri & Holbrook, 2001). When a company that

was thought to be trustworthy shows behaviour in a way that do not correspondent with the expected behaviour people will lose trust (Schweitzer et al., 2004). When this similar behaviour goes along with misleading, it will get less likely that trust will recover. This means for instance that when a company makes a marketing claim and people believe that this a misleading and deceptive claim that trust will get damaged (Darke et al., 2009).

2.2 Hypotheses

The hypotheses will be formulated based on previous described literature background and several studies that have been done. In total, five hypotheses are proposed.

The first main effect which is going to be investigated is what effect perceived greenwashing in the fashion industry will have on purchase intention. A study that has been done is about the view of the role of greenwashing, attitudes, and beliefs in consumers' choices to buy green items in the retail (Braga Junior et al., 2019). This study revealed that a product will lose the aspects of loyalty, benefits and satisfaction. The product will cause confusion at consumers once greenwashing is perceived (Braga Junior et al., 2019). Consumers will call this product "a make-up product" or "greenwashing product". The sales volume will be lowered.

Additionally, another research looked at the connections between greenwashing, green brand equity, green brand associations, brand trust and purchase intention (Akturan, 2018). The findings of this research showed that brand credibility and brand associations favorably affects green brand equity and this strongly impacts the purchase intention of consumers in a positive way within the retail market (Akturan, 2018). Additionally, greenwashing has a negative impact on brand credibility and associations with green brands, which indirectly impacts green brand equity and purchase intention (Akturan, 2018).

Another study's objective was to comprehend consumers' purchasing intents toward goods that made claims about their naturalness in their packaging and advertising (Kahraman & Kazançoğlu, 2019). According to the study's findings, greenwashing by businesses will have a detrimental impact on consumer perceptions of the environment, perceived risk, scepticism, and purchasing intention (Kahraman & Kazançoğlu, 2019). People avoid buying because they perceive it to be risky when they sense mistrust and scepticism toward the claims made by the companies in the advertising and products (Kahraman & Kazançoğlu, 2019). This study shows that the perception of risk lowers the desire to purchase. Based on these studies you could say that greenwashing has a negative effect on purchase intention and that is why the following hypotheses is drawn up:

H1a Perceived greenwashing in the fashion industry has a negative effect on purchase intention.

Furthermore, the possible moderating influence of environmental concerns will be studied. Based on the study that has been done about green purchase intention another hypothesis has been formulated. The goal of the study was to identify the elements that influence customers' purchasing intentions for green products and influence their decision to choose green items over others (Naalchi Kashi, 2019). What came out as a result is that environmental beliefs affect environmental concerns which changes people's perceptions about using green items, and which also leads to an increase of demand for green products (Naalchi Kashi, 2019). When people who have those environmental beliefs discover that a company is guilty of greenwashing, they could think that this company does not sell green products which could lead to a lower purchase intention.

Another study that has been done about consumers' green purchase behaviour using price and quality as contributors to the formation of purchase intention, came with other interesting results. Consumers have a stronger preference for companies that consider it more important to reduce pollution than those that prefer to increase their profitability (D'Souza et al., 2007).

A study that combined the mediating effect of green word-of-mouth (WOM) and the moderating impact of green concern evaluated if and how customers' views of greenwashing influence their intentions to make green purchases (Zhang et al., 2018). An online survey was distributed to 553 battery users in China as part of this study. The perception of greenwashing has a moderating effect on consumers' aspirations to make green purchases in China. The perception of greenwashing will have a greater negative impact on green purchase intentions once customers are more environmentally concerned (Zhang et al., 2018). According to this study, this is caused by the fact that customers who are more concerned about the environment are more conscious of the true environmental impact of products. They are more able to see the difference between real greening and symbolic greening and so they are more likely to buy genuine green goods. Additionally, consumers' own opinions of their environmental duty are reflected in their green concern, which motivates them to act ethically by minimizing their business with companies which are guilty of greenwashing (Zhang et al., 2018). Thus, the more concerned a buyer is about the environment, the more determined their intentions will be. Based on the results of mentioned studies you could say that perceiving greenwashing in the fashion industry has a negative effect on purchase intention, which will even be strengthened once someone already have their own environmental concerns. Based on these studies the second hypothesis has been formulated:

H1b The effect of perceived greenwashing in the fashion industry on purchase intention is moderated by environmental concerns, such that the effect is stronger when people have environmental concerns.

As third, the explaining role of brand trust, in the relationship of perceived greenwashing in the fashion industry on purchase intention, will be investigated. This will be a mediator effect. Other variables such as brand image and brand loyalty could have an explaining role between perceived greenwashing and purchase intention (Chen et al., 2018). However, these variables already have a significant effect on each other which makes it unnecessary and irrelevant to include these variables in this study (Kwan Soo Shin et al., 2019; Asadollahi & Hanzaee, 2011). This is why not a full mediation is expected, and the moderation and mediation effect will be investigated separately. This research will only focus on the mediating effect of brand trust. Research that attempted to define different types of corporate misbehaviour, which affects trust, came with the result that companies bending the law or not telling the truth can be seen as the most important condition in damaging trust (Davies & Olmedo-Cifuentes, 2016). This study describes trust being an important factor for creating a relationship between an individual and organisation. A corporation might lose a large intangible asset if its trust is damaged (Davies & Olmedo-Cifuentes, 2016). When a company is guilty of greenwashing, the company is most probably guilty of not telling the truth about the way they operate. Because of that you could say that greenwashing could damage brand trust.

Greenwashing might reduce the beneficial effects of green marketing on consumer brand trust according to a study which investigated the influence of green marketing on brand trust whereby they looked at the mediating role of brand image and the moderating role of greenwashing (Wu & Liu, 2022). Due to the continuing exposure of "greenwash," consumers may be skeptical of companies that have made green claims in the market since they are unable to determine the veracity of these claims (Wu & Liu, 2022).

In addition, another study which aimed to investigate the impact of brand trust, perceived value on brand preference and purchase intention showed that brand trust positively impacts the purchase intention (DAM, 2020). According to that you could say that once brand trust has been damaged this also could have a negative impact on purchase intention. Lastly, according to Cuong (2020) which investigated the connection between brand satisfaction and purchase intention with the mediating role of brand trust, brand trust has got a beneficial effect on purchase intention. Based on these studies you could say that brand trust explains the negative impact perceived greenwashing in the fashion industry has on purchase intention. The third hypothesis has been formulated:

H1c The effect of perceived greenwashing in the fashion industry on purchase intention is mediated by brand trust, such that when greenwashing is perceived brand trust is reduced which leads to a negative effect on purchase intention.

Furthermore, a second main effect will be tested. This main effect is about if perceived greenwashing in the fashion industry has an impact on green word-of-mouth. A study that has been done about the causes and consequences of green skepticism showed that green skepticism leads consumers to seek out for information about products and that they spark negative word-of-mouth to others (Leonidou & Skarmeas, 2015). Green skepticism is defined as the tendency of customers to have doubts about the environmental performance or benefits of a green product (Leonidou & Skarmeas, 2015). This study reveals that once consumers have the believes that a firm is guilty of greenwashing, they are likely to warn other people about the false product information by telling their doubts (Leonidou & Skarmeas, 2015). Negative word-of-mouth can be seen as a by-product of skepticism (Leonidou & Skarmeas, 2015).

A study about the influence of greenwashing on green word-of-mouth reveals that greenwashing negatively affects green word of mouth (Chen et al., 2013). When a firm is guilty of greenwashing the consumers who are the victims will tell others about this misconduct and warn them. During this study green satisfaction and green perceived quality acted as two mediators who explained the negative relationship between greenwashing and green word-of-mouth. This research advices firms to reduce their greenwashing activities to increase the green word-of-mouth of their customers (Chen et al., 2013). Companies should improve their green perceived quality and green satisfaction to increase the green word-of-mouth of their customers (Chen et al., 2013). Based on these studies the fourth hypothesis is about that when people will perceive greenwashing in the fashion industry that this will have a negative effect on their green word-of-mouth. People will then spread negative green word-of-mouth. The following hypothesis is formulated:

H2a Perceived greenwashing in the fashion industry has an effect on negative green word-of-mouth such that when greenwashing is perceived customers will spread more negative green word-of-mouth.

The possible moderating influence of environmental concerns on green word-of-mouth will be studied. A study about the impact of consumers' perceptions of retailers' ethics on buying decisions and word-of-mouth has showed that 'consumer perceptions of the ethics of retailers' has a positive prediction on word-of-mouth communication (Cheung & To, 2020). Ethical beliefs moderated this effect (Cheung & To, 2020). Another study that has been done regarding the role of social media and

personality attributes in spreading word-of-mouth about sustainable fashion came out with interesting results. It showed that having environmental concerns and having an eco-friendly behaviour for fashion production both are important factors that influence the spread of word-of-mouth (Salem & Alanadoly, 2020). Based on these studies you could say that people who have environmental concerns will use their green word-of-mouth when greenwashing is perceived. Therefore, the last hypothesis has been formulated:

H2b The effect of perceived greenwashing in the fashion industry on green word-of-mouth is moderated by environmental concerns, such that the effect is stronger when people have environmental concerns.

2.3 Conceptual models
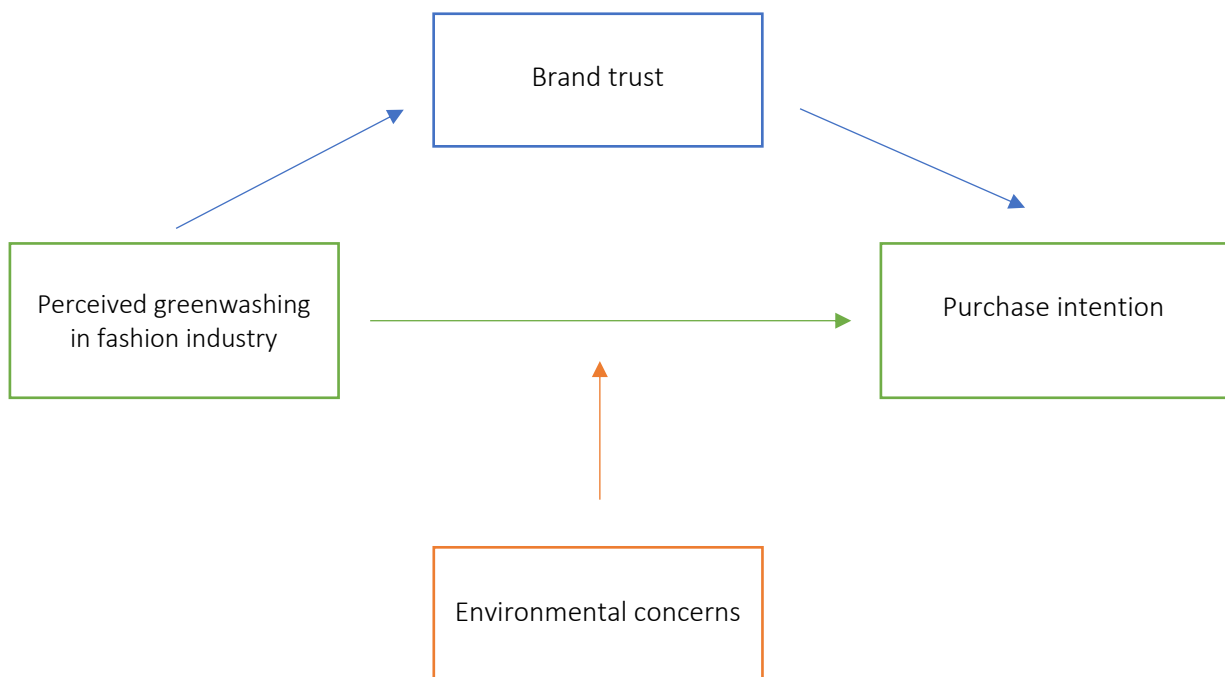
Figure 1: Conceptual model 1 Purchase intention

H1a Perceived greenwashing in the fashion industry has a negative effect on purchase intention.

