

## **The investment in renewable energy**

A quantitative research examining how prior crises and communicated motives affect public trust and eWOM

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# THE INVESTMENT IN RENEWABLE ENERGY: A QUANTITATIVE RESEARCH EXAMINING HOW PRIOR CRISES AND COMMUNICATED MOTIVES AFFECT PUBLIC TRUST AND EWOM

## ABSTRACT

The signs of global warming are everywhere, and climate change is becoming a fundamental threat to the lives of people and other species. To attack this problem, greenhouse gas emission needs to be reduced. Energy companies are feeling pressured to look at other “green” business alternatives, as their initial business is associated with polluting activities. Therefore, the communication of their CSR strategy is crucial in order to continue their business and gain the support of the public. However, various elements, such as prior crises and communicated motives, could influence the evaluation of the CSR initiative. Thus, the aim of this research is to dive deeper into the role of prior crises and communicated motives and examine what impact it can have on the level of trust and eWOM intentions regarding a CSR message.

In order to provide an answer to the research question, a quantitative research with a 2 (prior crisis: intentional vs. accidental) x 2 (type of communicated motive: public-serving vs. firm-serving) between-subjects design was conducted. The results showed that a prior accidental crisis would lead to more trust (in competence and morality) than a prior intentional crisis. However, the difference between accidental and intentional was not found for eWOM intentions. Instead, the scores for both crises were rather low. Additionally, communicated motives only had an effect on trust in competence. It was discovered that public-serving motives would lead to more trust in competence than firm-serving motives. No significant differences were found for trust in morality and eWOM intentions. Moreover, prior crisis does not moderate the effect of communicated motives on trust / eWOM. This indicates that combinations of communicated motives with prior crises do not differ from each other in trust and eWOM intentions. At the same time, it was discovered that trust can not act as a mediator between prior crises / communicated motives and trust. The findings provide insights for CSR managers and marketers on how to optimize their CSR strategy for the investment in renewable energy. However, more extensive research on this topic is needed to fully understand the communication strategy of CSR after a crisis.

**KEYWORDS:** Corporate Social Responsibility, renewable energy, prior crisis, communicated motives, eWOM, public trust

## **Preface**

Before you lies the thesis “The investment in renewable energy”, which is the final product of the Master Media & Business at Erasmus University in Rotterdam. This thesis is the result of a process containing months of research. A lot of time, dedication and hard work has been put into this process which sometimes resulted in stress. Nevertheless, it was an enormous learning process and I can say that I am proud of myself for delivering the best that I can and finishing this Master thesis.

It is important to mention that I would not have succeeded without the help of my supervisor dr. A.M. van Prooijen. There were several moments that I was uncertain about the research which would also result in stress. However, my supervisor guided and comforted me throughout this journey. Therefore, I am really thankful for her help and support. Also, I would like to thank my friends and family for always motivating me. During rough times, they would lend an ear and provide me with good advices which inspired me to work even harder. Finally, I would like to show my gratitude to the participants because this research would not have been possible without their help. Their opinions have resulted in interesting findings which add great value to existing literature.

This Master thesis marks the end of my time as a student. I am looking forward to putting all my gained knowledge during my study career into practice. Now, a new challenge awaits me and I am very excited for what the future holds!

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## **1. Introduction**

### **1.1 The rise of environmental awareness: the case of the energy sector**

The emission of greenhouse gases is one of the leading causes of global warming. It has led to extreme weather conditions that are much more common in today's world. To limit these consequences, a climate change conference was held in Paris in 2015, where 195 countries signed a binding climate agreement to combat climate change by reducing emission of greenhouse gases and ultimately reducing global warming (The Guardian, 2015). The goal is not only to cut down on greenhouse gases, but also to create market mechanisms to control the emissions (e.g., cleaner energy sources and renewable energy).

The climate change agreement of diminishing greenhouse gas emissions has the most impact on the energy sector as energy companies are being accused by environmentalists of causing climate change (Forbes, 2018). This is because fossil fuels are seen as the main driver of temperature changes. Therefore, disruptive climate change and climate change agreements are forcing energy suppliers to take a look at changes they must make in order to prevent the rise of the temperature. Instead of obtaining energy from fossil fuels, many energy companies are becoming more interested in obtaining energies from renewable resources (The Guardian, 2016). The investment in renewable resources can be understood as a Corporate Social Responsibility (CSR) initiative. CSR refers to the company's sense of responsibility towards its stakeholders and the environment (Porter & Kramer, 2006). CSR activities are a crucial factor for energy companies to gain trust as their initial business regarding fossil fuels are obtaining rather negative responses. Though renewable energies are largely perceived as positive by the public (Tampakis, Tsantopoulos, Arabatzis, & Rerras, 2013), the shift from fossil fuels to renewable resources initiated by energy companies can create suspicion (De Vries, Terwel, Ellemers, & Daamen, 2015). An emergent concern for environmental issues might clash with the associations from the public. This association is referred to the fact that the public assumes that energy companies are mainly associated with polluting activities, which would mean that the investment in environmental activities would not match with the company's values and actions. This was also confirmed by Terwel, Harinck, Ellemers and Daamen (2010), their research revealed that incongruency with the public inferences and organizational motives lead to unfavorable consumer evaluation which instigated less trust. In other words, the organization's communication regarding their reason for actions was not in line with what the public's association of the company, which in turn resulted in less trust. In order to attack climate change successfully by pursuing the shift to renewable resources by energy companies, it is of importance to discover the most effective way of communicating the CSR initiative to gain the public's trust and support.

## 1.2 Purpose and scope of research

Change is needed to limit the consequences of global warming and it all has to start with the reduction of greenhouse gas emission. The decrease in greenhouse gas emission by energy suppliers can be achieved by gaining public's trust and support in the shift to renewable energy through CSR communication. Nowadays, CSR activities are often communicated through the company's social media platforms. Therefore, it would be interesting to examine the impact of a CSR message on social media regarding renewable energy on public trust and electronic Word-of-Mouth (eWOM) behavior. Also, it is important to note that this research will focus on the investment in green energy by companies operating in the energy industry, mainly the oil sector.

Trust is needed for people to make decisions regarding environmental technologies (Terwel et al., 2010), which can lead to openness of trying new developments (Huijts, Midden, & Meijnders, 2007). Previous research (Huijts et al., 2007; Terwel et al., 2010; Van Prooijen, 2019) already emphasized the importance of trust in the adaptation of renewable energy and this research will continue the investigation on trust. On the other hand, social media has become a great outlet for companies to collaborate with their customers (Culnan, McHugh, Zubillaga, 2010). The growth of social media comes with social engagement by customers (Chu & Kim, 2011). This engagement can be manifested by eWOM, which is defined as "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). Therefore, eWOM behavior from customers can have an immense impact on the success of the product or company. In this case, eWOM behavior can stimulate engagement and spread awareness of climate change and ultimately stimulate the reduction of greenhouse gas emissions by investing in renewable energy. Previous research examined the influence of eWOM on consumer product judgement and consumer engagement (Lee & Youn, 2009; Park & Lee, 2008). However, little research has been done on eWOM intentions regarding renewable energy. It is interesting to investigate eWOM since it can act as a driver for consumers' purchase behavior (Cheng & Zhou, 2010) and can ultimately have an influence on the success of sustainable activities.

