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"How does the degree of sustainability improvements affect consumers' perception of the company's trustworthiness, and does it depend on the company's reputation for sustainability?"

A moderated mediation of the degree of perceived sustainability improments, percieved innovativeness and perceived trustworthiness.

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Abstract

In this research, we investigate how the degree of sustainability improvements implemented by companies, affect whether they are perceived as trustworthy by consumers, and if this effect depends on the company's reputation for sustainability. We believe that when implementing radical sustainability improvements, the company will be perceived as trustworthy because they are perceived as innovative. On the other hand, we believe that implementing an incremental improvement might be perceived as greenwashing, especially when the company has a bad reputation for sustainability. To test this, we developed a research model with the degree of sustainability improvements as the independent variable, perceived trustworthiness as the dependent variable, perceived innovativeness and perceived greenwashing as mediating variables, and perceived reputation for sustainability as the moderating variable. Our population of interest was Norwegian consumers, and we collected a data sample consisting of N=254 respondents through our social media platforms. The results of the research support the effect of the degree of sustainability improvements on perceived trustworthiness, indicating that radical sustainability improvements (vs incremental sustainability improvements) increases perceived trustworthiness. Further we find that perceived innovativeness fully mediates this relationship. We do not find support that reputation for sustainability moderates the effect between the degree of sustainability improvements and perceived trustworthiness, but we do however find that reputation for sustainability individually is an important predictor of perceived trustworthiness. Further we do not find support for our hypotheses related to greenwashing, however we acknowledge that the operationalization of this variable might not have been optimal, and we suggest that this relationship should be further researched in order to clarify the effect of greenwashing in the context of our research.

Acknowledgement

We would like to thank our supervisor Siv Skard for inspiring us with an interesting research topic, and for her guidance and patience throughout the semester.

The work with our thesis has at times been very demanding, especially as we have both been in full-time employment. Particularly in the times of the Covid-19 pandemic where our lives have been turned upside down with home office, closed kindergartens and schools. We have struggled to find enough time for everything. Thus, we would like to exert a big thank you to all friends and family for the encouraging words and indispensable support they have given us throughout this period, we would not have been able to make it without you.

Contents

1. Introduction

1.1 Background

The focus on sustainability in society has grown rapidly, and there is a growing concern for the environment. In the last couple of decades there has been a rise in external environmental pressures through international environmental regulations and environmental consciousness of consumers (Chen, 2008). Consumers are placing more importance on the social responsibility of firms when making purchasing decisions (Wagner, Lutz & Weitz, 2009).

Companies are increasingly focused on the financial benefits from CSR activities as a response to stakeholder demands (Bhattacharya & Sen, 2004), and are embracing CSR strategies and green innovations as a means to improve their performance because of the increasing environmental pressure(Lii & Lee, 2012; Chang, 2011).

Through our research, we want to examine how sustainability improvements by companies affect consumer's perception of the company. As an example, Hennes & Mauritz as a large company in the clothing/retail industry, has implemented a lot of sustainability initiatives. Through a quick look at their home page(H&M Group, 2020), we find that their focus on sustainability ranges from recycling, materials and packaging to animal welfare, chemicals and human rights. Some of the more visible initiatives can be observed easily in their stores, such as their sustainable clothing collection "conscious", and a clothing recycling program(https://goodonyou.eco/how-ethical-is-hm/). We believe that sustainability improvements within a company have the potential of increasing trustworthiness in the eyes of the consumer. Especially when the improvements are large enough and creates the impression of the company as innovative. However, this might not always be the case. Going back to the example of H&M, they have been criticised a lot in the media the last decade. One incident that catched a lot of attention was the "Rana Plaza collapse" in Bangladesh in 2013, where one of their supplier factories was located (https://www.vg.no/nyheter/utenriks/i/RLn6A/se-minuttene-etter-at-tekstilfabrikken-kollapset). More than 1100 people died in the accident. In 2015, they were again accused of not taking fire security at their factories seriously enough(https://www.tv2.no/a/7461428/). The same year they were also accused of child labour in Cambodia

(https://www.aftenposten.no/verden/i/145Q/rapport-barn-i-kambodsja-produserer-klaer-for-hm).

The vast effort of companies to satisfy their stakeholders also leads to an increase of reported incidents of irresponsible behaviors (Wagner et al, 2009).

While companies are increasingly focused on sustainability and implementing CSR as part of their strategy, consumers are at the same time becoming more discerning and skeptical of companies while they claim to be sustainable but fail to demonstrate this through their actions (Nyilasy, Gangadharbatla, & Paladino,2014). Furthermore, green performance can backfire on companies, especially in low performance scenarios (Nyilasy et al, 2014). Thus, another aim of our study is to investigate whether negative information about a company, specifically a bad reputation for sustainability, might lead to consumer perceived greenwashing, when the company only implements small and shallow sustainability initiatives.

1.2 Purpose of the study

For the purpose of the study, we have come up with the following research question:

"How does the degree of sustainability improvements affect consumers' perception of the company's trustworthiness, and does it depend on the company's reputation for sustainability?"

The idea of our study was based on a previous research project presented to us by our supervisor Siv Skard. They had found that innovativeness was mediating the relationship between perceived sustainability improvements and perceived trustworthiness, and that this relationship was moderated by reputation for sustainability. However, as this was a cross-sectional study, there were limited opportunities to draw conclusions of cause and effect. Thus, we decided to conduct an experiment to investigate this further. We decided to investigate the effect of the degree of sustainability improvements (incremental vs radical) on perceived trustworthiness, and we further elaborated the model with the variable perceived greenwashing, as we believed that incremental sustainability improvements could, especially when accompanied by a bad reputation, create a perception of greenwashing in the

mind of the consumer. Thus, the aim of our research is to contribute to and support these previous findings, as well as to provide new insights to add to the greenwashing literature.

1.3 Structure

To be able to answer the research question we have structured the research as follows. In the next chapter we outline the theoretical framework. We discuss relevant literature on the different variables of our model, and the relationship between them and develop hypotheses based on this. In the methodology chapter we present our choices regarding research design and strategy, as well as data collection techniques, measurement of variables and validity and reliability. In the data analysis chapter we outline how we are going to conduct the analyses, before we present the results in the following chapter. Last but not least, we discuss our findings, outline the limitations of our research and present some lines for future research, before we finally present a conclusion.

2. Theoretical framework and hypotheses

2.1 Perception

As our model is based on the consumer's perception of a company and its actions, we have to understand how people make judgments about underlying motives. Attribution theory is about how people interpret behavior in terms of its causes (Kelley & Michela, 1980). People seem to interpret others behavior based on who these others are, and in what situation the behavior unfolds (Gilbert & Malone, 1995). Gilbert & Malone (1995) further discuss how people draw conclusions about unobservable traits such as motives, desire, intentions and beliefs from the observable; namely other people's words and acts. This means that when consumers seek to answer the questions above, they will make inferences about the company's behavior based on what they can observe. As Gilbert & Malone (1995) further discusses, people often believe that people who perform behavior were predisposed to do so, and concludes on that even when they should not. This is called the correspondence bias, and tells us that making inferences can sometimes lead to severe judgmental mistakes.

2.2 Trustworthiness

Trustworthiness can be defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis & Shoorman, 1995). If a company is to be perceived as trustworthy, it should possess certain characteristics. Mayer et al. (1995) has done a review of different factors of trustworthiness previously focused on in literature, and has come to the conclusion that the three characteristics ability, benevolence and integrity are of the most important characteristics for trustworthiness, as they together explain a major portion of the concept (Mayer et al., 1995). Below, we will define and discuss the different components of trust with some examples related to sustainability.

If a company is making sustainability improvements in some way, if it is supposed to lead to a higher degree of trust, the consumer must believe that the company has the *ability* to carry out these improvements. This means the company must be believed to possess a set of *competencies* and *skills* on a certain area that makes the consumer believe that these green

improvements will be developed and implemented in a meaningful way. As an example, let's have a look at the car industry. If Tesla comes up with new technology on a more efficient battery, that is easier to produce and more environmentally friendly, consumers may trust that these improvements will actually be better for the environment as Tesla has long experience with electric vehicles and thereby has the skills to develop this product. On the other hand, if this innovation comes from a car manufacturer that is not previously known for experience with electric vehicles, consumers may be sceptical in terms of whether the product will perform as the company says, as the consumers do not trust that the company has the necessary *expertise* to develop it.

The second characteristic, benevolence, can be defined as *wanting to good aside from an egocentric profit motive* (Mayer et al, 1995). When it comes to companies it may be hard to imagine that they do a sustainability improvement out of pure altruism, but if consumers believe that the company is doing it mainly because they genuinely care about the environment, perceived benevolence is expected to be high. This implies that there should be some kind of relationship between the company and the consumer, in order for the consumer to be able to draw conclusions about the degree of benevolence. The consumer should be able to say something about the company's motives for the improvement, for instance based on information about how the company has done similar acts in the past, and the results of them.

The relationship between integrity and trust relies on the perception that the company has a *set of principles that it adheres to and that the consumer finds acceptable* (Mayer et al, 1995). We can split this definition in two parts. If a company adheres to their principles, it means they actually do what they say. For example, they have some ethical principles or a sustainability policy, and they will conduct their business in a way that doesn't compromise these. The other part implies that for integrity to be established, these principles or policies must also be something that the consumer can relate to and accept. As an example, we can use wind power. In Norway, the question of whether or not to build wind turbines is heavily debated. Most people care about the environment, so why is there so much resistance? There can be different answers to this question, but one of them might be that some people think it's more important to reduce CO2 emissions, while others believe it's more important to conserve nature and wildlife. While wind power is renewable energy and has the potential to reduce CO2 emissions, it also demands intervention of natural areas and may be harmful to

animal life. Whether or not a consumer perceives the wind company to have integrity may depend on their perspective.

2.3 Sustainability improvements

The focus of our research is on how the degree of sustainability improvements in a company improves perceived trustworthiness. This implies that we are interested in sustainability development within the company, and there are several fields of literature that are relevant for our research. When searching for literature we have taken a broad approach including corporate sustainability, CSR, sustainability investments and corporate sustainability strategies. We will begin this chapter by introducing some definitions and further discuss relevant research on these areas

Sustainability as a concept was first acclaimed in the 1987 world-renowned Brundtland Report published by the World Commission on Environment and Development, and was defined as following: "*Sustainability development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs*." (Brundtland, 1987). However, since this report was published, over hundreds of definitions for sustainability development have emerged (Marshall & Toffel, 2005). Dyllick and Hockerts have adapted Brundtland's definition for sustainability and redefined it to describe a firm's corporate sustainability efforts. They define corporate sustainability as " *satisfying the needs of the involved stakeholders, without compromising their ability to satisfy the needs of future stakeholders"* (Dyllick & Hockerts, 2002). CSR is a broad term and has been defined in various ways over the years (Latapí, Jóhannsdóttir & Davídsdóttir, 2019). One definition by Saiia, Carroll & Buchholtz (2003) is "The social responsibility of business that encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time".

Firms are becoming aware of the importance of sustainability issues, and have come to implement them as part of their strategy (Khan, Serafeim & Yoon, 2015). Companies are disclosing vast information in the form of environmental, social and governance data (Khan et al., 2015). This has resulted in a new type of corporate investments referred to as "sustainability investments"(Khan et al., 2015). However, not all kinds of investments will turn out to be value-enhancing for the firm. Material sustainability investments are shown to outperform immaterial sustainability investments in terms of shareholder-value (Khan et al.

2015). Baumgartner & Ebner (2010) classifies sustainability strategies into types and levels of maturity, and they distinguish between internal and external strategies. Among their findings is that an extroverted strategy (communicating sustainability initiatives) while being a driver of sustainability in society leads to a higher credibility. On the other hand, an extroverted strategy that is primarily focused on communicating with a lack of cooperation between the communication department and other corporate functions and departments, may have a weaker effect and a potential for being perceived as greenwashing.

Polonsky & Jevons (2006), argue that CSR as a branding tool should be exerted with caution, in the way that it requires a strategic shift to be successful in the long term, and that actions speak louder than words. They further argue that any leveraging of CSR initiatives should be genuinely integrated in the company's culture and actions. If not, they might suffer from reputational damage due to not meeting stakeholder expectations. Lii & Lee (2012) examines the effects that different types of CSR initiatives have on brand attitude. They find that philanthropic efforts are more favourably evaluated by consumers than sponsorship and CRM activities. They argue that this may be due to a higher skepticism among consumers for profit generating initiatives. Martínez and Rodríguez del Bosque (2013) has found that trust is a mediator between the relationship of CSR activities and loyalty in hospitality through research of hotels in Spain. They argue that communications that make CSR programs more credible, authentic and distinct from competitors will improve the attractiveness of the company. In a study of the retail industry in South-Korea, Park, Kim, & Kwon (2017) finds support for the hypothesis that trust is positively affected by the consumers perception of the company's commitment to CSR.