H1b The effect of perceived greenwashing in the fashion industry on purchase intention is moderated by environmental concerns, such that the effect is stronger when people have environmental concerns.

H1c The effect of perceived greenwashing in the fashion industry on purchase intention is mediated by brand trust, such that when greenwashing is perceived brand trust is reduced which leads to a negative effect on purchase intention.
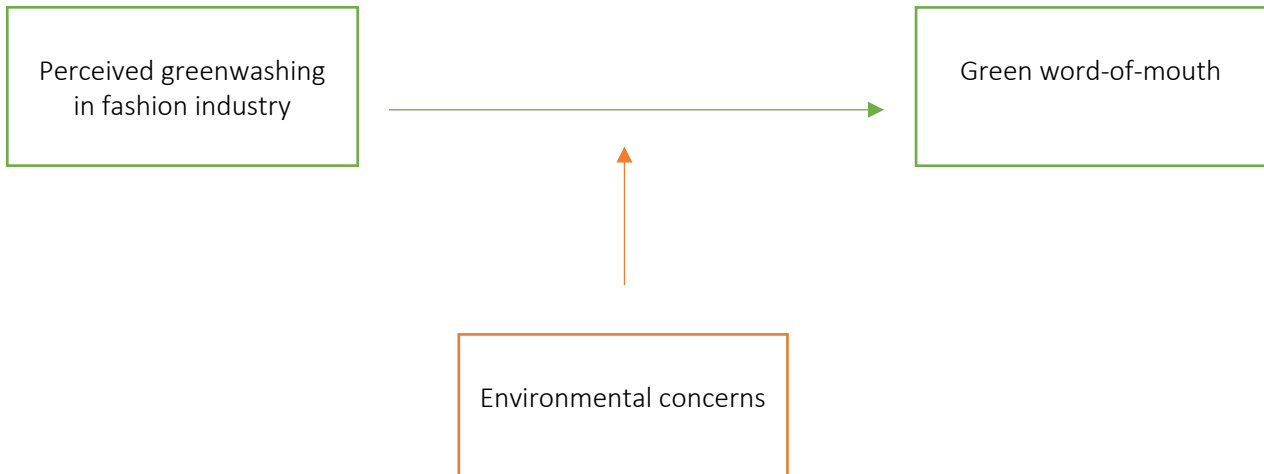
Figure 2: Conceptual model 2 Green word-of-mouth

H2a Perceived greenwashing in the fashion industry has an effect on negative green word-of-mouth such that when greenwashing is perceived customers will spread more negative green word-of-mouth.

H2b The effect of perceived greenwashing in the fashion industry on green word-of-mouth is moderated by environmental concerns, such that the effect is stronger when people have environmental concerns.

Two models are created by these formulated hypotheses. The first model is about the main effect of perceived greenwashing on purchase intention. This effect will be moderated by environmental concerns, such as the effect will be stronger when someone has environmental concerns. Thereby, the main effect will be explained by brand trust. When greenwashing is perceived in the fashion industry brand trust will be damaged and will lead to a lower purchase intention.

The second model is about the main effect of perceived greenwashing in the fashion industry on green word-of-mouth. This effect will be moderated by environmental concerns, such that the effect will be stronger when consumers have environmental concerns.

3. Methodology

The methods will be covered in this chapter. First the design of the experiment will be explained. Furthermore, the statistical technique and the sample size will be discussed. After the measurements will be discussed and the scales are showed.

3.1 Experiment design

To gather the data an experiment will be used. This experiment has a between subject design. During this experiment a survey has been send out to people who buy their own clothes. The reason for this is because this study is about the effects of greenwashing on customers in the fashion industry. People who are buying their own clothes will provide the most realistic feedback about the effect on purchase intention and green word of mouth when they observe greenwashing. This survey has been sent out on social media. The invitation for this survey clearly stated that this survey was only intended for people who buy their own clothes. The respondents have also been asked about how many times they buy clothes. Because of that it is guaranteed that only people who buy their own clothes have completed this survey. Qualtrics will was used to gather data. The survey is showed in the appendix A.

During this experiment there will be two groups. One group will function as the control group while the other group will function as the treatment group. During this study greenwashing is manipulated because it is perceived or not. This means there are two conditions and because of that the design will be a 1 x 2 design. Before the respondents start to fill in the survey, they will see an online ad which they could also encounter in real life on any online social network page. This ad is about a fictional brand. In this ad the fictional fashion brand states that they are going to expand to more countries. This ad tells several things about the brand which makes it an attractive fashion brand. This brand also claims to work with a full sustainable approach. In addition to the ad some comments of users are shown under the ad itself. This is where the manipulation is getting involved. The control group will only see two positive comments of users who say they would like to buy clothes of this fashion brand. The treatment group will see a third comment of a user who accused the brand of greenwashing with a link to a website where he or she gets this information from. To make the claim more credible the link shows logo and connects to the BBC news. It will already show some sentences about in what way the fashion brand is guilty of greenwashing. To check if the manipulation works, both groups will have the same question if they believe that the fictional fashion brand is guilty of greenwashing. They survey is sent out via social media platforms. The pictures of the ads are shown in figure 3 and 4.

Figure 3: Ad control group

Figure 4: Ad treatment group

3.2 Statistical technique

There are two conceptual models which leads to that two separate analyses will take place. The data of this survey will be analysed by using the programme SPSS. While analysing the data in SPSS, PROCESS will be used to test the moderator and mediator effect (Hayes, 2013). To test the first conceptual model 5 of Hayes will be used (figure 5). The second conceptual model will be tested with model 1 (figure 6) (Appendix B).
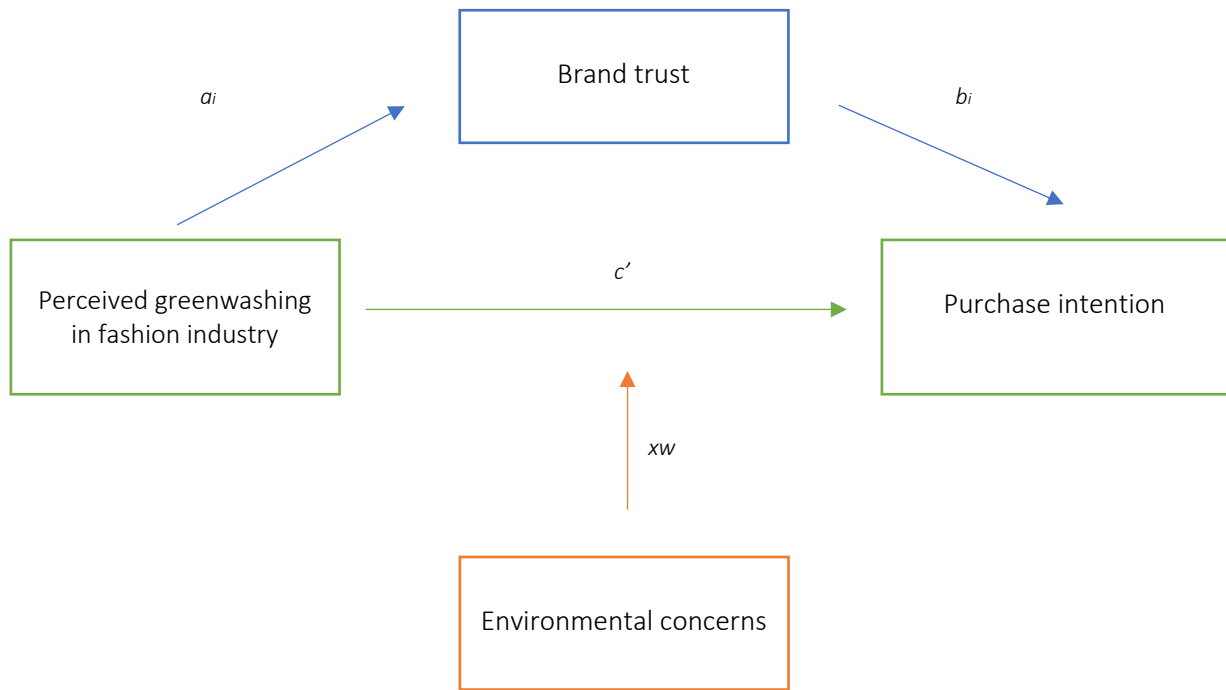
Figure 5: Relations that will be tested conceptual model 1 with model 5 in PROCESS
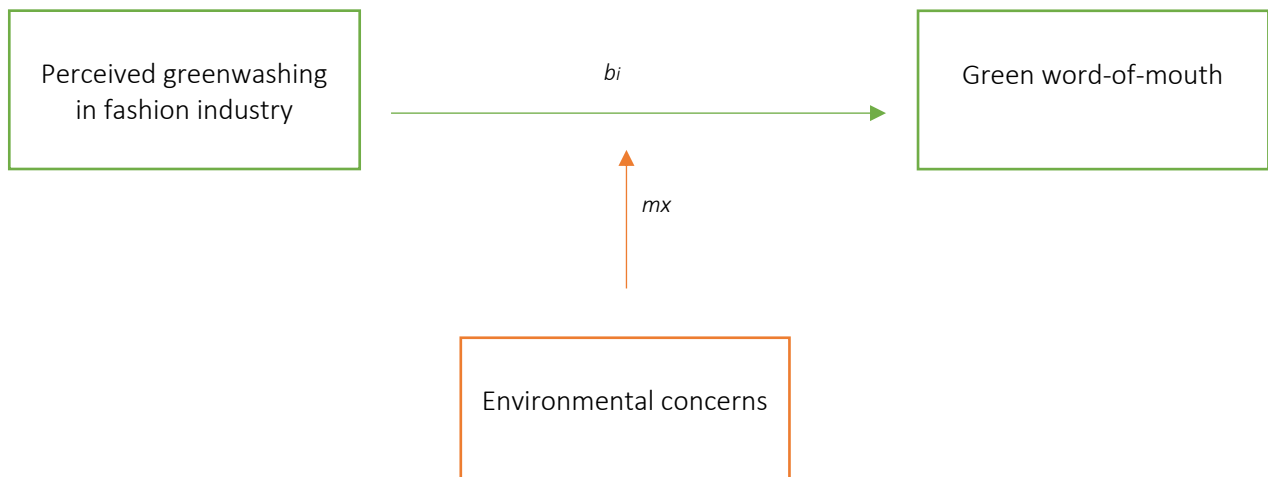

Figure 6: Relations that will be tested conceptual model 2 with model 1 in PROCESS

3.3 Sample size

Around 40 people per condition are needed (Hertzog, 2008). Since greenwashing is manipulated there are two conditions. In addition, the interaction with environmental concerns will be investigated which will lead to an aim of at least 160 respondents.