Additionally, this research will investigate whether an energy company's involvement in a prior crisis can have an effect on the level of trust and eWOM behavior after the promotion of a CSR message regarding renewable energy. Prior crises can be identified as intentional and accidental. Intentional refers to an act that is regarded as purposeful (Coombs & Holladay, 2002). On the other hand, accidental crises are considered as uncontrollable by

the company (Coombs & Holladay, 2002). As previously mentioned, this research will focus on the energy sector and this industry is prone to crises (e.g., oil spills) which can become a threat to their reputation and activities (Arora & Lodhia, 2017). However, little is known about the impact of prior crisis which can function as an antecedent for the level of trust on future sustainable initiatives. The current research will fill that gap by comparing the type of crisis (intentional vs. accidental) that an oil company experienced and how this might affect the level of trust and eWOM behavior on CSR initiatives.

Coombs (2007) mentioned the importance of crisis communication and posed the discussion of reputational damage when the crisis response strategy was not implemented correctly. However, not much research has been done on the topic of CSR communication after a crisis. It is assumed that the effect of a communication strategy is dependent on the type of crisis that occurred beforehand. It is regarded as important to investigate whether a different crisis type requires a different communication strategy in the discussion of a CSR message. Therefore, this research will examine the use of communicated motives as a communication strategy and how a prior crisis might have an impact on the effect of communicated motives. Communicated motives can be considered as motives that a company discloses to the public on why they decide to engage in certain activities (Terwel et al., 2010). Communicated motives can be classified into two primary categories: firm-serving and public-serving. Firm-serving reflects on business benefits and public-serving reflects on concern for the collective interest (De Vries et al., 2015).

Besides looking at the moderation effect, it is also important to look at the main effect of communicated motives because the framing of a message can have a possible effect on the trust level and eWOM behavior. Previous research focused on comparing communicated motives (De Vries et al., 2015 & Terwel et al., 2010) or even attributed motives (Ellen, Webb, & Mohr, 2006; Yoon, Gürhan-Canli, & Schwarz, 2006) in determining the effectiveness of CSR activities. However, little is known about the impact of used communicated motives on eWOM behavior. The current research will fill the gap and investigate consumers' eWOM activities as a result of the used communicated motives to introduce their step to renewable energy. Also, the communicated motives will be compared to examine the level of public trust regarding renewable resources.

### **1.3 Relevance of the paper (theory, social and practical)**

First of all, in terms of theoretical relevance, this research will contribute to the fulfilment of the gap in theory regarding prior crisis and communicated motives by looking closer into the communication of the motives and how they can be combined with the impact



of prior crises. Early research emphasized the influence of a corporate crisis and how crisis communication management would be able to restore the reputation (Coombs, 2007). However, little is known about CSR communication after a crisis and how organizations are able to gain trust and eWOM behavior. This paper will examine the moderation effect of prior crisis on communicated motives as it will add value to existing literature regarding CSR strategy after a crisis. Additionally, research regarding eWOM and renewable energy is still lacking while this may be an important factor for implementing renewable energy in the daily lives of the public. By observing eWOM behavior, this research is able to detect whether a CSR message is effective and what is needed in order to reach customer satisfaction regarding renewable energy.

Second of all, this topic is timely and important as the global tendency towards environmental changes is growing. Therefore, the social relevance of this research is to identify the most efficient way of communicating renewable energy in order to persuade the public in the engagement of the decrease of greenhouse gases. Gaining trust and stimulating (positive) eWOM behavior will hopefully create awareness of the climate impact and contribute to a greener consumption.

At last, the practical implication of this research is that it offers energy companies various communication solutions to promote sustainability and motivate consumers in participating in sustainable activities. As the success of implementing renewable resources is highly dependent on the stakeholders (in this case: the public), it is relevant to concentrate on the evaluation of stakeholders and investigate how communication regarding renewable energy should proceed. Therefore, the findings of this research will provide energy companies with information regarding the communication strategy when promoting their sustainable initiatives post-crisis to increase the public's trust and eWOM behavior.

#### **1.4 Research questions and hypotheses**

The current research shall investigate the following research question: "To what extent can communicated motives and type of prior crisis affect the public's evaluation of a CSR message regarding renewable energy?"

Related sub-questions are:

- "To what extent can communicated motives (firm-serving vs. public-serving) in a CSR message have an impact on trust and eWOM?"
- "To what extent can a prior crisis (intentional vs. accidental) have an impact on trust and eWOM after the promotion of a CSR message?"

- Interaction effect: “To what extent can the type of prior crisis (intentional vs. accidental) have an effect on how the communicated motives (firm-serving vs. public serving) are being perceived?”

### **1.5 Chapter outline**

The following parts of this research are structured as follows: the second chapter contains the theoretical framework, which explores existing literature in detail regarding the relevant concepts for this research. It starts by first discussing the broader concepts of CSR, renewable energy and greenwashing. Then, it focuses on the dependent variables of this research which are trust and eWOM. These variables are defined and explained through the concept of CSR. Finally, the role of prior crises and communicated motives in a CSR message are discussed. This is done by introducing the concepts and relating it back to the literature concerning trust and eWOM in CSR. Corresponding hypotheses based on the literature are presented in each section. The third chapter presents the methodology of this research. The research method is precisely discussed by focusing on the experimental design, sampling and data collection, participants and stimulus material. Moreover, the operationalization of the variables and the issue of validity and reliability are explained in detail. The findings of the statistical analyses of the experiment are presented in chapter four. The results contain the Chi Square test for the manipulation checks and Two-way ANOVAs to test the hypotheses. In addition, the findings for the mediation effect will also be provided by using the PROCESS macro. These findings are then interpreted and compared to literature discussed in chapter two. Therefore, chapter five consists of the answer to the research question, theoretical and managerial implications, limitations and directions for future research.

## **2. Theoretical Framework**

### **2.1 Corporate Social Responsibility**

Corporate Social Responsibility (CSR) is a concept that has a long history which started around the 1950s, where the primary focus was on the mutual dependence between business and society (Moura-Leite & Padgett, 2011). However, the structure of CSR has constantly changed over decades. Only until the 1990s, has the idea of CSR been universally acknowledged as a business strategy. From that moment on, many large companies began to pay considerable attention to CSR (Waddock, 2018). This led to the rise of significant global institutions (e.g., UN Global Compact, the Global Reporting Initiative, and many certification and monitoring agencies) that push corporations toward greater responsibility (Albareda & Waddock, 2016). CSR can be defined as a concept whereby corporations integrate both social and environmental concerns in their business strategy, and also in the interaction with their stakeholders (Khan, Khan, Ahmed, & Ali, 2012). It can be considered as a business model where companies are encouraged to be more aware of the impact of their business on the rest of society (Ni & Van Wart, 2015). Khan et al. (2012) argue that social responsibility does not only mean fulfilling legal expectations but also refers to going beyond compliance. By utilizing CSR in their business strategy, companies are able to prove their role is more than creating and selling goods and services (Wang, Tong, Takeuchi, & George, 2016). It allows the company to appease stakeholders and shareholders while fulfilling their social, economic, and environmental obligations (Gupta & Sharma, 2009). Nowadays, more and more companies have introduced CSR in their programs, and it is becoming increasingly clear that CSR is needed for companies to make a necessary transition to a sustainable economy (McIntosh, 2013).

