EWOM intentions and renewable energy

A quantitative research on how social media behaviour is influenced by media portrayal, trust, and environmental concern

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ABSTRACT

Global warming is taken more seriously now that more people start to experience the consequences of it. Consumers are becoming aware that they can contribute to the stagnation of this rise in temperature by changing their consuming habits. Switching from fossil fuels to renewable energy is one of the actions consumers can take to contribute. Energy suppliers often promote themselves online, which is also the place where consumers search for information about their products. Online messages by other consumers and organisations are very important in this process. The individual level of environmental concern is assumed to play a big role in the decision whether to participate in electronic word-of-mouth (eWOM) about renewable energy or not. This is also expected of the level of trust the consumer has in the organisation. This research aims to discover more about the relationship between media portrayal of renewable energy and the intention of consumers to participate in eWOM about this, and its relation to trust and environmental concern.

To answer the research question, an online experiment has been conducted with a unifactorial design with three conditions (green condition, grey condition, and a control condition). The sample consists of 273 respondents. The results show that media portrayal did not have a direct effect on eWOM intentions. Media portrayal does significantly influence the level of trust the respondent has in the organisation. The green condition showed higher levels of trust than the grey condition. Consequently, higher levels of trust lead to more positive eWOM intentions. Environmental concern does not have a moderation effect on the relationship between media portrayal and eWOM intentions. Furthermore, a full mediation of trust has been found in the relationship between negative/green media portrayal and negative eWOM. Only a partial mediation of trust has been found between negative/grey media portrayal and negative eWOM. For positive eWOM, no mediation has been found. The findings provide insights for marketers and energy suppliers on how to create a strategy for promoting their products, and into what happens when negative or positive messages are posted about them by a third party. More research will be necessary to be able to fully comprehend the relationship between media portrayal, trust, environmental concern, and eWOM.

KEYWORDS: renewable energy, eWOM, trust, environmental concern, media portrayal

Preface

Before you lies the thesis "eWOM intentions and renewable energy: a quantitative research on how social media behaviour is influenced by media portrayal, trust, and environmental concern", the final product of the Master Media & Business at Erasmus University Rotterdam. During the research process of the thesis, the COVID-19 pandemic caused the university to close, making it necessary to study at home. I have to admit that this has been difficult, as I often study at school. Nevertheless, this makes me even more proud and happy that I have been able to finish the Master thesis.

I have learned a lot during the process of writing this thesis. When I started on this project, I did not know much about the topic of renewable energy. Now that I do, I have already been making use of my new knowledge by choosing an energy supplier that scores high on sustainability in the research by the Consumentenbond and even convinced my parents to do the same!

I would like to thank my supervisor dr. A.M. van Prooijen for being supportive and helpful during the times I needed it. Sometimes I was completely lost in everything I tried to say and she has been able to get me back on track. Furthermore, I would not have succeeded without Stefan, thank you for reading my work and for always supporting me, especially during the moments when I had no motivation to continue this research. Also, I would like to thank my sister and my parents for brainstorming with me about the subject, proof-reading my work, and being there for me. I also want to thank Kelly for all our discussions on our theses, which have really helped me during the process. Finally, I would like to thank the respondents that were willing to fill out the experiment and distribute it further, as this research would not have been possible without their help.

This thesis will be one of the last things I will hand in as a student, as I will put my gained knowledge into practice after the upcoming summer. I am curious about what the future holds!

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1. Introduction

1.1 Increased importance of interest in climate change

"I want you to act as if the house is on fire, because it is" is what Greta Thunberg, a young climate activist, said at the World Economic Forum in Davos on 24 January 2019 (BBC, 2019). An increasing number of countries are becoming concerned about the climate because they start to feel the consequences of the rising temperature. Research by Statista among a group of 18,519 respondents in 28 countries showed that 37% of them included global warming in their top 3 of the most important environmental issues their country faces today. 22% of them included future energy sources and supplies and another 22% put nature resource depletion in their top 3 (Wang, 2019). This shows that interest in and worries about climate change increases.

Wells, Ponting, and Peattie (2011) found that consumers find themselves responsible for a big part of climate change and want to be part of the solution. Something that consumers can participate in is switching from grey energy to renewable energy. Grey energy is retrieved from fossil fuels (Nunez, 2019), whereas renewable energy can be defined as "sustainable or green energy, that is derived from natural processes and is constantly replenished. It includes among others wind energy, hydropower, solar energy, geothermal or aerothermal heat" (Centraal Bureau voor de Statistiek [CBS], 2020). Using renewable energy will ensure that energy is generated without depleting nature (CBS, 2019).

As the importance of climate change increased, media attention around this topic increased as well (Schmidt, Ivanova, & Schäfer, 2013). Sampei and Aoyagi-Usui (2009) researched this and found that an increase in media attention also led to a short-term increase in public concern. Advertisers respond to the visibility of the issue and use it as a marketing strategy to sell products under the label of sustainability (Dande, 2012). Energy suppliers often advertise their product as a contribution to the improvement of the climate, making consumers believe that they take care of nature when they purchase their product, which is called 'green marketing' (Majid, Bhat, & Kansana, 2016; Xue & Muralidharan, 2015).

Different types of companies work in the energy market. It is important to differentiate between these types, as they market different products. This difference is mainly between energy suppliers and energy producers. Energy suppliers are the connection between energy producers and consumers (in case the supplier is not a producer as well), whereas producers generate energy. Energy can be generated from green or grey sources. Suppliers want to offer green energy but do not always deliver this to their consumers. The demand for green energy is increasing but some companies portray themselves only as green, intentionally or accidental, while in practice they are not. This means that they mislead their consumers (Natuur & Milieu, Greenpeace, Consumentenbond, & Wise, 2019). Every year, Natuur & Milieu, Greenpeace, Consumentenbond, and Wise research the Dutch energy market in terms of sustainability. Last year, in 2019, they included 37 private energy suppliers and 24 energy suppliers that deliver to businesses and graded them on the sustainability of three different aspects: investments, delivery, and purchasing. These include the investments made by the organisation in the sustainable production of energy, what kind of energy they deliver to the consumer, and what kind of energy they purchase from energy producers. The scores on these three fields determine their overall sustainability score. Natuur & Milieu et al. (2019) found that several organisations portray themselves as green or sustainable organisations, while they are not in practice, and use this as a marketing strategy. The organisations can make themselves appear green by making use of certificates of origin, which can be sold along with grey energy, and indicate that the organisation has paid for green energy somewhere. It seems that consumers accept this, because the companies that work like this still exist, while there is public information available that reveals that the claims by the energy suppliers are untrue. Consumers do not receive the product they expect when they decide to buy energy from such a company. This could influence the consumers' belief in the trustworthiness of these companies and harm their trust in them. Consequently, this can impact how the company is perceived and how its actions are judged. This affects what consumers will tell their friends, family, or even (online) strangers about the organisation. This type of promotion is important for organisations, as it can reach or influence many (potential) consumers.

Word-of-mouth, which is "product information that individuals transmit to other individuals" (Solomon, 2018, p. 422), is important in the promotion of products. Online communication about products is important as well, which is also called electronic word-of-mouth, or "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004, p. 39). The Internet is important because many energy suppliers promote themselves online, but it is also the place for consumers to search for more information when they consider switching supplier or tell others about their experiences with a specific organisation (ACM, 2019; Castle, 2017). How an organisation is portrayed online, positively or negatively, affects how people will respond to the organisation and whether they would like to share something (online) about their own experiences. It is essential for organisations to get positive responses, as the Internet is often

used to spread messages to friends and family, which makes it a useful marketing platform (Guo, Tao, Li, & Wang, 2015). The online portrayal of organisations influences what type of messages people will spread. Both online media portrayal and responses by consumers to this media portrayal can be positive or negative and can influence the business and its online image. When an organisation like the Consumentenbond conducts research on the products a company sells and publishes its results online, there is public information about how well organisations live up to their promises. Once it becomes public that an energy supplier claims to be green, but the opposite appears to be true, what will happen to the trust consumers have in the organisation? And consequently, how will the consumers' electronic word-of-mouth (eWOM) intentions be affected? Will they share anything positive or negative about the organisation? As the research is about renewable energy suppliers, does the level of environmental concern of the consumer influence whether they are willing to share something about the messages online? Environmental concern can be defined as: "an evaluation of, or an attitude towards facts, one's own behaviour, or others' behaviour with consequences for the environment" (Fransson & Gärling, 1999). People that are more concerned about the environment might also respond more negatively to information about the usage of certificates and grey energy. How do all these factors work together in the consumer's decision to participate in online behaviour? This information and the previous questions have led to the following research question: To what extent do the media portrayal of renewable energy sources, trust, and individual levels of environmental concern influence social media users' electronic word of mouth intentions of promotional messages about renewable energy?

1.2 Theoretical and social relevance

Studying word-of-mouth is not something new. It has been and still is, a popular subject to study. Various reasons have been found as to why people are motivated to participate in eWOM (Chu & Kim, 2011), and what kind of messages they want to share (Kim, Park, Lee, & Park, 2017). Renewable energy and environmental concern have not yet gained a prominent place in research concerning eWOM, as existing literature mostly focuses on the benefits of renewable energy for nature (Panwar, Kaushik, & Kothari, 2011), strategies to implement renewable energy (Lund, 2007) and different types of energy (Alrikabi, 2014). Most studies on renewable energy investigate the subject from an economic standpoint, for example, how much money will be earned or lost when a switch is made to renewable sources. Few studies have been executed on the social aspect of renewable energy. The current research focuses on online communication in relation to renewable energy and trust.

This research contributes to the already existing literature as it adds a new dimension to the studies on renewable energy. Besides, the Netherlands claim they want to become sustainable, but they appear to perform the worst in the field of renewable energy in comparison to other European countries (van der Walle, 2020). It is necessary to learn more about involving consumers and creating an open and honest market for energy. This means that more needs to be learned about the level of environmental concern people have and how that relates to eWOM. Until now, much research has been conducted about gender in relation to environmental concern (Haytko & Matulich, 2008; Mishra, Maheswarappa, Maity, & Samu, 2018) purchase intentions and environmental concern (Khaola, Potiane, & Mokhethi, 2014), and brand attitude towards green brands (Matthes, Wonneberger, & Schmuck, 2014). Research about eWOM connected to environmental concern would contribute to the overall knowledge of both subjects.

This research has societal relevance as well, as the amount of people on this planet is increasing and the earth is starting to become exhausted (Mittal & Gupta, 2015). Natural sources, such as fossil fuels, are depleting and will no longer be available for everyone (Ritchie & Roser, 2020). Switching to renewable energy sources is an important factor for consumers to contribute to sustainable change and keeping the future liveable. This means that consumers will have to become aware of the options in renewable energy to be able to decide about their supplier, but also to help achieve bigger goals, such as the Climate Goals (as decided upon during the Paris Climate Summit in 2015), which state that we should reduce the carbon emissions emitted in Europe with 40 percent in 2030 compared to 1990 (Rijksoverheid, 2020). Switching energy supplier could help in this reduction. There is a lot of variation in the energy that is offered, which makes switching to the right supplier difficult. There is no clear information on how consumers are influenced by the number of suppliers and how they act once they have seen an advertisement or promotion about renewable energy. Through this research more will be learned about how consumers use their social media to promote or discourage the use of energy of a particular company, and whether this links to their identity, as social media is mostly used to portray oneself in a certain way (Kim et al., 2017). More awareness can be created around renewable energy through social media. This research aims to discover to what extent social media users are willing to share messages about renewable energy. It also provides information for renewable energy-suppliers about if and in what situation social media users are willing to share something. As consumers see themselves as part of the solution for climate change, it is necessary to find out to what extent they take sustainability into account in their social media behaviour (Wells et al., 2011).

The answer to the research question is sought by making use of a quantitative research method to be able to investigate the relationship between the variables. The data are collected through an online experiment that is spread through Facebook and LinkedIn. Online portrayal in de media plays a big role in how people perceive your organisation (Castle, 2017). In this experiment, a fictional organisation is portrayed differently across three conditions. In the first condition the organisation delivers truly green energy (positive media portrayal), in the second condition the organisation delivers grey energy but claims that it is green (negative media portrayal), and the third condition provides no background information (control condition). The goal is to find out what kind of effect these messages have when the respondents have to evaluate a Facebook post about a green initiative. By asking questions about the perceived values and competence, more should become clear about trust in the organisation and whether this is influenced by the type of media portrayal that the respondent saw. Also, by asking respondents about their eWOM intentions after they saw the manipulation, it will become clear how they feel about sharing something positive or negative about the previously seen organisation. This might be influenced by the trust they have in the organisation. Environmental concern is used as a moderator that possibly influences the relationship between media portrayal and eWOM. Demographics are used as control variables that might influence this motivation.

1.3 Chapter outline

This research focuses on the relationship between positive or negative media portrayal and eWOM intentions. The basis for the research is laid in the theoretical framework, which is the second chapter and is presented after the introduction. The topic of renewable energy will be explained further, just as the research by the Consumentenbond. The variables positive and negative eWOM, trust, environmental concern, and media attention about renewable energy will be explained in more depth. Previous studies are used to formulate hypotheses for this study, which are presented in each corresponding section. The third chapter explains the chosen methodology for this research. It elaborates on why a quantitative study is the best way to answer the research question. The sampling strategy is introduced, as well as the sample demographics. For these, if possible, the mean and standard deviation will be provided, as well as other relevant numbers. The sampling procedure is described and the stimulus material will be presented. Then, the operationalization of the variables is discussed, as well as the reliability and validity of the research. In the results section, which is the fourth chapter, are the findings presented of the analyses that have been done. It includes several

Chi-Squared tests to check whether the randomisation of the groups worked and regression analyses or univariate analyses of variance (ANOVA) to test the relationships between the variables. The findings of the analyses will show whether the hypotheses are supported or rejected. These findings will be discussed in relation to the literature in a separate discussion chapter, which is the fifth chapter. For the hypotheses that have been rejected, reasons are sought for why this might have been the case. The fifth chapter includes an answer to the research question, theoretical and practical implications, research limitations, and directions for future research. The sixth and final chapter will be a short conclusion.