3.4 Measurements

Below the measurements of the variables are explained. In chapter 4, where the results will be reported, a factor analysis will be carried out and the reliability statistics will be clarified per variable.

Purchase intention

After reading the ad the respondents will get several questions about their purchase intention about this fictional fashion brand. The respondents will answer these questions with a five-point Likert scale. This scale is from 1 to 5, with 1 indicating completely disagree and 5 indicating completely agree. The four items are adapted from two studies (Elder & Krishna, 2012; DAM, 2020). These items are: 1. In the future, I would intend to buy the clothes of this fashion brand. 2. I would choose buying clothes from this fashion brand over any other similar clothing brand. 3. I would actively seek out for this fashion brand to purchase clothes. 4. The next time I am buying clothes, I will buy the clothes from the advertised fashion brand.

Green word of mouth

The respondents have to answer questions about their negative green word of mouth about this fictional fashion brand. The respondents will answer these questions with a five-point Likert scale. This scale is from 1 to 5, with 1 indicating completely disagree and 5 indicating completely agree. The four items are adapted from a study (Chen et al., 2013a). These items are: 1. I would tell others that this brand is not environmentally friendly. 2. Because of its bad environmental functionality, I would degrade this fashion brand to others. 3. Because this fashion brand is not environmentally friendly, I would encourage others to not purchase it. 4. I would say bad things about this fashion brand to others because of its environmental performance.

Brand trust

The mediator brand trust will also be tested with four items. The respondents will answer these questions with a five-point Likert scale. This scale is from 1 to 5, with 1 indicating completely disagree and 5 indicating completely agree. The four items are adapted from a study (Chaudhuri & Holbrook, 2002). These items are: 1. I trust this fashion brand. 2. I feel that I can trust this fashion brand completely. 3. On this fashion brand, I can rely. 4. This fashion brand is safe.

Environmental concerns

To test the moderator, the respondents have to answer several questions about the environmental concern. The respondents will answer these questions with a five-point Likert scale. This scale is from 1 to 5, with 1 indicating completely disagree and 5 indicating completely agree. The four items are adapted from a study (Zhang et al., 2018). These items are: 1. I am concerned about the deterioration

of the quality of the environment. 2. For me, the environment is a big concern. 3. I am passionate about environmental protection issues. 4. I often think about how the state of the environment can be improved.

Perceived greenwashing -manipulation check-

To test the manipulation about perceived greenwashing a manipulation check will take place by answering the following question: To what extent do you agree with the following statement: *This brand does greenwashing.* The respondents will answer this question with a five-point Likert scale from 1 to 5, with 1 indicating completely disagree and 5 indicating completely agree. The respondent has to fill in to what extent they agree if the fictional fashion brand is guilty to greenwashing.

Demographic

To get a good view on how the respondents look like, several demographic questions will be asked. These questions are related to their gender, age, highest completed education and clothing buying behaviour. For gender the respondents will get a categorical question where they have to choose between male, female or prefer not to say. Age will be measured with a categorical question with the options 18-30, 31-40, 41-50, 51-60 and 61-65 and older then 65. For the variable highest completed education the respondents will get a categorical question where they can choose from: High school, Vocational Education, Bachelor's degree, Master's degree and PHD. Finally, the clothing buying behaviour will be measured with a continuous question whereby the respondents can choose for less than 1-2 times a year, 1-2 times a year, 3-4 times a year, 5-6 times a year, 6-7 times a year, 8-9 times a year and more than 8-9 times a year.

4 Results

This chapter will show the results of the research. It starts with the demographic frequencies, followed by the randomization and manipulation check. After that the descriptive statistics will be explained. Finally, the linear regressions of all the hypotheses will be showed, followed by a small overview of the outcomes.

4.1 Demographic frequencies

First all relevant information of the respondents will be given. A minimum of 160 respondents was the goal that had to be obtained. In total 234 people filled out the survey of which 160 fully completed the survey which means that the goal of 160 has been obtained. The survey has been completed by 71 male (44.4%), 87 female (54,4%) and 2 respondents who preferred not to say their gender (1.3%). The respondents were aged between 18-65 with a large group being 18-30 (77.5%). Most of the respondents have completed a bachelor's degree, namely 94 (58.8%). The second largest group consists of 32 (20%), they all have completed a master's degree. The largest group of the respondents, which consists of 42 people (26.3%), tell that they buy clothes more than 8-9 times a year. In total 49,4% stated that they buy clothes at least 6-7 times a year or more (appendix C).

4.2 Randomization check

To check if the groups were equally randomized a randomization check has been carried out. Chi square tests have been used to check whether the distribution in the groups corresponded within the control and manipulation groups. In table 1 the results have been showed. There is no significant difference between the control group and the manipulation group when it comes to gender *(Fisher's exact p=,937).* In addition, there is no significant difference between the control group and manipulation group when it comes to age *(Fisher's exact p=,937).* Furthermore, there is no significant difference between the control group and the manipulation group when it comes to education *(Fisher's exact p=,397).* Finally, there is no significant difference between the control group and the manipulation group when it comes to the buying behaviour of clothing *(χ^2 (2) =,497, p = ,508).* The randomisation has resulted in two comparable groups in terms of gender, age, education, and clothing buying behaviour.

	Control group			Manipulation group			
Characteristics	N	%		N	%	χ^2 (2)	p
Gender							
Male	34	43,6		37	45,1	f	,937
Female	43	55,1		44	53,7		
Prefer not to say	1	1,3		1	1,2		
Age							
18-30	61	78,2		63	76,8	f	,937
31-40	7	9,0		9	11,0		
41-50	4	5,1		3	3,7		
51-60	5	6,4		6	7,3		
61-65	1	1,3		1	1,2		
Highest completed education							
High school	15	19,2		10	12,2	f	,397
Vocational Education	2	2,6		6	7,3		
Bachelor's degree	45	57,7		49	59,8		
Master's degree	16	20,5		16	19,5		
PHD	0	0,0		1	1,2		
Clothing buying behaviour							
Less than 1-2 times a year	3	3,8		2	2,4	0,497	,508
1-2 times a year	9	11,5		11	13,4		
3-4 times a year	14	17,9		14	17,2		
5-6 times a year	12	15,4		16	29,5		
6-7 times a year	8	10,3		7	8,5		
8-9 times a year	7	9,0		15	18,3		
More than 8-9 times a year	25	32,1		17	20,7		
Notes. f Fisher's exact test							

Table 1: Randomization check

4.3 Manipulation check

As mentioned in the chapter "methods", respondents have been asked the question: "To what extent do you agree with the following statement: *This brand does greenwashing."* To test if the manipulation had worked an independent t-test has been carried out. The mean of the control group *(M=3.13, SD=.89)* is three quarters of a point lower than the mean of the treatment group (M=3,88, SD=.66). There is a significant difference between the treatment group and control group *(t= -6,053, sig <,001).* This means that the treatment group has a higher perception of greenwashing then the

control group. The treatment group has perceived greenwashing. This means that the manipulation has worked out. The full analysis can be found in Appendix D.

4.4 Reliability statistics

A relevant step is to test the construct validity and to verify the reliability. Therefore, the reliability statistics are showed in table 2. In order to measure the degree of consistency between the multiple survey questions per construct, the Cronbach's Alpha has been used. Every construct was measured with four items. All the variables show a Cronbach's Alpha which is higher than 0,80. So based on that reliable statements can be made about these variables.

Reliability Statistics		
	Cronbach's Alpha	N of Items
Purchase intention	,913	4
Green word-of-mouth	,878	4
Brand trust	,927	4
Environmental beliefs	,869	4

Table 2: Reliability statistics

4.5 Factor analysis

To test if the constructs are really four different constructs with no overlapping, a factor analysis has been carried out for every construct. The KMO is 0,844 and the Bartlett's Test of Sphericity is sig <,001 (Appendix C). For the variable purchase intention all four items are loading on one factor. The lowest factor loading is 0,772. The factor determined 20,11% percent of the variance. If we look at the variable green word-of-mouth all the four items are loading on the 1 factor. The lowest factor loading is 0,744. The factor determined 12,34% percent of the variance. For brand trust all the four items load on the 1 factor. The lowest factor loading is 0,810. The factor determined 36,55% percent of the variance. Lasty all the four items of environmental concerns are loading on the 1 factor. The lowest factor loading is 0,667. The factor determined 8,61% percent of the variance. The full analysis of this can be seen in Appendix E.

4.6 Assumptions

The assumptions should be checked before carrying out the regression. Therefore, there will be looked if the normality, linearity, homoscedasticity, and absence of multicollinearity will be met.

4.6.1   Conceptual model 1

The first conceptual model is about the effect of perceived greenwashing in the fashion industry on purchase intention. In addition to this, the moderator environmental concerns and the mediator brand trust are included.

The first assumption to look at is normality. At first sight the data look approximately normally distributed. What can be seen in the Q-Q plot is that the circles are following the normality line. There is some deviation, but not that much whereby the assumption about normality has been met. In addition to this, no extreme outliers showed up.

When looking at linearity it is possible to sketch a line between to show the linearity. This means that the assumption about linearity has been met.

The next assumption to check is the homoscedasticity. The scatterplot shows that the points are distributed more or less equally, so it can be concluded that the assumption of homoscedasticity has been met.

Finally, the absence of multicollinearity will be looked at. The VIF scores show that each value is below 10 which indicates that this assumption has been met (O'brien, 2007).

In conclusion, all the assumptions are met for this conceptual model. The full analyses of the assumption can be seen in Appendix F.

4.6.2   Conceptual model 2

The second conceptual model is about the effect of perceived greenwashing in the fashion industry on negative green word-of-mouth. In addition to this a moderation effect is included.

The first assumption to look at is normality. The distribution looks quite normal. What can be seen in the Q-Q plot is that the circles are following the normality line. There is some minor deviation but not that much whereby the assumption about normality has been met. In addition to this, there are no extreme outliers.

When looking at linearity it is possible to sketch a line between to show the linearity. This means that the assumption about linearity has been met.

Homoscedasticity is the next assumption to be checked. The scatterplot does not show a clear pattern whereby the points have been distributed more or less equally. So it can be concluded that the assumption of homoscedasticity has been met.

Finally, the absence of multicollinearity will be looked at. The VIF scores show that each value is below 10 which indicates that this assumption also has been met (O'brien, 2007).

In conclusion all the assumptions are met for this conceptual model. The full analyses of the assumption can be seen in Appendix F.

4.7 Descriptive Statistics

To introduce the relevant variables, a description of the statistics has been showed in table 3. The visual inspection of the Q-Q plots of the continuous variables indicates that they are all approximately normally distributed and that they do not contain no extreme outliers (Appendix G).