Today's world is facing complex problems like climate change, which companies of all sectors have to inevitably deal with (Levin, Cashore, Bernstein & Aduld, 2012). Organizations have realized the need for being committed towards CSR because the role of business in society is no longer focused on revenues alone but also on being responsible towards stakeholders and the environment (Khan et al., 2012). However, investing in CSR can also be utilized as a competitive advantage because it positively differentiates companies from competitors (Guarnieri & Kao, 2008). A sustainable competitive advantage requires an organization to perform a combination of activities (Smith, 2007). Porter (1996) determines that long-term activities, executed by a company, provide competitive advantage as it is more difficult for competitors to copy a combination of activities than just one. Therefore, the ability to fit the stakeholders needs and wishes into a combination of business processes and CSR activities can enhance the sustainability as a competitive advantage (Smith, 2007).

### **2.1.1 Corporate Social Responsibility communication in the energy sector**

CSR communication in socially stigmatized industries differs from other industries as it tends to receive more negative responses from the public. Socially stigmatized industries are companies “whose products or manufacturing processes contribute negatively to an issue of societal concern” (Austin & Gaither, 2017, p. 840). The energy sector can be considered as a socially stigmatized industry because the use of fossil fuels contributes to environmental concerns. The pressure from NGOs, consumers, and politicians can be the driving force for the industry to “go green” (Ihlen, 2009). The controversial issue has led energy industries to apply CSR in their business strategy in order to avoid negative judgements and strengthen their reputation (Du & Vieira, 2012).

Despite the implementation of CSR, energy industries can still face difficulties in achieving a good image due to the voice of NGOs (Palazzo & Richter, 2005). NGOs, such as Greenpeace, are vocal critics that expose flaws to the public by describing the utilization of CSR as contradicting with its business (Palazzo & Richter, 2005). NGOs can be considered the most interested and active stakeholders when it comes to projects regarding oil and gas productions. The relationships between NGOs and oil and gas companies can be portrayed as a battle of tug-of-war because of their opposing sides (Buchman, 2012). However, the oil industry is coming up with more solutions to battle the climate change by engaging in renewable energy. Despite their efforts, NGOs are still acting as ‘watch-dogs’ to inspect their actions. Therefore, this research will solely focus on the oil sector of the energy industry, as this sector can be considered as the most controversial due to the fact that its core business is in contradiction to sustainability.

As stated before, NGOs are carefully inspecting the actions of oil companies and would expose flaws when expectations are not met. However, many oil companies would try to define sustainability to its own advantage. Their strategy of approaching sustainable development would be to include minor adjustments to the current situation instead of reforming the industry (Hopwood, Mellor & O’Brien, 2005). Ihlen (2009) conducted a study on how the oil industry would express their sustainability claims by using a Norwegian oil company as case study. This oil company stated in their sustainability report that their business is sustainable by claiming that they strive to diminish its gas emissions and that they are more environmentally friendly than other oil companies. They argued that a sustainable method of producing oil and gas is to make the production as clean as possible. In addition, they would compare the oil industry with other energy sources (available at that time: 2009) that are viewed as non-realistic alternatives. Also, they would accentuate the fact that

managing sustainability is a long-term operation and, therefore, the oil industry is still sustainable. It is considered sustainable because new resources will be found, and the oil production will be replaced.

Engaging in CSR activities by oil industries can be a crucial means of improving the reputation and corporate image as their actions of producing oil are mostly declared as socially irresponsible (Jo & Na, 2012). It can be considered as a long-term business strategy in order to protect the industry's profitability. However, these activities can also be perceived as not fully trustworthy by the public and NGOs as the industry's deeply rooted beliefs and actions do not match. Therefore, oil companies need to establish the credibility of their CSR initiatives and restore the public's trust (Du & Vieira, 2012). The research conducted by Ihlen (2009) only stated the ways of communicating sustainability but did not clarify if it would enhance public's trust or eWOM intentions. Therefore, this research will focus on how an oil company can communicate their CSR activities in the best way possible to enhance trust and eWOM intentions.

## **2.2 Renewable energy**

The current energy supply largely depends on fossil fuels such as natural gas and petroleum (Quaschnig, 2016). However, future extraction of these fuels will become more difficult due to the increasing exploitation which results in higher prices. Additionally, fossil fuels are becoming an environmental issue due to the greenhouse gas emissions which lead to climate change and rising temperatures (The Guardian, 2016). Since environmental protection concerns are growing, new energies such as renewable energy resources are being examined and pursued (Ellabban, Abu-Rub, & Blaabjerg, 2014).

Renewable energy resources are "energy resources that are inexhaustible within the time horizon of humanity" (Quaschnig, 2016, p. 20). These energy resources are constantly being replenished by nature and derived from natural movements and mechanisms of the environment (e.g., the sun, wind, hydropower; Ellabban et al., 2014). Natural energy sources are being turned into usable forms of energy (heat, electricity, and fuels) and do not include energy derived from fossil fuels. Ellabban et al. (2014) stated that the markets of renewable energy have been growing since the beginning of 2000s. They claim that renewable energy resources are able to exponentially surpass the energy demand and compete with fossil fuels. Consequently, the rise of newer technologies has enhanced the confidence in the technologies but also reduced the costs leading to opening new opportunities (Hepbasli, 2008). Therefore, these types of resources will have a significant impact on future energy security which in turn

can help reduce greenhouse gas emissions, thereby limiting climate impacts and extreme weather.

Green energy companies focus on the production, trade and supply of green energy or other energy-related matters. Various forms of producing renewable energy can be performed, for example: solar energy, wind energy, biomass energy, and hydropower energy (Ellabban et al., 2014). These companies provide households but also business customers with renewable energy. This research will focus on the investment in solar energy. Solar energy can be defined as a technology that utilizes direct energy from the sun in order to produce electricity (Taylor, 2008). Although solar energy technologies have gained popularity over the years, suppliers should consider the customer's needs in order to satisfy them and make a great step into the sustainable market. Therefore, this research will examine the customer evaluation of the investment in renewable energy by an oil company that was previously involved in a crisis.

### **2.2.1 CSR initiatives on renewable energy**

The climate change agreement on reducing carbon dioxide emission has put pressure on many countries and energy suppliers. A significant reduction in emission of greenhouse gases is needed in order to fulfill the protocol that was established during the climate change conference. Renewable energy resources can greatly contribute to lower carbon emissions and ultimately mitigate global warming (IPCC, 2018). Energy suppliers should look into the development of renewable energy resources as part of their CSR strategy, as it is necessary to both address issues related to global climate change and to ensure secure and sustainable energy supplies at reasonable costs (Kardooni, Yusoff, Kari, & Moeenizadeh, 2017). The development of renewable energy as a CSR activity does not only have a positive influence on the sustainability but will also provide socioeconomic benefits. The contribution to energy supply enhances national or even global development and can create opportunities for future industries.

While there may be ambitious government goals and developments to increase the use of renewable energy, it is recognized that acceptance by the public can be a barrier in achieving this goal (Wüstenhagen, Wolsink, & Bürer, 2007). According to Wüstenhagen et al. (2007) community acceptance is the most important factor in generating public support for renewable energy innovation and the actual realization of certain projects regarding sustainable initiatives. The achievement of public acceptance should be taken into consideration when energy companies want to implement renewable energy in their CSR strategy as it can have an impact on the successful realization of renewable energy projects.