2. Theoretical Framework

2.1 Renewable energy and certificates

An increase is visible in the importance of renewable energy sources. In general, global demand for and consumption of renewable energy increases, while the use of traditional fossil fuels decreases (United Nations Development Programme, 2020; United Nations Environment Programme, 2020). In the Netherlands, the use of renewable energy was 7.4% of the total energy use in 2018, which was only 6.6% in 2017. Half of the increase can be explained by the increase in the use of biomass, in the shape of biodiesel and bio gasoline (Centraal Bureau voor de Statistiek (CBS, 2019). The International Energy Agency (IEA, 2019) expects that there will be an increase of 50% in the renewable power capacity between 2019 and 2024, with solar energy as the biggest share. Though, still more than half of the used energy is non-renewable (Ritchie & Roser, 2020). This needs to change. In 2019, renewable energy sources make up only 26% of the total electricity used worldwide (IEA, 2019). In 2050, the European Union wants to be climate neutral to be able to stop the increase in temperature on earth at 1.5 degrees (European Parliament, 2019; Intergovernmental Panel on Climate Change, 2018). Switching to renewable energy sources is important in achieving this goal.

According to Friege and Herbes (2017), renewable energy has three attributes. The first is that energy is a product that does not receive attention daily. It is very unlikely that people reconsider their supplier more than once a year if they even do so at all. Secondly, in general, all energy suppliers are interchangeable. There is no difference in how good the energy makes appliances work. Therefore, there is no real differentiation between the products that can be noticed during consumption. Prices are often determined on the market, depending on supply and demand, which again makes the differences between suppliers not outstanding. Finally, renewable energy is a credence good. This means that the consumer cannot determine the quality of the product before or after the purchase (Fong, Liu, & Meng, 2018). Consumers buy the product based on the described qualities it should have but are not able to check if this is true. They depend on the word of the energy supplier.

The Dutch organisation Autoriteit Consument & Markt [ACM] researches consumer motivations in the energy market. They investigate if and why consumers want to switch suppliers, how many have switched, and the satisfaction with their supplier. The ACM research results from 2018 show that a stable percentage of consumers would like to switch suppliers to become more sustainable in their energy consumption (ACM, 2019). The same organisation found that in 2017, around 70% of people in the Netherlands have a contract for green energy, and ACM expects this number to increase in the future (ACM, 2017). But, as the CBS found, only 6.6% (2019; and 7.4% in 2018) of the total energy that has been used is green. This means that there is a substantial difference between the numbers of the ACM about people that think they receive green energy and the actual number of people that receive it. The difference could be explained by the use of certificates of origin which make energy appear green on paper. This works as follows: Dutch energy producers do not produce enough green energy to deliver to everyone that wants to receive green energy. The suppliers need to buy green energy somewhere else, for example in another country, where they produce more than enough. Energy producers receive a certificate of origin for every certain amount of green energy they produce. When a green energy producer produces more energy than is asked for in their country, then they can sell the certificates on the market. When a Dutch energy supplier wants to deliver more green energy to its consumers, it can buy these certificates from a country that sells them. This means the Dutch energy supplier now owns the papers, which say that (somewhere) green energy has been produced. These papers can be sold alongside grey energy to make it appear green, as the certificates tell the consumer that somewhere green energy has been produced. This means that even though people believe that they receive green energy, they get grey energy delivered along with a certificate of origin. This could explain the difference between the number of people that expect to receive green energy and the people that do receive it (Natuur & Milieu et al., 2019). Consumers would not be inclined to switch to a green energy supplier when they think they already receive green energy. This is harmful to the environment because people assume that they are protecting it by buying green energy but do not receive it in reality. It is also difficult to check because the energy delivered to households is a combination of all types of energy pumped into the network. The type of energy purchased is therefore not (entirely) the same energy that is delivered to one's home. The Netherlands produced around 18.5 million kWh in 2018 and an estimated 21.7 million kWh in 2019. This accounts for respectively 15.1% and 17.9% of the total electricity production. For 2018, this is 7.4% of the total energy production. This would mean that everything else is obtained through certificates (CBS, 2020).

2.2. Dishonesty in the energy sector

Consumers are not always aware of the difference in production and delivery of energy, which can create an opening for dishonesty within the energy sector. This could mean that the supplier does not clearly explain where the energy is coming from (i.e. that it is grey instead of green). This dishonesty can be interpreted as greenwashing, which means that an organisation deliberately frames its activities as beneficial to nature to be perceived as an environmentally friendly organisation (de Vries, Terwel, Ellemers, & Daamen, 2013). The Centre for Sustainable Business researched the market on sustainable products and found an increase in demand for products that are marketed through highlighting its sustainable properties in the period between 2013 and 2018 (Kronthal-Sacco & Whelan, 2019). This means that an increasing amount of companies use the (perceived) greenness of their products as a promotional asset and therewith try to take advantage of being perceived as an environmentally friendly organisation, whether they are green or not in reality. This increase has also already been found between 2009 and 2015 (Delmas & Burbano, 2011). Terrachoice, which belongs to Underwriters Laboratories, an organisation that researches the safety and honesty of certifications, has created a list of 'sins of greenwashing' that they discovered in organisations' marketing strategies during the research they conducted to understand the growth of greenwashing. The certificates that are used in the energy sector to make the product appear green can be seen as the sin of no proof because there is no proof that the product that is delivered is green, or the sin of fibbing, which means that false (environmental) claims are made (Underwriters Laboratories, 2009).

When suppliers are dishonest about what product they deliver and consumers find out (e.g. through the media or negative media portrayal), the consumer could start to develop a negative attitude towards the organisation. The violation of trust can lead to negative feelings among consumers (Chen, Wu, & Chang, 2013). Research by Cone Communications, a research organisation that focuses on social and environmental issues, showed that in 2013 78% of consumers intended to stop buying a product if it has come to light that their environmental claims have been misleading. The other 22% of consumers did not mind being misled and intended to continue buying the product (2013). The same organisation found in another study that most Americans prefer organisations to be honest about their greenness, instead of trying to be or appear as perfect (Cone Communications, 2011). Honesty seems to be very important for consumers of green products.

2.3 Marketing in the renewable energy sector

How green products are marketed plays a role in how consumers view organisations or products. Castle (2017) researched how green products are advertised, by interviewing five business leaders and conducting literature research. She found that advertising is done on a macro-level (e.g. how consumers impact the world), micro-level (e.g. what consumers can

change in their household) or a mix of both. These types of marketing apply to renewable energy as well. The marketing strategy of renewable energy is values-driven marketing with a many-to-many collaboration (Friege & Herbes, 2017). Values-driven marketing implies, for green initiatives, that it is emphasized that the world can become a better place and that it is something to achieve together. This message is linked to visuals that highlight the beauty of nature, which gives us the impression that the organisation is environmentally friendly (Matthes et al., 2014; Xue & Muralidharan, 2015). It is encouraged through the commercials to adapt to a 'green lifestyle' and buy the advertised product. Their approach is holistic, which means that it includes functional, emotional, and spiritual aspects. A many-to-many approach means that organisations use social media because it is ideal to reach a big audience at once. It also creates the opportunity for the reader of the message to respond quickly, which increases the possibility of easy and quick communication between the organisation and the public (Friege & Herbes, 2017).

Research by Spielmann (2020) on organic food showed that positive emotions can be created among consumers when advertising leads to the perception of green product virtue. This means that the product "provides lower short-term rewards but has fewer negative longterm consequences than vices" (p. 3). It is expected that the products have a positive influence on others and, in general, society, and are therefore considered to be virtuous. Green energy can be perceived as such a product, as it contributes to lowering CO2 and a stop to the depletion of resources for future generations (CBS, 2019). This should lead to increased purchase intentions, as people are more willing to buy virtuous products or want to be associated with them (Spielmann, 2020). They are also more likely to donate money to something that advertises as green and there is a bigger chance that consumers will buy green products because it provides them with positive emotions (Gershoff & Frels, 2015; Spielmann, 2020). Green products thus positively influence consumer behaviour. This could be one of the reasons why many-to-many advertising of green products works so well: people want to be associated with virtuous products or initiatives and are therefore willing to talk about it online. Social media has a big influence on product sales and consumer involvement (Tang, Fang, & Wang, 2014). Businesses that have been reluctant to use social media and stuck with traditional marketing techniques now see a decrease in revenue (Caniëls, Lenaerts, & Gelderman, 2015). This is because social media has on the one hand lower costs than traditional media, while on the other hand does it make it easy to reach many people at once and connect with consumers because of its real-time response possibilities. It is important for

organisations to have an active presence on social media, as it makes it possible for consumers to spread its message (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011).

2.4 eWOM intentions

Besides the promotion by the organisation itself, there are also messages coming from outside of the company. This can be in the form of attention from other organisations, which can be positive or negative. Positive messages are often beneficial to the organisations, while negative messages can harm its image. Both types of messages influence (online) consumer word-of-mouth. While traditional word-of-mouth (WOM) has been believable, relevant, and truthful, as the interaction often happened between people with whom the consumer had strong ties, eWOM allows for another type of communication. This can be with many people at once, which often do not have a direct connection and for whom it is not always possible to check whether the information placed online is true because online messages can easily be posted anonymously. It has become possible to easily find an abundance of information online within seconds (Ismagilova, Dwivedi, Slade, & Williams, 2017; Kaul & Chaudhri, 2017; Moran & Muzellec, 2017).

Online messages can be posted on different sites. Various platforms have been researched in combination with eWOM, such as social media platforms (Moran & Muzellec, 2017; Xu & Lee, 2020), e-commerce websites (Yan, Wu, Wang, Wu, Chen, & Wei, 2016), discussion forums (Shih, Lai, & Cheng, 2013), online reviews (Erkan & Evans, 2018; Sun, Niu, Yao, & Yan, 2019), and blogs (Kim, Melton, Min, & Kim, 2020). All these platforms are more or less focused on the interaction from one consumer to another. What seems to be missing is more research on how consumers respond to online media attention about one organisation, coming from another. Organisations can easily influence other organisations with what they do. On the one hand might competitors put each other in a bad light to be able to promote themselves. While on the other hand, organisations try to create an open, honest environment for consumers, such as the Consumentenbond, to help them in making considered decisions about the products they would like to, or have already, purchase(d). Both have the power to influence the opinions and actions of consumers online and offline, however, in the current study only online influence will be researched.

Energy is a credence good, which means that consumers rely on (online) messages and advertising about the product to gather information about it. Informativeness has been found to be a basis to create a positive association with the message that provides the information. This increases the chance that the reader of the message will 'like' (as happens on social media platforms) the message they have just read (Lee & Hong, 2016). The credibility of online messages is very important in this, especially for credence goods. Tsao and Hsieh (2015) researched the credibility of messages about credence goods, such as renewable energy, and compared them to search goods, such as restaurants. They found that the credibility for positive eWOM about credence goods is stronger than for search goods, and positive eWOM also influences purchase intention more strongly for credence goods than search goods. This means that what is said online about credence goods is very important. Positive messages about a company show to have a strong influence on the ideas and actions of consumers. Advertisements that induce positive perceptions among consumers are perceived to have a high return on investment, this means that when consumers experience something positive online, they are more likely to respond positively to this, for example by purchasing the advertised product (Lee & Hong, 2016). Hence, positive media portrayal or eWOM messages are very likely to lead to more positive actions.

Negative media attention has been researched as well. Liu and Keng (2014) conducted research on what the effect is of intentionally disseminating deceptive messages on the readers' motivation to spread untruthful and negative truthful eWOM messages. They discovered that consumers who have read bad information about an organisation are very likely to spread untruthful or negative truthful eWOM messages about this organisation. This often happens when the consumer experienced an inconsistency, which means that they have read something that does not match with their belief about the organisation. The spread of both negative truthful messages or untruthful messages can harm the organisation which is the subject of the messages. Negative messages are weighed more heavily by consumers than positive messages (Solomon, 2018). This is because negative messages are more attention-grabbing than positive messages (Park & Lee, 2009), but people are also more likely to tell others about a bad experience they have had with a product or service than about a good experience (Solomon, 2018). This implies that consumers are more likely to participate in negative eWOM than positive eWOM after they have had a bad experience with a product or service.

Type of platform and website reputation both influence whether consumers want to participate in eWOM (Park & Lee, 2009; Xu & Lee, 2020). Xu and Lee (2020) researched the linguistic characteristics and product and service attributes that can be found in online consumer reviews about hotel experiences on three different platforms (social media, third party booking platform, and a direct platform). They found that social media platforms contain posts that are the longest and the most subjective in comparison with the other platforms. This means that people tend to elaborate on stories about their experiences and emotions, making the messages and platform very personal. Social media platforms, such as Facebook, link strongly to the consumer's identity, as they write mostly personal stories there (Kietzmann et al., 2011). Social identity consequently influences whether consumers are motivated to participate in (positive) eWOM (Ruiz-Mafe, Bigne-Alcaniz, Sanz-Blas, & Tronch, 2018). According to Kietzmann et al. (2011) lies the focus for Facebook mainly on relationships but also identity, presence, reputation, and conversations are very important. This means that people are more likely to participate on Facebook when one of these factors is involved. When the topic of the message fits with one or more of these factors, there will be increased motivation to share or post a message. When the topic of a (positive) message links to one's perceived self-identity, this person is more likely to do something with this information (Kim et al., 2017). This means that when a person perceives him/herself as an environmentally friendly person and reads something about an honest green organisation, they are probably likely to share something about this because it matches their identity. When they read something negative about green organisations, they will be less likely to share something positive about it because that would clash with the image or reputation they have on social media.

2.5 Environmental Concern and green advertising

Almost all consumption habits affect the environment directly or indirectly. For consumers, this means that the individual level of environmental concern plays a role in many sustainable choices in the daily life of consumers, consciously or unconsciously (Fransson & Gärling, 1999). Whitmarsh and O'Neill (2010) found that self-identity, among others, is an important factor in predicting various aspects of environmentally friendly behaviour. They found, for example, a positive relationship between pro-environmental self-identity and domestic energy conservation (energy management and usage). Consumers who are involved in pro-environmental behaviour also show a more positive attitude towards green advertising (Haytko & Matulich, 2008). Renewable energy initiatives are often advertised online (Castle, 2017). Facebook is a place where people share their identity and connect with friends (Kim et al., 2017). This makes it the ideal platform for energy suppliers to promote their products. It is expected that when people with a high environmental self-identity read a positive message about the environment online, this person would be more likely to share this message with their friends on social media because it fits with their identity. Research by Bamberg (2003)

showed that among a group of students, students with a higher level of environmental concern (compared to a lower level of environmental concern) were more likely to show interest in brochures about green energy initiatives and to use the brochure. Van der Werff, Steg, and Keizer (2013) found that people with a strong environmental self-identity are likely to act in an environmentally friendly manner, which means that they are expected to participate in promoting environmentally friendly behaviour. These people are likely to act in accordance with their concerns (Royne, Martinesz, Oakley, & Fox, 2012; Richards, 2013; Ulusoy & Barretta, 2016). Consumers are also more likely to participate in positive eWOM when they think that they can help the organisation by doing so. This means that people that are convinced that it is important to invest in green initiatives will also be more likely to participate in positive eWOM about it because that will help the organisation spread its message (Hasanjanzadeh & Iahad, 2013). It is expected that consumers with a higher level of environmental concern are also more likely to spread positive eWOM about renewable energy when they see a positive message. Their concern will strengthen their motivation to participate in positive eWOM about the topic.