Descriptive Statistics					
	N	Minimum	Maximum	M	SD
Purchase intention	160	1	4,25	2,42	0,87
Brand trust	160	1	4,25	2,48	0,80
Green word-of-mouth	160	1,25	5	2,83	0,80
Environmental concerns	160	1	5	3,63	0,75
Manipulation	160	0	1	0,51	0,50
Buying behaviour	160	0	6	3,64	1,89
What is your age?	160	1	5	1,44	0,95
Education	160	1	5	2,85	0,94
Gender (1=male)	160	0	1	0,44	0,50

Table 3: Descriptive Statistics

To get a first impression on how the variables are related to each other and whether they influence each other strongly, the correlations are shown in table 4. Only the continuous variables within the conceptual models have been considered. The correlations between the variables whose relationship will be tested within this study will only be discussed. Brand trust, environmental concerns and purchase intention are the continuous variables of conceptual model 1. We can see that purchase intention is highly positively correlated with brand trust $(r= .577)$. Furthermore, purchase intention is little negatively correlated with environmental concerns $(r= -.148)$. Within conceptual model 2, green word-of-mouth and environmental concerns are the continuous variables. Green word-of-mouth is medium negatively correlated with environmental concerns $(r= -.335)$.

Correlations				
Scale	Purchase intention	Brand trust	Green word-of-mouth	Environmental concerns
1. Purchase intention				
2. Brand trust	.577**			
3. Green word-of-mouth	-.214**	-.244**		
4. Environmental concerns	-.148	-.159*	-.355**	
** Correlation is significant at the 0.01 level (2-tailed).				
* Correlation is significant at the 0.05 level (2-tailed).				

Table 4: Correlations

4.8 Linear regression

The hypotheses will be analysed with a linear regression. The analysis for conceptual model 1 and 2 will be done separately.

4.8.1 Linear regressions conceptual model 1

The first conceptual model will be analysed first. This model consists out of three hypotheses. These are about the main effect, moderator effect and mediation effect. In order to analyse the main effect a linear regression will be carried out. The moderation effect and mediation effect will be analysed by Process model 5 by Hayes (Hayes, 2013).

Main effect

A linear regression has been used to test if perceived greenwashing significantly predicted purchase intention. The hypothesis of the main effect is as follows:

H1a Perceived greenwashing in the fashion industry has a negative effect on purchase intention.

When greenwashing is perceived *(M=2.21, SD=.77)* the purchase intention is almost half a point lower compared to when greenwashing is not perceived *(M=2.63, SD=.93)*. As predicted, there is a significant negative effect of perceived greenwashing in the fashion industry on purchase intention *(b= -.42, p =.002)*. This is showed in table 5. The effect means that when greenwashing is perceived in the fashion industry, the purchase intention will be lower compared to when greenwashing is not perceived in the fashion industry. H1a will not be rejected. The full analyses can be seen in Appendix H.

	b	se	Standardized Coefficients Beta	t	p
Constant	2.64	0.096		27.36	< .001
Perceived greenwashing	-.42	0.13	-.242	-3.13	.002

Table 5: Linear regression purchase intention

	df	F	p	R^2
Model 1	159	9.81	.002	.058

Table 6: Model summary purchase intention

Moderation analysis

A linear regression has been used by model 5 by Hayes to test if environmental concerns strengthen the effect of perceived greenwashing on purchase intention. The hypothesis about the moderator is as follows:

H1b The effect of perceived greenwashing in the fashion industry on purchase intention is moderated by environmental concerns, such that the effect is stronger when people have environmental concerns.

Although no hypothesis about the direct effect of environmental concerns on purchase intention (=w) has been drawn during this study, model 5 shows this effect. There is no significant effect of environmental concerns on purchase intention *(w= b = 0.00, p= .977)*. The outcome of model 5 shows the effect of environmental concerns on the relationship of perceived greenwashing in the fashion industry and purchase intention (=xw). There is no significant effect of having environmental concerns on the relationship between perceived greenwashing in the fashion industry and purchase intention *(xw= b = -0.15, p =.323)*. Because of that hypothesis H1b will be rejected.

Even though the interaction is not significant, what can be seen is that if people have environmental concerns and they perceive greenwashing in the fashion industry that they will have a lower purchase intention than people who do not have environmental concerns since the effect is negative. This is probed with the spotlight analysis in PROCESS (Appendix H). People with an above-average amount of environmental concerns have the greatest negative impact on purchase intention *(b= -.06, p=.709)* compared to people with an average *(b=-.17, p=.142)* or below-average *(b=-.29, p=.082)* amount of environmental concerns. The overview per level of environmental concerns is showed table 7. However, this is directional evidence since the interaction is not significant so no conclusions can be made. A clear overview of this moderation effect is showed in figure 7. The full analyses can be seen in Appendix H.

	b	p
Level 1 (Mean-SD)	-.06	.709
Level 2 (Mean)	-.17	.142
Level 3 (Mean+SD)	-.29	.082

Table 7: Spotlight analysis purchase intention

Mediation analysis

Bootstrapping has been applied to test the mediation effect. The non-parametric method called "bootstrapping" resamples data with replacements roughly 5.000 times to examine the direct, indirect, and total effects (Shrout & Bolger, 2002). Using 5.000 bootstrap samples, PROCESS by Hayes produces asymmetric bias-corrected bootstrap confidence intervals (Igartua & Hayes, 2021). For the mediation effect the explaining role of brand trust will be tested for the relation between perceived greenwashing in the fashion industry on purchase intention. The hypothesis about the mediation is as follows:

H1c The effect of perceived greenwashing in the fashion industry on purchase intention is mediated by brand trust, such that when greenwashing is perceived brand trust is reduced which leads to a negative effect on purchase intention.

The outcome of model 5 shows that there is no direct significant effect of perceived greenwashing in the fashion industry on purchase intention ($c'= b =-0.17, p= .142$). However, perceived greenwashing in the fashion industry does have a significant negative effect on brand trust ($a = b =-0.42, p < .001$) and brand trust has a positive significant effect on purchase intention ($b=b =0.59, p < .001$). The indirect effect is negative and significant ($β=-.2505, CI= -.4176, -.1106$). In this case, zero does not fall within the 95% confidence interval which means that, as predicted, brand trust mediates the relationship between perceived greenwashing in the fashion industry and purchase intention. Therefore, hypothesis H1c will not be rejected. Because of this, it can be concluded that there is a full mediation. When greenwashing is perceived in the fashion industry, brand trust will be damaged and purchase intention will be lowered. A clear overview of this mediation effect is showed in figure 7. The full analyses can be seen in Appendix H.
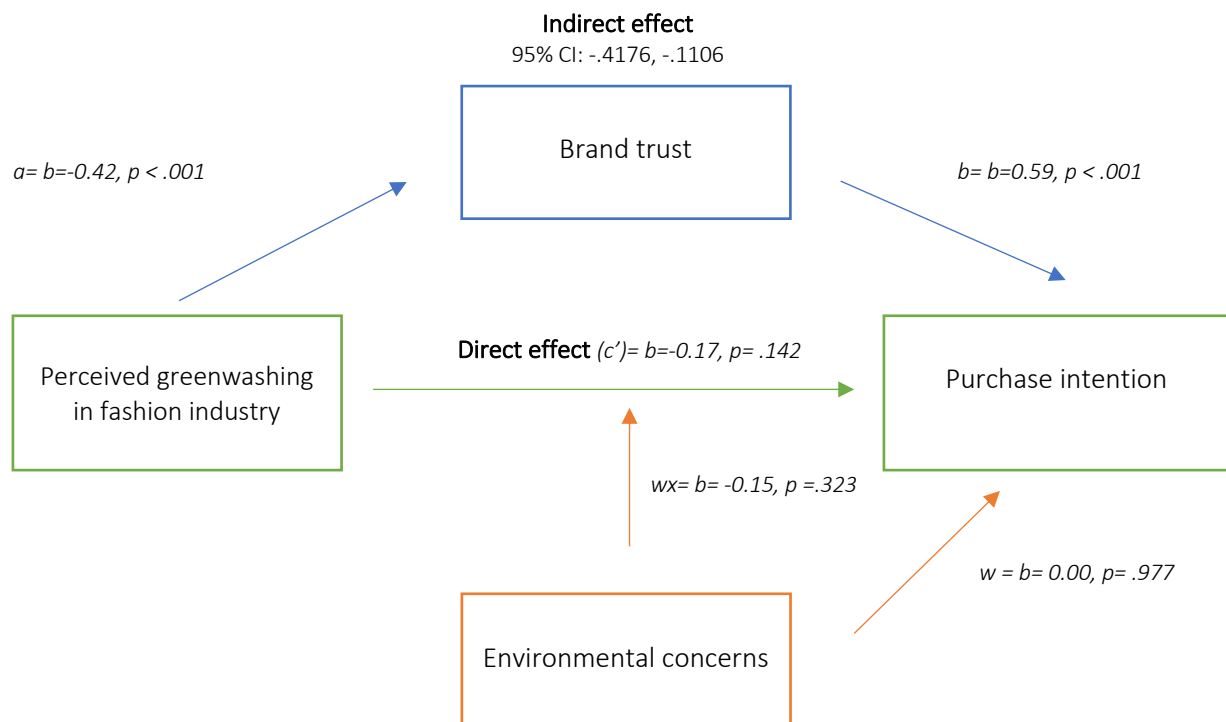
Indirect effect
95% CI: -.4176, -.1106

Brand trust

a= b=-0.42, p < .001

b= b=0.59, p < .001

Perceived greenwashing
in fashion industry

Direct effect *(c')*= b=-0.17, p= .142

Purchase intention

wx= b= -0.15, p =.323

Environmental concerns

w = b= 0.00, p= .977

Figure 7: Conceptual model 1 Purchase intention with model 5

4.8.2 Linear regressions conceptual model 2

The second model will be analysed and consist of two hypotheses. These are about a main effect and a moderator effect. To analyse the moderator effect PROCESS model 1 by Hayes has been used (Hayes, 2013).

Main effect

A linear regression has been used to test if perceived greenwashing will have a negative effect on green word-of-mouth. The hypothesis about the main effect is as follows:

H2a Perceived greenwashing in the fashion industry has an effect on negative green word-of-mouth such that when greenwashing is perceived customers will spread more negative green word-of-mouth.

A linear regression has been applied. When greenwashing is perceived *(M=3.10, SD=.78)* the negative green word-of-mouth is a half point higher compared to when greenwashing is not perceived *(M=2.56, SD=.71).* The outcome of the linear regression shows, as predicted, that there is a positive significant effect of perceived greenwashing on negative green word-of-mouth *(b =0.54, p < .001).* This is showed in table 8. This means that hypothesis H2a will not be rejected. This positive effect means that when greenwashing is perceived in the fashion industry people will spread negative green word-of-mouth. The full analyses can be seen in Appendix H.

	b	se	Standardized Coefficients Beta	t	p
Constant	2.56	0.09		30.09	< .001
Perceived greenwashing	0.54	0.12	0.338	4.52	< .001

Table 8: Linear regression green word-of-mouth

	df	F	p	R^2
Model 1	159	20.44	< .001	.115

Table 9: Model summary green word-of-mouth

Moderation analysis

Model 1 by Hayes has been used to test if environmental concerns strengthen the effect of perceived greenwashing on green word-of-mouth. The hypothesis about the moderated effect is as follows:

H2b The effect of perceived greenwashing in the fashion industry on green word-of-mouth is moderated by environmental concerns, such that the effect is stronger when people have environmental concerns.