### **2.2.2 Greenwashing**

The investment in environmental measures by energy companies may have a positive effect on corporate evaluations (Alniacik, Alniacik, & Genc, 2011). However, the risk of accusations of corporate greenwashing is apparent. Greenwashing refers to the act of framing certain CSR activities in order to look “greener” and more environmentally friendly (Laufer, 2003). Greenwashing is commonly associated with a gap between rhetoric and reality as the truth is sometimes overstated (Vos, 2009). In the case of energy supplies, the public has become more and more aware of environmental issues which caused a growth in “green” products in the market. Many energy corporations are trying to attract a green audience by using claims that sound environmental but are vague or may be false at the same time (Furlow, 2010). The distortion of environmental claims has led consumers to question the honesty of organizations. Moreover, the over usage of these claims by companies can even saturate the market leading to a point where consumers think greenness of a product is meaningless (Zimmer, Stafford, & Stafford, 1994). Consequently, companies that are true to their sustainable and environmental mission will lose their place in the market due to competition of organizations that are falsely claiming their green position.

An example of greenwashing in the oil industry is by BP. BP claimed to be earth conscious and labelled itself as a green oil company (Furlow, 2010). In contradiction, BP continued non-green activities including illegally dumping waste from the oil field. Despite the criticism and questionable “environmentally green” activities, BP has been successful in painting itself green.

Although several studies present insights into public opinions on implementing renewable energy (De Vries et al., 2015; Qazi & Rahim, 2018), little research has been done that addresses the level of trust and consumer-behavior (especially eWOM) when energy suppliers intend to invest in renewable energy. As previously mentioned, energy companies can create suspicion when they try to switch to the production of green energy when their initial business is associated with polluting activities. This research wants to investigate in which context the public is more inclined to perceive CSR communication as sincere or greenwashing by manipulating prior crisis and communicated motives.

### **2.3 Public trust in energy decision-making**

Social acceptance is a social process that is relevant for renewable energy technologies whereby the participation of the public is needed in order for it to be successful (Huijts et al., 2007). The reliance on the technology is needed in order to protect the climate (Hussain, Arif & Aslam, 2017). Different actors influence each other through interaction and

shared information. The public tries to form judgements based on these information or intuitive feelings like life experiences (Huijts et al., 2007). Therefore, people will have to rely on each other, and this is where trust becomes an important factor. Under conditions where personal knowledge is lacking, the opinions of people are highly influenced by the general public's trust in the organizations that are involved with new technologies (Siegrist & Cvetkovich, 2000).

Trust can be defined as 'the willingness to be vulnerable under conditions of risk and interdependence' (Rousseau et al., 1998, p.5). More specifically, consumer trust is related to a certain belief that the provided product or service is reliable in the sense that it serves long-term interests to the consumers (Crosby, Evans & Cowles, 1990). Trust can be seen as a social process because it is fragile and is created slowly but can be rapidly damaged (Slovic, 1993). It is an essential concept of cooperation and interpersonal relationships (Misztal, 1996). A lack of trust in leading actors (in this case: companies) and the doubt about the risks and benefits may have an effect in the adoption of a certain technology by consumers. The level of trust is also of importance for the effective functioning of corporations in society (Fukuyama, 1995). A lack of trust can eventually lead to discouragements of people's cooperation and even reduce the openness to try new developments (Huijts et al., 2007). In contrast, trust allows people to make decisions and enjoy various benefits that a technology can bring without having the full knowledge of details. Similarly, Misztal (1996) sees trust as an important role in building mutual respect and reciprocity which can ultimately foster collaboration. This, in turn, is relevant for the development and adaptation of renewable energy projects. People are more accepting of decisions regarding environmental technologies when they trust the responsible organization (Terwel et al., 2010). Ultimately, trust is a crucial determinant of the willingness to participate in renewable energy (Kalkbrenner & Roosen, 2016).

Moreover, trust is also dependent on the communication of an organization regarding their products or services. Here, it is important to recognize how and by whom the information is managed (Owens, 2004). Earle and Siegrist (2007) examined the relation of transparency on trust. Their research showed that transparency of the procedure and outcome resulted in the increasement of acceptance in the technology, which had a positive impact on trust. Based on Earle and Siegrist (2007), it can be assumed that the public will trust the company more when the process of adapting renewable energy is transparent. Therefore, communication is a key element in achieving transparency which ultimately has positive effects on trust.



This research focuses on the investment in renewable energy, especially solar energy. Solar energy has a high level of public awareness and is generally accepted by the public (Yuan, Zuo & Ma, 2011). Kim, Park, Kwon, Ohm and Chang (2014) explored the factors that have an effect on the intention of use of solar energy technologies. Their research showed that the public determines trust in solar energy from a social mood, which refers to the perceived trust generated by the society or other users. The trust in social reliability and preferences towards the technology were enhanced by looking at others within the same society. Thus, Kim et al. (2014) stated that social trust can be considered as a significant variable for the utilization of solar energy.

#### **2.4 Consumers' engagement in eWOM**

The emergence of the Internet has created an important outlet and source for communication for customers (Hennig-Thurau et al., 2004). This refers to electronic word-of-mouth (eWOM), which is the extension of traditional WOM but on the internet platform. Word-of-mouth communication (WOM) has been of considerable importance to organizations and marketing departments. It shows to have a significant impact on consumers' evaluation (Katz & Lazarfeld, 1955) and product perceptions (Bone, 1995). In some situations, WOM can even be more effective than traditional marketing tools and advertising (Katz & Lazarfeld, 1955).

The development of the Internet has extended consumers' options for gathering information and knowledge regarding products by including consumers' comments of their own product experience (Park, Wang, Yao & Kang, 2011). The Internet created opportunities for consumers to offer their own advice through the engagement of eWOM (Hennig-Thurau et al., 2004). It enabled users to exchange information with each other from anywhere and at any time (Wang, Yeh, Chen & Tsydypov, 2016) According to Bickart and Schindler (2001), customers value eWOM more than marketer-created sources due to high credibility and empathy of the information. When consumers face difficulties in the process of judging the quality of a product, they place great importance on opinions of others during the decision-making process (Cheung & Thadani, 2012). Therefore, the value of available information increases when it enables the process of analyzing a product (Bone, 1995).

Social media have become one of the most prevalent eWOM channels due to its interactive and ubiquitous nature (French & Read, 2013). These attributes enable users to connect with each other and the brand more frequently and closely (Laroche, Habibi & Richard, 2013). As more and more companies integrate social media as an important part of their business strategy, it is of importance to investigate the determinants that influence

consumers' engagement in eWOM. Therefore, this research is interested in examining what factors motivate the engagement in eWOM by consumers regarding renewable energy. Research done by Rogers (1995) indicated a positive relationship between innovativeness and information seeking. This refers to a person's tendency to search for information about innovative products and share these findings with other people. Lee, Lee and Hwang (2015) suggested that the eagerness to keep up with the latest technology can motivate the engagement in eWOM. On the other hand, Cheung and Lee (2012) showed that sense of belonging, enjoyment of helping, and reputation were the most critical motives for consumers' eWOM intention. The stronger sense of belonging to a certain product or brand created a feeling of greater citizenship, which affected the eWOM intentions positively (Cheung & Lee, 2012). This was also evident for the factor enjoyment of helping others. Consumers can benefit peers during their decision-making process through eWOM which demonstrated enjoyment (Cheung & Lee, 2012). At last, consumers wanted to be viewed as an expert through the engagement in eWOM which resulted in higher reputation (Cheung & Lee, 2012).