It is expected that consumers care more about messages that have a positive connection to their identity, which leads to an increase in motivation to participate in eWOM about it. Environmental concern could be a factor that moderates the effect of media portrayal of renewable energy on eWOM. This has led to the following hypotheses:

H1: Negative media portrayal leads to lower positive eWOM intentions than positive media portrayal

H2: Higher levels of environmental concern promote stronger positive eWOM intentions about renewable energy

H3: The effect of media portrayal of renewable energy on positive eWOM is stronger for respondents with a high level of environmental concern than for respondents with a low level of environmental concern

2.5 Trust

Consumer trust is essential in a market for credence goods, such as the energy market (Nuttavuthisit & Thøgersen, 2015). Various studies suggest that consumers tend to be sceptical about green product claims made by organisations themselves (Finisterra do Paco & Reis, 2012; Phau & Ong, 2007; Ulusoy & Barretta, 2016). Thøgersen, Haugaard, and Olesen (2010) call the type of trust that occurs in the energy sector 'disembedded trust' because it is a more universalistic or institutional kind of trust. This means that trust cannot be established through a simple relationship between organisation and consumer but it is based upon the success of trust in the whole green energy sector. As there is no way for the consumer to check the product, they depend upon regulations by the government, which ensures the consumer that the product delivered conforms to certain rules. This is the reason why (online) information from other parties is so important for the energy market. Independent organisations such are the Consumentenbond play a big role in this, as they can do grand-scale market research on whether the product does conform to these regulations and what discrepancies can be found in the sector.

Certificates show consumers what kind of product they are dealing with (Lanz & Reins, 2019). The certificates are trusted more highly by consumers when a third, independent party certified the product. This is especially true when this third party is a public authority (Janssen & Hamm, 2012). The Consumentenbond could be seen as such third, independent party which is also a public authority. It is expected that when they do research on organisations that appear green on whether their claims are true or false, consumers will trust their findings. Hereby, it is of importance that the certifier is transparent about their relationships and way of working so that it will not affect the legitimacy and effectiveness of the certification (Bullock, 2015).

Not only certificates are valuable for organisations to gain legitimacy, also online social interaction among consumers is important, which focuses on the exchange of "marketing information [..] and it plays an essential role in changing consumer attitudes and behaviour towards products and services" (Chu & Kim, 2011, p. 48). Social media posts play a big role in this communication. Consumers are more likely to consider something to be useful when it is posted by someone which they think is trustworthy, whether this is a friend, organisation, or a qualified stranger. Positive and negative messages both influence the level of trust a consumer has in an organisation. While organisations are not very likely to post something negative about their products, consumers are often motivated to elaborate online on any dissatisfaction they have experienced by using a product or service (Guo et al., 2015). Only reading messages by the organisation gives the consumer a one-sided and biased opinion about the product they are interested in (Solomon, 2018), which is why other opinions are considered to be of importance as well. Tsao and Hsieh (2015) found that on the credence good market, the credibility of positive eWOM messages is essential because it is not possible to check whether things are true, it is crucial that the messages are plausible and credible.

Reading positive messages about an organisation or its products is beneficial for increasing trust in an organisation (Algharabat, Rana, Alalwan, & Baabdullah, 2020). It increases the perceived believability of messages, which in turn benefits the consumer-company relationship. This makes the consumer feel more positive towards the organisation (Kaul & Chaudhri, 2017; Spielmann, 2020). For green initiatives, it is necessary to be found sincere, for consumers to trust the organisation. Van Prooijen (2019) found that "messages (...) from energy suppliers were considered to be sincerer and more trustworthy when concern for environmental problems was expressed as the main motive" (p.122). This means that 'being green' needs to be part of the brand, instead of something that the company has recently decided to become. Something similar has been researched by Phau and Ong (2007). They found that for clothing brands, green claims about products are found to be more credible when they have been promoted by a green brand, instead of a neutral brand. 'Being green' has to be part of the company that promotes the product. For the current research, this has been tried to accomplish for the organisation that spreads the messages.

A positive or negative message by another organisation, such as the Consumentenbond, can influence trust in an organisation. A negative message will lead to a decrease in trust in the company under consideration, which in turn will lead to an increased chance of more negative eWOM among and spread by consumers (Guo et al., 2015). Higher levels of trust in a brand lead to consumers' decreased motivation to participate in negative eWOM (Tantrabundit, Phothong, & Chanprasitchai, 2018). The level of trustworthiness of the source has a significant influence as well on the extent to which the eWOM satisfies the social function. The three reasons for participating in eWOM (opinion seeking, opinion giving, and opinion passing) all contribute to creating and sustaining that social image (Chu & Kim, 2011). These three actions are influenced by how much the source or message is trusted, therefore, it is important that the consumer trusts the source and subject of the information otherwise they will not be likely to participate in positive eWOM (Gharib, Garcia-Perez, Dibb, & Iskoujina, 2019). A low level of trust increases the likelihood that the consumer will participate in negative eWOM (Guo et al., 2015). While higher levels of trust lead to increased participation online (Chu & Kim, 2011).

The energy sector often sells its products online, which can also be called e-commerce. Here, trust is of importance as well. "The impression of e-commerce (..) has a strong impact on the willingness to trust online shopping. The general credibility of e-commerce strongly influences the decision of whether or not to adopt online shopping at all" (Corbitt, Thanasankit, & Yi, 2003). This means that not only the energy sector is dependent upon disembedded trust but the e-commerce sector too (Thøgersen et al., 2010). It is essential for the sector to show that they are honest, to make sure they keep their consumers. Corbitt et al. (2003) researched the relationship between trust and e-commerce. They found that when people trust the organisation, they are more likely to participate in e-commerce, which means that they are more likely to purchase a product (e.g. energy) online. In the energy sector, trust plays a big role in selling products online.

It is assumed that trust is a mediator in the relationship between the portrayal of a certain message and the intention to do something with this message, whether the message is positively or negatively. This information has led to the following hypotheses:

H4: Positive media portrayal of renewable energy leads to higher levels of trust than negative media portrayal

H5: Higher levels of trust promote stronger positive eWOM intentions about renewable energy

H6: The effect of media portrayal on positive eWOM is mediated by trust H7: The effect of media portrayal on negative eWOM is mediated by trust

2.6 Conceptual models



Figure 2.6.1. Conceptual model including the hypotheses



Figure 2.6.2. Conceptual model hypothesis 6



Figure 2.6.3. Conceptual model hypothesis 7

3. Method

In this chapter, the choices that have been made regarding the research design, sampling, execution, and analysis are explained. The method that has been chosen is discussed first. Then, the sampling method and sample are described, followed by the survey procedure and stimulus material. This is followed by a description of the operationalization of the measurements. Finally, the validity of the research is accounted for.

3.1. Choice of research method

For this research, quantitative methods are used to gather and analyse the data. This method has been chosen to be able to test the relationship between the variables (media portrayal, environmental concern, trust, eWOM, and demographics) and to be able to determine whether the independent variable (media portrayal) has a significant effect on the dependent variable (eWOM). The quantitative data for this research have been collected through an online experiment.

3.1.1 Quantitative method

According to Goertzen (2017) "quantitative research methods are concerned with collecting and analysing data that is structured and can be represented numerically" (p. 12). For this research, several hypotheses have been created, which have been based on literature research, different theories, reports, and empirical research that already has been conducted. The hypotheses try to find relationships between dependent variables, independent variables, moderators, and mediators. These relationships can be assessed through quantitative methods, as they provide the possibility to find direct links between the variables because they work with statistics (Goertzen, 2017). For an experiment, this means that correlations will become visible, and cause and effect can be researched (Bryman, 2016). This makes the use of quantitative research suitable for confirming or rejecting the hypotheses and coming to conclusions about them.

The hypotheses try to find a relationship between three different types of media portrayal and the consequences for the respondents' eWOM intentions. This has been researched through a unifactorial design with three conditions, which makes it possible to look at an independent variable in different situations and find corresponding simultaneous effects (Neuman, 2014). The hypotheses are tested using an online experiment. Experiments provide the opportunity to test hypotheses in each created condition, considering the variables in different settings (Neuman, 2014). Each group in the experiment represents another part of the independent variable (media portrayal), to determine whether it influences the dependent variable (eWOM intentions) (Bryman, 2016). Conducting an online experiment is cheaper and quicker than conducting a real-life experiment and is therefore chosen as the most convenient way to conduct this research. Also, because the subject is eWOM, it made more sense to conduct the research online. Besides, it is more convenient for respondents to fill out the questions online because then they can complete them at their preferred speed (Bryman, 2016). Respondents are randomly assigned to one of the three conditions through Qualtrics. This is an unbiased assignment. This helps to ensure that there are no systematic differences between the groups, which creates the possibility to compare these groups. The research has a between-subjects design (Neuman, 2014). Online data gathering makes it easier to gather and eventually analyse the data. All data are collected through the same system, as opposed to when one would do a physical experiment. The data can easily be downloaded into one file to be analysed.

A disadvantage to this online method is that it is impossible to remind people of their participation directly, as the experiment is anonymous. This means that once a respondent has started answering the questions but gets interrupted somehow, it is not possible to ask them if they would like to finish their session. This could lead to respondents quitting halfway. This can also happen when questions are included which they rather not answer, then they can easily leave the questionnaire. This is why online experiments can have very low response rates (Bryman, 2016). It has been tried to prevent this by sending out multiple messages and general reminders to the potential respondents. Also, it has been tried to keep the questions simple and accessible, so that nobody would feel offended by them and quit the survey.

3.2. Sampling

Sampling has been done by making use of a non-probability sampling strategy: snowball sampling, as a part of convenience sampling. Besides, sampling has also been conducted through various Facebook and LinkedIn groups to reach more people beyond personal connections. In snowball sampling, the "researcher makes initial contact with a small group of people who are relevant to the research topic and then uses these to establish contact with others" (Bryman, 2016, p. 696). The sampling method has been used to spread the survey through the social networking sites Facebook and LinkedIn. A post has been created that has been put on both the Facebook and LinkedIn page of the researcher (See figure 3.2.1 and 3.2.2), and friends and connections have been asked to fill out the survey and spread it among their friends and acquaintances. This created the opportunity to reach people beyond the

researchers' personal network and could easily increase the number of respondents in a cheap way (Bryman, 2016). This makes it also easier to send general reminders to the respondents because it has been clear in which direction the experiment has been spread. This increased the amount of control over the sampling phase (Bryman, 2016; Noy, 2008).

Voor mijn master scriptie doe ik onderzoek naar groene energie en intenties om hier iets over te delen op Facebook. Ik ben op zoek naar respondenten! Help jij mij afstuderen door mijn vragenlijst in te vullen? Er is geen (voor)kennis over de energiesector voor nodig, iedereen kan hem invullen. Het duurt ongeveer 10 minuten en is volledig anoniem. Je zou me er enorm mee helpen! 😂 🍀

Link naar de vragenlijst: https://erasmusuniversity.eu.qualtrics.com /.../SV_0080HrE5TEt...

Alvast bedankt! 😘

Figure 3.2.1. The message put on Facebook page of the researcher



Figure 3.2.2. The message put on LinkedIn page of the researcher

A disadvantage of convenience sampling is that the sample may be biased because the sampling has not been random. Specific people have been asked to fill out the survey and spread it further. This often happens within different subgroups of people that have similar interests. This makes the sample often not representative for larger populations (Magnani, Sabin, Saidel, & Heckathorn, 2005), and hard to generalize (Sarstedt, Bengart, Shaltoni, & Lehmann, 2018).

Before putting the survey online, two people have read through the survey to check if everything was clear for them. After this, some adjustments in spelling have been made and the subject of the survey has been discussed with them to discover what might be missing. After this, the two questions about green energy at home have been added to learn more about what kind of energy the respondents have purchased. Thereafter, the link to the experiment has been spread on the researchers' Facebook and LinkedIn page and in multiple Facebook and LinkedIn groups about sustainability (see Appendix B). This has been done because people in these groups are most likely interested in sustainability, which increases the chances that they would like to fill out the experiment. Because the experiment has been spread via the internet, people that do not use the internet are automatically excluded from participation in the survey. The survey reached a total of 350 respondents, but many of them did not finish the survey or skipped relevant questions for this research. Eventually, this has led to a sample of 273 respondents, whose responses have been collected between April 14th and May 4th (See Appendix D for the survey).

3.2.3 Demographics

Several demographics have been included in the survey as control variables. Previous studies have shown that they might influence one or more variables in this research. The following demographics have been included: gender, age, income, and educational level. Yu (2020) researched the effects of gender and scepticism toward (green) advertising. He found that men are in general more sceptical towards advertising, and therefore also more sceptical of green advertising. There is research that contradicts this finding, as Phau and Ong (2007) found that gender is not related to scepticism about green claims. Because of this, gender has been chosen to include in the survey and it will be tested whether it has a significant outcome on the results of the study. Furthermore, Li and Chen (2018) researched the relationship between income and environmental concern. They discovered that absolute income is significantly related to environmental concern, where people with higher incomes also show higher levels of environmental concern. Park, Russell, and Lee (2007) found as well that income has a relationship with environmental sustainability. It is implied that economical activities influence environmental performance. Based on both studies, it is expected that income might have some kind of influence on the results, therefore it has been taken into account in the experiment. It is expected that the research will have a relatively young sample because the experiment is distributed through the internet. Consequently, educational level is also included in the experiment to get a better image of the demographics of the respondents. It is

expected that respondents of a young age have not yet completed their studies and not yet earn a full salary. The educational level can also indicate what a person might earn later in their life. Besides, age has been included to see whether the expectation of having a young sample is indeed true. Research has also shown that younger people are more likely to participate in eWOM (Mishra et al., 2018). This might influence the results and is therefore important to take into account because, for example, when one of the groups has a younger average age, this might influence their intentions to participate in eWOM.

3.2.4 Sample

The final sample included 273 respondents. A complete overview of demographic data is shown in Appendix A. All respondents (N = 273) were at least 18 years old. The observed range of age has been 19 to 74, with a mean of 31.76 and a standard deviation of 12.64.

Considering gender (N = 273), 73 (26.7%) respondents identified themselves as male and 196 (71.8%) identified as female. Furthermore, 1 person (0.4%) found themselves to be neither female nor male and 3 respondents (1.1%) would rather not share their gender.