Further Berrone, Fosfuri & Gelabert (2017) has done research on the link between environmental actions and environmental legitimization in companies. They conclude that actions that require more commitment are more likely to be considered legit. They further outline two key features of environmental legitimacy as visibility, and differentiated costs (substantial costs that are non-recoverable). They also found that a higher level of credibility, measured by changes in environmental performance, would increase the positive effect of environmental actions on environmental legitimization.

To conclude, we have reviewed that different types of sustainability efforts within a company has a positive effect on firm-value, effectiveness, trust, and consumer perceptions of a company. Key points from the literature we have reviewed are that sustainability efforts

should be material, credible, genuine, authentic and require commitment in order to reap positive effects. We believe that in order for the consumer to develop such associations, sustainability improvements should be substantial, which leads to our first hypothesis:

H1: Radical sustainability improvements(vs. incremental sustainability improvements) increases trust.

2.4 Innovativeness

Innovativeness is often associated with newness, and creativity(DiBendetto, 2015). As our model is based on consumer perceptions, we need to understand innovativeness from a consumer's point of view. The following research by Kunz, Schmitt & Meyer (2010) has a specific focus on that, and we will adopt their view on innovativeness throughout our thesis.

Kunz et. al (2010), has a broad based-consumer-centric view on innovativeness, which they have conceptualized as "perceived firm innovativeness" (PFI). They define PFI as "the consumer perception of an enduring firm capability that results in novel, creative and impactful ideas and solutions for the market". This means that for a firm to be perceived as innovative, it's not sufficient to be creative or introduce a new product to the market, but these efforts should also have a market-impact, which includes changing established consumption patterns and challenging the status quo, in a meaningful way from the consumer's point of view. Also, the innovative behavior and characteristics should be stable over time. This indicates that launching a new product, or introducing an innovative solution to the market will not necessarily lead consumers to perceive a firm as innovative in itself. But if the firm releases several innovative products or solutions, or shows that they have an enduring focus on creativity and dynamism rooted in their organizational culture, and the consumer observes this over time, the consumers will be likely to perceive the firm as innovative.

Ultimately, Kunz et al. (2010) finds that PFI has a significant positive effect on consumer loyalty through two different routes, the "functional cognitive route", and the "affective experiential route". The functional-cognitive route is based on functional competence, which they define as "expertise to perform the job effectively and reliably". This will again lead to a less risky firm-relationship from the consumers point of view. The affective experiential route derives from hedonic value, and positive affect, such as consumer excitement and a

feel-good state of mind. Kunz et al. (2010) found that these two routes led to emotional and cognitive satisfaction. Further, Delgado-Ballester and Munuera-Alemán (2001), shows that there is a connection between satisfaction and brand trust.

The definition of perceived firm innovativeness as stated above implies that sustainability improvements should be both enduring and impactful to be perceived as innovative. As we assume that radical sustainability improvements should be more material and require more commitment than incremental ones, it is plausible that radical sustainability improvements might increase perceived innovativeness. An enduring capability can further be understood as doing something consistently. This relates nicely to the principle of integrity which is a component of trustworthiness. Further, perceived firm innovativeness is assumed to increase customer satisfaction through functional competence and positive affect. Satisfaction has been shown to predict trustworthiness as stated in the theory above. We also assume that functional competence defined as the expertise to perform the job reliably and effectively, will correlate positively with ability which is another dimension of trustworthiness. This leads to our second hypothesis:

H2: The positive effect of radical sustainability improvements on perceived trustworthiness is mediated by perceived innovativeness.

2.5 Greenwashing

With a societal growing concern for the environment, stakeholders have become more discerning and companies have become more and more aware of the importance of CSR and sustainable initiatives. As consumers are becoming more aware of the environmental impact of the products and services they are purchasing(Wagner et al, 2009), investors find it profitable to invest in "green companies" (Khan et al., 2015), and the competitive landscape becomes increasingly focused on sustainability(Bhattacharya & Sen, 2004; Lii & Lee, 2012; Chang, 2011). These external market factors increase the pressure on companies to maintain a positive impression of their environmental performance, which may again lead to "greenwashing" (Delmas & Burbano, 2011).

In literature, there are various definitions of the term greenwashing. Delmas & Burbano (2011) explains greenwashing as a company with bad environmental performance that communicates positively about their environmental performance. Implicitly, this means that

greenwashing is about disclosing false information. However, greenwashing is more than providing false information, it can also be about only disclosing the positive parts of information. Lyon and Maxwell (2011) defines greenwashing as "selective disclosure of positive information about a company's environmental or social performance, without full disclosure of negative information on these dimensions, so as to create an overly positive corporate image". The term "corporate hypocrisy" is defined by Wagner et al.(2009) as "the belief that a firm claims to be something that it's not", which is quite similar to the definitions of greenwashing. Further motives for CSR activities are often divided into two categories, public serving motives and firm serving motives (Forehand & Grier, 2003). The company's public serving motives benefits society, while firm serving motives relates to ulterior motives, such as profit or image. Forehand & Grier (2003) further found that skepticism developed when stated motives were different to other apparent motives.

Greenwashing has increased in popularity in recent years, while consumers get more and more aware of the fact that companies are taking advantage of this trend (Chen & Chang, 2012), (Nyilasy et al, 2014). This leads to a higher scepticism among consumers about companies' environmental claims (Pomering & Johnson, 2009), and a reduction in consumers *green trust* (Chen & Chang, 2012). Green trust is further defined as "a willingness to depend on a product, service or brand, based on the belief or expectation resulting from its credibility, benevolence and ability about it's environmental performance" (Chen, 2010).

Wagner et al. (2009) finds that inconsistent CSR information, meaning how a company's behavior differs from how they position themselves, can lead to a higher perception of corporate hypocrisy, and negative attitudes towards the firm. They further find that a reactive CSR strategy, such as trying to mitigate negative effects from previous negative CSR behavior, may lead to a scenario of perceived inconsistent information, followed by the negative consequences mentioned above.

As implied by H1 & H2, we expect trustworthiness to be relatively lower for incremental than for radical sustainability improvements. While we predict that innovativeness mediates the relationship between radical sustainability improvements and trustworthiness, we believe that incremental sustainability improvements will affect perceived trustworthiness through

perceived greenwashing. As Berrone et al.(2017) argues, to achieve environmental legitimization, environmental actions should be substantial and require commitment. Otherwise they might be perceived as less authentic by the consumer, which we believe may increase consumer skepticism. Further, we hypothesize that greenwashing will lead to a reduction in trust which is in line with former research on greenwashing by Chen (2010). This leads us to our next hypothesis:

H3: Incremental(vs radical) sustainability improvements, decreases perceived trustworthiness. This effect is mediated by perceived greenwashing.

Corporate reputation is the outcome of a firm having gone through a course of what can be defined as "social legitimization", and is unique to the individual firm, as it the result of specific chain of events that have occurred over a specific period of time (Martín-de Castro, López, & Sáez, 2006). It can therefore be defined as the cumulative representation of current and previous activities and outcomes of the firm, defining its ability to generate value for its stakeholders (Martín-de Castro et al., 2006)

Positive CSR information may have negative effects on consumer reactions when combined with information on inconsistent firm behaviour(Wagner et al, 2009). Lii & Lee (2012) have found that CSR initiatives may be perceived differently depending on corporate reputation. They argue that consumers who perceive a company's reputation as low, may have a skeptical attitude towards their company's CSR efforts. Nyilasy et al. (2014) finds support for the fact that green advertising can harm companies through consumer-perceived greenwashing. This is because the negative effect of low performance on brand attitude and purchase intent is strengthened by the presence of green advertising messaging. They further argue that the results they find can largely be explained by attribution theory, and that these results should apply not only to cases where information originates from the company, but also from direct experience or third parties. This research is applicable to our research as our research model relies entirely on consumer perceptions. .Thus we predict that reputation, as a source of information can moderate the effects between sustainability improvements and perceived trustworthiness, leading to the following hypotheses:

H4a: The effect of sustainability improvements on perceived trustworthiness is moderated by perceived reputation for sustainability. Specifically, for incremental sustainability improvements reputation has a stronger effect.

H4b: The indirect effect of perceived innovativeness is moderated by reputation for sustainability. Specifically the effect postulated by H2 will be weaker for a bad reputation for sustainability.

H4c: The indirect effect of perceived greenwashing is moderated by reputation for sustainability. Specifically, the effect postulated by H3 will be stronger for a bad reputation for sustainability

The conceptual model below is a visualization of the proposed effects of our hypotheses:
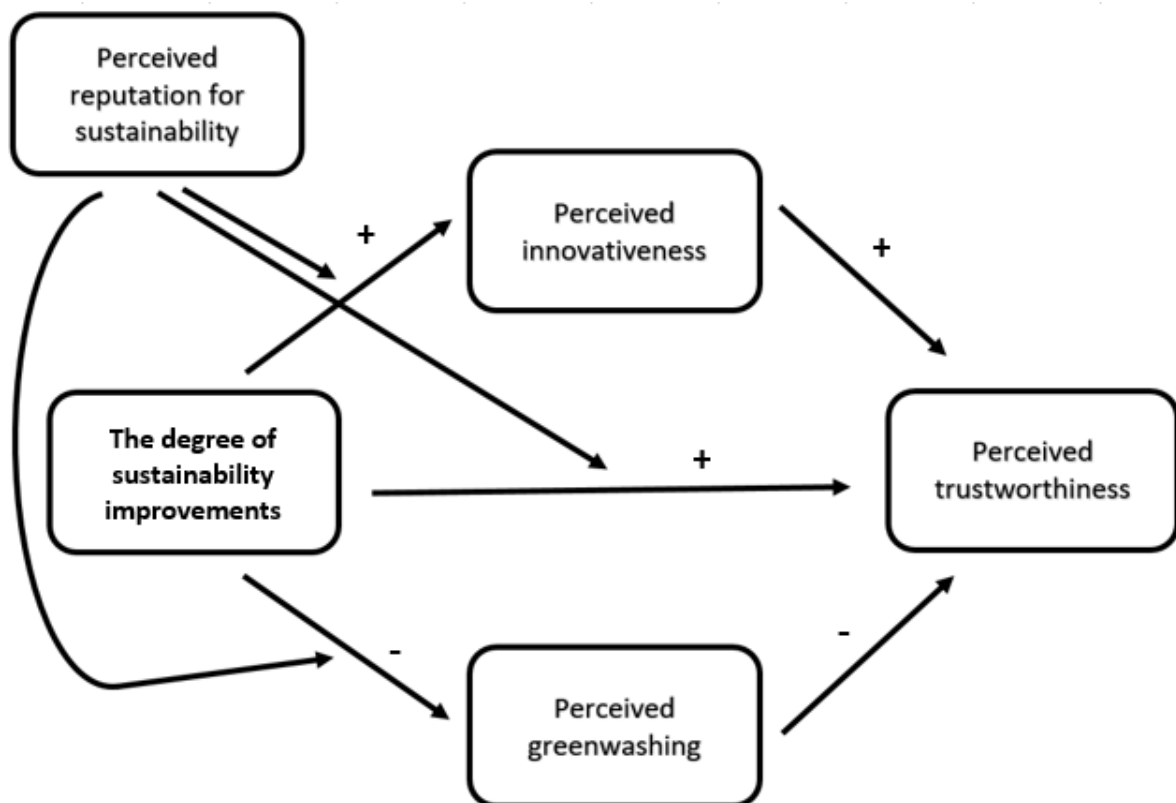

Figure I Conceptul model

3.   Methodology

3.1 Research design and strategy

The purpose of our study is explanatory, which means that we are looking to explain the relationships between the different variables in our model (Saunders, Lewis & Thornhill, 2016). For this purpose, we have chosen to conduct a mono-method quantitative study. This means we use a single data collection technique, a questionnaire, followed by a statistical analysis. As a research strategy we have chosen an experiment. The purpose of an experiment is to study the probability of a change in an independent variable causing a change in a dependent variable (Saunders et al., 2016), which is appropriate for the purpose of our study.