The outcome of model 1 of hayes shows the effect of environmental concerns on the relationship of perceived greenwashing in the fashion industry and negative green word-of-mouth (=mx). Seen from the interaction effect, there is a positive significant effect of having environmental concerns on the relationship between perceived greenwashing in the fashion industry and negative green word-of-mouth *(b =0.43, p =.003)*. The positive coefficient means that when greenwashing is perceived and people have environmental concerns they will spread more negative green word-of-mouth then people who do not have environmental concerns. This has been showed in table 10. Because of this hypothesis H2b will not be rejected. The full analyses can be seen in Appendix F.

	b	se	t	p
Constant	2.55	0.08	32.97	< .001
Perceived greenwashing	0.55	0.11	5.08	< .001
Environmental concerns	0.14	0.10	1.31	.191
Perceived greenwashing*environmental concerns	0.43	0.14	2.97	.003

Table 10: PROCESS-model 1 green word-of-mouth

	df	F	p	R^2
Model 1	3.156	19,62	<.001	.274

Table 11: PROCESS-model 1 summary green word-of-mouth

The interaction is probed with spotlight analysis in PROCESS. To give a more detailed view about this interaction effect the results for the 3 levels of environmental concerns are showed in table 12. The b and p-value of the effect of greenwashing on negative green word-of-mouth are showed. The table shows that when people have at least an average amount of environmental concerns and they perceive greenwashing, that there is a significant effect that they will spread more negative green word-of-mouth. For level 2, people will spread a bit less negative green word-of-mouth *(b=0.55, p < .001)* then people who have level 3 of environmental concerns *(b=0.87, p < .001)*. When people have lower than an average amount of environmental concerns and they perceive greenwashing, there is no significant effect that they will spread more negative green word-of-mouth *(b=0.23, p= .142)*.

	b	p
Level 1 (Mean-SD)	0.23	.142
Level 2 (Mean)	0.55	< .001
Level 3 (Mean+SD)	0.87	< .001

Table 12: Spotlight analysis negative green word-of-mouth

4.9 Overview hypotheses outcome

To create a clear overview about the final outcome of the hypotheses table 13 has been created.

Hypotheses	Outcome
H1a Perceived greenwashing in the fashion industry has a negative effect on purchase intention.	Not rejected
H1b The effect of perceived greenwashing in the fashion industry on purchase intention is moderated by environmental concerns, such that the effect is stronger when people have environmental concerns.	Rejected
H1c The effect of perceived greenwashing in the fashion industry on purchase intention is mediated by brand trust, such that when greenwashing is perceived brand trust is reduced which leads to a negative effect on purchase intention.	Not rejected
H2a Perceived greenwashing in the fashion industry has an effect on negative green word-of-mouth such that when greenwashing is perceived customers will spread more negative green word-of-mouth.	Not rejected
H2b The effect of perceived greenwashing in the fashion industry on green word-of-mouth is moderated by environmental concerns, such that the effect is stronger when people have environmental concerns.	Not rejected

Table 13: Hypotheses outcome

5 Discussion

The interpretation of the results and the conclusions will be given within this chapter. Later on, the implications will be indicated, and the limitations will be explained. Finally, the suggestions for future research will be given.

5.1 Summary and conclusions

There is a lot of greenwashing today and people are getting more conscious about the environment. There is no knowledge about the effects of perceived greenwashing on the purchase intention and green word-of-mouth in the fashion industry. Also, there was no knowledge about the moderated role of environmental concerns and mediator role of brand trust. The goal of this study was to find the answers to these gaps of knowledge and find the answer to the research question:

"What is the effect of perceived greenwashing and having environmental concerns on purchase intention and green word-of-mouth in the fashion industry?"

The explanatory role of brand trust has been examined as well. During this research the purpose was to find the answers to fill in the gaps. Some research has been done about what the effect of greenwashing is on purchase intention and green word-of-mouth. With this research question it was possible to find an answer to the gap of missing knowledge about what the effect of perceived greenwashing will be in the fashion industry. Here, the gap could be filled with the information on what the effect in the fashion industry is on purchase intention and green word-of-mouth. It was clearly obtained whether greenwashing has an impact on products that many people could consider a necessary product, namely fashion. It has emerged whether greenwashing has a role in changing purchase intentions and green word-of-mouth among consumers in the clothing industry. This study also has found an answer for the gap of knowledge whether having environmental concerns enhances the effect of perceived greenwashing. Finally, the gap is filled with whether brand trust has an explanatory role in perceived greenwashing purchase intention in the fashion industry.

First the effect of perceived greenwashing in the fashion industry on purchase intention has been examined. What can be concluded, as expected for hypothesis H1a, is that when people perceive greenwashing in the fashion industry, they have a lower purchase intention towards people who do not perceive greenwashing. This means that perceived greenwashing has a negative effect on purchase intention. Even though clothing is a product that people need, greenwashing still has an impact on their purchase intention. This could be because of the fact that people are getting more conscious about the negative impact their purchasing behaviour could have on the environment and

they want to choose for more environmentally friendly products. When they perceive greenwashing at a fashion brand, they know that the brand will have a negative impact on the environment. Because of that people do not want to buy that product of that brand which leads to a lower purchase intention.

Secondly, it has been investigated whether having environmental concerns strengthens the effect of perceived greenwashing in the fashion industry on purchase intention. What can be concluded is that having environmental concerns does not strengthen the effect of perceived greenwashing on purchase intention. No difference has been found in the level of purchase intention between people who had environmental concerns and people who did not have many environmental concerns. An explanation for this could be that because in general people are getting more conscious about their buying behaviour and because of that having environmental concerns do not strengthen the effect of perceived greenwashing on purchase intention anymore.

Thirdly the mediating role of brand trust has been examined. It has been investigated whether the effect of perceived greenwashing in the fashion industry on purchase intentions could be explained by brand trust. What can be concluded, as expected for hypothesis H1c, is that brand trust mediates the effect. When people perceive greenwashing in the fashion industry their brand trust is negatively reduced which leads to a negative effect on their purchase intention. One explanation may be that among those who have observed greenwashing, their brand trust has been damaged, which is one of the most important factors between an individual and a company. Usually, brand trust has a positive impact on purchase intention but when brand trust has been damaged the relation between a brand and consumers will be damaged and then will lead to a lower purchase intention.

Fourth, the effect of perceived greenwashing in the fashion industry on green word-of-mouth has been examined. It has been tested to see if people will spread negative green word-of-mouth after they have perceived greenwashing in the fashion industry. It can be concluded, as expected for hypothesis H2a, that people who have perceived greenwashing do indeed spread more negative green word-of-mouth compared to people who have not perceived greenwashing. An explanation for this could be that people are likely to warn others about a false product. When a company is guilty of greenwashing, they have lied about their products or way of working which could lead to that people will define this fashion brand as false. The fashion brand is guilty of greenwashing which could lead that people will spread negative green word-of-mouth. They will tell others about the misconduct.

At last, the moderating effect of environmental concerns has been examined. It has been investigated whether having environmental concerns strengthens the effect of perceived greenwashing in the fashion industry on green word-of-mouth. What can be concluded, as expected for hypothesis H2b, is that when people have environmental concerns, they indeed spread more negative green word-of-mouth when they perceive greenwashing in the fashion industry compared to people who do not have any environmental concerns. An explanation for this could be that people who are always concerned about the environment are also always concerned about which companies are environmentally friendly and then spread this among other people to warn them and to protect the environment. When they see that a clothing brand is guilty of greenwashing, they are more likely to spread negative green word-of-mouth than people who do not have, or only less serious environmental concerns.

In conclusion, four of the five hypotheses have been supported during this study. This means that the general negative impact of greenwashing on companies also applies to the companies within the clothing industry. The answer to the research question is therefore that greenwashing negatively impacts purchase intention and people will spread negative green word-of-mouth. The negative impact on purchase intention is explained by brand trust and environmental concerns strengthens the effect from perceived greenwashing and spreading negative green word-of-mouth.

5.2   Implications
The implications will be given. These implications have been divided between theoretical and managerial implications.

5.2.1 Theoretical implications
This research has addressed the need for further theory development about the effect of perceived greenwashing in the fashion industry on purchase intention and green word-of-mouth. Only minor research has been done so far about the effect of greenwashing on purchase intention and green word-of-mouth. The research that has been done about the effect of greenwashing on, for example, consumer buying behaviour and word-of-mouth advertising, was never specifically done about the fashion industry. This research has led to a more specific and in-depth investigation of greenwashing on one particular sector, namely the fashion industry. This is valuable because it is not possible always to assume that the results of previous general previous research can be applied to all types of sectors. The fashion industry is huge and one of the most polluting ones. Reactions of customers could be different for this reason as they simply need clothing. It can be concluded that the outcome of this study corresponds to other studies that have been done about greenwashing. Every other study that has been done about greenwashing revealed the negative impact on for example buying behaviour,

green word-of-mouth, or a company. This study revealed this as well but this study specifically focussed on the fashion industry. In addition, other studies did not look at the moderating role of environmental concerns and mediating role of brand trust. This also indicates that this study has a more specific and deepening effect.

5.2.2 Managerial implications
Now that the results have showed that perceived greenwashing causes a negative impact on a fashion brand, fashion brands should realize that they must think twice before they start promoting their selves as a green brand. Many fashion brands are guilty of greenwashing. They want to promote their brand as environmentally friendly in order to keep their customers happy and to attract more customers. The results of this study can lead to that marketing managers will learn not to promote themselves as green if they are not entirely so. Fashion brands and marketing managers must realise that they have to work in an honest way. If the truth comes out that they are not entirely green, they will know that this will have a negative effect on the purchase intention of (potential) customers, and that negative green word-of-mouth will spread. The results of this study could lead to that fashion brands will not promote themselves as a green brand when they are not fully green. In this way greenwashing in the fashion industry could become less present or even disappear. In addition, fashion brands could improve the way they are working as well. Their product lifecycle could be fully improved in order to become fully green. This would be the best solution because in this way greenwashing will disappear and fashion brands will be sincerely green which most probably will lead to more new customers. Fashion brands will have two choices if they do not want to have the negative results of greenwashing. They should promote themselves fairly or they must improve their way of working in a sincere greener way.

5.3 Limitations and future research
Although the study has revealed relevant findings there are some limitations about this study. Four limitations have been found.

The first limitation is that during this experiment a fake fashion brand has been used. Based on this fake fashion brand the respondents had to give their answers about their brand trust, purchase intention and green word-of-mouth. People did not know this brand which could possibly influence their thoughts about the brand and their brand trust, purchase intention or green word-of-mouth. It could be that people already did not like the fake brand attractive which already could lead to a lower purchase intention or brand trust. For future research this could be improved. A real brand could perhaps be used, and the experiment could be done among current purchasers of the fashion brands.

Then the second limitation is about the respondents. Since this study mainly included respondents around the age of 18-30 and with the education levels of a bachelor's or master's degree the results may not be generalisable to other age categories or people with different levels of education. It could be that people of other age categories have different standards and values or have different priorities. Also, having a certain level of education may cause people to have different values or priorities. For future research this could be improved.

The third limitation is about the mean outcomes of purchase intention and negative green word-of-mouth. Although the effects of perceived greenwashing in the fashion industry on purchase intention and negative green word-of-mouth are significant the mean differences between the control group and the treatment are not major striking. This means that perceived greenwashing in the fashion industry has a significant effect on purchase intention and negative green word-of-mouth but not very large. There is a difference in purchase intention and negative green word-of-mouth but this difference is not extreme.