All respondents answered the question about education (N = 273). Most respondents have an HBO Bachelor as highest completed education (99, 36.3%), followed by WO Master (76, 27.8%), and WO Bachelor (40, 14.7%). The lowest number of respondents have done a PhD or something equivalent (1, 0.4%) or would rather not share their education (4, 1.5%).

All respondents answered the question about their yearly income (N = 273). Most of them, namely 148 respondents (54.2%), earn between 0 and 24.999 euros a year. 48 respondents (17.6%) earn between 25.000 and 49.999, and 30 (11.0%) earn between 50.000 and 74.999 euros. There was only one person that earned more than 125.000 euros (0.4%). Among the group of respondents, 27 people did not want to share their income (9.9%) and 10 respondents did not know their yearly income (3.7%).

All respondents (N = 273) answered the question about energy. Almost half of all respondents (142, 52.0%) are responsible for the energy supply at home. This means that they can choose what kind of energy supplier they would like to buy their energy from, the other half of the respondents is not in control over this decision (131, 48.0%).

The respondents (N = 273) were asked whether they have green energy at home. 121 of them (44.3%) answered 'yes', 64 (23.4%) answered 'no' and 88 (32.2%) did not know whether they have a contract for green energy at home.

Qualtrics randomly assigned participants to the three different conditions of the experiment. An analysis has been done to check whether this worked. The division has been

as follows: 91 (33.3%) respondents saw the green energy condition, 93 (34.1%) respondents saw the grey energy condition and 89 (32.6%) respondents saw the control condition.

A new variable has been created to measure how long respondents took to fill out the survey. On average, respondents completed the survey in 1703 seconds. This is approximately 28 minutes; this number does not show a fair image of the duration because one person took 4 days to complete the survey. The quickest was 49 seconds, which implies that this person did not read the questions and texts very carefully. These were the only two outliers according to SPSS. Both of them have been removed from the analysis and a new analysis has been done. This has led to an average of 253 seconds to complete the questions. This is approximately 4 minutes and 13 seconds.

3.2.5 Survey procedure

The research population is everyone that is over the age of 18, has used Facebook in the past half year, and speaks Dutch, as the language of the questions in the experiment is in Dutch. Eventually, 350 people opened the link to the questions. People that did not conform to the beforementioned requirements have automatically been excluded from the research through the questions about their year of birth and their Facebook usage. In total, 13 people were excluded and directed to the end of the survey. While cleaning the data, more people have been deleted from the sample. Ten people only opened the link and did not answer any questions. Another 7 skipped some questions in the middle of the experiment and 57 stopped answering the questions early. This number also includes participants that were still in a session when the data collection was stopped. All these respondents have been excluded from participating and led to a final sample of 273 respondents. This is 78% of people that initially started the survey.

To make the experiment more easily accessible, it has been optimized to function on laptops, computers, and mobile phones. This means that people can answer the questions through the medium they find most convenient, which can potentially have increased the number of respondents. The experiment has been spread through Facebook and LinkedIn. Every day the experiment was posted in a different group so that people who are members of multiple groups would see the experiment multiple times. In some groups, the post has been placed twice to remind people of the research. The research has been placed twice on the researchers' Facebook page and LinkedIn page.

Before starting the survey, participants had to give their consent. This means that they accept that the information they provide is used in this research, and this research only. It has

been made clear that they participate voluntarily and can quit anytime they wish to by closing the internet browser. The researchers' email has been presented, so the respondents could email the researcher with questions or comments. This has led to several people emailing about the goal of the research or with comments on how to improve the survey.

The first two questions asked in the survey concerned the respondents' age and Facebook usage, to exclude people that did not belong to the research population. Then, the respondents had to answer questions about how environmentally friendly they consider themselves to be and to what extent they want to be perceived as an environmental-friendly person. After this, the concepts of green and grey energy have been explained, alongside two questions about if the respondents are in control over what energy supplier they have and if they purchased green energy. These questions are followed by three different conditions (i.e. the manipulation) which show different messages about an organisation which sells energy to consumers. These conditions are further explained in the next sub-chapter (i.e. 3.2.6 Stimulus material). After the manipulation, there has been a manipulation check, to learn how the respondent has interpreted the story that has been presented to them. This is followed by questions about sincerity, competence, and norms and values of the organisation. These three scales are indicators of the trust the respondents have in the organisation they have read about. Two scales will then ask the respondents about whether they have the intention to participate in positive or negative eWOM when taking into account the stimulus material they just have seen. The survey ends with questions about gender, education, and income. On the last screen, the respondent will learn that the organisation that has been used in the research is fictional. The link to the Consumentenbond research is presented if the respondent wishes to read more about the topic. Again, the respondent is thanked and the email of the researcher is stated so respondents can email if they have any questions (See Appendix D).

The respondents are collected in the Netherlands; therefore, the language of the experiment has been in Dutch. This increases the chances that people would like to fill out the experiment because the language is no barrier to them. This excludes people that do not speak Dutch from filling out the questions.

3.2.6 Stimulus material

Respondents received a different message in each of the three conditions. First, it was explained to them that they would receive a text which they would have to read carefully. This text includes background information about the company from which the respondents would afterwards see a Facebook post. The text is different in every condition. In the green condition, the respondent will read about what certificates of origin are and receive more information about the research that has been conducted by the Consumentenbond in 2019. The text then explains that the respondent will see a Facebook post from an energy supplier. The research by the Consumentenbond showed that this energy supplier scores highly on sustainability. It is explained that this means that they get their energy from renewable sources, such as wind energy or solar power. It is explicitly mentioned that this organisation does not use certificates to make grey energy appear green. After reading this text, they will see the Facebook post.

In the grey condition, the consumer will also read about the Consumentenbond research and the certificates but in this condition, this will be supplemented with other information about the company. In this condition, it is explained that the post the respondent will see later is from an organisation that scores low on sustainability. The company sells energy that originates from fossil fuels and is therefore not renewable. They use certificates to make the energy appear green. After reading this, they will see the Facebook post.

In the control condition has no extra text has been provided. This means that there is a sentence that announces the Facebook post that will appear on the next page. Then, they will see the Facebook post. There is no further background information given on the organisation nor about the research of the Consumentenbond.

The Facebook post is from a fictional organisation called *Green Power Energie* that claims to offer renewable energy in the Netherlands. A Facebook page has been created to make it more believable that the organisation is real. A message has been posted on the organisations' page, which has been included in the experiment by screenshotting this post. It has been decided to make the organization fictional because research has shown that participation in eWOM lies often in the importance of prior knowledge. When consumers have prior knowledge about an organization, they are more sensitive to negative messages that are spread about the organization than consumers that lack this kind of knowledge (SunJae & Jang-Sun, 2009). By using a fictional organization, there is no risk that some respondents have previous knowledge and others do not. The topic of the research has been explained in general in the Facebook post to the respondent: renewable energy and intentions to share something about it on social media. There has been no explicit cover story, but respondents were unaware of the fact that there have been different versions of the survey. This means that they did not know the true purpose of the research and that the different groups would be compared to each other.

3.3 Measurements and operationalization

The goal of this research is to find an answer to the research question. To be able to do so, the data from the survey needs to be analysed and tested for its reliability and validity. A manipulation check has been conducted and for every variable has a reliability analysis been performed. Factor analyses have been conducted if it was relevant to do so. For an overview of all variables and corresponding items, see Appendix C.

3.3.1. Manipulation check

A manipulation check has been included in the research to discover how different groups judge the manipulation they have seen. One question has been included after the manipulation text and Facebook post; therefore, the manipulation was measured with one item. The manipulation was measured through a continuous variable. Respondents were asked to indicate on a Likert-scale from 1 (Strongly disagree) to 7 (Strongly agree) whether the statement in the item applied to them. The item is stated as follows: "Green Power Energy is a sustainable energy supplier". All respondents answered the question (N = 273). The mean score was 4.46 with a standard deviation of 1.55.

3.3.2. Environmental Concern

The first independent variable was environmental concern, which has been measured with six items. Respondents were asked to indicate on a Likert-scale from 1 (Strongly disagree) to 7 (Strongly agree) whether the statement in the item applied to them. Items were: perceiving oneself as pro-environmentalist, feeling strong ties with pro-environmentalist people, identifying with pro-environmentalist people, perceiving oneself as an environmentally friendly consumer, perceiving oneself as concerned about environmental problems, and being proud when others think you are an environmentally friendly person (adapted from Brick, Sherman, & Kim, 2017; Whitmarsh, & O'Neill, 2010). The above mentioned six items about environmental concern have been put into a factor analysis to find out if there are groups that must be defined within concern. The factor analysis using Principal Components extraction with Varimax rotation based on Eigenvalues (> 1.00), KMO = .85, χ^2 (N = 273, 15) = 960.03, p < .001) showed that all items belong to one factor. The resultant model explained 65.3% of environmental concern of the respondents. All items have been included in the variable *environmental concern*. The scale's Cronbach's alpha was .89. This means that the scale is very reliable. The reliability analysis showed that deleting either one of the items would only decrease Cronbach's alpha, which has led to the decision to keep

all items included. A new variable has been created and the scale's score has been calculated by averaging the respondents' scores on the six items (N = 273). The respondents had a mean score of 4.54 and a standard deviation of 1.13.

3.3.3. Trust

Trust has been measured with three items about sincerity (honesty, sincerity, and trustworthiness) and three items about competence (competence, intelligence, and skill) (adapted from Leach, Ellemers, & Barreto, 2007). Furthermore, the third indicator of trust is the norms and values of the organisation as perceived by the respondents. For sincerity and competence did the respondents indicate in their answers whether the organisation fits with the above characteristics on a 7-point Likert-scale, which ranges from 1 (Very bad) to 7 (Very good). For the norms and values, the respondents had to judge four statements about whether the organisation is concerned about the environment, invest in the environment out of ethical concerns, tries to look more environmentally friendly than they are, and if they invest in the environment because it fits with the norms and values of the organisation (adapted from Ellen, Webb & Mohr, 2006). These statements were indicated by the respondent on a Likert-scale from 1 (Strongly disagree) to 7 (Strongly agree) whether they applied to them.

A factors analysis using Principal Components extraction with Varimax rotation based on Eigenvalues (> 1.00), KMO = .90, $\chi 2$ (N = 273, 45) = 2202.67, p < .001) has been conducted. One of the items belonging to norms and values (the organisation tries to look more environmentally friendly than they really are) had to be reversed because this item included negatively worded items. The analysis showed that the ten items work best if they are considered to be two separate scales. All three items that belonged to sincerity and all four items that belonged to norms and values are loaded upon the first factor, whereas the items belonging to competence belong to the second factor. These two factors would cumulatively explain 71.2% of total variance, of which the combined sincerity scale (so sincerity, and norms and values) explains 58.3% and the competence scale 12.9%.

Several reliability tests have been conducted. First, the reliability of the results from the factor analysis has been tested. These give a Cronbach's alpha of .91 of the factor that includes both *sincerity* and *norms and values*. The reliability of every separate scale has been measured as well, namely *norms and values, sincerity*, and *competence*. The sincerity scale's Cronbach's alpha was .96. This means that the scale is very reliable because it scores higher than .80 (Pallant, 2016). For sincerity, the mean score is 4.13 and a standard deviation of 1.37.

The competence scale's Cronbach's alpha was .88, which makes this a very reliable scale as well. For competence, a separate variable has been created as well. It has a mean score of 4.47 and a standard deviation of 1.04. The scale of norms and values had a Cronbach's alpha of .77, which shows that the scale is reliable. Cronbach's' alpha could be increased to .80 when the third item (organisation tries to look more environmentally friendly than they actually are) is deleted. Cronbach's alpha has already a good score, therefore it has been decided to keep the item in creating a new variable. It has a mean score of 4.03 and a standard deviation of 1.08.

| Item | Sincerity and Norms & Values | Competence |
|----------------------------------|------------------------------|------------|
| Sincerity | .79 | |
| Honesty | .82 | |
| Trustworthiness | .82 | |
| Competence | | .78 |
| Intelligence | | .89 |
| Skill | | .90 |
| Is concerned about the | .80 | |
| environment | | |
| Invests in green energy for | .70 | |
| ethical reasons | | |
| Invests in green energy because | .75 | |
| it is in line with the norms and | | |
| values of the organisation | | |
| Tries to look more | .59 | |
| environmentally friendly than | | |
| they really are | | |
| R ² | 58.3 | 12.9 |
| Cronbach's alpha | .91 | .88 |

Table 3.3.3.1: Factor and reliability analysis for scales for trust

Out of convenience for the further study, it has been decided to combine the three subscales into one scale named *trust*. The correlation between the three variables has been tested through a bivariate correlation analysis. The results show that all three scales correlate significantly with each other (See table 3.3.3.2). The three scales *sincerity, competence,* and

norms and values have been put together into a reliability test. The scales' Cronbach's alpha was .84, which means that the scale is very reliable. The mean score is 4.21 and the standard deviation is 1.01. A new variable has been created named *trust*. For every further analysis, this variable is used for *trust*, unless stated otherwise.

| Table 3.3.2: Correlation matrix components for the variable <i>trust</i> | | | | | |
|--|---------------------|----------------|--------------|---------------|--|
| | | Sincerity as a | Competence | Norms and | |
| | | part of trust | as a part of | values as a | |
| | | | trust | part of trust | |
| Correlation | Sincerity as a part | - | | | |
| | of trust | | | | |
| | Competence as a | .641* | - | | |
| | part of trust | | | | |
| | Norms and values | .767* | .498* | - | |
| | as a part of trust | | | | |
| <i>Note:</i> * <i>p</i> < .001 | | | | | |

. . .

3.3.4. Electronic word-of-mouth

EWOM has been measured with ten items. Six items are about positive eWOM and four are about *negative eWOM*. The ten items about eWOM have been put into a factor analysis to find out if these groups are also defined there. A factor analysis using Principal Components extraction with Varimax rotation based on Eigenvalues (> 1.00), KMO = .88, χ^2 (N = 273, 45) = 2406.86, p < .001) showed that the items indeed load upon two factors: *positive eWOM* and negative eWOM. Positive eWOM explains 50.3% of variance and negative eWOM explains 29.4% of variance. According to the factor analysis have positive eWOM intentions been measured with six items. These include whether the respondent is willing to like the message, post a positive reaction under the message, would share the message with friends, would say positive things about it on Facebook, would recommend it to friends, and whether they would start to follow the Facebook page of the company (adapted from Eisingerich, Chun, Liu, Jia, & Bell, 2015). They had to indicate their answers on a Likert-scale from 1 (Strongly disagree) to 7 (Strongly agree) whether the statement applied to them. The scale's Cronbach's alpha was .93. This means that the scale is very reliable. The items have been put together in a new variable *positive eWOM*. The mean score is 2.07, with a standard deviation of 1.11.