3.2 The experiement

To examine the moderating effect of perceived reputation for sustainability on the effect of the degree of perceived sustainability improvements on perceived trustworthiness, we have chosen a 2*2 between-subjects factorial design for our experiment. This means we are manipulating the independent and moderating variable, creating four different scenarios in total. Participants were randomly assigned to one of the four different scenarios. The other option would be a within-subjects design, where the same participants are exposed to all the different scenarios subsequently, which would require fewer respondents. However, with the between-subjects design, we avoid unwanted carryover effects which may negatively impact the validity of our findings (Saunders et al, 2016).

3.3 Manipulations

3.3.1 Moderating variable – the degree of sustainability

To manipulate the variable perceived sustainability improvement, we created one scenario where the sustainability improvement was incremental, and one scenario where the sustainability improvement was radical. To illustrate the radical improvement, we gave the participants information about several changes that the company had done to their value-chain, as to give them an impression that the changes were permeating their entire business

processes as a whole. For the incremental improvement, we chose fewer and more shallow changes, to illustrate them as less important and only a small step towards becoming more sustainable.

3.3.2 Moderating variable - reputation for sustainability

To manipulate the perceived reputation for sustainability, we created one scenario with good reputation and one with bad reputation. To illustrate the differences between bad and good reputation, we gave the participants information on the company's score on the Dow Jones Sustainability Index (low versus high), and information on how they had been depicted in the media (negative vs positive media exposure) related to their production facilities in low-cost countries. Otherwise we aimed to keep the two scenarios as similar as possible to avoid the possibility of other factors influencing the participants perceptions.

3.4 Data collection

3.4.1 The questionaire

Layout and conduction

The first part of the questionnaire is an introduction, where participants received preliminary information about how the questionnaire should be conducted, the importance of reading the questions thoroughly, and instructions to answer the questions as best as they could, based on the information that was given.

In the next part, they were introduced to the company "Youthscape" and its business operations. "Youthscape" is a fictitious company which we chose to avoid any biases arising from familiarity with an existing company. To increase the credibility and create an impression of the company as "real", we created a logo which the respondents also are exposed to at this point.

YOUTHSCAPE

To increase the probability of the respondents reading the text thoroughly, we also added a timer for the information slides. The respondents had to wait for between 7-25 seconds before being able to continue to the next slide, depending on the amount of information displayed.

After being introduced to the company, questions were randomised, so that each participant was only exposed to one of the in total four different following scenarios:

- Good reputation for sustainability and radical sustainability improvements

- Good reputation for sustainability and incremental sustainability improvements

- Bad reputation for sustainability and radical sustainability improvements

- Bad reputation for sustainability and incremental sustainability improvements

We set up the randomization so that the scenarios would be evenly distributed between participants. However, some variation occurred in our final sample, because not all participants completed the questionnaire, and those responses had to be removed from our sample.

After the respondents were exposed to the information, they were asked to complete the following questionnaire. The alternatives were in a 7-point Likert response format , which is considered as a sound way of measuring attitude, with alternatives ranging from "totally

disagree" to "totally agree" (Likert, 1932; Carifio & Perla, 2007). We used the option of "force response" in qualtrics, to avoid incomplete responses in our dataset.

The questions asked were designed to measure the dependent variables in our model: perceived innovativeness (mediator), perceived greenwashing (mediator) and perceived trustworthiness. We also added two slides with questions that aimed to serve as control variables in our analysis, one of them measuring the respondents impression of the company's sustainability efforts, and the other one measuring the respondents sustainability profile. Finally we added the following demographic questions: age, gender, level of education and current employment.

3.4.2 Sampling

The population of interest was Norwegian consumers, thus we distributed the questionnaires to our colleagues and social networks through social media. The survey was conducted through an online survey platform from Qualtrics, which simplified our data collection process immensely.
The survey was distributed via Facebook and Workplace by Facebook. In total we obtained a number of 355 responses, which of 100 were incomplete, resulting in 254 applicable observations for our data analysis. The sample consisted of 146 females (57,5 %) and 108 males (42,5 %). Their age ranged from 18 to 75 or more, and the majority of our sample were in the age group ranging from 25-34 (46,9 %). 43,3 % of our sample possessed a bachelor's degree, 31,9% a masters degree, and approximately 20 % had finished college. The majority of our sample were also full time employees (80,7%), and 8,3% were students.

3.5 Measurement of variables

To be able to measure our variables, we had to operationalize them, which means translating the concepts into measurable questions that define the concept (Saunders et al., 2016). As our thesis is based on prior work, we have also operationalized our variables accordingly, with some adjustments to fit our chosen case, the company Youthscape, and translation to norwegian. The exception is our mediating variable "greenwashing", which we have operationalized based on our literature review of the topic above. We have argued that people make assumptions based on underlying motives, and as described we have distinguished between firm serving and public serving motives of CSR. The conclusion we

came to was that public serving motives are more likely to be seen as genuine, while firm-serving motives are more likely to be seen as an attempt on greenwashing. This resulted in a Likert scale with four items. Three of these were designed to measure three types of firm serving motives: reputation, profit and trend. The last question intended to measure "non-greenwashing", or public serving motives.

Research model variables (Construct)	Questions (Translated from Norwegian)
Perceived innovativeness α = 0.916 (based on Kunz et al. 2010)	• I think Youthscape seems like a very creative company. • I think Youthscape is the type of company that firstly introduces novel solutions. • Youthscape seems to be an innovative company. • I think Youthscape will change the Norwegian market for cosmetics with their offers.
Perceived greenwashing α = 0.694 (α = 0.616) (based on literature review)	• I think that Youthscape has made improvements because it's important for them to be responsible and they care about the environment • I think Youthscape has made changes because it is profitable to make sustainable improvements. • I think Youthscape has made changes because it's a trend among companies to invest in sustainability. • I think Youthscape has made changes to improve their reputation.
Perceived trustworthiness - Integrity α = 0.964 (based Mayer et al., 1995)	• Youtscape seems to do the job as they say they will. • Youthscape seems to be an honest company • Youthscape seems to be a company that keeps its promises.
Perceived trustworthiness - Ability α = 0.944 (based Mayer et al.,1995)	• Youthscape seems to be a company with a high degree of competence • Based on what I have learned about the company, I feel confident about the company's knowledge. • I think Youthscape is competent.
Perceived trustworthiness - Benevolence α = 0.912	• I think Youthscape cares about their customer's well-being. • I think that the customers' needs and wishes are important to Youthscape. • I think Youthscape will go to great lengths in the attempt to help their customers.

(based Mayer et al., 1995)	

Sum of Chronbach's α after computing integrity, ability and benevolence into perceived trustworthiness (based on Mayer et al. 1995) equaled 0.959.

3.5.1 Likert scale

The questions in our survey was in form of 7-point Likert response format , where we computed the Likert items into Likert scale variables, that are part of our conceptual research model:

- perceived innovativeness

- perceived trustworthiness

- perceived greenwashing

The Likert format is a measuring instrument developed by Rensis Likert (1932) for measurement of attitudes, character and personality traits . A Likert scale is an averaged mean of several Likert items (Carifio & Perla, 2007). For example: " *Youthscape seems to be an honest company*", taken from our survey, is a Likert item, while the construct "integrity" is a Likert Scale.

There are often misconceptions in the research field regarding the Likert scale (Carifio & Perla, (2007). However, part of the discussion results due to confusion of misinterpretation of the Likert scale, such as the word scale and the response format in itself (Carifio & Perla, (2007). A Likert item is ordinal data, however by for example calculating the mean of multiple Likert items, and creating a Likert scale, we can consider it as continuous data to be able to perform the necessary parametric analysis to analyze and interpret our data (Carifio & Perla, (2007).

3.5.2 Control variables

We also added two control variables to our questionnaire. The first one was a four item scale (inspired by Peloza, Loock, Cerruti, & Muyot, 2012) that was operationalized and used to measure the construct of perceived reputation for sustainability in the paper by our

supervisor Siv Skard and her fellow associates, which was the basis of origin for our research. We included this variable to be able to measure whether our manipulation of reputation for sustainability was meaningful and produced the results we assumed it would. The second one was a measure of the respondent's "green profile" that also consisted of four Likert items. This scale of items was included because we assumed that the extent to which the consumers care about the environment might affect their responses.

Our demographic variables were included to be able to analyze whether our sample was representative for the population, as well as to be able to discuss differences between groups (Saunders et al., 2016).

3.6 Validity and reliability

The validity of the questionnaire, or internal validity, refers to whether the questionnaire measures what you intend it to measure (Saunders et al., 2016). Internal validity can further be divided into "content validity", "criterion related validity" and "construct validity". Content validity refers to whether the questionnaire covers what it needs to, in order to produce meaningful answers from the analysis. Criterion related validity is about whether the independent variables are designed in a way that predicts the outcome of the dependent variables. "Construct validity" concerns the extent to which items combined together as a scale measures the construct you intended it to(Saunders et al., 2016). Reliability on the other hand is a measure of consistency, and is about the questionnaire's ability to produce consistent findings under different circumstances(Saunders et al., 2016).

3.6.1 Pilot testing

To assess the content and criterion related validity, we wanted to do a pilot test before we distributed our questionnaire, which means testing the questionnaire on a number of people similar to those who will answer it. According to Saunders et al. (2016), 10 respondents are normally the minimum required respondents for student purposes, but as we were limited by time and resources and we wanted to distribute the questionnaire as soon as possible, we limited the pilot-test to some few friends and family. This gave us a chance to assess the "face validity" of the questionnaire, meaning testing whether it made sense to the respondents. What we wanted to find out by doing this, was whether the text for the scenarios was understandable, if the questions were clear and we also wanted to control

whether the respondents replied in a manner that was close to our expectations. Thus, we decided to test the questionnaire on 4 different respondents, one for each scenario. All of the test-respondents said the questions were clear and that the text was understandable and easy to read. We will now further elaborate on their answers, one by one.

The first respondent, who was exposed to incremental sustainability improvements and bad reputation said she was probably a skeptical consumer. When we asked why, she answered that she thought the company "only did what they had to", and that she would have been less skeptical if they would have done more than hiring a manager responsible for sustainability. We checked her response and saw that the answers for trust and innovativeness were on the mid-lower side of the scale, while the three negatively worded questions on our greenwashing scale were answered on the higher end of the scale. This was in line with our expectations.

The second respondent, who was exposed to the radical sustainability and good reputation scenario, had all her answers in the middle of the scale. The exception was the control variable "green profile", where she had answered "totally agree" on all three items. To our surprise, this was not in line with our expectations, which were a higher score on innovativeness and trust, and a lower score on greenwashing for the given scenario. We asked her if there was a reason for the neutral response, and her answer was that she didn't know the products or knew anything about them except from what she was told in the survey. She didn't have an appropriate basis for answering the questions in any other way. This is a common weakness of questionnaires and the fact that we used a fictitious company, which we acknowledge, but which is hard to improve. We also acknowledged that a person who has a high score on "green profile", also may have higher demands when it comes to product information, and that this might be a possible reason for her answers. We also realized she had spent less than three minutes on completing the questionnaire, which may indicate a "careless response" (Niessen, Meijer & Tendeiro, 2016). The other respondents spent between 5-9 minutes completing it.

The third respondent was exposed to the scenario with radical sustainability improvements and bad reputation. The responses on innovativeness and trust were on the mid/higher end of the scale, and so were the responses for the greenwashing variable. It was a bit harder to predict answers for this scenario, as one variable was high while the other was low, but in general we assumed that the radical improvements would mitigate the negative effect of bad

reputation. However, we did expect a negative correlation between trust and greenwashing, which was not indicated by this response.

For the last respondent we got aware of some technicalities in qualtrics that needed improvement. We expected to get results for the scenario with incremental sustainability improvements and good reputation, but we realized that this respondent had also gotten radical sustainability improvements and good reputation. This made us realize that the settings in qualtrics had to be changed in order to get an even distribution of the scenarios. We also noticed the respondent had only answered one of the four questions on our greenwashing scale, realizing we had forgotten to apply the "force response" option for this block of questions.

We decided to include the responses from our pilot test in our final data as we wanted to collect as many responses as possible, and they were conducted on the same terms as the rest of the responses. However we did delete the one with missing values for greenwashing, and improved the settings in qualtrics. We decided to not make further adjustments to the questionnaire. Although the responses varied in terms of our expectations we couldn't draw any conclusions from testing only four responses.