Despite the evidence of eWOM's influence on consumer decision-making process, a lack of theory remains regarding which factors can stimulate the engagement of eWOM on newer technology, such as renewable energy. Although, previously mentioned factors can act as the drivers for eWOM intention, these attributes can be mainly regarded on the consumer-level and are rather personal. Current research is interested in factors beyond the consumers and is concentrating on external determinants that can influence the engagement of eWOM. This is important because eWOM may be a great source for the success of renewable energy due to its nature of gathering and spreading information. The awareness of the initiative combined with the eWOM intention can create a great value for initiating this type of energy. Therefore, this research will examine whether prior crisis and used communicated motives can increase eWOM intentions regarding renewable energy.

## **2.5 Impact of crises on consumers' evaluation**

Every organization is vulnerable to various types of crises. Crises can always be a threat to a company's reputation, which in turn can affect the interaction between the company and its stakeholders (Coombs, 2007). Therefore, crisis communication is needed to restore the reputation of organizations and trust that was built by stakeholders (Utz, Schultz, & Glocka, 2013). The Situational Crisis Communication Theory (SCCT; Coombs, 2007) is a framework that offers an understanding on how crisis communication can be used to protect the reputation

of a company. SCCT identified three clusters of crises based on responsibility and competence to control the crisis: accidental, intentional, and victim (Coombs & Holladay, 2002).

The accidental crises are considered unintentional or uncontrollable by the organization (Coombs & Holladay, 2002). Examples of accidental crises are: technical-error accidents or technical-error product harm. Coombs and Holladay (2012) identified a technical-error accident as a failure of technology or equipment that caused an industrial accident. As for the technical-error product harm, it is considered a failure of technology or equipment that led to a product to be recalled. An accidental crisis type has minimal attributions of crisis responsibility by the company. On the other hand, intentional crises are regarded as purposeful (Coombs & Holladay, 2002). This cluster has very strong attributions of responsibility by the organization. In contrast to accidental crisis, a human-error accident or product harm are caused by human errors that led to an industrial accident or a product to be recalled. Another example is organizational misdeed, which is referred to laws being violated by the organization. The final type of cluster (victim) has the least attributions of crisis responsibility (Coombs & Holladay, 2002). In this case, the organization is viewed as a victim, examples are: natural disasters and rumors. This research will solely focus on the differences between intentional and accidental crises because both crises derive from inside the company, which is most often the case for the energy sector. For example, accidental oil pollutions are mainly caused by technical factors (Hassler, 2011). As for intentional oil pollutions, the most common causes are the cleaning of the tanks and flushing of machine rooms to save time and money (Hassler, 2011).

Customer satisfaction is connected to profits and market share; hence it is a central point in business success. However, a crisis can have a consequence in customer confidence in the organization (Sparks & McColl-Kennedy, 2001). When the confidence drops, the dissatisfaction may arise resulting in activities directed against the organization, such as the decrease in trust and spreading negative eWOM. Therefore, the ability to recover from a crisis is crucial for the contribution to positive evaluations of the organization which in turn can increase customer loyalty (Tax et al., 1998). During the recovery attempt, an organization should know how to act and what to say in order to increase the success and gain customers' trust back. Thus, the communication a company provides regarding a crisis can heavily influence the way customers evaluate its future activities and sincerity (Kimberly & Härtel, 2008).

### **2.5.1 Implementation of CSR post-crisis**

Early research suggested that pre-crisis CSR initiatives can function as a shield against the consequences of a crisis (Shrivastava, 1995; Tombs & Smith, 1995). CSR can have positive influences on the responses of the consumers after a crisis occurred (Cho & Kim, 2012). However, little is known about the CSR efforts post-crisis and how this can influence consumers perception of the organization. As corporate crises can cause harm to the company's reputation, it is of importance to consider consumers' responses before initiating CSR in the crisis strategy management. A reactive approach such as implementing CSR strategy right after a crisis may induce skepticism and negative attitudes towards the company. Therefore, it is relevant to examine the experienced crisis beforehand when introducing a CSR initiative. Here, crisis type is an important criterion as it reveals how the crisis occurred (Janssen, Sen & Bhattacharya, 2015). As previously mentioned, each crisis type attributes to the corporate responsibility in a different manner. According to the Attribution Theory (Weiner, 1985), people make attributions for events, in this case, search for the causes of a crisis and attribute the responsibility for an event. An intentional crisis has strong attributions of responsibility to the organization (Coombs & Holladay, 2002), which can increase the suspicion behind a CSR initiative after a crisis (Kim & Choi, 2014). However, when an accidental crisis occurs, consumers attribute the responsibility to external factors which indicates less skepticism when a CSR initiative is introduced (Kim & Choi, 2014).

The type of prior crisis can have an influence on the consumers' evaluation on future CSR activities. Kim and Choi (2018) conducted a research regarding the impact of a crisis on a post-crisis CSR initiative. Their research also focused on intentional and accidental crises and the results showed that an accidental crisis generates more favorable attitudes towards the company, greater purchase intention and consumers are more likely to attribute the initiative to altruism than intentional crises. Similarly, the attribution of responsibility differs for each crisis type which indicates that accidental crises are more likely to gain less suspicion compared to intentional crises. A prior intentional crisis was caused due to human errors or an organizational misdeed, in other words, with intention. This could lead to the public perceiving a CSR initiative as a way of restoring the reputation without actually caring for the society and the environment. However, a CSR initiative after an accidental crisis would not receive this skepticism as the cause of the accident is related to external factors beyond the company's control. Based on Kim and Choi's research and the attribution of responsibility, it is expected that an accidental crisis can generate more trust.

Additionally, the type of prior crisis can also have an impact on the eWOM behavior of consumers after a CSR initiative is introduced. The Attribution Theory can also be applied on eWOM. Research done by Wattegama and Qing (2014) examined eWOM behavior during times of negative publicity due to a product-harm crisis. They suggested that when the responsibility for a crisis is attributed to the organization, the public can experience a negative emotional reaction to that crisis. This can serve as a motivator for creating negative eWOM. On the other hand, positive behavioral responses emerge when the responsibility is attributed to external factors beyond the organization's control (Wattegama & Qing, 2014). This would evoke sympathy (Weiner, 1985), which would result in positive eWOM. Although this research examined eWOM during a crisis, this can also be employed for eWOM after a crisis. A crisis type can influence the way the public views future organizational initiatives and behavioral responses. Based on the Attribution Theory, it is expected that the attribution of responsibility to an organization (intentional crisis) leads to less positive eWOM after a CSR initiative is introduced. This is due to the fact that people may perceive the CSR activity as insincere because of previous actions leading to a crisis. Experiencing a negative emotional reaction would lead to creating negative eWOM (Wattegama & Qing, 2014). On the other hand, when responsibility of a prior crisis is attributed to external factors, the public would view this as an accident beyond the control of the organization. Thus, when a CSR initiative is being introduced, the public would not be suspicious regarding the sincerity of the activity. This would create a positive behavioral response, in this case positive eWOM.

Based on previous research regarding the Attribution Theory, research by Kim and Choi (2018) and Wattegama and Qing (2014), the first hypothesis is formulated as follows:

H1: Prior accidental crisis leads to (a) more trust and (b) more positive eWOM when a CSR message is communicated regarding renewable energy compared to prior intentional crises.

## **2.6 Communicated motives in CSR messages**

Organizations are constituted and constructed through communication (Chaudhri, 2016). In this case, CSR is also constructed and sustained through communication. The ways organizations try to present themselves in their manner of talking are constructive activities that are able to contribute to continuous achievement as an organization (Christensen, Morsing, & Thyssen, 2011). CSR can be treated as a communicative process itself where its influence is dependent on how well it is integrated with its stakeholders (Schoeneborn &

Trittin, 2013). Companies can pursue this process by communicating various organizational motives in their CSR strategy.