The other factor is *negative eWOM* intentions, which have been measured with four items. These include whether the respondent is willing to post a negative reaction under the message, whether they want to share it with their friends to express negative feelings about it, if they would be willing to say negative things about the company on Facebook, and whether

they would say negative things about the energy they deliver to its customers (adapted from Eisingerich et al., 2015). These have been indicated on a Likert-scale from 1 (Strongly disagree) to 7 (Strongly agree) whether the statement applied to them. The scale's Cronbach's alpha was .94. This means that the scale is very reliable. Deleting an item would only decrease Cronbach's alpha score. The items have been combined into a new variable *negative eWOM*. The mean score of the scale is 1.79, with a standard deviation of 1.02.

Because both variables have a different meaning – i.e. they are not opposites of each other, it has been chosen to perform two analyses for eWOM, one for negative eWOM and one for positive eWOM. Therefore, the sixth and seventh hypothesis that have been stated tests the same relationship, but once with negative eWOM and once with positive eWOM. This is because there might be different reasons why people participate in negative or positive eWOM, which can lead to different results.

| Item | Positive eWOM | Negative eWOM |
|----------------------------------|---------------|---------------|
| I would 'like' this message on | .85 | |
| Facebook | | |
| I would say positive things | .87 | |
| about Green Power Energy on | | |
| Facebook | | |
| I would share this message on | .88 | |
| Facebook with my friends to | | |
| support this initiative | | |
| I would follow the Facebook | .85 | |
| page of Green Power Energy | | |
| I would post a positive reaction | .87 | |
| under this message | | |
| I would post a negative | | .92 |
| reaction under this message | | |
| I would share this message on | | .90 |
| Facebook with my friends to | | |
| warn them for this initiative | | |
| I would say negative things | | .92 |
| about the company Green | | |
| Power Energy on Facebook | | |
| | | |

Table 3.3.4.1: Factor and reliability analysis for scales for eWOM
I would say negative things on Facebook about the energy Green Power Energy delivers to its customers

| R ² (variance explained) | 50.9 | 29.0 |
|-------------------------------------|------|------|
| Cronbach's alpha | .93 | .94 |

.93

3.4 Relationship analysis

The relationships between the variables in this study will be tested through different types of analysis. The relationship between media portrayal of renewable energy and trust will be tested by an ANOVA, as will the relationship between media portrayal and eWOM. The relationship between trust and eWOM will be tested by a regression analysis. The moderating effect of environmental concern will be tested by a hierarchical regression. The three groups will be tested on whether there are significantly different scores on the control variables (age, gender, level of income, level of education, being able to choose energy supplier, and having green energy at home). If so, then the control variables will be considered during the testing of the hypotheses. The mediation analyses will be done by conducting regression analyses.

3.5 Validity and reliability

This research aims to increase validity and reliability in various ways. "Validity of a scale refers to the degree to which it measures what it is supposed to measure" (Pallant, 2016, p. 7). Respondents have been randomly assigned across the three conditions, which decreases bias between the groups and increases internal validity because all groups are treated as equivalent. This means that there is no risk of bias coming from the researcher assigning the participants and it is supposed to balance the groups on variables that might affect the outcome of the research (Bryman, 2016; Neuman, 2014). To check whether this worked, the groups are tested on if there are significant differences between them. If this appears to be the case, this will be taken into account in the analyses. A manipulation check has been executed as well, to be able to check whether the respondents have read the text and answer the questions based upon this. This is to make sure that the effect of the independent variable on the dependent variable is measured but also to ensure that the effects that have been found are caused by the manipulation. However, what might threaten internal validity is the maturation effect. This effect is the growth of boredom or other experiences that can occur during the

experiment which might influence the answers of the participant (Neuman, 2014). If respondents find out that they are not very interested in the subject, they can become bored and give different answers than they would when they would be actively interested in the topic. As an attempt to prevent this, the questions in the experiment have been kept as short as possible. Participants that stopped early with the experiment have been excluded from the analysis. The reliability of a scale "indicates how free it is of random error" (Pallant, 2016, p. 6). Most of the scales in the experiment have been adjusted from previous research. This means that the scales have already been tested multiple times and have a high Cronbach's Alpha, which shows the reliability of the scales. For almost all the scales is the Cronbach's Alpha above .80, which implies that the scales are very reliable (Pallant, 2016).

4. Results

This chapter provides the results that have been obtained by analysing the data that have been gathered via Qualtrics in SPSS. First, a manipulation check has been done to see whether the manipulation has worked. This is done through a univariate analysis of variance (ANOVA) test. Then, for all the control variables will be checked if there are any significant differences between the three conditions the respondents have been randomly assigned to. This is followed by the analyses of the hypothesis. For every potential relationship that is stated in the hypotheses will be analysed whether this is the case. For this, ANOVA, simple linear regression analyses, and hierarchical regression analyses are used. The results will finally test the relationship between all the variables in the model to find out whether it is the case that there is a full mediation.

4.1 Manipulation check

A manipulation check has been done to discover ANOVA revealed a significant main effect for condition on considering the organisation Green Power Energie as being sustainable, F(2, 270) = 34.64, p < .001, partial $\eta^2 = .20$. Tukey post-hoc comparisons revealed that participants that were in the green condition group significantly agreed more with the statement that Green Power Energie is a sustainable organisation (M = 5.05, SD = 1.17) than the respondents which have been put in the grey condition group (M = 3.49, SD = 1.7), p < .001. A significant difference has also been found between the grey condition and the control group (M = 4.87, SD = 1.21), p < .001. There was no significant difference between the green condition and the control condition.

4.2 Control variables

Respondents have been randomly assigned to three different conditions. It is important to know if the randomization has worked, to make sure that the results are not influenced by the differences in demographics that occur between the groups. Therefore, for every variable, a one-way ANOVA or Chi-Squared test has been conducted to see whether the groups differ significantly from each other ($\alpha = .05$). If this is not the case, the variables are not taken into account as control variables in the following analyses. If it appears that the groups differ significantly in their scores for the control variables, then the randomization did not work and the control variables are taken into account in the analyses.

4.2.1 Age

A one-way ANOVA has been done to see whether there is a difference in age, which is a continuous control variable, between the manipulation groups. The results show that there is no significant difference in age between the different groups F(2, 270) = 0.11, p = .900.

4.2.2 Gender

To see whether there is a difference in gender between the three groups, a Chi-squared test has been conducted, because gender is a categorical variable. The four people that have answered something else than 'male' or 'female' as their gender have been excluded from analysis by labelling them as 'missing values'. This has been done because this group is too small to be able to draw any conclusions about them. It appears that there is no significant difference in gender between the groups χ^2 (N = 269, 2) = 3.38, p = .185.

4.2.3 Level of education

A Chi-Squared test has been conducted to see whether there is a difference in the level of education, which is a categorical variable, between the three conditions. It appears that there is no significant difference in the level of education between the three groups χ^2 (N = 273, 14) = 13.22, p = .509.

4.2.4 Level of income

To see whether there is a difference in the level of income, a categorical variable, between the different conditions, another Chi-Squared test has been conducted. No significant difference in the level of income has been found between the three groups χ^2 (N = 273, 14) = 7.84, p = .898.

4.2.5 In charge of choosing the energy supplier at home

A Chi-Squared test has been conducted to see whether the conditions differ in the number of respondents that are in charge of choosing the energy supplier for their household. This is a categorical variable. The test revealed that there is no significant difference between the three groups χ^2 (N = 273, 2) = 1.25, p = .535.

4.2.6 Having purchased green energy

To see if there is a difference between the three groups in whether they have purchased green energy for their household (a categorical variable), a Chi-Squared test has been conducted. This test revealed that there is no significant difference between the groups in their choice for green energy χ^2 (N = 273, 4) = 7.43, p = .115.

It appears that none of the demographic variables differ significantly between the three conditions. Therefore, the randomization of the groups has worked well. For the testing of the hypotheses, therefore, no control variables will be included.

4.3 Hypothesis testing

4.3.1 The influence of negative media portrayal and positive media portrayal on positive eWOM intentions

In the first hypothesis (H1), it has been stated that negative media portrayal leads to lower positive eWOM intentions than positive media portrayal. A univariate between-groups analysis of variance was conducted to explore the relationship between media portrayal and positive eWOM intentions. Media portrayal, a categorical variable, is the independent variable and positive eWOM intentions, a continuous variable, is the dependent variable. Participants have been randomly divided into three conditions: positive media portrayal, negative media portrayal, and a control condition. There was no significant effect for media portrayal on positive eWOM intentions, F(2, 270) = 0.91, p = .406, partial $\eta 2 = .01$. This means that hypothesis 1 is rejected. Still, the pattern in the data was in line with the hypothesis: the respondents in the negative media portrayal group (M = 2.03, SD = 1.09) had a lower mean score on positive eWOM intentions than the respondents in the positive media portrayal group (M = 2.19, SD = 1.17). The respondents in the control group had the lowest score on positive eWOM intentions (M = 1.98, SD = 1.06).

4.3.2 The influence of environmental concern on positive eWOM intentions about renewable energy

In the second hypothesis (H2), it has been stated that higher levels of environmental concern promote stronger positive eWOM intentions about renewable energy. Environmental concern is the independent variable, which is continuous, and the dependent variable is positive eWOM intentions, which is a continuous variable as well. The relationship has been tested by using a simple linear regression analysis. Respondents' scores on environmental concern predict 6.1% of the variance in scores on positive eWOM intentions. The model was found to be significant, $R^2 = .06$, F(1, 271) = 17.54, p < .001. Environmental concern had a positive significant influence on positive eWOM intentions ($\beta = .25$, p < .001). This means that hypothesis 2 is accepted, higher levels of environmental concern promote stronger positive eWOM intentions about renewable energy.

4.3.3 The moderation effect of environmental concern on the relationship between media portrayal and eWOM intentions

The third hypothesis tests the moderation effect of environmental concern on the relationship between media portrayal and positive eWOM. The hypothesis is stated as follows: the effect of media portrayal of renewable energy on positive eWOM is stronger for respondents with a high level of environmental concern than for respondents with a low level of environmental concern. The independent variable is media portrayal and the dependent variable is positive eWOM. The moderator is environmental concern. This has been tested through a hierarchical regression analysis. The following variables have been entered in the first block: the standardized variable for environmental concern and two dummies for the manipulation conditions. The first dummy variable compares the green manipulation condition with the control and grey condition, and the second dummy variable compares the grey condition with the green and control condition. In the second block are the variables for the two interaction effects between environmental concern and the two manipulation dummy variables included. The first interaction variable is made up of the standardized environmental concern variable times the first dummy (green condition versus the grey and control condition). The second interaction variable includes standardized environmental concern as well but includes the second dummy variable instead of the first one.

The first model explains 6.8% of variance in positive eWOM, $R^2 = .26$, F(3, 269) = 6.52, p < .001. The manipulation conditions showed to have no significant effect on positive eWOM intentions. Environmental concern ($\beta = .25$, p < .001) does have a positive significant effect on intentions to participate in positive eWOM. This means that people with a higher level of environmental concern are also more likely to participate in positive eWOM. The second model does not significantly improve the explained variance in comparison to the first model $\Delta R^2 = .01$, F(2, 267) = 1.75, p = .176. Therefore, the effect of media portrayal on renewable energy is not found to be stronger for people with a high level of environmental concern. In general, people with a high environmental concern are more likely to intend to participate in positive eWOM. Therefore, hypothesis 3 is rejected.

4.3.4 The influence of media portrayal on the level of trust

For the fourth hypothesis, the relationship between media portrayal and trust has been tested. The hypothesis is stated as follows: positive media portrayal of renewable energy leads to higher levels of trust than negative media portrayal. Herein, media portrayal is an independent categorical variable and trust is a dependent continuous variable. Trust is a combined variable made up out of three separate variables. All three have been tested individually to find out whether there are differences between the components. The separate components provide similar results, therefore for this analysis, it has been decided to combine these subscales into the overarching variable 'trust'. To test the relationship, a univariate analysis of variance has been used. The ANOVA revealed a significant effect of manipulation on trust in the organisation, F(2, 270) = 24.83, p > .001, partial $\eta 2 = .16$. Tukey post-hoc comparisons revealed that participants from the green energy manipulation scored significantly higher on trust (M = 4.52, SD = 0.89) than respondents in the grey energy manipulation (M = 3.66, SD = 1.11), p < .001. The control group scored also significantly higher (M = 4.46, SD = 0.75), p < .001, than the grey manipulation group. No significant difference has been found between the control group and the green energy manipulation. This means that positive media portrayal leads to higher levels of trust than negative media portrayal and therefore hypothesis 4 is supported.

4.3.5 The influence of trust on the intention to participate in eWOM

For the fifth hypothesis, the relationship between levels of trust, the independent variable, and eWOM intentions, the dependent variable, have been tested. The hypothesis is stated as follows: higher levels of trust promote stronger positive eWOM intentions about renewable energy. For trust is the combined

variable used (see hypothesis 4). Trust and positive eWOM intentions are both continuous variables. Their relationship has been tested through a simple linear regression analysis. Respondents' scores on trust predict 14.6% of the variance in scores on positive eWOM intentions. The model was found to be significant, $R^2 = .14$, F(1, 271) = 46.15, p < .001. Trust had a positive significant influence on positive eWOM intentions ($\beta = .42$, p < .001). This means that hypothesis 5 is supported, higher levels of trust promote stronger positive eWOM intentions about renewable energy.



Figure 4.3.5.1: Significance of the relationships between the variables

Note: * *p* < .001

4.3.6 The mediation effect of trust in the relationship between media portrayal and eWOM It is important to formally test the mediation as stipulated in the research question as well: media portrayal affects (a) trust, and trust affects (b) eWOM intentions. Trust then mediates the relationship between media portrayal and eWOM intentions (c). This relationship has been stated in the sixth hypothesis for positive eWOM: the effect of media portrayal on positive eWOM is mediated by trust. And in the seventh hypothesis for negative eWOM: the effect of media portrayal on negative eWOM is mediated by trust. Negative and positive eWOM intentions are separate variables, as they are not opposites of each other. It is important to learn more about both types of eWOM, therefore, the model has been tested twice. This has been done through a mediation analysis, also called multiple regression analysis. For all following analyses that include the concept of *media portrayal* have dummy variables been used. The first dummy separates the green condition (1) from the grey and control condition (0), and the second dummy separates the grey condition (1) from the green and control condition (0). This has been done to be able to put the categorical variable in the regression analysis. The reference group is the control condition. For trust, the earlier mentioned combined variable has been used to test the relationships.