3.6.2 Manipulation check

To assess the validity of our manipulation of reputation for sustainability, we conducted a manipulation check. According to Jennifer Hoewe (2017), a manipulation check consists of "one or more questions geared towards understanding each participant's cognizance regarding the condition to which they were exposed". Thus we decided to conduct an independent sample t-test to check whether the two groups of our dichotomous variables had a significant effect on the mean of our continuous variable for reputation for sustainability. For bad reputation the mean was 3.3225, and for good reputation the mean was 5.3613. The differences between the groups were statistically significant ($p = 0.000$), thus we concluded that our manipulation of reputation for sustainability had been successful.

3.6.3 Chronbach's alpha

As we have mentioned previously, the data collection for this thesis was in a form of a questionnaire based on the Likert response format. The computation of the scales were meant to be composed of three items each, with the exception for perceived innovativeness

and perceived greenwashing which had four items individually. However, to be certain that the variables we computed were reliable, there were several elements to be taken into consideration. In particular, the internal consistency and unidimensionality of the computed variables. To test the internal consistency, we reviewed the coefficient alpha of the scales, also known as Chronbach's alpha.With Cronbach's alpha we want to make sure that we are measuring the same construct with our computed Likert scales, which is defined as internal consistency (Tavakol & Dennick, 2011). Furthermore, we performed a Principal Component Analysis which we will discuss in the next subchapter "*Factor analysis*".

Chronbach's alpha α is a numerical value between 0 and 1, where a value of α below 0.70 is considered low, and an α of .90 should not be exceeded (Tavakol & Dennick, 2011). However, in our case the only computed value that is lower than 0.70 is perceived greenwashing, with an α of 0.694. Originally, the variable had four items with an α value of 0.616, hence we chose to discard the first item, increasing the α to 0.694. This indicates a lower correlation amongst the items in the variable, but as it is just below 0.70 we deemed the α value as acceptable. Perceived innovativeness and perceived trustworthiness both have an α value above 0.90. This indicates that the variables are computed of items that are asking the same question, but in a different way. Nevertheless, as the variables only consist of 3-4 questions, we chose not to discard any questions due to the low number of items, and therefore proceeded with our analysis.

3.6.4 Factor analysis

For this subchapter, we examined the dimensionality of perceived innovativeness, perceived trustworthiness and perceived greenwashing. We performed an Principal Component Analysis (see APPENDIX XX) with an Varimax rotation with Kaiser Normalization (see APPENDIX XX. What we could interpret from the analysis was: the Kaiser-Meyer-Olkin measure of sampling adequacy equaled 0.934, which is greater than 0.8 and shows an adequate sampling. The Bartlett's Test of Sphericity a statistical significance (p = 0.000), which supports our KMO findings.

Furthermore, we have three components with an Eigenvalue greater than 1 which stand for 77 % of the variance. This indicates that the variables are not dimensional. However, the Varimax rotation, shows that the Likert items which constitute perceived innovativeness,

perceived trustworthiness and perceived greenwashing, are intercorrelated with each other, indicating a weakness in our operationalized constructs.

4. Data analysis

The hypothesized research model is tested using SPSS. Below, we will take you through the different steps we have been through to analyze our data, before we present our results in the next chapter.

First, we ran descriptive statistics on our data. We chose to split the descriptives by our four scenarios, as we believe this will give us the most meaningful insight regarding our research model and the purpose of our study. We also ran a correlation analysis, to get an overview of how the different variables in our research model interact with each other.

The next step was hypothesis testing. We first conducted an independent samples t-test to test H1, which aims to explain whether the degree of perceived sustainability improvements has an effect on perceived trustworthiness. We chose this test because it is suitable for a dichotomous independent variable (incremental versus radical sustainability improvements), and a continuous dependent variable (perceived trustworthiness). The independent samples t-test tells us whether there is a significant difference between the means of the two groups on the variable perceived trustworthiness (Pallant, 2005).

To test the remaining hypotheses concerning the mediating and moderating effects of our model we performed a regression analysis, applying Hayes PROCESS macro for SPSS (Hayes & Little, 2018). The PROCESS macro is developed specifically for simplifying the procedure related to the analysis of different models including mediating and moderating effects (Hayes & Little, 2018). For our hypotheses concerning mediation, we applied model 4 to conduct a simple mediation analysis. For the moderating effect, we applied model 1 for the effect of perceived sustainability improvements on perceived trustworthiness, and model 7 for the moderated mediation effects.

4.1 Correlation analysis

A correlation analysis is a statistical tool to assess the strength and direction of the relationship between two variables(Chen & Popovich, 2002). Due to the nature of our data, perceived reputation for sustainability and perceived sustainability improvements are defined as dichotomous variables. Dichotomous variables are characterized as categorical nominal variables that have only two categories(Pallant, 2005). The remaining variables are

continuous variables with numeric values. A phi-correlation is normally used for correlating two dichotomous variables, and a point-biserial correlation is normally used for correlating a dichotomous and a continuous variable (Tabachnick & Fidel, 2013). However, these types of correlations share the same formula, and as the dichotomous variables are dummy coded (0,1), all of the correlations can be calculated using a Pearson product-moment correlation(Tabachnick & Fidel, 2013). Thus we have used the Pearson correlation for calculating the correlations between all our different variables.

4.2 Assumptions for Independent samples T-test

The underlying assumptions that have to be met in order to use an independent samples t-test(Pallant, 2005), and their relevance for our data are described below:

1. Level of measurement. To test for significant differences between groups, the dependent variable has to be measured on a continuous scale. This assumption is met as we have combined our Likert items into scales, as described above (section measurement of variables).

2. Random sampling means the sample drawn from the population is randomly selected. This means every subject in the target population has an equal chance of being selected, and this increases the chance of a sample that is representative for the population (Acharya, Prakash, Saxena & Nigam, 2013). As pointed out by Pallant (2005), this is often not the case in real life research. We did attempt to check if our sample was representative of the population(see appendix). When it comes to distribution of males and females, our sample is fairly representative. However when it comes to level of education, higher education is overrepresented in our sample compared to the norwegian population. Also splitted by age groups, the groups of 25-34 and 35-44 are overrepresented in our sample, compared to the rest of the population. This doesn't come as a surprise as the sample is collected through our own social network. As we understand that this assumption is one that is often violated, we will still perform the test. However we do acknowledge that this might be a weakness in our study, and that statistical inference to the norwegian population might be less reliable.

3. Independence of observation. This assumption is violated if one observation is influenced by any other observation in the dataset. As the respondents are only exposed to one of the two groups (radical or incremental sustainability improvements and good or bad reputation), and there is no interaction between respondents, this assumption is also met.

4. Normal distribution. The data being normally distributed is generally an assumption when testing for differences between groups. According to the central limit theorem, this assumption can normally be violated for large sample sizes(greater than N=30)(Pallant, 2005), as research shows that as sample size increases, the distribution approaches normality(Kwak & Kim, 2017). Our sample is considered large enough to safely violate this assumption without major problems (N=254).

5. Homogeneity of variance. This assumption means the samples should be obtained from populations of equal variances. This is controlled through "Levene's test" for equality of variances, and we have found that this assumption is also met (see the chapter "Results" for further information).

4.3 Boostrapping

For our mediation analyses, we use bootstrapping. As explained by Hayes & Little (2018), bootstrapping resamples the original sample many times to create a simulated dataset with a number of different combinations, which results in an empirically derived representation of the sampling distribution for the indirect effect(ab). Based on this, a confidence interval for ab is constructed. Bootstrapping does not assume normality, like the normal theory approach does, thus we do not have to worry about the distribution of our sample.

5. Results

5.1 Preliminary analysis

For preliminary analytics, we have created two tables. One with descriptive statistics by scenario, and one correlation matrix. (see APPENDIX XX and APPENDIX XX. Due to the nature of our project, we find it useful to present our descriptives divided by the different scenarios that our respondents have been exposed to, thus we have combined our two dichotomous variables "reputation for sustainability" and "sustainability improvements" into the four different scenarios "Good reputation, Radical improvements", "Good reputation, incremental improvements", "Bad reputation, Radical improvements", and "Bad reputation, incremental improvements".

As we can observe from the descriptives, the trend for all three variables is a mean on the high end of the score for scenario 1 (good reputation, radical improvements), and the mean further on decreases for the following scenarios, more so for the two scenarios with "bad reputation". We also see that for incremental improvements, the mean is lower than for radical improvements, combined with both good as well as bad reputation. When it comes to the variables perceived innovativeness and perceived trustworthiness, this is in line with our expectations. However, for the variable perceived greenwashing, we observe an effect which is the opposite of what we anticipated. Our expectations was that the mean for perceived greenwashing would be at its lowest for scenario 1, and that it would increase with reducing reputation for sustainability and degree of sustainability improvements, thus correlating negatively with these two variables, as well as with perceived innovativeness and perceived trustworthiness. The score for perceived greenwashing is actually on the high end of the score across all four scenarios, and has the highest total mean of all of the measured variables in our model.

From the correlation analysis, it is worth noticing that both perceived reputation for sustainability and perceived sustainability improvements , have a significant positive correlation with perceived trustworthiness and perceived innovativeness (p ≤ 0.01). Notice that perceived trustworthiness and perceived innovativeness are strongly correlated with a significance level of 0.01 and a correlation value of 0.821**. The correlation between these

variables shows the highest correlation value of all the variables that were included in our research.

We would also like to point out the positive significant ($p \leq 0.01$) correlation(0.445**) between perceived trustworthiness and perceived reputation for sustainability. Furthermore, perceived innovativeness and perceived reputation for sustainability shows significant ($p \leq$ 0.01) correlation (0.475**). However, perceived innovativeness and perceived sustainability improvements show a lower, but still shows significant correlation (0.200**). Perceived sustainability improvements and perceived trustworthiness is observed to a have lower correlation (0.163**), but again, still significant ($p \leq 0.01$). The manipulation check variable for reputation for sustainability correlates positively and significantly ($p \leq 0.01$) with reputation for sustainability (0.556**, $p \leq 0.01$).

Perceived greenwashing has a significant correlation ($p \leq 0,01$) with perceived trustworthiness (0.336**), and perceived innovativeness (0,298**) . However, even though there is a minor correlation between perceived greenwashing and perceived sustainability improvements, and between perceived greenwashing and perceived reputation for sustainability, the correlation is not significant ($p \geq 0.05$).

Based on the results from these preliminary analysis, we have again reviewed our greenwashing scale, and we are worried that the questions we used for measuring this construct did not really measure what we intended it to. As we review the questions again, we realize that even though the questions might reflect the construct greenwashing as we have defined it through our literature review, they might also reflect perceptions that consumers might have about all companies, such as the fact that they care about profitability. Regardless of these insights, we will still include greenwashing in further analysis, even though we now have an indication that the results might not be as hypothesized.

5.2 H1 - Independent Sample *t*-Test

To test H1, the effect of radical (vs incremental) sustainability on perceived trustworthiness, we have chosen to perform an independent samples t-test, which is a test of whether there is a significant difference between the means of different degrees of sustainability improvements on perceived trustworthiness.

Following is a statistical model for a visualization of the effect:

The degree of sustainability improvements   **Perceived trustworthiness**

| X | → | Y |
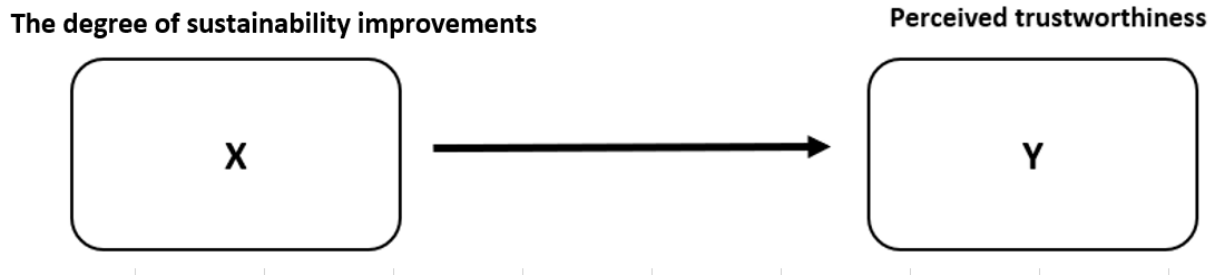
The results for our independent sample t-test are as follows:

Group Statistics

	Sustainability improvements	N	Mean	Std. Deviation	Std. Error Mean
Perceived trustworthiness	Incremental	128	4.0486	1.45806	0.12888
	Radical	126	4.5062	1.30885	0.11660

Independent Samples Test

		Levene's Test for Equity of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Perceived trustworthiness	Equal variances assumed	1.245	0.266	- 2.631	252	.009	- 0.45756	0.17394

As the test results for The Levene's test is not significant (p = 0.266), we can conclude there is equality of variances in our two groups, which is an assumption for conduction of an independent t-test.