The last limitation is about the manipulation check. Although the manipulation check is significant and the manipulation has worked, the mean difference between the manipulated and control group was not that big (3,13 – 3,88). Perhaps if the manipulation had been stronger, the effect of perceived greenwashing on purchase intention and green word of mouth would also have been stronger. For future research the manipulation can be made a bit more stronge. For example, making it more obvious that the brand is guilty of greenwashing. For example, a real newspaper article could be used that provides more information on why the clothing brand is guilty of greenwashing and with evidence.

This research was about the effect of perceived greenwashing in the fashion industry. The effect on purchase intention and green word of mouth has been examined. Further research could dive deeper in possible other effect greenwashing could have in the fashion industry. In addition to this, further research could also focus on the effect of perceived greenwashing in other industries. When it comes out that greenwashing will have a negative impact in all kinds of industry, companies perhaps will think twice before they start to promote their selves as green and perhaps greenwash activities will stop and belong to the pas.

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Appendix

A. Models by Hayes

Model 1

Conceptual Diagram
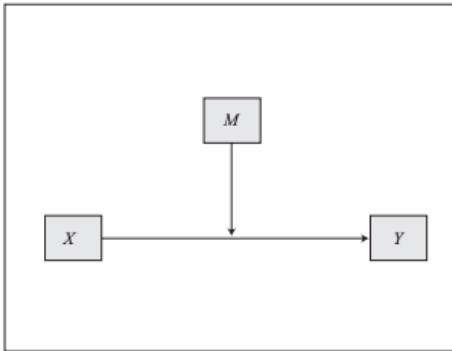
Statistical Diagram
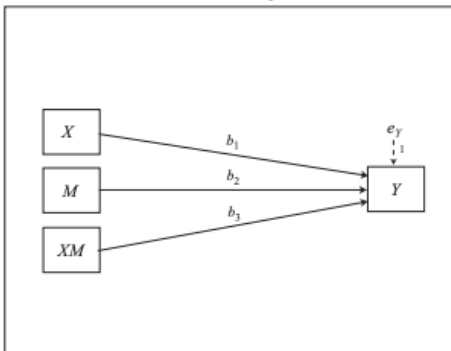
Conditional effect of X on $Y = b_1 + b_3 M$

Conceptual diagram model 1 (Hayes, 2013)

Model 5

Conceptual Diagram
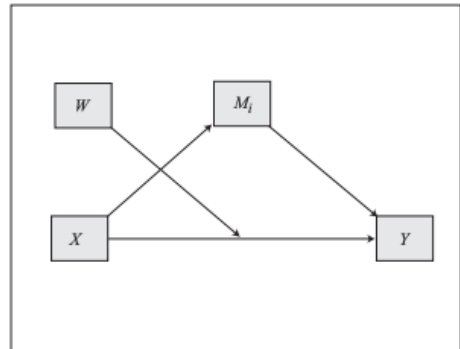
Statistical Diagram
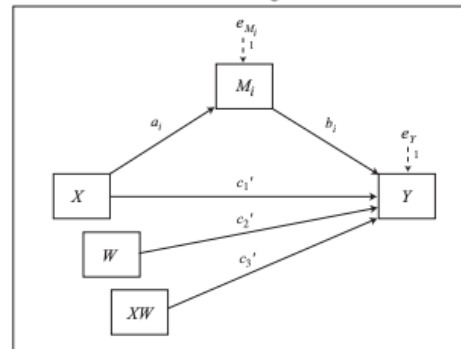
Indirect effect of X on Y through $M_i = a_i b_i$
Conditional direct effect of X on $Y = c_1' + c_3'W$

*Model 5 allows up to 10 mediators operating in parallel

Conceptual diagram model 5 (Hayes, 2013)

B. Survey

People could indicate the extent to which they agreed with the statements on a scale of 1- completely disagree and 5- completely agree.

Please indicate to what extent you agree or disagree with all of the statements below:
In the future, I would intend to buy the clothes of this fashion brand.
I would choose buying clothes from this fashion brand over any other similar clothing brand.
I would actively seek out for this fashion brand to purchase clothes.
The next time I am buying clothes, I will buy the clothes from the advertised fashion brand.

To what extent do you agree with the following statement?
This brand does greenwashing.
* Greenwashing is about "to make people believe that your company is doing more to protect the environment than it really is." - Cambridge Dictionary

Please indicate to what extent you agree or disagree with all of the statements below:
I would tell others that this brand is not environmentally friendly.
Because of its bad environmental functionality, I would degrade this fashion brand to others.
Because this fashion brand is not environmentally friendly, I would encourage others to not purchase it.
I would say bad things about this fashion brand to others because of its environmental performance.

Please indicate to what extent you agree or disagree with all of the statements below:
I trust this fashion brand.
I feel that I can trust this fashion brand completely.
On this fashion brand, I can rely.
This fashion brand is safe.

Please indicate to what extent you agree or disagree with all of the statements below:
I am concerned about the deterioration of the quality of the environment.
For me, the environment is a big concern.
I am passionate about environmental protection issues.
I often think about how the state of the environment can be improved.

How often do you buy clothes?
Less then 1-2 times ayear
1-2 times a year
3-4 times a year
5-6 times a year
7-8 times a year
More then 8-9 times a year

What is your age
18-30
31-40
41-50
51-60
61-65
Older then 65

What is your gender

Male
Female
Prefer not to say

What it the highest level of education you have completed

High school
Vocational education
Bachelors degree
Masters degree
phd

C. Demographic frequencies

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	71	44.4	44.4	44.4
Female	87	54.4	54.4	98.8
Prefer not to say	2	1.3	1.3	100.0
Total	160	100.0	100.0	

Frequencies gender

Age	Frequency	Percent	Valid Percent	Cumulative Percent
18-30	124	77.5	77.5	77.5
31-40	16	10.0	10.0	87.5
41-50	7	4.4	4.4	91.9
51-60	11	6.9	6.9	98.8
61-65	2	1.3	1.3	100.0
Total	160	100.0	100.0	

Frequencies age

Education	Frequency	Percent	Valid Percent	Cumulative Percent
High school	25	15.6	15.6	15.6
Vocational Education	8	5.0	5.0	20.6
Bachelor's degree	94	58.8	58.8	79.4
Master's degree	32	20.0	20.0	99.4
PHD	1	.6	.6	100.0
Total	160	100.0	100.0	

Frenquencies education

Buying Behaviour	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 1-2 times a year	5	3.1	3.1	3.1
1-2 times a year	20	12.5	12.5	15.6
3-4 times a year	28	17.5	17.5	33.1
5-6 times a year	28	17.5	17.5	50.6
6-7 times a year	15	9.4	9.4	60.0
8-9 times a year	22	13.8	13.8	73.8
More than 8-9 times a year	42	26.3	26.3	100.0
Total	160	100.0	100.0	

Buying behaviour

D. Manipulation check

Group Statistics					
	Manipulation	N	Mean	Std. Deviation	Std. Error Mean
To what extent do you agree with the following statement? - This brand does greenwashing.	not manipulated	78	3,13	,888	,101
	manipulated	82	3,88	,655	,072

Group statistics

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
To what extent do you agree with the following statement? - This brand does greenwashing.	Equal variances assumed	12,249	,001	-6,098	158	,000	,000	-,750	,123	-,993	-,507
	Equal variances not assumed			-6,053	141,370	,000	,000	-,750	,124	-,995	-,505

Independent samples test

E. Factor analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,844
Bartlett's Test of Sphericity	Approx. Chi-Square	1810,804
	df	120
	Sig.	,000

KMO and Bartlett's Test

| Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5,847	36,546	36,546	5,581	34,883	34,883	4,435
2	3,218	20,114	56,660	2,920	18,252	53,135	4,300
3	1,974	12,336	68,996	1,631	10,192	63,327	3,327
4	1,377	8,608	77,604	1,134	7,088	70,415	3,132
5	,593	3,705	81,309				
6	,502	3,139	84,448				
7	,424	2,650	87,098				
8	,345	2,159	89,256				
9	,319	1,994	91,250				
10	,286	1,786	93,036				
11	,233	1,455	94,492				
12	,218	1,361	95,852				
13	,209	1,306	97,158				
14	,184	1,153	98,311				
15	,151	,945	99,255				
16	,119	,745	100,000				
Extraction Method: Principal Axis Factoring.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Total variance explained

Pattern Matrix[a]

	Factor			
	1	2	3	4
In the future, I would intend to buy the clothes of this fashion brand.	-,029	**,816**	-,140	-,035
I would choose buying clothes from this fashion brand over any other similar clothing brand.	,025	**,888**	-,019	,082
I would actively seek out for this fashion brand to purchase clothes.	-,005	**,892**	,042	-,005
The next time I am buying clothes, I will buy the clothes from the advertised fashion brand.	,057	**,772**	,064	-,050
I would tell others that this brand is not environmentally friendly.	-,004	-,023	**,744**	-,025
Because of its bad environmental functionality, I would degrade this fashion brand to others.	-,043	,025	**,791**	,028
Because this fashion brand is not environmentally friendly, I would encourage others to not purchase it.	-,043	,000	**,786**	,111
I would say bad things about this fashion brand to others because of its environmental performance.	,052	-,036	**,871**	-,098
I trust this fashion brand.	**,877**	,006	-,032	,051
I feel that I can trust this fashion brand completely.	**,845**	,084	,125	-,061
On this fashion brand, I can rely.	**,925**	,000	-,018	-,004
This fashion brand is safe.	**,810**	-,034	-,093	,007
I am concerned about the deterioration of the quality of the environment.	-,077	-,071	-,101	**,667**
For me, the environment is a big concern.	,038	-,129	-,044	**,881**
I am passionate about environmental protection issues	,035	,077	,082	**,868**
I often think about how the state of the environment can be improved.	-,001	,117	,051	**,759**
Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.[a]				
a. Rotation converged in 5 iterations.				