Positive eWOM (H6)

- The relationship between media portrayal and positive eWOM intentions (c) A simple linear regression analysis has been done to test the relationship between media portrayal and the intention to participate in positive eWOM. The independent variable is media portrayal, which is a categorical variable. The dependent variable positive eWOM is a continuous variable. No significant relationship has been found between media portrayal and positive eWOM, *Fchange*(2, 270) = 0.91, p = .406. This means that hypothesis 6 is rejected. Therefore, it is not possible to have a mediation between the variables. The relationships between media portrayal and trust, and between trust and positive eWOM intentions are tested to see whether there is an indirect effect of media portrayal on positive eWOM.

- The relationship between media portrayal and trust (a)

The simple linear regression analysis of media portrayal, a categorical independent variable, and trust, a continuous dependent variable, showed a significant relationship between media portrayal and trust. According to the results does media portrayal explain 15.5% of variance in trust, *Fchange*(2, 270) = 24.83, *p* < .001. The grey condition showed to differ significantly compared to the control and green condition. Respondents from grey condition score on average 0.81 less on trust than the respondents in the control condition (β = -.38, p < .001). The green condition showed no significant difference from the control condition.

- The influence of trust on positive eWOM intentions (b)

A simple linear regression analysis has been conducted to test the relationship between trust, the independent variable, on positive eWOM, the dependent variable. Trust and positive eWOM are both continuous variables. Trust explains 14.2% of variance in positive eWOM, *Fchange*(1, 271) = 46.15, p < .001. This is a significant relationship. Trust has a positive

significant influence on positive eWOM (β = .38, p < .001). For every step increase in trust, the respondents scored 0.42 higher on intentions to participate in positive eWOM.

For the model of positive eWOM, no significant relationship has been found between media portrayal and positive eWOM. This means that hypothesis 6 is rejected and that there is no mediation effect for positive eWOM. There has been a significant relationship between media portrayal and trust. There has also been a significant relationship between trust and positive eWOM. This means that, even though there is no mediation, there is an indirect effect of media portrayal on positive eWOM through the level of trust respondents have.

Figure 4.3.6.2 Significant and non-significant relationships in the model of positive eWOM



Note: * *p* < .001

Negative eWOM (H7)

- The relationship between media portrayal and negative eWOM intentions (c) To test the relationship between media portrayal, a categorical variable that has been tested by making use of the earlier mentioned two dummy variables, and negative eWOM, a continuous dependent variable, a multiple regression analysis has been done. There is a significant relationship between media portrayal and negative eWOM, in which media portrayal explains 6.4% of variance in negative eWOM, *Fchange*(2, 270) = 9.27, *p* < .001. A significant difference has been found between the grey condition and the control condition, where respondents in the grey condition scored 0.62 higher on intentions to participate in negative eWOM compared to the control group (β = .29, p < .001). No significant difference has been found between the green condition and the control group.

- The relationship between media portrayal and trust (a)

For the relationship between media portrayal and trust, the same analysis can be used as has been conducted for the model of positive eWOM concerning this same relationship. This analysis showed that media portrayal explains 15.5% of variance in trust, Fchange(2, 270) =

24.83, p < .001. The grey condition differed significantly from the control group ($\beta = -.38$, p < .001), in which respondents scored on average 0.81 less on trust than in the control condition. No significant difference has been found between the green condition and the control condition.

- The influence of both media portrayal and trust on negative eWOM intentions (b + c) Again, a multiple regression analysis has been done to see whether there is a significant relationship between media portrayal and negative eWOM, and trust and negative eWOM. Media portrayal and trust are both independent variables, and negative eWOM is a dependent variable. Media portrayal is categorical, whereas trust and negative eWOM are continuous variables. There is a significant relationship between both independent variables and negative eWOM. Media portrayal and trust explain together 10.3% of variance in negative eWOM, *Fchange*(3, 269) = 10.28, p < .001. The results show that for every step increase in trust, the respondent's intentions to participate in negative eWOM decreased with 0.22. This means that trust has a significant negative relation with negative eWOM intentions. Furthermore, in the grey condition are respondents significantly more likely to participate in negative eWOM than respondents in the control condition ($\beta = .45$, p = .003). When the green condition is compared to the control condition, the significant difference that has been found in the relationship without including trust disappears.

This means that for the model of negative eWOM there is a significant relationship between media portrayal and negative eWOM. Also, a significant relationship between media portrayal and trust has been found. Furthermore, the influence of trust and media portrayal on negative eWOM showed to be significant as well. This means that the complete model is significant. For the green condition, a full mediation has been found because the significant influence of media portrayal on negative eWOM disappears when trust is involved. For the grey condition, there is only partial mediation, because the relationship between media portrayal and negative eWOM that has been found earlier still exists when trust is added to the analysis.

Figure 4.3.6.3 Significant and non-significant relationships in the model of positive eWOM



Note: * *p* < .001

5. Discussion

As climate change becomes a more relevant subject every day, it is important to do more research about this. Consumers play a very big role, maybe even the biggest, in tackling this issue (Wells et al., 2011). Buying renewable energy instead of fossil fuels is one of the things consumers can do, to improve the climate and make sure that natural resources are not depleted (CBS, 2019). As the promotion of the energy sector often happens online, it is important to have a good online presence and consumers that are willing to participate in eWOM to spread the message further (Castle, 2017). Within this relationship, trust and environmental concern play a big role, because the consumers have to have a reason to participate in eWOM. To find the relationship between these factors, an online experiment has been conducted to answer the following research question: "To what extent do the media portrayal of renewable energy sources, trust, and individual levels of environmental concern influence social media users' electronic word of mouth intentions of promotional messages about renewable energy?"

5.1 Key findings

This research focuses on the relationship between media portrayal, trust, and eWOM, and a possible mediation between them. For the first hypothesis (H1), it was expected that negative media portrayal would lead to lower positive eWOM intentions in comparison to positive media portrayal. The findings showed that there was no significant difference in the intention to participate in positive eWOM between the three conditions. The findings show a difference between the conditions in the same direction as stated in the hypothesis, namely that respondents in the green condition have a higher average score on intentions to participate in positive eWOM than respondents in the grey condition, but the difference was not big enough to be significant. Earlier studies show that negative messages on social media often lead to negative eWOM and not to positive eWOM (Liu & Keng, 2014; Park & Lee, 2009). Positive messages tend to lead to more positive messages (Tsao & Hsieh, 2015). It is expected that a bigger sample size would increase the precision of the sample, making it more likely to reach significant results (Bryman, 2016), and would then support the current literature on the topic.

The second focus point of the research has been to discover whether a high level of environmental concern promotes stronger positive eWOM intentions. The second hypothesis (H2) stated as follows: higher levels of environmental concern promote stronger positive eWOM intentions about renewable energy. According to the findings, the hypothesis can be accepted. This supports the findings from previous studies. Van der Werff et al. (2013) found that a strong environmental self-identity contributes to the likelihood of participating in the promotion of environmentally friendly behaviour, such as sharing something positive about an initiative on Facebook. Environmentally friendly people are more likely to be interested in green initiatives and are also more willing to interact with them (Bamberg, 2003). There is not much research on environmental concern and eWOM intentions but there are several studies that link higher levels of environmental concern to increased chances of purchasing green products. It seems that the findings of this study are in line with this, as people with higher environmental concern are more likely to act according to their concern (Royne, et al., 2012; Richards, 2013; Ulusoy & Barretta, 2016). Based on the findings in this study and previous studies, it can be confirmed that people with higher levels of environmental concern show stronger positive eWOM intentions.

Thirdly, the research aimed to find out whether environmental concern moderates the relationship between media portrayal and eWOM. The third hypothesis (H3) is as follows: the effect of media portrayal of renewable energy on positive eWOM is stronger for respondents with a high level of environmental concern than for respondents with a low level of environmental concern. The findings show that there is no significant effect of media portrayal on positive eWOM. This means that the third hypothesis cannot be accepted. Environmental concern influences the intention to participate in positive eWOM, as people with a higher level of environmental concern are more likely to participate in positive eWOM about the topic. But the regression analysis showed that there are no interaction effects and the relationships, therefore, do not depend upon each other. This might be explained by that personal identity is an important part of the decision-making process, but social identity is as well (Kietzmann et al., 2011; Ruiz-Mafe et al., 2018). The level of environmental concern might be influencing whether they think the subject is important or not but does not necessarily mean that the respondents will share something about it on social media, as not only their personal identity but also their social identity is of importance there.

Besides the aim to find a moderation effect of environmental concern, another purpose of the research has been to find a mediation effect of trust in the relationship between media portrayal and eWOM. The fourth hypothesis (H4) focuses on the relationship between media portrayal and trust and is stated as follows: positive media portrayal of renewable energy leads to higher levels of trust than negative media portrayal. This hypothesis has been accepted. The results show that both the green manipulation group and the control group score significantly higher on trust than the grey manipulation group. It was expected that the green manipulation group would score higher on trust than the grey manipulation group because earlier research showed that negative messages decrease the level of trust consumers have in an organisation (Guo et al., 2015). Another study found that reading positive messages will in turn increase trust in the organisation (Algharabat et al., 2020). By using the Consumentenbond as the source for these messages, which is an important public authority in the consumer market, it should have been the case that the respondents trusted the organisation to be honest about their findings on the researched organisations (Janssen & Hamm, 2012). The high scores of the control group came as a surprise. It appears that when respondents do not receive any background information about the organisation, they are quite positive about the message they read. This might be explained by the green identity the organisation tries to show. The name of the organisation is "Green Power Energie", which means that 'being green' is already embedded in the identity of the organisation. Respondents might have considered the organisation credible or trustworthy as the greenness they are talking about in the Facebook post is also already part of its identity. Earlier research showed that having a green identity as an organisation influences the perception consumers have of it and its messages (Phau & Ong, 2007; Van Prooijen, 2019).

Then, the relationship between trust and eWOM has been assessed through the fifth hypothesis (H5), which is stated as follows: higher levels of trust promote stronger positive eWOM intentions about renewable energy. The findings show that this hypothesis can be accepted, as respondents that showed higher levels of trust have also been more likely to share something positive on social media. This is in line with previous studies. Gharib et al. (2019) found that trust influences opinion seeking, opinion passing, and opinion giving (Chu & Kim, 2011), which are the three reasons for participating in eWOM. It is also an important factor in the renewable energy sector, as trust in this sector is not only linked to one organisation but the sector in general (Thøgersen et al., 2010). The current study supports the research on trust and eWOM as it has been discovered that trust does influence the motivation to participate in positive eWOM. Chu and Kim (2011) found that higher levels of trust lead to increased participation online. Lower levels of trust lead to less participation in positive eWOM (Guo et al., 2015). This is supported by the findings in this study.

Finally, the whole model has been tested twice (H6 and H7), once to discover whether the effect of media portrayal on positive eWOM is mediated by trust (H6) and a second time to find out whether the effect of media portrayal on negative eWOM is mediated by trust (H7). First, the model that includes positive eWOM showed no mediation effect. There has been no significant effect of media portrayal on positive eWOM (H1), there has been a significant positive effect of media portrayal on trust (H4), and there has been a significant positive effect of trust on positive eWOM (H5). This means that there cannot be a mediation because there has been no relationship between media portrayal and positive eWOM in the first place. But, there is an indirect effect of media portrayal on positive eWOM through the level of trust respondents have (Hayes, 2009). This does support previous studies, as it confirms the relationship between the type of media portrayal and the level of trust, and the influence of trust on eWOM intentions (Chu & Kim, 2011; Gharib et al., 2019; Guo et al., 2015; Tantrabundit et al., 2018).

For the model of negative eWOM, different results have been found. First, the relationship between media portrayal and negative eWOM has been significant. Respondents in the grey manipulation group scored significantly higher on the intention to participate in negative eWOM compared to the control group. No difference has been found between the green condition and the control condition. This is in line with previous studies, as studies show that negative messages easily lead to more negative messages (Liu & Keng, 2014). This is because these messages impact consumers more and grab more attention than a positive message (Solomon, 2018; Park & Lee, 2009). Consumers are more willing to share a negative experience than a positive one, which might explain why the respondents showed to be more likely to share a negative message about Green Power Energie than a positive one (Solomon, 2018). Second, the relationship between media portrayal and trust has already been tested for the positive eWOM model and showed that media portrayal significantly affects trust (H4). Thirdly, the relationship between trust and negative eWOM, and media portrayal and negative eWOM has been tested. The findings show that the higher the respondents' score on trust, the less likely they are to participate in negative eWOM. This has been a significant relationship. Especially respondents that saw the grey condition, which included the negative message, are more likely to participate in negative eWOM. This is in line with earlier studies as a decrease in trust will lead to more negative eWOM (Guo et al., 2015), as the trustworthiness of the source significantly influences reasons for participating in eWOM (Chu & Kim, 2011). Also, trust influences opinion seeking, opinion passing, and opinion giving online (eWOM) (Chu & Kim, 2011). This means that for the model of negative eWOM, there is a full mediation for the green condition. All relationships showed to be significant. Once the mediation of trust was introduced, the direct effect of media portrayal on negative eWOM disappeared. This can be explained by that many studies have shown that trust is very important for green products (Krystallis, Vassallo, Chryssohoidis, & Perrea, 2008; Tung, Shih, Wei, & Chen, 2012). When the brand proved to be trustworthy, consumers are less likely to participate in negative eWOM about it (Tantrabundit et al., 2018). Trust appears to be an important factor for sharing

positive messages. There has been a partial mediation between the grey condition and negative eWOM because the grey condition has a significant direct effect on the intention to participate in negative eWOM but also shows that trust mediates that same relationship. This is in line with the study by Liu and Keng (2014) who found that negative messages lead to more negativity. This is separate from whether the respondents trust the organisation or not. Though, the decrease in trust adds to the urge to participate in negative eWOM. Inconsistency in the messages that consumers read, for example when the organisation claims one thing but another thing is true, leads to a decrease in trust in this organisation, which then leads to an increased chance to participate in negative eWOM (Solomon, 2018). This means that there is a double effect of media portrayal on the intention to participate in negative eWOM, a direct effect, but also an indirect effect through trust. This means that there is a partial mediation for the grey condition, which has been shown in this study.