The results of the independent t-test shows that there is a statistically significant difference between the two groups' effect on perceived trustworthiness (p = 0.009). There is a significant difference between the means of radical perceived sustainability improvements (M = 4.5062, SD = 1.30885), and incremental perceived sustainability improvements (M = 4.0486, SD = 1.45806).

Furthermore, to measure the effect size of our t-test, we calculated the Cohen's d. The results showed an effect size of d = - 0.33. Cohen (1988) suggests to determine the effect size based on the following: 0.20 indicates a small effect, 0.5 indicates a strong effect and 0.8 indicates a large effect. Based on this we can determine a small to medium effect size for d = 0.33. We can conclude that perceived radical sustainability improvements have a significant

positive effect on perceived trustworthiness compared to perceived incremental sustainability improvements, and H1 is therefore supported.

5.3 H2 - Simple mediation – Innovativeness

For H2, we tested whether the positive effect of radical sustainability improvements on perceived trustworthiness is mediated by perceived innovativeness. To answer this question we performed a mediation analysis using PROCESS model 4 from the PROCESS macro written by Andrew Hayes (& Little, 2018). The mediation analysis uses a 95 % bootstrapping interval to determine whether the indirect effect is significant or not. If the coefficient of the indirect effect falls within the CI and the 95 % bootstrapping interval does not straddle zero, it determines that there is a significant effect, and if the CI is completely above zero it shows that the statistical significance is positive (Hayes & Little, 2018).

Perceived innovativeness
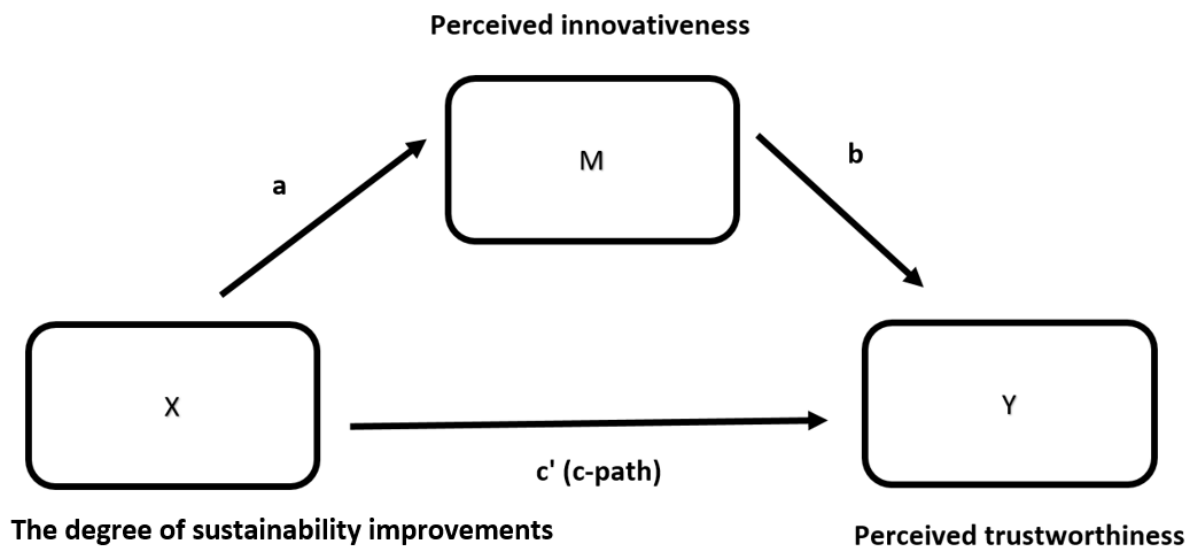
The mediation analysis includes the variables which can be seen in the conceptual/statistical model above that illustrates the relationship between the variables, and the effects they have on each other. The a-path depicts how perceived sustainability improvements affects perceived innovativeness, b-path displays the effect of perceived innovativeness on perceived trustworthiness, and c-path depicts the total effect perceived sustainability improvements (X) has on perceived trustworthiness (Y). c'-path however, is the direct effect that X has on Y, while keeping perceived innovativeness constant.

The mediation analysis concluded with the following results: For a-path the coefficient (β) was 0.6036, t (252) = 3.23 and was significant with a p-value of 0.0014. For b-path the coefficient was 0.7593, t (252) = 22.285 and was positively significant (p ≤ 0.0001). The total effect (c) of X on Y was statistically significant (β = 0.4576, t (252) = 2.63, p = 0.009), and shows that X has a positive effect on Y, which supports our findings for H1. The c'-path (β = - 0.0008, t (252) = 0.0076, p = 0.993) was not significant and had a β which was relatively close to 0. The indirect effect (β = 0.4583), however, with a CI 95 % [0.1852, 0.7322], was statistically significant. The following equation illustrates the relationship for our results for simple mediation:

$$0.4576 \quad = \quad -0.0008 \quad + \quad 0.4583$$

$$\underbrace{\qquad}_{\text{Total effect } (c)} \qquad \underbrace{\qquad}_{\text{Direct effect } (c')} \qquad \underbrace{\qquad}_{\text{Indirect effect } (ab)}$$

As we can see, the total effect (c) of X on Y is the result of the indirect effect (ab) due to the direct effect of X on Y being relatively close to 0, as we mentioned in the last paragraph. Furthermore, the 95 % bootstrapping confidence interval [0.1852, 0.7322] does not straddle zero and is entirely above zero, demonstrating a positive and significant mediation (Hayes & Little, 2018, p. 94). This suggests that the indirect effect is the main effect of the total effect, and perceived innovativeness fully mediates the relationship between X and Y, and thus supports H2.

- Overall model: $F_{(2,251)}$ = 258,58, p ≤ 0.0001, R^2 = 0.6732

5.4 H3 – Simple mediation – Greenwashing

For H3, we tested whether the effect of incremental (vs radical) sustainability improvements on perceived trustworthiness, is mediated by perceived greenwashing. We have performed a mediation analysis using model 4 from PROCESS macro accordingly to H2. Thus, the same steps have been taken when performing and analysing this mediation analysis.

Perceived greenwashing

```
        M
```

a   b

```
  X                              Y
        c' (c-path)
```

The degree of sustainability improvements   **Perceived trustworthiness**
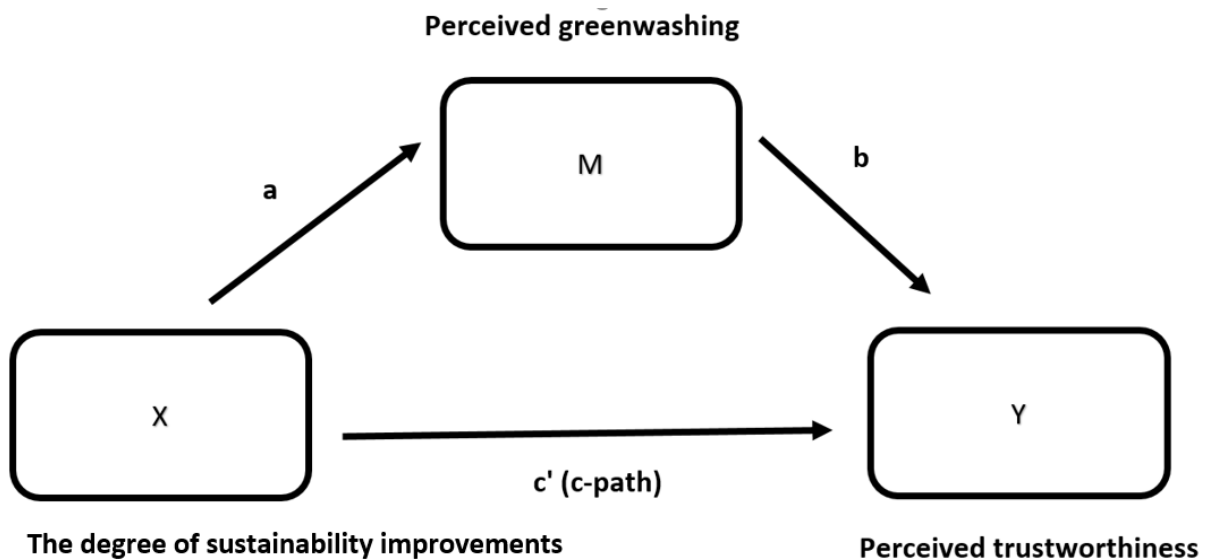
There is a positive relationship between perceived sustainability improvements and perceived greenwashing (a-path), however the relationship is not statistically significant (β = 0.2761, t (252) = 1.875, p = 0.062).

The relationship between perceived greenwashing and perceived trustworthiness (b-path) is both positive and significant (β = 0.3823, t (251) = 5.42 , p ≤ 0.0001).

The c-path shows the total effect of X on Y, which is identical (β = 0.4576, t (252) = 2.63, p = 0.009) with our previous mediation analysis from H2. The c'-path shows that there is a significant direct effect of perceived sustainability improvements on perceived trustworthiness while keeping greenwashing constant (β = 0.3520, t = 251, p = 0.0350).

Our results show that perceived greenwashing does not mediate the relationship between perceived sustainability improvements and perceived trustworthiness, as the indirect effect is not significant (β = 0.1056, CI 95% [- 0.0027, 0.2215] → CI 95% straddles zero). H3 is therefore not supported.

The following equation gives us a simplified interpretation of our results:

$$0.4576 \quad = \quad 0.3520 \quad + \quad 0.1056$$

Total effect (*c*)   Direct effect (*c'*)   Indirect effect (*ab*)

- Overall model: F (2,251) = 18.54, p ≤ 0.0001, R^2 = 0.1288

5.5 H4a – Simple moderation

Perceived reputation for sustainability
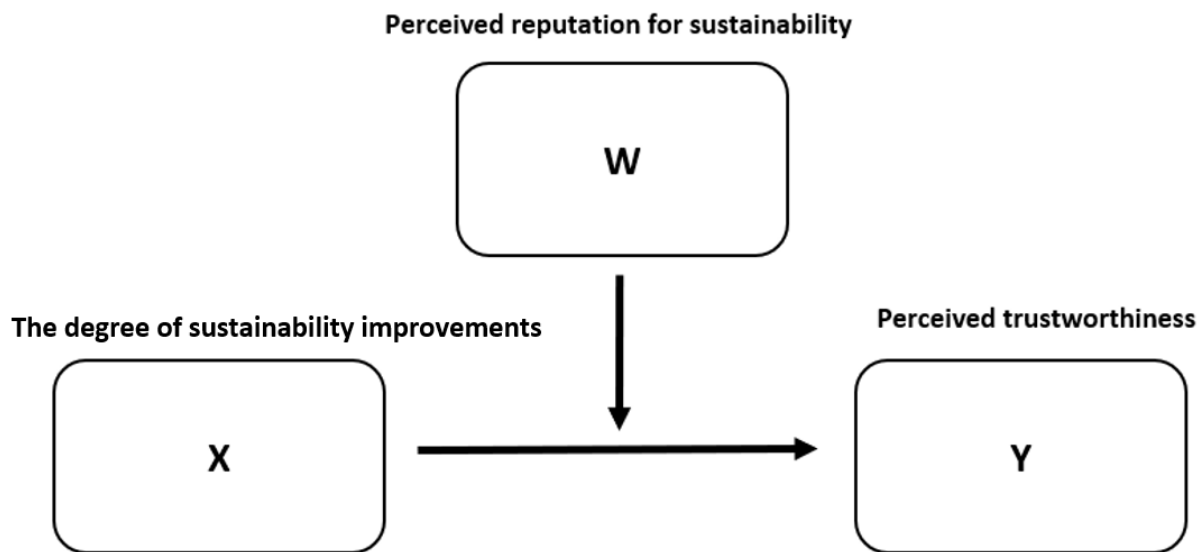
For H4a, we used Hayes PROCESS macro model 1, to test the moderating effect of perceived reputation for sustainability on the effect of perceived sustainability improvements on perceived trustworthiness. We considered using a two-way ANOVA for the purpose of testing this hypothesis as we have dichotomous X and W. However, Hayes & Little (2018, p. 292, p.298), argues that as long as the variables are coded correctly, the PROCESS model 1 is equivalent to the two-way ANOVA. As both our independent variables are dichotomous, we had to transform our dummy coded variables from 0 and 1, to - 0.5 and 0.5, to generate mathematically correct results using the PROCESS macro model 1 (Hayes & Little, 2018, p. 298). If the variables were dummy coded 0 and 1, we would get a simple parameterization effect of the 2*2 model instead of the desired main effects (Hayes & Little, 2018, p. 296).