Terwel et al. (2009) define organizational motives as reasons why a corporation decides to engage in certain activities. The public decides whether or not to trust a company based on these communicated motives (Terwel et al., 2009). The motives can be further distinguished into two primary types of motives: public-serving and firm-serving. Public-serving motives can be seen as reasons to invest due to benefitting public interests (Kim & Lee, 2012). These concerns are reflecting people outside the organization. Whereas, firm-serving motives are mostly referring to the benefits of the organization itself (Terwel et al., 2009). Here, the focus is on economic gain.

Climate change is a sensitive topic to citizens and companies in the energy sector are facing a communication dilemma. The growing exposure to CSR communication has led consumers to be increasingly aware of organization's motives and actions. Therefore, companies have to be cautious when introducing their step to renewable energy to avoid accusation of greenwashing. The appropriate use of communicated motives can enhance public's trust in the organization which could ultimately lead to the participation in renewable energy. De Vries et al. (2013) and Terwel et al. (2009) suggested that when energy suppliers communicated their initiative regarding renewable energy (in their case: carbon dioxide storage), firm-serving motives would positively affect public's trust and perceived honesty of the organization. The public would be more supportive when the acknowledgement of financial benefits was included in the communication than only focusing on the concern for the environment. Van Prooijen (2019) posed that the findings could be explained through perceived risks which are associated with carbon dioxide storage. Carbon dioxide storage can be experienced as rather negative and unsure. Hence, the awareness for the initiative would increase resulting in the motive to identify the reason behind the action. When the organization only communicates their concern for the environment (public-serving motives), when carbon dioxide storage is actually perceived as harmful, it would raise more suspicion (Van Prooijen, 2019). The communication of public-serving motives can lead to people suspecting a strategic behavior and perceiving greenwashing (Vries et al., 2015). Instead, communicating firm-serving motives would lead to more trust as the motive is congruent with the public's inferences. The public's inferences are related to the expectation of energy companies to act upon firm-serving motives, such as profit maximization (Terwel et al., 2009). When an economic motive is communicated, people suspect less strategic behavior as it is consistent with the ideas of the public, resulting in more trust. Additionally, Van Prooijen (2019) conducted a research regarding communicated motives for investing in wind power.

Contradicting to the results of De Vries et al. (2013) and Terwel et al. (2009), Van Prooijen suggests that public-serving motives result in higher perceived sincerity and trust than firm-serving motives. The reasoning is that wind power is largely perceived as positive by the public and can be understood as energy that is more environmentally friendly, which leads to less skepticism. Moreover, prior research suggests that communicating public-serving motives generally receives more positive evaluations than firm-serving motives. Rifon, Choi, Trimble and Li (2004) suggest that public-serving motives enhances the credibility and attitude towards an organization compared to firm-serving motives. Their study claims that the communication of public-serving motives leads to consumers evaluating the CSR as a genuine act towards the issue. According to Yoon et al. (2006), perceived sincerity of the communicated motives has a mediating role when it comes to the evaluation of CSR.

This research focuses on the adaptation of renewable energy by an oil company, specifically solar energy. Borchers, Duke, and Parsons (2007) found that consumers prefer solar energy over other types of green energy (such as wind and biomass) and the willingness to pay was positive for green energy electricity. Therefore, it is expected that consumers would be less skeptical towards the initiative compared to carbon dioxide storage. Moreover, it is predicted that this research will have similar results as Van Prooijen's (2019) research regarding wind power and public trust. Both solar energy and wind power are largely accepted by the public and are recognized as more environmentally friendly compared to traditional fossil fuel energy. Thus, based on previous theory that suggested that public-serving motives lead to more positive consumer evaluation (Rifon et al., 2004 & Yoon et al., 2006) and Van Prooijen's (2019) research regarding wind power, it is expected that public-serving motives lead to more trust than firm-serving motives.

Additionally, positive consumer evaluation can also be related to positive eWOM. The public will have less doubts about the initiative, due to a relatively positive perception of solar energy. A positive reputation or perception results in more positive eWOM (Park & Lee, 2009). This can be related to the vehicle source effect which can be applied to the eWOM context (Shamdasani, Stanaland & Tan 2001). Vehicle source effect refers to source variables that moderate the impact of a message through influencing the confidence of the public in the message (Shamdasani, Stanaland & Tan 2001). In the context of eWOM, consumer confidence can influence the eWOM direction (Park & Lee, 2009). When the confidence is perceived to be high, in this case: in solar energy, eWOM will be more positive. Therefore, communicating public-serving motives could be regarded as the source variable which can result in more positive eWOM, because it promotes more support in comparison to firm-serving motives as the inferences of the public is congruent with the actions of the

company. Thus, it is expected that public-serving motives lead to more positive eWOM than firm-serving motives. The following hypothesis was formulated:

H2: Public-serving motives in a CSR message regarding renewable energy lead to (a) more trust and (b) more positive eWOM than firm-serving motives.

### **2.6.1 Moderation effect: Communicated motives and prior crises**

By communicating certain organizational motives for the implementation of a CSR initiative, an organization can create a different and sometimes more positive impression to the public (Terwel et al., 2009). This impression can help initiate public trust and eWOM intentions towards the company. However, a prior experienced crisis can create a communication dilemma due to incongruity with public inferences and communicated motives (Terwel et al., 2009). This is because consumers evaluate the company and its initiatives based on the information available (Kim & Choi, 2018). Hence, when an organization communicates CSR initiatives directly after a crisis, it may be experienced as insincere and a way of exploitation when it is not aligned with their previous actions.

The congruence effect is already apparent in research regarding the fit between corporation and its CSR initiative. A congruence positively affects consumers' attitudes as it also matches with consumer-held expectations (Speed & Thompson, 2000). Forehand and Grier (2003) conducted a research regarding the inconsistency between the expressed organizational motives and the consumers' attributions. Their findings showed that consumer evaluation was most negative when an organization would express public-serving motives when firm-serving benefits were highly noticeable. This was also confirmed by research done by Terwel et al. (2009) in which they examined trust and congruency between communicated motives and organizational intentions. Their results indicate that incongruity between communications and intentions cause less trust. Early research suggests that the public's skepticism towards companies is salient when companies are not genuinely concerned for the public's welfare. Thus, a lack of congruence between corporation and CSR efforts lead to consumers perceiving the initiatives as unnatural.

The communication dilemma and congruence effect discussed above, can also be applied on the case of prior crisis and the communicated intentions. It is expected that an incongruity between the prior experienced crisis and future organizational CSR intentions can lead to less public trust and less eWOM intentions. For instance, when an organization experienced an intentional oil pollution before, but now states that it is involved in CSR activities due to public-serving motives (e.g., concern for climate change). The organization's explanation for participating in CSR activities is regarded as positively valued but the



public's assumptions regarding the organizations' previous actions and current motives are incongruent. This is because an intentional oil pollution is identified with saving money and time, while public-serving motives is regarded as a genuine concern for the climate and the public. Consumers may perceive it as a manipulative attempt to cover previous mistakes (Kim & Choi, 2018). This contradiction can negatively influence public's trust and eWOM intentions towards the organization. On the other hand, trust and eWOM can be strengthened when congruency between prior crisis and the communicated motives are met. This is evident when an oil company communicates their investment in CSR activities with firm-serving motives (benefits to the company) when they were involved in a prior intentional crisis. The public would regard this as honesty due to the consistency between prior crisis and further intentions, which would result in acceptance with less suspicion.