Pattern matrix

F. Assumptions

1) Conceptual model 1
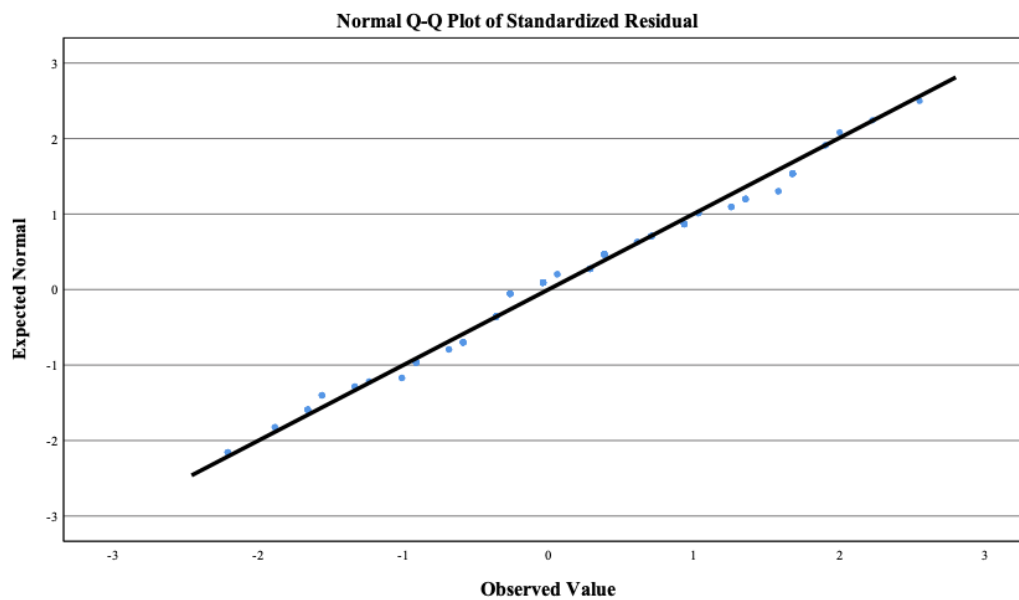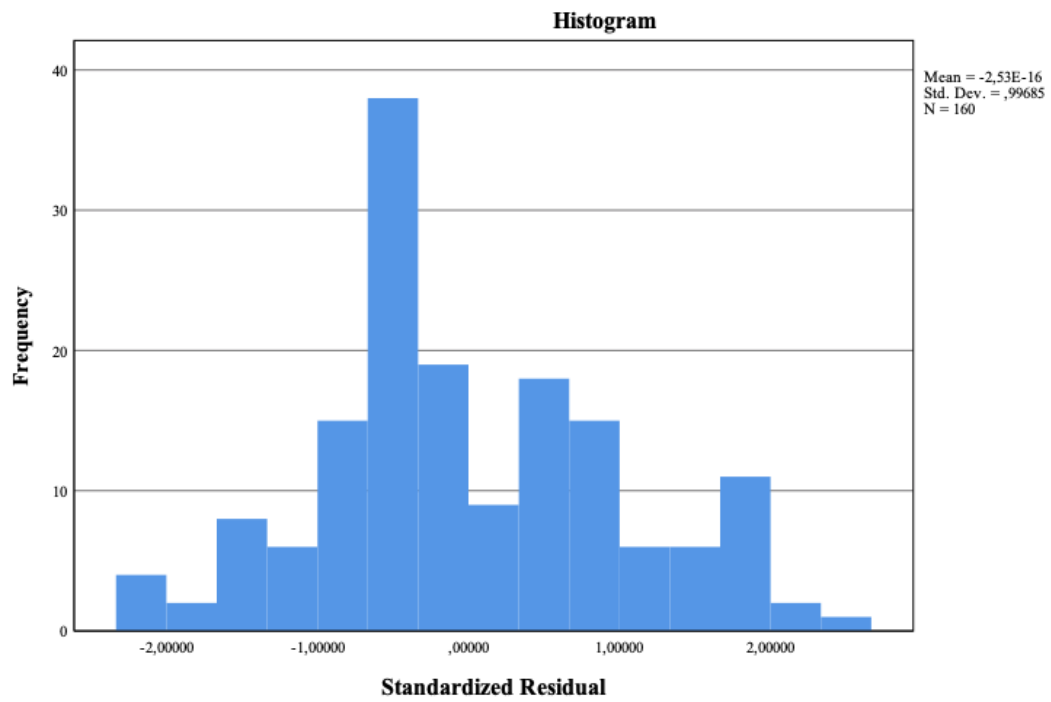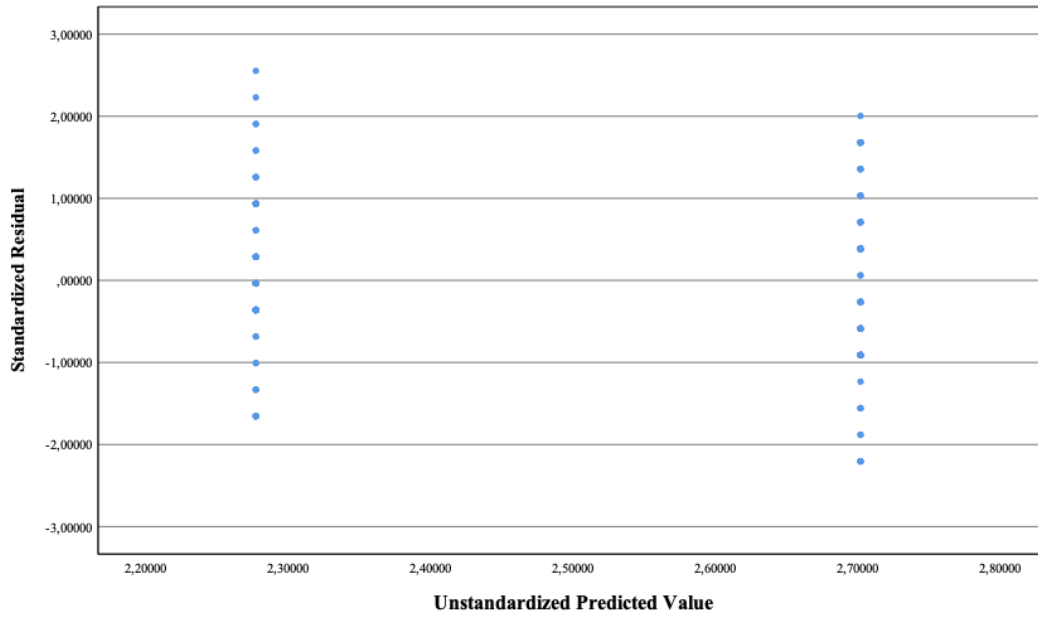
Histogram

Mean = -2,53E-16
Std. Dev. = ,99685
N = 160

Normal Q-Q Plot of Standardized Residual

Q-Q plot

Scatterplot

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	2,702	,087		30,895	<,001	2,529	2,875		
	Manipulation	-,424	,122	-,266	-3,475	<,001	-,666	-,183	1,000	1,000

a. Dependent Variable: Brand trust

VIF scores

Histogram

Normal Q-Q Plot of Standardized Residual
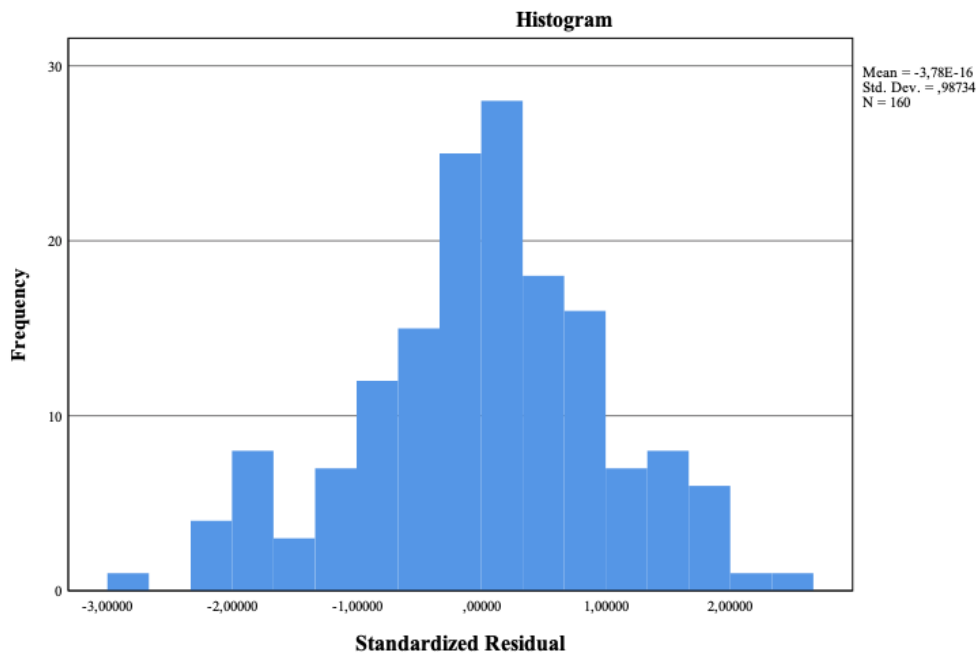
Q-Q plot

Scatterplot

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1,040	,217		4,786	<,001	,611	1,470		
	Manipulation	-,173	,117	-,100	-1,477	,142	-,405	,058	,924	1,082
	Brand trust	,590	,075	,540	7,910	<,001	,443	,737	,901	1,109
	MC_ENVIRONMENTAL_C ONCERNS	,003	,110	,003	,029	,977	-,213	,220	,468	2,137
	IT_MANI_ENV	-,149	,150	-,093	-,992	,323	-,446	,148	,474	2,111

a. Dependent Variable: Purchase intention

VIF scores

2) Conceptual model 2
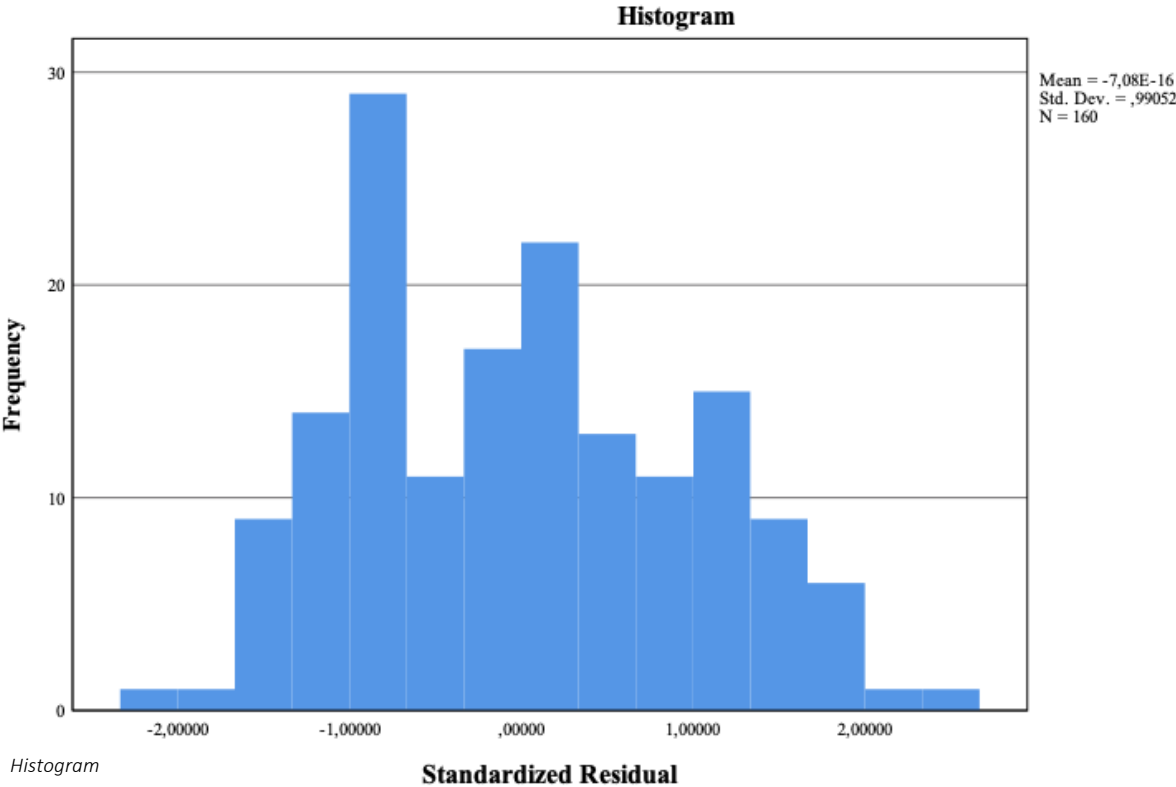
Histogram

Q-Q plot

Scatterplot

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	2,555	,077		32,969	<,001	2,402	2,708		
	Manipulation	,550	,108	,347	5,080	<,001	,336	,764	,999	1,001
	MC_ENVIRONMENTAL_C ONCERNS	,137	,104	,130	1,313	,191	-,069	,343	,474	2,111
	IT_MANI_ENV	,428	,144	,295	2,974	,003	,144	,713	,474	2,111