The results displayed below show the individual main effects of perceived sustainability improvements and perceived reputation for sustainability on perceived trustworthiness, and the interaction effect of these two variables on perceived trustworthiness. The effects are depicted in a statistical diagram below, and we have also plotted the effects in an interaction plot for easier interpretation of the main and interaction effects.
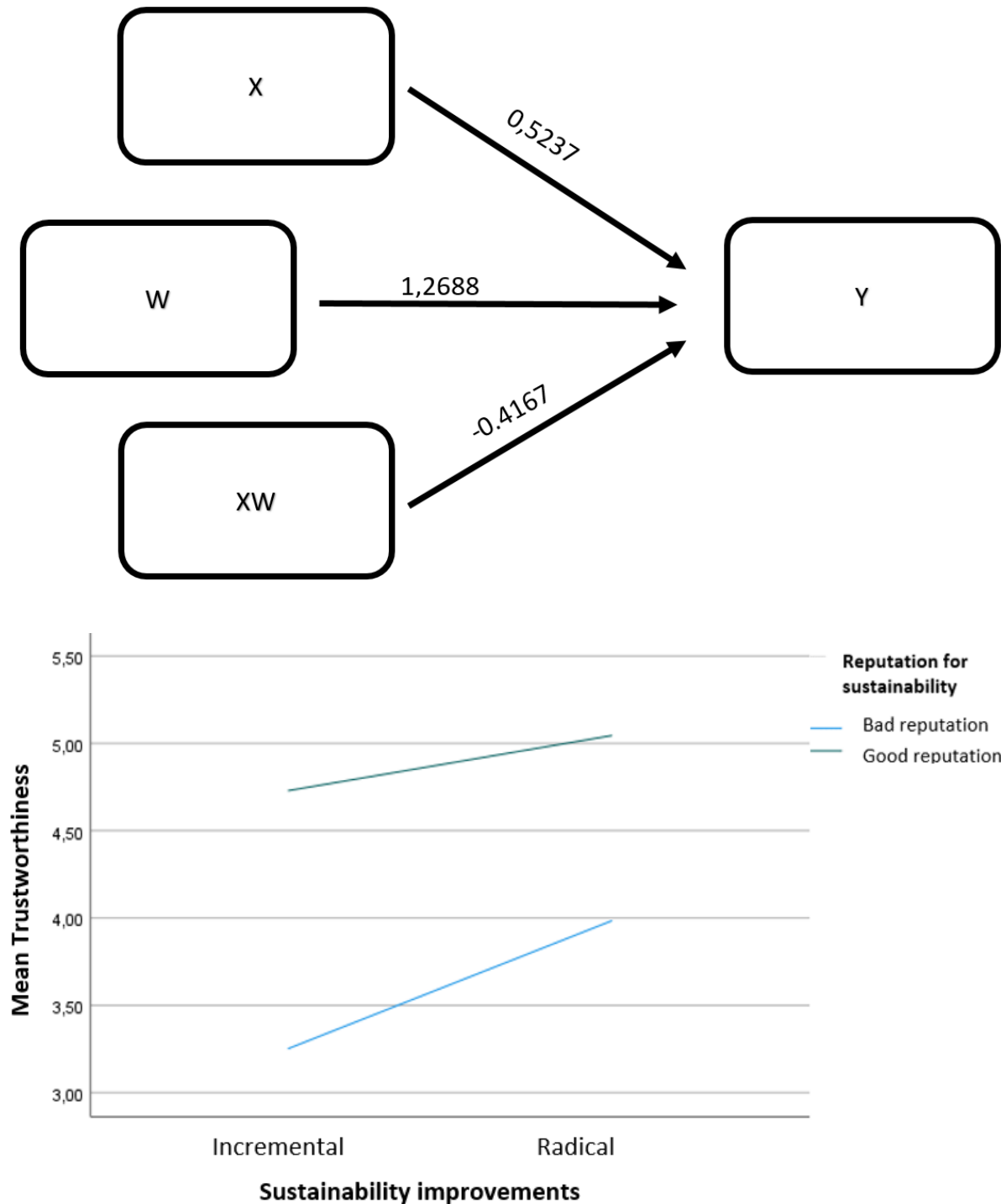
The main effects explain the mean effect of each of the individual variables on perceived trustworthiness, while keeping the other variable constant (Hayes & Little, 2018, p. 295). As we can see, perceived sustainability improvements have a positive, and significant effect (β = 0.5237, t (250) = 3.38, p = 0.008) on perceived trustworthiness, and perceived reputation for sustainability has an even stronger positive significant effect (β = 1.2688, t (250) = 8.19, $p \leq 0.0001$) on the same dependent variable. We also observe a negative interaction effect,

which means that the effect of perceived reputation for sustainability on perceived trustworthiness decreases for higher levels of perceived sustainability improvements. We can observe this in the interaction plot. The difference in the slopes indicates that we have an interaction effect, and this effect decreases for perceived radical sustainability improvements, as the lines approach each other. However, the interaction effect is not statistically significant (β = - 0.4167, t (250) = -1.35 p = 0.1796), and consequently hypothesis 4a is not supported

- Overall model: F (3,250) = 25.94, p ≤ 0.0001, R^2 = 0.2374

5.6 H4b – Moderated mediation – Innovativeness

To test hypothesis H4b, we performed a moderated mediation, referred to as conditional process analysis by Hayes (& Little,2018). For this analysis we will use the model 7 from PROCESS macro for moderated mediation. The purpose of this analysis is to examine whether the indirect effect of perceived innovativeness between perceived sustainability improvements and perceived trustworthiness, is moderated by perceived reputation for sustainability. Furthermore, for a better understanding of the context of the effects, we have created a statistical diagram, and an interaction plot that illustrates the relationship between the included variables.
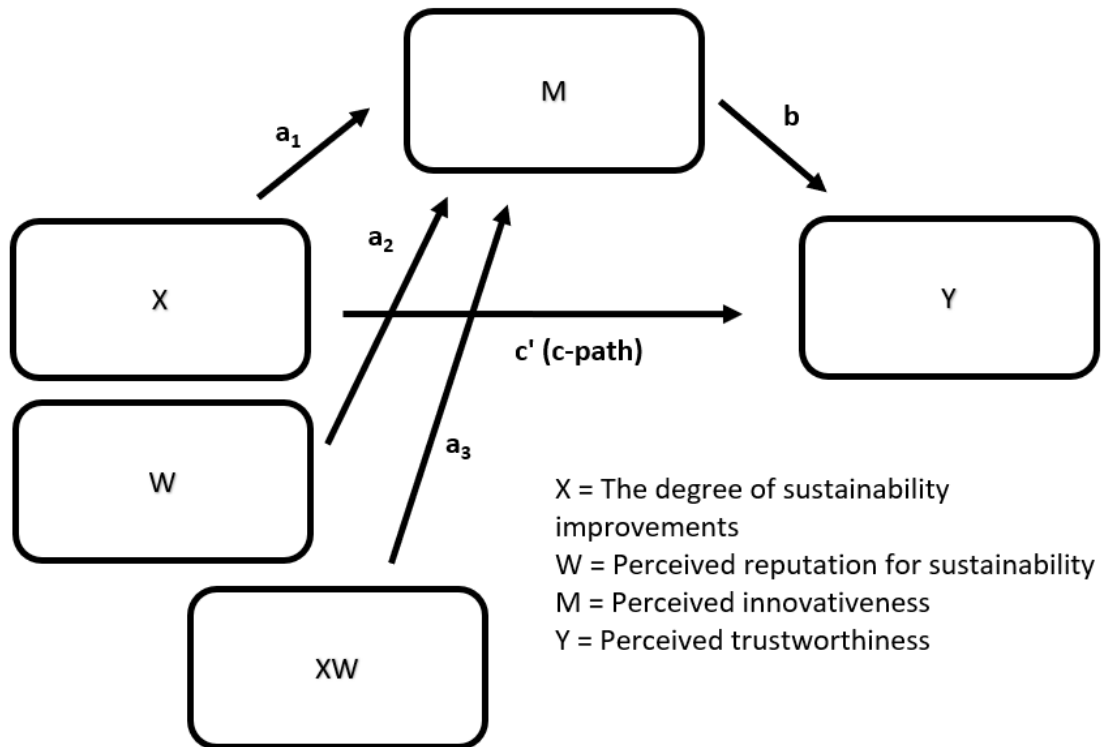
On the account that H4b is the moderating effect of perceived reputation for sustainability on H2, another three paths have emerged consisting of a_1-path (effect of X on M), a_2-path (effect of W on M) and a_3-path (effect of XW on M), which can be observed in the statistical diagram above. The a_3-path is the interaction effect of X and W on M.
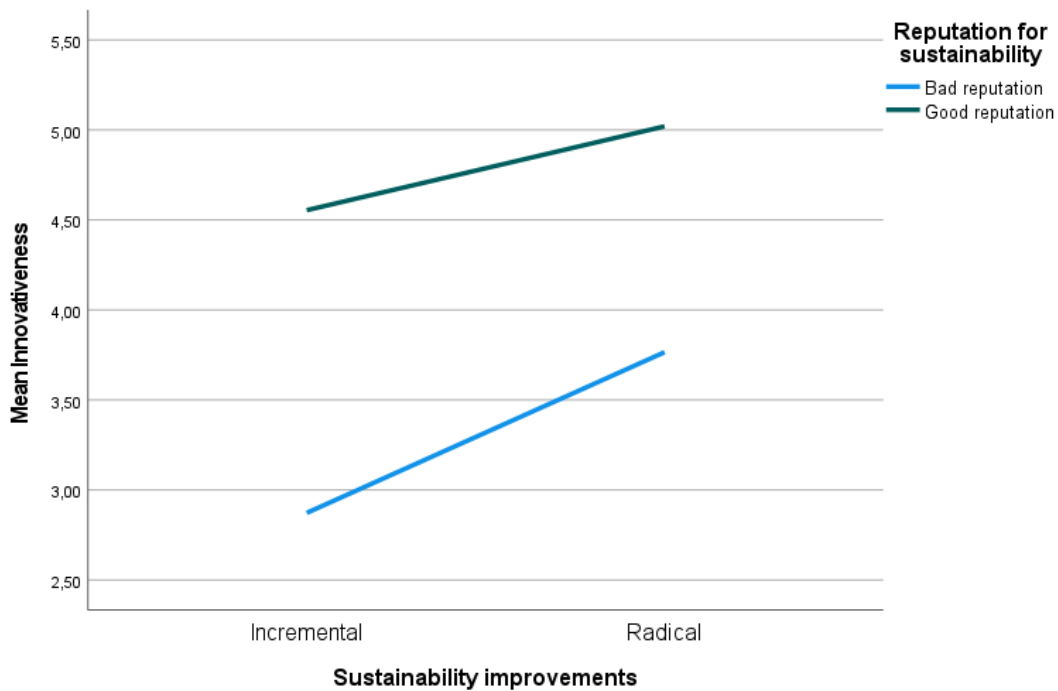
The effect of a_1-*path* showed a β value of 0.6793, t (250) = 4.17, and was significant ($p \leq$ 0.0001) . Next the effect of a_2-*path* was also significant (β = 1.4680, t (250) = 9.03 , $p \leq$ 0.0001), and displayed a formidable effect of perceived reputation for sustainability on perceived innovativeness. This finding corresponds with the correlation results from the correlation chapter, showing a significant correlation (2-tailed) between perceived innovativeness and perceived reputation for sustainability. The interaction plot shows similar results as the simple moderation analysis, with a smaller effect of reputation for radical improvements, indicating a negative effect, and the interaction effect is not statistically significant (β = - 0.4269, t (250) = -1.31, p = 0.1904). In addition, the bootstrapping confidence interval [-0.8285,0.1527] for the index of moderated mediation (a_3b = - 0.3242) does straddle zero, which indicates that there is no moderated mediation (Hayes & Little, 2018, p. 456). We can therefore conclude that hypotheses 4a is not supported.