Similarly, the congruence effect also applies for a prior accidental crisis. The public attributes the responsibility of an accidental crisis to external factors beyond the company's control. Therefore, the public might not have doubts regarding the sincerity of concern for the climate when public-serving motives are communicated. The match between the company's intentions and public's inferences would then lead to more trust and positive eWOM behavior.

In conclusion, a congruency between communicated motives and prior experienced crisis is expected to instigate more trust and eWOM. Forehand and Grier (2003) stated that inconsistency between the communicated motives and the actions of a company resulted in lower consumer evaluation. This can also be considered for trust and eWOM. The incongruency leads to less trust as the public would perceive the company's initiative as not genuine. As for eWOM, the vehicle source effect is evident (Shamdasani, Stanaland & Tan 2001). The type of prior crisis in combination with a communicated motive can act as a source variable that influences the confidence in a message regarding renewable energy. It can be expected that a congruency would lead to a positive perception of the initiative resulting in more positive eWOM. Therefore, it can be assumed that the type of prior crisis is a moderator of the effect of communicated motives. The hypothesis is stated as followed:

H3: The effect of communicated motives on (a) trust and (b) eWOM is moderated by the type of prior crisis. Firm-serving motives lead to more trust and positive eWOM than public-serving motives when the cause of the prior crisis was intentional, whereas public-serving motives lead to more trust and positive eWOM than firm-serving motives when the cause of the prior crisis was accidental.

### **2.6.2 Mediating role of trust**

The mediating role of trust in CSR has been recognized by early research such as Park, Lee and Kim (2014) which stated that trust would mediate the effect of CSR initiatives on corporate reputation. The outcome showed that CSR activities create trust in the corporation, which would then lead to positive perceptions of the company. Additionally, research done by Vlachos, Tsamakos, Vrechopoulos and Avramidis (2009) indicated that trust mediates the relationship between CSR efforts and recommendation intentions. In contrast to past studies, current research treats trust as a mediator between communicated motives/prior crisis and eWOM. Little research has been done on the effects of trust on eWOM in the field of CSR. However, it is expected that communicated motives lead to more trust as organizations are able to express their reasons of engagement in certain activities and the public tend to value certain motives over others (Terwel et al., 2009). The increase in trust would, in turn, lead to more eWOM. On the other hand, it is expected that prior crisis would result in less trust and, consequently, less eWOM. It is assumed that prior crisis influences trust because Coombs (2007) stated that crisis can be a threat to a company's reputation. This can ultimately affect the relationship between the company and its stakeholders. The influence of trust on eWOM has been proven in research done by Chu and Kim (2011) that stated that trust is an important antecedent to eWOM behavior. Their study suggests that more trust in social connections would lead to more eWOM. However, this could also be evident for trust in organizations. Lovelock and Wirtz (2007) stated that customer trust in a company has a significant effect on WOM communication. Although their research focused on WOM communication, it is assumed that this could also be applied for eWOM. Therefore, the hypotheses for the mediating role of trust is proposed as follows:

H4a: The effect of communicated motives on eWOM intentions is mediated by trust

H4b: The effect of prior crisis on eWOM intentions is mediated by trust  
eWOM.

### **3. Methodology**

In this chapter, the chosen research method will be discussed in detail. First, the method of experiments will be justified, which will be followed by the research design. Second, the sampling and information regarding the participants will be presented. After that, the stimulus material and operationalization of the constructs will be explained.

#### **3.1 Justification of method**

The chosen method for this research was an experiment, which was accompanied by a survey, in order to better understand the consumers' evaluation of renewable energy. An experiment allows the manipulation of the independent variables and explore how they affect the dependent variables, while maintaining a stable condition (Wyner, 1997). This was needed in order to measure the results of the variables without other possible influences. In this case, communicated motives and prior crisis were manipulated in order to investigate whether trust and eWOM were affected. Moreover, this research also investigated whether a mediation effect is present, where trust is the mediator between communicated motives / prior crisis and eWOM. Thus, quantitative research allows the dependent, independent, moderating and mediating variables to be statistically analyzed in order to measure effects and relationships between variables (Fallon, 2016).

This method was considered appropriate as it allowed the researcher to gather data online in a time efficient way (Wimmer & Dominick, 2014). An online experiment is a convenient and inexpensive way of reaching a wide variety of participants without the presence of the researcher (Van Selm & Jankowski, 2006). By undertaking an experimental design, standardized answers were provided which were then easy to compare (Saunders, Lewis & Thornhill, 2007). Also, it is worth to mention that conducting an online experiment helped in reaching participants through and from Web 2.0 platforms. The reason that it was considered as helpful is because part of this research focused on eWOM intentions, which would be appropriate to examine under participants that were reached through online platforms. Therefore, this method enabled the researcher to approach a significant number of participants, from within the defined population, that were familiar with the use of online platforms.

#### **3.2 Research design**

This research mainly focused on trust in and eWOM regarding sustainable activities pursued by the energy sector. Therefore, the dependent variables were: trust and eWOM intentions. The independent variables were: communicated motives and prior crises. For this

research, a 2 (prior crisis: intentional vs accidental) x 2 (type of communicated motive: public-serving vs firm-serving) between-subjects design was employed with four conditions in total. A conscious choice was made in utilizing a between-subjects design instead of a within-subject design as it minimizes the chances of a “demand effect”. This effect refers to the tendency to interpret the experimenter’s intentions and acting in accordance to the expectations (Rosenthal, 1976).

Moreover, an equal probability for each condition to be chosen was ensured by using random assignments. This method is unbiased as personal preferences are not taken into account during the selection process and each condition was presented to a similar number of participants (Neuman, 2014). The findings from each condition were then compared and synthesized in order to draw conclusions. Apart from discovering the main effects, this research design also allowed to unveil the possibility of interaction effects. The analysis of whether an interaction effect occurred was relevant in this research as it would suggest additional effects under certain conditions. In this case, it would offer insights by providing information regarding the combination of communicated motives and prior crisis.

### **3.3 Sampling and data collection**

This research required a sample of people aged above 18. Adults (18+) were chosen because of their capability in making conscious decisions regarding renewable energy. Adults are most likely aware of the impact of climate change and how sustainable activities are able to act as problem solvers. Moreover, participants who speak the English language were needed, because the survey was in English. There were no further requirements regarding education level and knowledge of corporate sustainability initiatives as participants were shortly introduced to the conditions with explanations before answering the questions.

Data was collected through snowball and convenience sampling. Convenience sampling was utilized through a social media platform, namely Facebook. The target sample was reached by sharing a link of the survey on the personal Facebook page. The use of convenience sampling can raise issues of biased answers and obtaining a non-representative sample (Neuman, 2014). However, it was specified that only adults over 18+ were suitable for this experiment. Thus, participants acquired through Facebook would still represent the sample population. Moreover, snowball sampling was used via Facebook pages that had a great number of visitors. The survey link was shared on Facebook pages regarding sustainability and the environment. Mentioning the desired target sample in the message allowed the researcher to gather specific participants that cater to the research. Additionally, “Dissertation Survey Exchange – Share Your Research Study, Find Participants” was used in

order to obtain diverse data from participants all over the world. This Facebook page allows students to share their research in order to find suited participants.