a. Dependent Variable: Green word-of-mouth

VIF scores

G. Descriptive Statistics
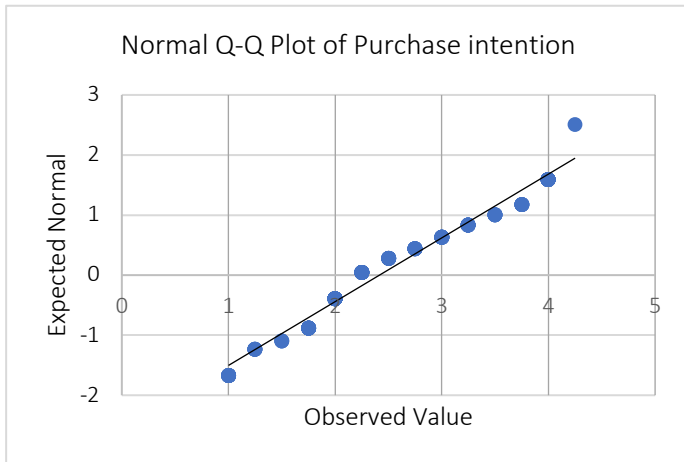
Q-Q plot purchase intention
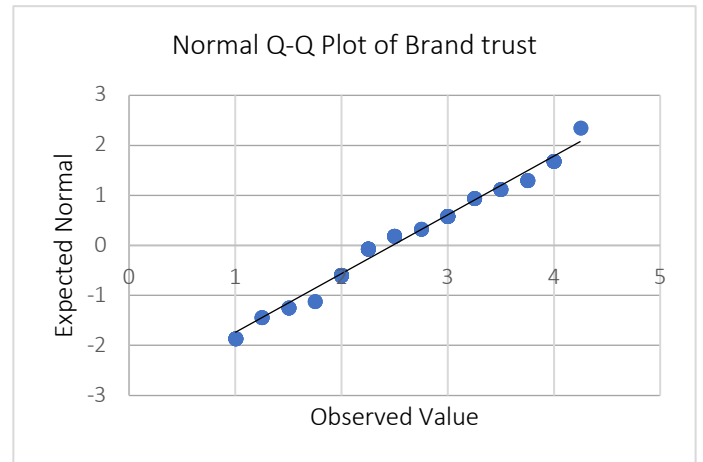
Q-Q plot brand trust
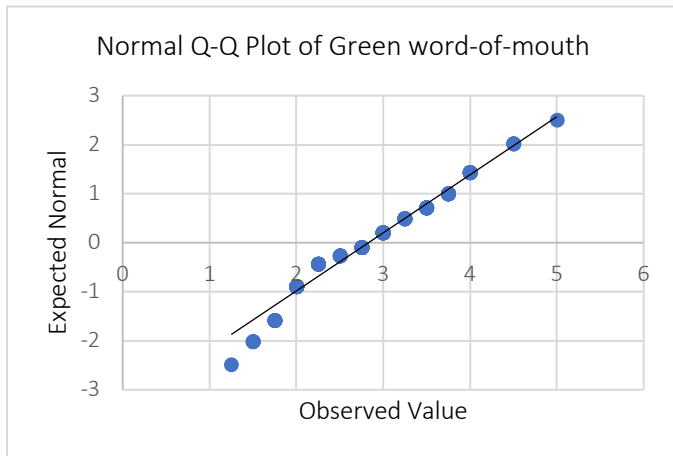
Q-Q plot green word-of-mouth
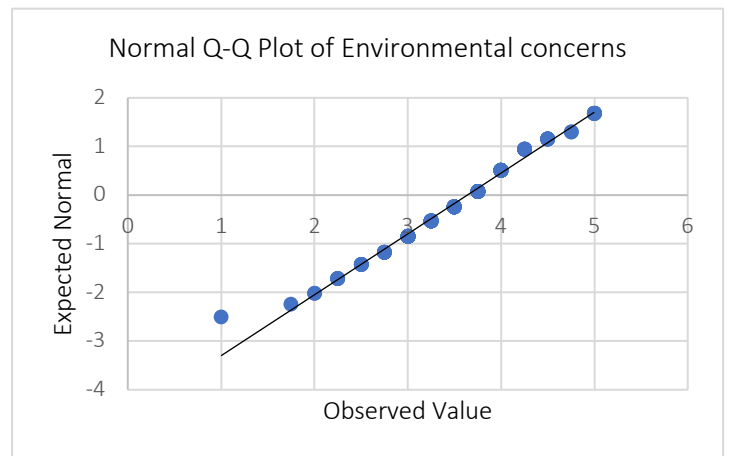
Q-Q plot Environmental concerns.

H. Analyses hypotheses

Effect H1a

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.242[a]	.058	.052	.85027

a. Predictors: (Constant), Manipulation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.092	1	7.092	9.810	.002[b]
	Residual	114.227	158	.723		
	Total	121.319	159			

a. Dependent Variable: Purchase intention
b. Predictors: (Constant), Manipulation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.635	.096		27.366	<.001
	Manipulation	−.421	.134	−.242	−3.132	.002

a. Dependent Variable: Purchase intention

Effect H1b and H1c

Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 4.0 ****************

        Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 5
   Y : Purchase
   X : Manipula
   M : Brand_tr
   W : Environm

Sample
Size: 160

****
OUTCOME VARIABLE:
 Brand_tr

Model Summary
        R   R-sq   MSE   F   df1   df2   p
     ,2664   ,0710   ,5966   12,0740   1,0000   158,0000   ,0007

Model
                coeff   se   t   p   LLCI   ULCI
constant   2,7019   ,0875   30,8951   ,0000   2,5292   2,8747
Manipula   -,4245   ,1222   -3,4748   ,0007   -,6658   -,1832

****
OUTCOME VARIABLE:
 Purchase

Model Summary
        R   R-sq   MSE   F   df1   df2   p
     ,5914   ,3498   ,5089   20,8462   4,0000   155,0000   ,0000

Model
                coeff   se   t   p   LLCI   ULCI
constant   1,0403   ,2174   4,7859   ,0000   ,6109   1,4696
Manipula   -,1734   ,1174   -1,4772   ,1417   -,4052   ,0585
Brand_tr   ,5901   ,0746   7,9101   ,0000   ,4427   ,7374
Environm   ,0032   ,1096   ,0288   ,9771   -,2133   ,2196
Int_1   -,1490   ,1501   -,9923   ,3226   -,4456   ,1476

Product terms key:
 Int_1   :   Manipula x   Environm

Test(s) of highest order unconditional interaction(s):
     R2-chng   F   df1   df2   p
X*W   ,0041   ,9847   1,0000 155,0000   ,3226

   Focal predict: Manipula (X)
       Mod var: Environm (W)

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
  Manipula   Environm   Purchase .
BEGIN DATA.
    ,0000   -,7549   2,5038
   1,0000   -,7549   2,4429
    ,0000   ,0000   2,5062
   1,0000   ,0000   2,3328
    ,0000   ,7549   2,5086
   1,0000   ,7549   2,2227
END DATA.
GRAPH/SCATTERPLOT=
 Environm WITH   Purchase BY   Manipula .

***************** DIRECT AND INDIRECT EFFECTS OF X ON Y ****************

Conditional direct effect(s) of X on Y:
  Environm   Effect   se   t   p   LLCI   ULCI
  -,7549   -,0609   ,1630   -,3735   ,7093   -,3829   ,2612
   ,0000   -,1734   ,1174   -1,4772   ,1417   -,4052   ,0585
   ,7549   -,2858   ,1633   -1,7504   ,0820   -,6084   ,0367

Indirect effect(s) of X on Y:
           Effect   BootSE   BootLLCI   BootULCI
Brand_tr -,2505   ,0779   -,4176   -,1106

********************* ANALYSIS NOTES AND ERRORS *********************

Level of confidence for all confidence intervals in output:
 95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
 5000

NOTE: The following variables were mean centered prior to analysis:
    Environm

WARNING: Variables names longer than eight characters can produce incorrect output when some variables in the data file have the same first eight characters. Shorter variable names are recommended. By using this output, you are accepting all risk and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----

Outcomes hypothesis H1b and H1c

Effect H2a

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.338[a]	.115	.109	.75082

a. Predictors: (Constant), Manipulation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.520	1	11.520	20.435	<.001[b]
	Residual	89.070	158	.564		
	Total	100.590	159			

a. Dependent Variable: Green word-of-mouth
b. Predictors: (Constant), Manipulation

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.558	.085		30.086	<.001
	Manipulation	.537	.119	.338	4.520	<.001

a. Dependent Variable: Green word-of-mouth

Effect H2b

Run MATRIX procedure:

**************** PROCESS Procedure for SPSS Version 4.0 ****************

        Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

****
Model : 1
   Y : Green_WO
   X : Manipula
   W : Environm

Sample
Size: 160

****
OUTCOME VARIABLE:
 Green_WO

Model Summary
        R   R-sq   MSE   F   df1   df2   p
     ,5234   ,2740   ,4682   19,6215   3,0000 156,0000   ,0000

Model
              coeff   se   t   p   LLCI   ULCI
constant   2,5550   ,0775   32,9685   ,0000   2,4020   2,7081
Manipula   ,5499   ,1083   5,0798   ,0000   ,3361   ,7637
Environm   ,1371   ,1044   1,3128   ,1912   -,0692   ,3434
Int_1   ,4283   ,1440   2,9744   ,0034   ,1439   ,7127

Product terms key:
 Int_1   :   Manipula x   Environm

Test(s) of highest order unconditional interaction(s):
     R2-chng   F   df1   df2   p
X*W   ,0412   8,8468   1,0000 156,0000   ,0034

   Focal predict: Manipula (X)
       Mod var: Environm (W)

Conditional effects of the focal predictor at values of the moderator(s):

   Environm   Effect   se   t   p   LLCI   ULCI

```
  -,7549    ,2266    ,1536   1,4755    ,1421   -,0768    ,5299
  ,0000    ,5499    ,1083   5,0798    ,0000    ,3361    ,7637
  ,7549    ,8732    ,1533   5,6976    ,0000    ,5705   1,1760
```

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

```
DATA LIST FREE/
   Manipula  Environm  Green_WO  .
BEGIN DATA.
    ,0000   -,7549   2,4515
   1,0000   -,7549    2,6781
    ,0000    ,0000   2,5550
   1,0000    ,0000    3,1049
    ,0000    ,7549   2,6585
   1,0000    ,7549    3,5318
END DATA.
GRAPH/SCATTERPLOT=
 Environm WITH    Green_WO BY      Manipula .
```

*********************** ANALYSIS NOTES AND ERRORS ***********************

Level of confidence for all confidence intervals in output:
  95,0000

W values in conditional tables are the mean and +/- SD from the mean.

NOTE: The following variables were mean centered prior to analysis:
      Environm

WARNING: Variables names longer than eight characters can produce incorrect output
when some variables in the data file have the same first eight characters. Shorter
variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----
Outcomes hypothesis H2a and H2b