For the outcome variable perceived trustworthiness, the effects are identical to the results from H2 :

    - *c'-path* (not significant):
        β = -0.0008, t (252) = - 0.008 p = 0.993

    - *b-path* (statistically significant):

        β = 0.7593, t (252) = 22.29, $p \leq$ 0.0001

- Overall model: F (3,250) = 33.39, p $\leq$ 0.0001, R^2 = 0.2799

5.7 H4c – Moderated mediation – Greenwashing

To test H4c, we performed a moderated mediation analysis identical to H4b, but with perceived greenwashing instead of perceived innovativeness as the mediator, using the same model 7 from PROCESS macro (Hayes & Little, 2018). We wanted to explore whether the indirect effect of perceived greenwashing between perceived sustainability improvements and perceived trustworthiness, is moderated by perceived reputation for sustainability. Subsequently, we have produced a statistical diagram, and an interaction plot that illustrates the relationship between the included variables.

Statistical diagram of moderated mediation H4c:
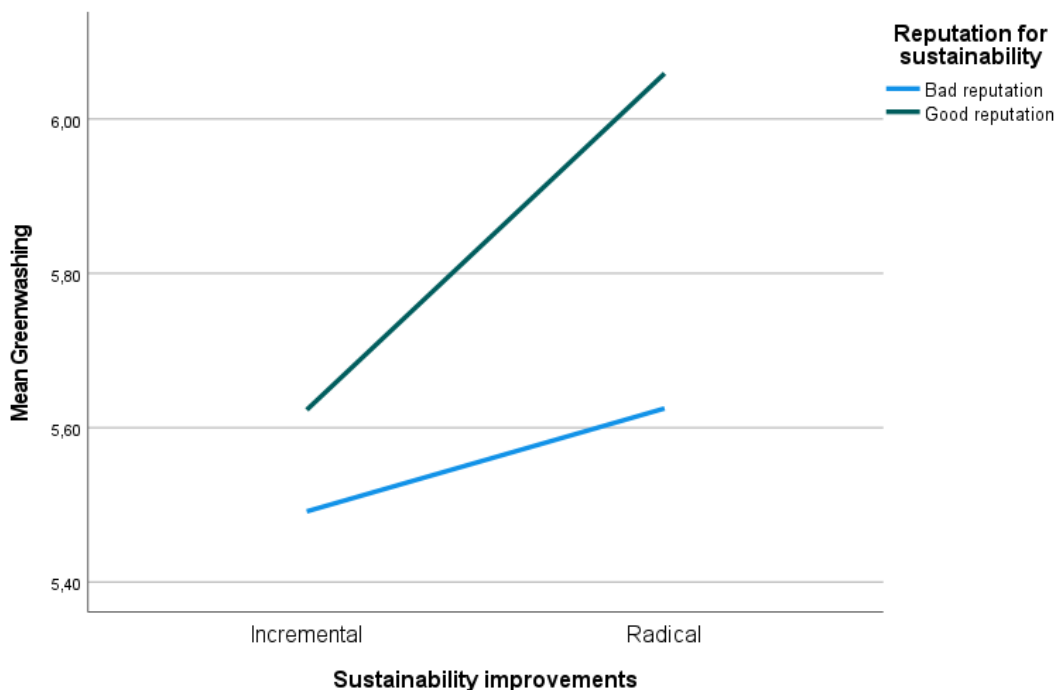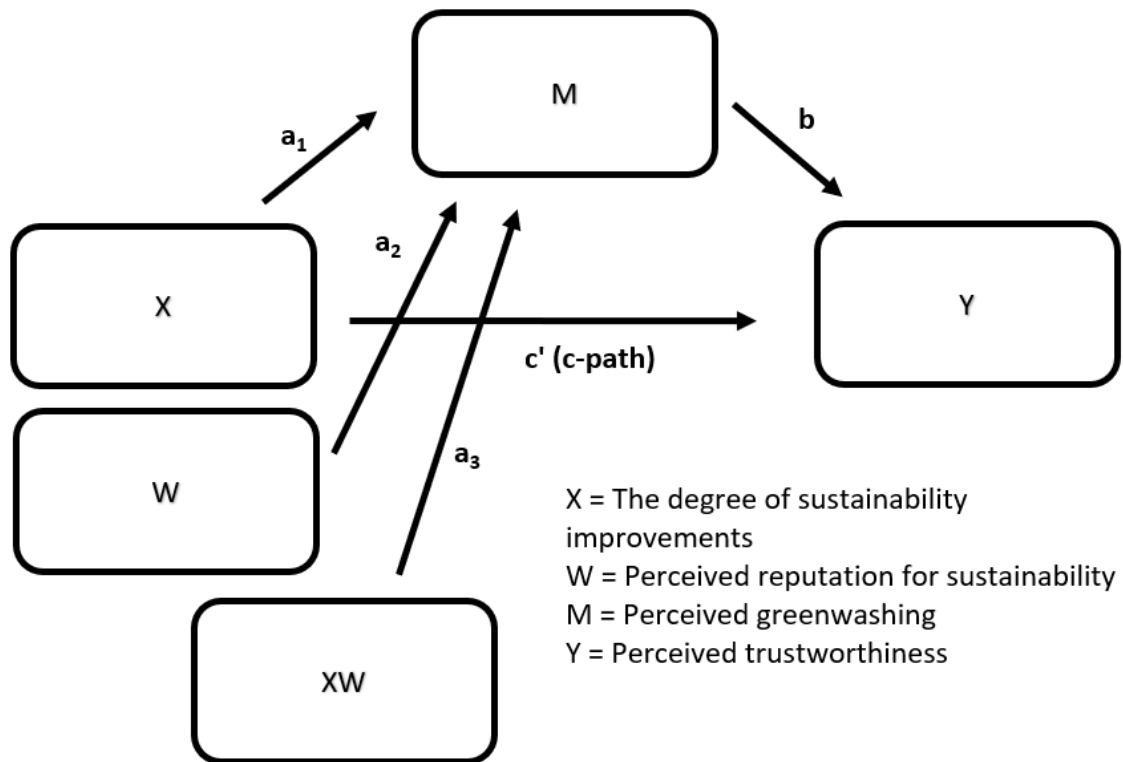
The interaction effect (a_3-*path*) of reputation on the relationship between perceived sustainability improvements and perceived greenwashing is positive, but not statistically significant ($\beta = 0.3025$, $t(250) = 1.03$, $p = 0.3037$). The positive effect indicates that

reputation for sustainability has a larger effect on perceived greenwashing for radical vs incremental sustainability improvements, which is visually depicted in the interaction plot. However, as the effect is not significant, and the confidence interval for the index of mediated moderation ($a_3b = 0.1156$, bootstrapping CI 95 % [-0.1071, 0.3618]) straddles zero, we can conclude that there is no moderation on the indirect effect, and hypothesis 4c is not supported. Looking further at the results of the main effects, we can observe that the main effects of (a_1-*path*) perceived sustainability improvements ($\beta = 0.2847$, t (250) = 1.94, $p = 0.0535$), and (a_2-*path*) perceived reputation for sustainability ($\beta = 0.2829$, t (250) = 1.92, $p = 0.0550$), both have positive effects that are not statistically significant at a 95% level.

- Overall model: F (3,250) = 2.77, p = 0.0422, $R^2 = 0.0322$

6. Discussion

Hypotheses results		Effect	Sig.	Bootstrapped 95 % CI
H1 - supported	The degree of sustainability improments → Perceived trustworthiness	0.33	≤ 0,01	
H2 - supported	The degree of sustainability improments → Perceived innovativeness → Perceived trustworthiness	0.4583		[0.1852, 0.7322]
H3 - not supported	The degree of sustainability improments → Perceived greenwashing → Perceived trustworthiness	0.1056		[- 0.0027, 0.2215]
H4a - not supported	Reputation for sustainability × The degree of sustainability improments → Perceived trustworthiness	- 0.4167	≥ 0.05	
H4b - not supported	Reputation for sustainability × The degree of sustainability improments → Perceived innovativeness → Perceived trustworthiness	- 0.3242	≥ 0.05	[-0.8285,0.1527]
H4c - not supported	Reputation for sustainability × The degree of sustainability improments → Perceived greenwashing → Perceived trustworthiness	0.1156	≥ 0.05	[-0.1071, 0.3618]

Table II: Hypoteses results

6.1 Summary of findings

The aim of the study was to investigate the effect that different degrees of sustainability improvements has on perceived trustworthiness. Specifically we wanted to investigate whether innovativeness mediates this relationship when sustainability improvements are radical, leading to a higher perceived trustworthiness, and whether greenwashing mediates the relationship when sustainability improvements are incremental, leading to a relatively lower perceived trustworthiness. Furthermore, we wanted to investigate whether these effects depend on a company's reputation for sustainability. Specifically we hypothesized that for a bad reputation for sustainability, trustworthiness would significantly decrease when going from radical to incremental sustainability improvements.

In H1, we tested whether the degree of sustainability improvements has a significant effect on perceived trustworthiness. Indeed, our research supports this hypothesis, as we observe a significant difference in trustworthiness between the two degrees of changes, such that

radical sustainability improvements significantly increases trust relative to incremental sustainability improvements.

In H2, we tested whether innovativeness mediates the relationship between perceived sustainability improvements and perceived trustworthiness. This hypothesis was also supported, showing that innovativeness fully mediates this relationship, leaving the degree of sustainability improvements insignificant when the effect of innovativeness is kept constant.

In H3, we tested whether greenwashing mediates the relationship between the degree of sustainability improvements and perceived trustworthiness. More specifically, we hypothesized that incremental (vs radical) sustainability improvements decrease trustworthiness, and that this effect is because of a perception of greenwashing. This hypothesis was not supported as there was no significant indirect effect. The effect was positive, although not significant. Indeed we did expect a positive indirect effect, however, we hypothesized that the a and b path's would be negative, suggesting higher levels of greenwashing for incremental sustainability improvements, and lower levels of trust for higher levels of greenwashing. As our a and b paths are both positive, we observe the opposite effect from what we expected; higher levels of greenwashing for radical sustainability improvements, and also higher levels of trustworthiness for higher levels of greenwashing.

For H4a, we wanted to investigate whether reputation for sustainability moderates the relationship between the degree of sustainability improvements and perceived trustworthiness. The simple moderation analysis shows a negative interaction effect. The negative effect implies that reputation has a greater effect on incremental sustainability improvements than on radical sustainability improvements, which is in line with our expectations. However, as the interaction effect is not significant at a 95% level, H4a is not supported. What we do however observe is that reputation for sustainability improvements individually does have a significant effect on perceived trustworthiness, and that this effect is even stronger than for sustainability improvements. The results indicate that perceived

reputation for sustainability and the degree of sustainability improvements are both significant predictors of perceived trustworthiness. However, the effect that reputation has on perceived trustworthiness for the different levels of sustainability improvements is not large enough to say that the increase in trustworthiness due to increase in improvements depends on reputation for sustainability.

When testing H4b, the moderated mediation analysis with innovativeness as the mediator, we got similar results as for H3, indicating that perceived reputation for sustainability does not moderate the indirect effect of innovativeness between perceived sustainability improvements and perceived trustworthiness. Still, the individual main effects are significant, but not the interaction effect, indicating there is no moderation of the indirect effect. Thus, H4b was also rejected.

For H4c, we wanted to test whether reputation for sustainability moderated the indirect effect of greenwashing on the relationship between the degree of sustainability improvements and perceived trustworthiness. The moderated mediation analysis with greenwashing as a mediator shows positive main effects and a positive interaction effect, implying that reputation has a larger effect on trust for radical improvements than for incremental improvements. Neither of the effects were significant, which means H4c is also rejected. However, it is interesting to further discuss the results, although not significant. What we expected was that reputation would have a greater effect for incremental improvements, such that greenwashing would be notably decreased for a company that had a good reputation (vs a bad reputation), and that this decrease would be significantly larger when the company did radical (vs incremental) sustainability improvements. This also implies that we expected negative main effects. This means that the results we got were completely opposite from our expectations.

6.2 Unexpected findings

	Mean scores by scenarios			
	Scenario 1 (Good reputation, radical improvements)	Scenario 2 (Good reputation, incremental improvements	Scenario3 (Bad reputation, radical improvements)	Scenario 4 (Bad reputation, incremental improvements
Perceived trustworthiness	5,0448	4,7295	3,9844	3,2524
Perceived innovativeness	5,0202	4,5543	3,7656	2,8792
Perceived greenwashing	6,0591	5,6232	5,625	5,4915

As mentioned above, our results of H3 and H4c related to greenwashing were not according to what we predicted. As we observe, the mean scores on greenwashing are relatively high across all scenarios. We believe there might be several different explanations for this unexpected finding.