5.2 Theoretical and practical implications

The findings of this study contribute to the existing literature and can help energy suppliers and marketers in the promotion of their products. The current study investigated the relationship between different types of media portrayal, trust, and eWOM intentions. This has been combined with research on the influence of environmental concern on the relationship between media portrayal and eWOM intentions. This study helped to expand the knowledge on all these topics, and especially the combination of these, as this has not been researched before. On the one hand do the findings show that negative media portrayal leads to more negative eWOM than positive media portrayal, while on the other hand, positive media portrayal leads to more positive eWOM than negative media portrayal. After having seen the negative media portrayal (grey) condition, the respondents were much more likely to participate in negative eWOM compared to respondents who saw the positive (green) condition and were asked about their intentions to participate in positive eWOM. This means that consumers are much more likely to express negative feelings online after they have read something negative, than that they would like to share something positive after they have read a positive message. This supports earlier studies (Lee & Hong, 2016; Liu & Keng, 2014; Solomon, 2018). These results show that it might be more urgent for organisations to limit the negative messages, if there are any, than to focus on the increase of spreading positive messages, because the latter have less return of investment. Furthermore, people with a higher level of environmental concern are more likely to participate in positive eWOM about renewable energy than people with lower levels of environmental concern. Environmental

concern will probably become more important in the future as climate change will keep having an influence on daily life. More than half of the respondents The results show that most of the respondents (think that they) receive green energy at home, which is another indication that the climate is something people are thinking about. The social side of renewable energy is becoming more important and will have to be researched more. This research contributes to the start of more research on renewable energy and eWOM.

The practical implications of this study can contribute to the marketing strategies of marketers and energy suppliers but also provide the government with more information about consumers' intentions to use information about renewable energy. The Dutch government wants the Netherlands to become more sustainable (van der Walle, 2020). For them, it will be necessary to learn more about to what extent renewable energy companies are trusted by consumers and what they would like to share online about these organisations with their friends and family. This could provide more insights into why people are interested in renewable energy and how more interest in the topic can be created. As the study is based on existing research by the Consumentenbond (and others), the results might also be useful for organisations that have been examined in this research, as it can be learned how consumers interpret these messages and how willing they are to share something online. It has been shown that negative messages are likely to lead to more negative messages. It seems essential to try to limit these kinds of messages as much as possible. This study supported earlier research because it shows that, for green organisations at least, consumers with higher levels of environmental concern are more likely to participate in positive eWOM about it, and can be an important asset in a promotion strategy. Though, this research has been based on a general renewable energy organisation; it has not been specified from what type of renewable energy source the organisation delivers power to its consumers. Therefore, the results should be considered with caution, as the type of renewable energy that is delivered might be of importance how consumers perceive the messages.

5.3 Limitations

The findings of this research contribute to the already existing literature on media portrayal, trust, eWOM and environmental concern. However, there are several limitations which have influenced the results of this research.

First, only people that use the internet are included in the research, in itself, this is not a big issue as the research focused on electronic word-of-mouth. But this can explain the young sample because older people are, in general, less capable of using the internet and are less active online (Nimrod, 2016). This means that it has been hard to reach elderly to get a more varied sample. This influenced the average age of the respondents in the sample. The low age of respondents might also have influenced sharing intentions, whereas a younger people are more active on social media, they most likely have less experience with purchasing energy or choosing an energy supplier because they still live at home. There is a chance that this influenced the outcome of the research.

Second, no question has been included in the survey to ask how and to what extent the respondents normally participate in eWOM. This could have given a better insight in how active respondents are online and if this post is just another thing they would share or if it is something that they genuinely think is important to share with others. Previous research has shown that people that to what extent people normally like social media posts, has a positive influence on the intention to like more of them (Lee & Hong, 2016). This would have provided better insights in the daily eWOM behaviour of the respondents.

Thirdly, the experiment has been distributed through the personal network of the researcher. This might have influenced the research results, as the sample has partly been gathered through convenience. It is expected that most respondents have been gathered through this way and less through the Facebook and LinkedIn groups, as the number of respondents did not exponentially increased after posting the messages in these groups, even though these groups had many members. There might be a bias towards the personal or social background of the researcher. One of the reasons for using the personal network is that the COVID-19 virus made it impossible to gather respondents in different locations, by making use of an iPad for example, to find a more varied sample and make the findings more representable.

5.4 Directions for future research

Renewable energy as a research topic has become more interesting as there are many developments in the field and people are becoming more concerned about the climate. Even more awareness could be created around this subject, possibly through research. Much research has already been done on the topic of word-of-mouth but the relationship between WOM and renewable energy has been neglected as a research topic. Most studies focus on the relationship between economic factors and renewable energy, while less research is done on social aspects and renewable energy. Therefore, based upon the findings of this study and its limitations, some suggestions for further research are proposed in the following section.

First, this research focused on respondents' eWOM intentions after reading a renewable energy post. Even though respondents level of environmental concern are measured, nothing is known about their interest in renewable energy sources. For the current research it has been assumed that people with high levels of environmental concern also are more interested in renewable energy but this might not be the case. Further research should explore this relationship. There are arguments against the implementation of renewable power, as wind mills can leak toxic gasses or are hard to tear town once they are build up, solar panels create shadows which can change the nature underneath it, and both of them have to be placed somewhere, which might be near homes or cities where respondents live (Brandemann, 2019; Natuurmonumenten, 2020). Their knowledge on the topic influences their opinions about renewable energy. For further research, this could be included in the questions of the experiment.

Second, the sample of this study is relatively young, as the mean age is approximately 31 years old. For further research should be aimed for older respondents. Research has shown that when age increases, the level of trust also increases (Li & Fung, 2013). Besides, another study showed that younger people are more likely to participate in eWOM (Mishra et al., 2018). It has also been found that older people are showing lower levels of environmental concern than younger people. The latter tend to be more concerned about the environment (Buttel, 1979; Van Liere & Dunlap, 1980). With a better spread age distribution, the influence of age on trust, eWOM and environmental concern could be explored, as it appears to have an influence on all of the separate variables.

Thirdly, the respondents were asked whether they would like, respond, or share the message on Facebook. For the sharing, it has not been specified what kind of sharing this is. On Facebook, there are many groups in which people share things they have in common, such as hobbies or interests. The topic of the current study seems to be something that is not likely to be shared on Facebook in general but it could be that respondents would be willing to share it in groups where people have the same interests. Further research should better emphasize where the message will be shared and provide more background information about this. Then the image of the sharing behaviour of Facebook posts about this subject will become more complete and it will be clearer when people do want to share something and when they do not. When this information about online sharing will be combined with findings on the respondents' level of environmental concern, the knowledge on eWOM about renewable energy as a topic will be increased.

6. Conclusion

The change from fossil fuels to renewable energy sources is very important in reversing or stagnating climate change. Consumers can play a big role in this process by demanding to receive renewable energy. Research by organisations such as the Consumentenbond is necessary in order to educate consumers about what kind of energy they purchase, as energy is a credence good. Social media helps in spreading this information from organisations to consumers but also among the consumers themselves.

This study provided deeper insights into the relationship between media portrayal of messages and the intention of consumers to participate in positive or negative eWOM. Different factors were analysed to understand the level of environmental concern of the consumers and their level of trust in the organisation that has been described. This research can serve as inspiration for energy suppliers and marketers to decide upon a marketing strategy and help in decisions after positive or negative research results have been put online about their particular organisation. Furthermore, the insights from this study contribute to previous research, as the relationship between media portrayal and eWOM has been explored further. This topic could be studies further, therefore, recommendations for further research have been given for the personal relationship respondents have with renewable energy. Also, online sharing behaviour could be explored further by exploring the influence on Facebook groups in the intention to share something online.

In sum, the current study demonstrated that higher levels of environmental concern promote stronger positive eWOM intentions about renewable energy. Additionally, media portrayal influences trust, in such a way that positive media portrayal leads to higher levels of trust than negative media portrayal. In turn, higher levels of trust promote stronger eWOM intentions about renewable energy. Especially for positive media portrayal has trust a mediation effect on negative eWOM. However, the type of media portrayal did not have a direct effect on eWOM intentions. Therefore, no moderation effect has been found for environmental concern in this same relationship. These results show that it is important how organisations are portrayed in the media, as their consumers' level of trust can be influenced by it, which in turn can influence their social media behaviour.

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Appendix A

Table 1: Age of respondents (N = 273)

| Characteristics | | Frequency | % | Cumulative % |
|------------------------------|---------------|---------------|------|--------------|
| Age (already or will become) | Year of birth | | | |
| 19 | 2001 | 1 | 0.4 | 0.4 |
| 20 | 2000 | 3 | 1.1 | 1.5 |
| 21 | 1999 | 13 | 4.8 | 6.2 |
| 22 | 1998 | 20 | 7.3 | 13.6 |
| 23 | 1997 | 52 | 19.0 | 32.6 |
| 24 | 1996 | 32 | 11.7 | 44.3 |
| 25 | 1995 | 17 | 6.2 | 50.5 |
| 26 | 1994 | 16 | 5.9 | 56.4 |
| 27 | 1993 | 11 | 4.0 | 60.4 |
| 28 | 1992 | 7 | 2.6 | 63.0 |
| 29 | 1991 | 6 | 2.2 | 65.2 |
| 30 | 1990 | 8 | 2.9 | 68.1 |
| 31 | 1989 | 3 | 1.1 | 69.2 |
| 32 | 1988 | 5 | 1.8 | 71.1 |
| 33 | 1987 | 3 | 1.1 | 72.2 |
| 34 | 1986 | 1 | 0.4 | 72.5 |
| 35 | 1985 | 1 | 0.4 | 72.9 |
| 37 | 1983 | 5 | 1.8 | 74.7 |
| 38 | 1982 | 3 | 1.1 | 75.8 |
| 39 | 1981 | 2 | 0.7 | 76.6 |
| 41 | 1979 | - | 0.4 | 76.9 |
| 42 | 1978 | 3 | 11 | 78.0 |
| 43 | 1977 | 2 | 0.7 | 78.8 |
| | 1976 | $\frac{2}{4}$ | 1.5 | 80.2 |
| 45 | 1975 | 2 | 0.7 | 81.0 |
| 46 | 1974 | 3 | 11 | 82.1 |
| 47 | 1973 | 3 | 1.1 | 83.2 |
| 48 | 1973 | 4 | 1.1 | 84.6 |
| 40 | 1972 | 1 | 0.4 | 85.0 |
| 50 | 1970 | 1 | 15 | 86.4 |
| 50 | 1969 | 2 | 0.7 | 87.2 |
| 51 | 1968 | 2 | 0.7 | 88.3 |
| 52 | 1967 | 3 | 1.1 | 80.5 |
| 55 | 1966 | + 5 | 1.5 | 01.6 |
| 55 | 1965 | 5 | 1.0 | 91.0 |
| 55 | 1905 | 3 | 1.0 | 93.4 Q1 5 |
| 50 | 1063 | 2 | 1.1 | 94.5 |
| 58 | 1905 | 2 | 0.7 | 95.2 |
| 60 | 1902 | 2 | 0.7 | 50.0 06 7 |
| 61 | 1900 | 2 | 0.7 | 90.7 07 4 |
| 62 | 1737 | ∠ 1 | 0.7 | 97.4 |
| 64 | 1930 | 1 | 0.4 | 97.8 |
| 65 | 1930 | 1 | 0.4 | 98.2 08 5 |
| | 1900 | 1 | 0.4 | 98.5 |
| 00 | 1952 | 1 | 0.4 | 98.9 |
| 70 | 1950 | 1 | 0.4 | 99.3 |
| | 1949 | 1 | 0.4 | 99.6 |
| /4 Tradat | 1940 | 1 | 0.4 | 100 |
| Total | | 273 | 100 | 100 |

| Table 2: | Demograp | hics of | respondents |
|----------|----------|---------|-------------|
|----------|----------|---------|-------------|

| | | n = 273 |
|---------------------------------|-----------|---------|
| Characteristics | Frequency | % |
| Gender | | |
| Male | 73 | 26.7 |
| Female | 196 | 71.8 |
| Other | 1 | 0.4 |
| Rather not say | 3 | 1.1 |
| | | |
| Income level | | |
| €0 - €24.999 | 148 | 54.2 |
| €25.999 - €49.999 | 48 | 17.6 |
| €50.000 - €74.999 | 30 | 11.0 |
| €75.000 - €99.999 | 7 | 2.6 |
| €100.000 - €124.999 | 2 | 0.7 |
| €125.000 – €149.999 | 1 | 0.4 |
| I don't know | 10 | 3.7 |
| Rather not say | 27 | 9.9 |
| | | |
| Education level | | |
| High School | 11 | 4.0 |
| MBO | 22 | 8.1 |
| Bachelor HBO | 99 | 36.3 |
| Master HBO | 20 | 7.3 |
| Bachelor WO | 40 | 14.7 |
| Master WO | 76 | 27.8 |
| PhD or other equivalent | 1 | 0.4 |
| Rather not say | 4 | 1.5 |
| | | |
| Are you responsible for | | |
| choosing the energy supplier at | | |
| your home? | | |
| Yes | 142 | 52.0 |
| No | 131 | 48.0 |
| | | |
| Do you receive green energy at | | |
| home? | | |
| Yes | 121 | 44.3 |
| No | 64 | 23.4 |
| I don't know | 88 | 32.2 |

Appendix B

| Group | Members (on 04-05-2020) |
|--|-------------------------|
| Groep Duurzaam Nederland | 1.921 |
| Duurzaam Minimaliseren – Verklein je | 3.220 |
| ecologische voetafdruk | |
| Milieu & Duurzaamheid | 646 |
| Duurzaam leven met kinderen | 10.263 |
| Minimalisme, Duurzaamheid, Simpel Leven en | 2.270 |
| Financiele Onafhankelijkheid | |
| Duurzame Rotterdammers | 1.282 |
| Duurzaam leven | 2.192 |
| Klimaat & Energie | 153 |

Table 3: List of Facebook groups the experiment has been shared in.

Table 4: List of LinkedIn groups the experiment has been shared in.

| Group | Members (on 04-05-2020) |
|-----------------------------|-------------------------|
| Duurzame energie | 14.911 |
| Energietransitie Gelderland | 551 |

Appendix C

| Variable/construct | Question | Source |
|--------------------|--|-----------------------------|
| Environmental | Ik zie mezelf als milieuvriendelijk | Brick et al. (2017). |
| Concern | Ik voel me sterk verbonden met | |
| | milieuvriendelijke mensen | |
| | Ik identificeer mezelf met milieuvriendelijke | |
| | mensen | |
| | Ik vind mezelf een milieuvriendelijke | |
| | consument | |
| | Ik zie mezelf als iemand die erg bezorgd is | |
| | over milieuproblemen | |
| | Ik zou er trots op zijn als mensen vinden dat | |
| | ik leef als een milieuvriendelijk persoon | |
| Green energy | Bent u (mede-) verantwoordelijk voor het | No source. |
| | kiezen van de energieleverancier bij u thuis? | |
| | Ontvangt u thuis groene energy? | |
| Manipulation | Green Power Energie is een duurzame | No source. |
| check | energieleverancier | |
| Sincerity | Eerlijkheid van de organisatie | Leach et al. (2007). |
| | Oprechtheid van de organisatie | |
| | Betrouwbaarheid van de organisatie | |
| Competence | Bekwaamheid van de organisatie | Leach et al. (2007). |
| | Intelligentie van de organisatie | |
| | Vaardigheid van de organisatie | |
| Norms and values | Zich oprecht zorgen maakt over het milieu | Ellen et al. (2006) |
| | Zich milieubewuster voordoet dan zij | |
| | werkelijk is | |
| | Uit ethische overwegingen in groene energie | |
| | investeert | |
| | In groene energie investeert omdat het in lijn | |
| | ligt met de normen en waarden van de | |
| | organisatie | |
| Positive eWOM | Ik zou dit bericht 'liken' op Facebook | Eisingerich, et al. (2015). |
| | | |

Table 5: Items that are combined in the variables and the sources they are retrieved from.

| | Ik zou een positieve reactie plaatsen op dit | |
|------------------|--|----------------------------|
| | bericht | |
| | Ik zou dit bericht op Facebook delen met | |
| | mijn vrienden om het initiatief te steunen | |
| | Ik zou positieve dingen zeggen over Green | |
| | Power Energie op Facebook | |
| | Ik zou Green Power Energie aanbevelen aan | |
| | mijn vrienden op Facebook | |
| | Ik zou de Facebookpagina van Green Power | |
| | Energie gaan volgen | |
| Negative eWOM | Ik zou een negatieve reactie plaatsen onder | Eisingerich et al. (2015). |
| | dit bericht | |
| | Ik zou dit bericht op Facebook delen met | |
| | mijn vrienden om ze te waarschuwen voor | |
| | dit initiatief | |
| | Ik zou negatieve dingen zeggen over het | |
| | bedrijf Green Power Energie op Facebook | |
| | Ik zou negatieve dingen zeggen op Facebook | |
| | over de energie die Green Power Energie | |
| | levert aan haar klanten | |
| Demographics | Gender | No source |
| | Hoogst genoten opleiding | |
| | Inkomen van afgelopen jaar | |
| Population check | Leeftijd | No Source |
| | Social media gebruik | |

Appendix D Experiment Ellis

Welcome message and consent

Beste lezer,

Hartelijk dank voor uw interesse in de deelname aan dit onderzoek. Dit onderzoek wordt uitgevoerd door een masterstudent Media & Business aan de Erasmus Universiteit Rotterdam. De vragen gaan over hernieuwbare energie en een bijbehorend Facebookbericht.

Uw deelname aan dit onderzoek is volledig vrijwillig, wat betekent dat u op ieder moment kunt stoppen met de vragenlijst door uw browser te sluiten. Uw antwoorden op de vragen worden anoniem verwerkt en de uitkomsten van deze enquête zullen alleen gebruikt worden voor het eerder genoemde onderzoek.

Lees de vragen alstublieft rustig door en klik het antwoord aan dat uw mening het beste weergeeft. Er zijn geen goede of foute antwoorden. Het invullen van de vragenlijst zal ongeveer 10 minuten van uw tijd in beslag nemen. Voor vragen of opmerkingen kunt u mailen naar 433625eg@student.eur.nl

Population check

Beantwoord alstublieft de volgende twee vragen voordat u begint aan de enquête. Hiermee kan bepaald worden of u onder de onderzoekspopulatie valt.

Geboortejaar Wat is uw geboortejaar?

▼ 2002 of later ... 1905 of eerder

Facebook Heeft u momenteel, of heeft u in de afgelopen 6 maanden, een Facebook account gehad?

🔿 Ja

O Nee

(Note: Bij "2002 of later" of "Nee" bij bovenstaande vragen:)

Bedankt voor uw interesse in dit onderzoek. Helaas behoort u niet tot de onderzoekspopulatie. (*Note: Bij een andere geboortedatum dan "2002 of later" of "ja" bij bovenstaande vragen:*) Bedankt voor uw antwoorden! U past binnen de onderzoekspopulatie.
Environmental concern

Beantwoord alstublieft de volgende vragen over uw zorgen over het milieu. Houd in uw gedachten dat er geen goede of foute antwoorden zijn. In hoeverre bent u het eens of oneens met de volgende stellingen?

| | Helemaal oneens | Oneens | Enigszins oneens | Neutraal | Enigszins eens | Eens | Helemaal eens |
|--|--------------------|------------|---------------------|----------|-------------------|------------|------------------|
| Ik zie mezelf als milieuvriendelijk | \bigcirc | \bigcirc | 0 | 0 | \bigcirc | 0 | 0 |
| Ik voel me sterk verbonden met milieuvriendelijke mensen | \bigcirc | 0 | \bigcirc | 0 | 0 | \bigcirc | \bigcirc |
| Ik identificeer mezelf met milieuvriendelijke mensen | \bigcirc | 0 | \bigcirc | 0 | 0 | \bigcirc | \bigcirc |
| Ik vind mezelf een milieuvriendelijke consument | \bigcirc | 0 | \bigcirc | 0 | 0 | \bigcirc | \bigcirc |
| Ik zie mezelf als iemand die erg bezorgd is over milieuproblemen | \bigcirc | 0 | \bigcirc | 0 | 0 | \bigcirc | \bigcirc |
| Ik zou er trots op zijn als mensen vinden dat ik leef als een milieuvriendelijk persoon | 0 | 0 | \bigcirc | 0 | \bigcirc | \bigcirc | \bigcirc |

Energy at home

In dit onderzoek zullen we ons richten op groene en grijze energie.

Groene energie wordt opgewekt uit duurzame energiebronnen. Dit zijn alle bronnen die hernieuwbaar

zijn, bijvoorbeeld zonne-energie of windenergie.

<u>Grijze energie</u> wordt opgewekt uit fossiele brandstoffen. De bronnen voor deze brandstoffen zullen op den duur uitgeput raken, en zijn schadelijk voor het milieu.

Bent u (mede-) verantwoordelijk voor het kiezen van de energieleverancier bij u thuis?

🔾 Ja

O Nee

Ontvangt u thuis groene energie?

🔾 Ja

O Nee

O Weet ik niet

Green manipulation condition

Lees de onderstaande tekst alstublieft zorgvuldig door.

De Consumentenbond heeft in 2019 een onderzoek gedaan naar welke energieleveranciers echt duurzaam zijn. Veel consumenten krijgen - op papier - groene stroom geleverd, maar om te beoordelen of deze energieleveranciers hiermee bijdragen aan de verduurzaming van onze energievoorziening, moet niet alleen gekeken worden naar de geleverde stroom. Een energieleverancier kan namelijk vervuilende grijze energie inkopen en deze voor de levering aan de klant administratief vergroenen met goedkope (vaak buitenlandse) certificaten (garanties van oorsprong). In de meeste gevallen gaat er bij gebruik van deze certificaten geen prikkel voor een echte verduurzaming van de energievoorziening van uit.

Op de volgende pagina krijgt u een Facebook bericht van een energieleverancier te zien. Uit het onderzoek van de Consumentenbond kwam naar voren dat deze energieleverancier **hoog scoort op duurzaamheid**. De energie die zij produceren komt voort uit **hernieuwbare bronnen**, zoals windenergie. Deze energieleverancier maakt **geen** gebruik van het administratief vergroenen van grijze energie met goedkope certificaten.



Ga voor groen!

Nederland écht groener maken, dat is wat wij willen bereiken. Daarom leveren wij groene stroom. Op deze manier investeren wij in een duurzame toekomst. Green Power Energie gelooft dat we met elkaar het verschil kunnen maken in het bijdragen aan een beter milieu.



OR

Grey manipulation condition

Lees de onderstaande tekst alstublieft zorgvuldig door.

De Consumentenbond heeft in 2019 een onderzoek gedaan naar welke energieleveranciers echt duurzaam zijn. Veel consumenten krijgen - op papier - groene stroom geleverd, maar om te beoordelen of deze energieleveranciers hiermee bijdragen aan de verduurzaming van onze energievoorziening, moet niet alleen gekeken worden naar de geleverde stroom. Een energieleverancier kan namelijk vervuilende grijze energie inkopen en deze voor de levering aan de klant administratief vergroenen met goedkope (vaak buitenlandse) certificaten (garanties van oorsprong). In de meeste gevallen gaat er bij gebruik van deze certificaten geen prikkel voor een echte verduurzaming van de energievoorziening van uit.

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OR

Control condition

Op de volgende pagina krijgt u een Facebook bericht van een energieleverancier te zien.



Bedankt voor het lezen van het Facebook bericht. Wij willen u nu een aantal vragen stellen.

Manipulation check

In hoeverre bent u het eens of oneens met de volgende stelling?

Green Power Energie is een duurzame energieleverancier

O Helemaal oneens

Oneens

|) | Enigezine | ondone |
|----------|-----------|--------|
| \smile | Lingszins | oncens |

O Neutraal

O Enigszins eens

◯ Eens

O Helemaal eens

Sincerity as a part of trust

Uw inschatting van de oprechtheid van de organisatie

| | Zeer slecht | Slecht | Enigszins slecht | Neutraal | Enigszins goed | Goed | Zeer goed |
|-----------------|----------------|------------|---------------------|------------|-------------------|------------|--------------|
| Eerlijkheid | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Oprechtheid | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Betrouwbaarheid | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |

Hoe schat u de volgende eigenschappen van Green Power Energie in?

Competence as a part of trust

Uw inschatting van de bekwaamheid van de organisatie

Hoe schat u de volgende eigenschappen van Green Power Energie in?

| | Zeer slecht | Slecht | Enigszins slecht | Neutraal | Enigszins goed | Goed | Zeer goed |
|---------------|----------------|------------|---------------------|------------|-------------------|------------|--------------|
| Bekwaamheid | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Intelligentie | 0 | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Vaardigheid | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |

Norms and values as a part of trust

Normen en waarden van de organisatie

Ik denk dat Green Power Energie... Zich oprecht zorgen maakt over het milieu.

Helemaal oneens
Oneens
Enigszins oneens

O Neutraal

O Enigszins eens

○ Eens

O Helemaal eens

Zich milieubewuster voordoet dan zij werkelijk is.

Helemaal oneensOneens

O Enigszins oneens

O Neutraal

○ Enigszins eens

◯ Eens

O Helemaal eens

Uit ethische overwegingen in groene energie investeert.

○ Helemaal oneens

Oneens

 \bigcirc Enigszins oneens

O Neutraal

O Enigszins eens

○ Eens

O Helemaal eens

In groene energie investeert omdat het in lijn ligt met de normen en waarden van de organisatie.

O Helemaal oneens

O Oneens

| \bigcirc | | |
|------------|-----------|--------|
| \bigcirc | Enigszins | oneens |

O Neutraal

O Enigszins eens

O Eens

O Helemaal eens

Positive eWOM intentions

Geef alstublieft aan in hoeverre u het eens of oneens bent met de volgende stellingen.

| | Helemaal oneens | Oneens | Enigszins oneens | Neutraal | Enigszins eens | Eens | Helemaal eens |
|--|--------------------|------------|---------------------|------------|-------------------|------------|------------------|
| Ik zou dit bericht 'liken' op Facebook | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ik zou een positieve reactie plaatsen op dit bericht | 0 | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc | \bigcirc |
| Ik zou dit bericht op Facebook delen met mijn vrienden om het initiatief te steunen | 0 | 0 | \bigcirc | 0 | \bigcirc | \bigcirc | 0 |
| Ik zou positieve dingen zeggen over Green Power Energie op Facebook | 0 | 0 | \bigcirc | 0 | \bigcirc | \bigcirc | 0 |
| Ik zou Green Power Energie aanbevelen aan mijn vrienden op Facebook | 0 | 0 | \bigcirc | 0 | \bigcirc | \bigcirc | 0 |
| Ik zou de Facebookpagina van Green Power Energie gaan volgen | 0 | \bigcirc | \bigcirc | 0 | \bigcirc | \bigcirc | 0 |

Negative eWOM intentions

Geef alstublieft aan in hoeverre u het eens of oneens bent met de volgende stellingen.

| | Helemaal oneens | Oneens | Enigszins oneens | Neutraal | Enigszins eens | Eens | Helemaal eens |
|--|--------------------|------------|---------------------|------------|-------------------|------------|------------------|
| Ik zou een negatieve reactie plaatsen onder dit bericht | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ik zou dit bericht op Facebook delen met mijn vrienden om ze te waarschuwen voor dit initiatief | 0 | 0 | \bigcirc | 0 | \bigcirc | 0 | 0 |
| Ik zou negatieve dingen zeggen over het bedrijf Green Power Energie op Facebook | 0 | 0 | \bigcirc | 0 | \bigcirc | \bigcirc | 0 |
| Ik zou negatieve dingen zeggen op Facebook over de energie die Green Power Energie levert aan haar klanten | 0 | \bigcirc | \bigcirc | \bigcirc | \bigcirc | 0 | 0 |

Demographics

Ter afsluiting, beantwoord alstublieft de volgende vragen over wie u bent. Met welk geslacht identificeert u zichzelf?

O Man

○ Vrouw

O Anders

○ Zeg ik liever niet

Wat is uw hoogst genoten opleiding?

Basisschool
Middelbare school
Beroepsonderwijs na de middelbare school
Bachelor HBO
Master HBO
Bachelor WO
PhD, of ander equivalent
Weet ik niet
Zeg ik liever niet
Anders, namelijk...

Welke van onderstaande opties beschrijft uw persoonlijke inkomen van het afgelopen jaar het best?

| ○ €0 tot €24.999 |
|-----------------------|
| ○ €25.000 tot €49.999 |
| ○ €50.000 tot €74.999 |

○ €75.000 tot €99.999

○ €100.000 tot €124.999

○ €125.000 tot €149.999

○ €150.000 of meer

O Weet ik niet

O Zeg ik liever niet

Thank you message

U bent aan het einde gekomen van de vragenlijst. In dit onderzoek waren wij geïnteresseerd in uw mening over hernieuwbare energie. Er is gebruik gemaakt van een **fictieve energieleverancier** om te voorkomen dat uw mening wellicht zou worden beïnvloed door de reputatie van een bedrijf. Tevens hebben wij gerefereerd naar een onderzoek van de Consumentenbond. Het volledige onderzoeksrapport van de Consumentenbond kunt u hier terugvinden:

https://www.consumentenbond.nl/binaries/content/assets/cbhippowebsite/tests/energie-vergelijken/wise_odns_rapport_a4_2019.pdf

Hartelijk dank voor uw deelname! Mocht u nog vragen hebben over het onderzoek dan kunt u contact opnemen door te e-mailen naar 433625eg@student.eur.nl. U kunt uw antwoorden versturen door op de pijltjesknop te klikken.