We have discussed the possibility of whether this finding can be due to the fact that people are generally sceptical towards companies. As we have outlined previously, consumers are becoming more and more aware that companies are taking advantage of the CSR trend to become more profitable. We believe there might be a chance that consumers do in fact have a low threshold when it comes to attributing companies' acts to ulterior motives, and suspect greenwashing. However, as pointed out in our analysis for H3, we have found that our greenwashing variable significantly increases perceived trustworthiness, which we find confusing. We find it hard to imagine that a perception of greenwashing can actually have a positive effect on trustworthiness, which leads us to another alternative explanation, namely that we might not have measured greenwashing correctly. As we discussed in relation to our preliminary analyses, we suspected that our operationalization of the variable greenwashing might not have captured the essence of the concept of greenwashing. We realized that, no matter what scenario the respondent was given, it might be natural to assume that they will score highly on this scale; of course the company will follow trends, and have a wish to improve their reputation and increase their profitability, which the consumer doesn't necessarily perceive as something negative. This doesn't mean that greenwashing can not be a predictor of (reduced) trust, and that it is wrongfully a part of our model, it rather indicates

that we have done a poor job conceptualizing and operationalising the construct in our questionnaire.

As we can observe from the table showing the mean scores by scenario, there is a significant difference between the mean score for perceived trustworthiness for scenario 1 and scenario 4. Based on our discussion, we cannot outrule the possibility that consumers' perception of greenwashing is high for scenario 4, even though we have not been able to support this theory by our findings.

6.3 Limitations

There are a number of limitations to our study that should be acknowledged. First of all limited time and resources has made it difficult to refine the study the way we otherwise would have been able to. Also our experience as researchers is a limitation. After having been through the whole research process, there are many things we would have wanted to do differently if we were to do it all over again, to be able to generate more insightful and valid results. The fact that we were in a rush to distribute the questionnaire and due to the limited understanding of the data collection process, might have had an impact on the quality of our questionnaire, such as the operationalization of the construct greenwashing as previously discussed. Further, there are limitations regarding the representativeness of our sample. As our sample is overrepresented by respondents of higher education and the age group ranging from 25-44, generalizing the results to the population of Norwegian consumers might be problematic. Also as pointed out in the pilot testing section, using a questionnaire as a single method for data-collection, and the fact that we used a fictitious company may be weaknesses. As one of our respondents commented, she thought it was hard to draw conclusions about a company she didn't know and had limited information about.

7. Conclusion

7.1 Conclusion

By conducting this research the aim was to answer the following research question:

"How does the degree of sustainability improvements affect consumers' perception of the company's trustworthiness, and does it depend on the company's reputation for sustainability?"

To answer the research question we developed six hypotheses in total. The first hypothesis was whether radical sustainability improvements increased perceived trustworthiness. In hypothesis 2 & 3 we further hypothesized that the effect between the degree of sustainability improvements and perceived trustworthiness was mediated by perceived innovativeness when sustainability improvements were radical, and perceived greenwashing when sustainability improvements were incremental. Hypothesis 4, 5 & 6 examined whether reputation for sustainability moderated the effects of the first three hypotheses.

Through analysis, we found support for hypothesis 1 & 2, thus we can conclude that the degree of sustainability improvements has an effect on perceived trustworthiness, and that this effect is mediated by perceived innovativeness. We did not find support for greenwashing as a mediator, however as pointed out through our discussion, we do not want to rule out the possibility that it still might be, even though we could not capture this effect through our research. Further, as hypotheses 4,5 and 6 were all rejected, we do not find support that reputation for sustainability moderates the relationship between the degree of sustainability improvements and perceived trustworthiness. However, we did find that reputation for sustainability has a significant effect on perceived trustworthiness. Thus, we can conclude that both the degree of sustainability improvements and reputation for sustainability individually are predictors of trust.

7.2 Future Research

As we obtained some unexpected results related to greenwashing, we would like to suggest further research on this topic to be able to clarify the role of perceived greenwashing in the relationship between the degree of sustainability improvements and perceived

trustworthiness. We believe that a different approach to operationalization of the construct greenwashing may be required to achieve valid results. As mentioned in our literature review, greenwashing can be defined as disclosing false information or as disclosing only positive parts of information in an attempt to create an overly positive corporate image. Thus, we believe that directing questions more directly towards this will be meaningful. Examples can be asking questions such as "Do you believe that the company has made changes to create an overly positive corporate image" or "do you believe that the company is making changes to make up for previous poor sustainability efforts".

We also found some other interesting results that we believe may be interesting to have a closer look at. As the scores were high on the greenwashing scale for all scenarios, we discussed whether this was because of a general high scepticism towards companies, and we believe it might be interesting to explore the relationship between consumer scepticism and trust further.

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APPENDIX *III*

Report – Descriptive statistics by scenario				
Scenario		*Innovativeness*	*Greenwashing*	*Trust*
Good reputation, Radical improvements	Mean	5,0202	6,0591	5,0448
	N	62	62	62
	Std. Deviation	1,13919	0,92629	0,98099
	Minimum	1	3,33	1,56
	Maximum	7	7	6,56
Good reputation, Incremental Improvements	Mean	4,5543	5,6232	4,7295
	N	69	69	69
	Std. Deviation	1,36855	1,23393	1,20011
	Minimum	1	1	1

	Maximum	7	7	7
Bad reputation, Radical improvements	Mean	3,7656	5,625	3,9844
	N	64	64	64
	Std. Deviation	1,37211	1,1856	1,38025
	Minimum	1	2	1
	Maximum	7	7	6,89
Bad reputation, Incremental improvements	Mean	2,8729	5,4915	3,2524
	N	59	59	59
	Std. Deviation	1,26744	1,28855	1,33043
	Minimum	1	1,67	1
	Maximum	5,75	7	6,67
Total	Mean	4,0787	5,6995	4,2756
	N	254	254	254
	Std. Deviation	1,5153	1,17964	1,40218
	Minimum	1	1	1
	Maximum	7	7	7

APPENDIX IV

Correlations Matrix - Pearson Correlation

	Reputation	Improvements	Innovativeness	Greenwashing	Trustworthiness	Green profile	Man. check reputation	Gender	Age	Education	Occupation
Reputation	1										
Improvements	-0,047	1									
Innovativeness	,475**	,200**	1								
Greenwashing	0,114	0,117	,298**	1							
Trustworthiness	,445**	,163**	,821**	,336**	1						
Green profile	-0,054	-0,043	0,087	0,065	,144*	1					
Man. check reputation	,556**	,177**	,785**	,280**	,838**	,145*	1				
Gender	0,005	0,007	-0,080	-0,112	-0,121	-,321**	-,134*	1			
Age	0,005	0,008	0,011	-0,054	0,036	-0,063	0,000	0,048	1		
Education	-0,069	0,045	-0,122	0,073	-0,123	-0,075	-,125*	0,021	-0,013	1	
Occupation	0,071	0,113	0,039	-0,048	0,097	-0,110	0,054	0,113	,374**	-0,006	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Correlations Matrix - Pearson Correlation

	Reputation	Improvements	Innovativeness	Greenwashing	Trustworthiness	Green profile	Man. check reputation
Reputation	1						
Improvements	-0,047	1					
Innovativeness	,475**	,200**	1				
Greenwashing	0,114	0,117	,298**	1			
Trustworthiness	,445**	,163**	,821**	,336**	1		
Green profile	-0,054	-0,043	0,087	0,065	,144*	1	
Man. check reputation	,556**	,177**	,785**	,280**	,838**	,145*	1

The population of Norway	Statistics Norway (SS)	Pecent SS	Sample
18-24	470 970	11,1 %	7,9 %
25-34	745 147	17,5 %	46,9 %
35-44	703 838	16,6 %	23,6 %
45-54	748 079	17,6 %	12,6 %
55-64	639 122	15,0 %	7,9 %
65-74	534 724	12,6 %	0,8 %
75 or older	407 092	9,6 %	0,4 %
Total	4 248 972		
Female		49,0 %	57,5 %
Male		51,0 %	42,5 %
Education			
Primary school		25,3 %	0,8 %
Upper secondary school		37,0 %	19,7 %
University		34,6 %	79,5 %

APPENDIX V

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9,547	59,667	59,667	9,547	59,667	59,667
2	1,741	10,880	70,547	1,741	10,880	70,547
3	1,006	6,290	76,837	1,006	6,290	76,837
4	0,711	4,445	81,282			
5	0,631	3,944	85,227			
6	0,448	2,803	88,029			
7	0,385	2,409	90,438			
8	0,323	2,016	92,454			
9	0,250	1,565	94,019			
10	0,218	1,362	95,381			
11	0,182	1,139	96,520			
12	0,149	0,932	97,452			
13	0,131	0,819	98,271			
14	0,113	0,709	98,980			
15	0,101	0,630	99,610			
16	0,062	0,390	100,000			

Extraction Method: Principal Component Analysis.

APPENDIX VI

Rotated Component Matrix			
	Component		
	1	2	3
I think Youthscape seems like a very creative company	0,825		
I think Youthscape is the type of company that firstly introduces novel solutions	0,87		
Youthscape seems to be an innovative company	0,841		
I think Youthscape will change the Norwegian market for cosmetics with their offers	0,731		
Youtscape seems to do the job as they say they will	0,791	0,389	
Youthscape seems to be an honest company	0,8	0,346	
Youthscape seems to be a company that keeps its promises	0,808	0,377	
Youthscape seems to be a company with a high degree of competence	0,783	0,367	
Based on what I have learned about the company, I feel confident about the company's knowledge	0,78	0,451	
I think Youthscape is competent	0,77	0,461	
I think Youthscape cares about their customer's well-being	0,467	0,787	
I think that the customers' needs and wishes are important to Youthscape	0,314	0,85	
I think Youthscape will go to great lengths in the attempt to help their customers	0,43	0,819	
I think Youthscape has made changes because it is profitable to make sustainable improvement	0,331		0,626
I think Youthscape has made changes because it's a trend among companies to invest in sustainability			0,865
I think Youthscape has made changes to improve their reputation			0,831

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

Youthscape har de siste årene fått en svært lav score på "The Dow Jones Sustainability Index". Indeksen blir brukt som målestokk for å evaluere hvor bærekraftig et selskap er. Det har blitt stilt spørsmål om selskapets integritet når det gjelder bærekraftig produksjon, noe som har ført til mye kritikk i media. De har blant annet blitt anklaget for forurensning av drikkevann og dårlige arbeidsbetingelser for ansatte ved produksjonsfasilitetene deres i Bangladesh og Filippinene.

Youthscape har de siste årene fått en svært høy score på "The Dow Jones Sustainability Index". Indeksen blir brukt som målestokk for å evaluere hvor bærekraftig et selskap er. Selskapet har etablert en sterk kultur for bærekraft innad i organisasjonen, noe som har ført til at de har fått mye positiv oppmerksomhet i media. De har blant annet fått mye skryt for deres engasjement for lokalsamfunnet i Bangladesh og Filippinene, hvor to av deres største produksjonsfasiliteter er lokalisert. Blant tiltakene er rensing av drikkevann og svært gode arbeidsbetingelser for lokale arbeidere.

Youthscape har nylig gjort store endringer i verdikjeden:

- De har inngått kontrakter med nye leverandører som leverer økologiske ingredienser. Samtlige av bedriftens hår-og hudpleieprodukter vil derfor bli svanemerkede.

- De har effektivisert produksjonsprosessen, kuttet ut unødvendige ledd og tatt i bruk mer miljøvennlig produksjonsutstyr.

- De har redusert bruken av plastemballasje. Hud- og hårpleie produktene selges i glassflasker hvor man kan kjøpe re-fills som kommer i 100% nedbrytbart materiale. Sminken leveres i esker av bambus som er nedbrytbart, samt at de fleste produktene som øyenskygger og foundations kan re-filles.

- De har byttet ut mikroplast i samtlige skrubbeprodukter med naturlige alternativer som sukker, salt og urter.

- De har endret transportmetodene slik at varene blir transportert til salgssteder på en mer miljøvennlig måte.

Endringene har ført til en vesentlig reduksjon av bedriftens totale CO_2-utslipp.

Youthscape har nylig gjort endringer i selskapet:

- De har ansatt en bærekraftsdirektør som vil ha ansvaret for selskapets miljøtiltak.

- Selskapet har lansert et nytt prosjekt som går ut på at hver gang noen kjøper produktene deres, vil 1% av kjøpesummen doneres til regnskogfondet.