According to a power analysis calculation by Faul, Erdfelder, Buchner and Lang (2009), a one-way analysis of variance should consist of at least 53 participants per condition group. However, their calculation was based on a large-scale research. This research can be considered small-scale in which the Two-way ANOVA tests were used. Therefore, the calculation of Faul et al. (2009) were still used as a guideline. Thus, the aim for this research was to find at least 212 participants for all four conditions in order to enhance the generalizability of this research.

### 3.4 Participants

Data from a total of 220 participants were collected during the period of 2<sup>nd</sup> of May and 14<sup>th</sup> of May. However, due to drop-outs, missing data and not meeting the age requirement, the final sample consisted of 188 participants. Therefore, the final sample was qualified to be utilized for the statistical analyses of this research. The age of the participants ranged from a minimum of 18 to a maximum of 63 years, with an average age of 25.00 ( $SD = 7.40$ ). It is important to mention that previously three participants were removed from the data because they did not meet the age requirement of 18+. Table 3.4 illustrates the descriptive statistics regarding the gender of the sample. It indicates that the ratio between male and female was rather balanced, with 41.5% male and 56.4% female. The other two answer options (“other” and “prefer not to say”) covered 2.1% of the sample.

Table 3.4. Descriptive statistics – Gender

	N	%
Male	78	41.5
Female	106	56.4
Other	1	0.5
Prefer not to say	3	1.6
Total	188	100

### 3.5 Stimulus material

This research focused on the investment in renewable energy in the energy sector. However, the energy sector contains a lot of different industries. Therefore, this research chose to conduct an experiment concentrated on the oil sector. During this experiment, a

fictitious oil company (Petrodo) was introduced to participants. A conscious choice was made in regard to a fictitious company in order to prevent biased results due to pre-existing brand preferences. The use of fictitious brand can enhance the experimental control during the testing (Keller & Aaker, 1992).

First, two types of fictitious news articles were created to manipulate the crisis type, and participants were randomly assigned to one of the two conditions. They were shown a news article from “The Daily Report”, which was also a fictitious news outlet, regarding a crisis that the oil company Petrodo was involved in. The description regarding the crisis was being displayed as a news article in order to increase the credibility of the message. The news article talked about the oil pollution in the Rhine river caused by Petrodo. It also included a research done by the Bureau of Safety and Environmental Enforcement to examine the reason of the oil spill. This manipulation was adapted from Kim and Choi (2018). The manipulation of their research was successful. Therefore, it was expected that the chance of success of this manipulation for this research would also be high. As for the purpose of a legitimate comparison, it was of importance to only manipulate the text regarding the crisis, while keeping the other aspects of the situation constant. Hence, both news articles were kept as similar as possible and both crises occurred due to a small crack at the bottom of the borehole. However, in order to differentiate the texts regarding the prior crisis (intentional or accidental), various sentences and words were used to accentuate the fact that the crisis occurred due to an accident or intention. In this case, only the way of solving the crack was formulated differently. The accidental crisis (Figure 3.5.1) was described as an attempt to solve the crack by immediately sealing it. Yet, the crack accidentally ruptured again. On the other hand, the intentional crisis (Figure 3.5.2) was reported as lack of care in order to save time and money. The oil company did not seal the crack immediately and kept on using the borehole until it ruptured even further. Additionally, the lay-out and structure of the two news articles were constructed in the exact same way.

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## *The Daily Report*

May 17, 2018

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### **Oil Pollution in the Rhine River, Stirring Environmental Fears**



In April 2018, Petrodo (oil company) was involved in the pollution of the Rhine river resulting in the release of a significant amount of oil. The Bureau of Safety and Environmental Enforcement examined the cause of the oil spill. Their findings revealed that Petrodo discovered a small crack at the bottom of the borehole during one of their regular inspections, which was then immediately sealed. However, after a few days, the crack accidentally ruptured again, causing oil and gas leaking into the river.

Environmentalists are concerned about the threat to sea and bird life. Oil spill disasters are environmental catastrophes as the water becomes contaminated by liquid petroleum hydrocarbon. This causes damage to the environment by threatening wildlife and disturbing the ecosystem for decades.

Figure 3.5.1 News article with accidental crisis

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## *The Daily Report*

May 17, 2018

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Environmentalists are concerned about the threat to sea and bird life. Oil spill disasters are environmental catastrophes as the water becomes contaminated by liquid petroleum hydrocarbon. This causes damage to the environment by threatening wildlife and disturbing the ecosystem for decades.

Figure 3.5.2 News article with intentional crisis

Second, two short posts on a fictitious Facebook page from Petrodo were created regarding Petrodo's initiatives for renewable energy. The social media post described Petrodo's step towards renewable energy by taking over an all (fictitious) green energy company (Greenexx) by January 2019. Greenexx was described as an energy company that obtains green energy from solar panels. A non-existing company was used to prevent brand preferences. For this research, it was important to manipulate the communicated motives (firm-serving and public-serving) in the social media posts. The manipulation was done by referring to the reasons of investment in renewable energy, either for the company's benefit (firm-serving) or the environment (public-serving). However, to protect the valid comparison between the motives, it was necessary to keep other aspects of the text consistent. Therefore, the lay-out, design and structure of the Facebook post were constructed in the same way. Also, to minimize the influence of other factors, information regarding the Facebook post itself, such as likes, shares, and comments were left out. The public-serving text (Figure 3.5.3) consisted of reasons for investment in order to help the environment. The recognition of today's climate change was explained and Petrodo's way of helping the environment by taking over an all green energy company was emphasized. On the other hand, the firm-serving text (Figure 3.5.4) described Petrodo's reason for investing in renewable energy as having beneficial effects for their company. The growth in revenue was highlighted in this social media post. After both texts (news article and social media post), participants were presented a survey regarding their evaluation of the oil company Petrodo.

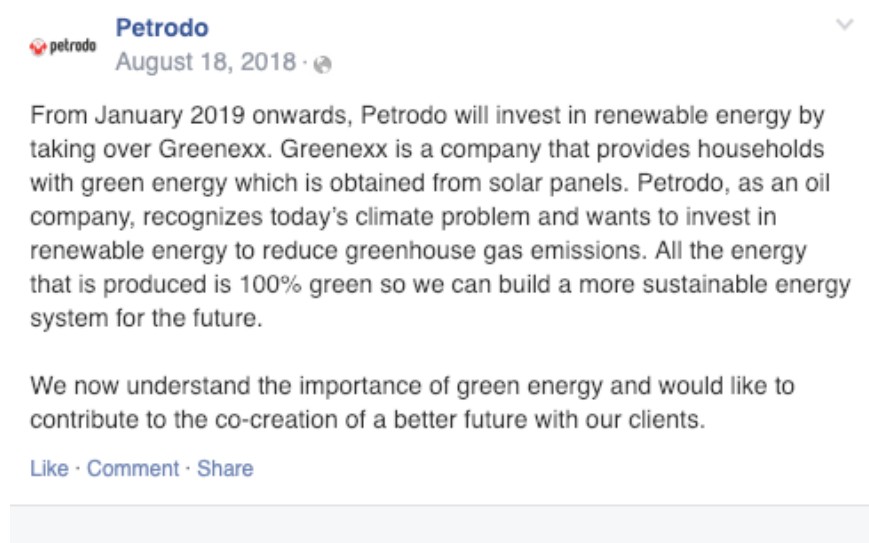


Figure 3.5.3. Social media post with public-serving motives



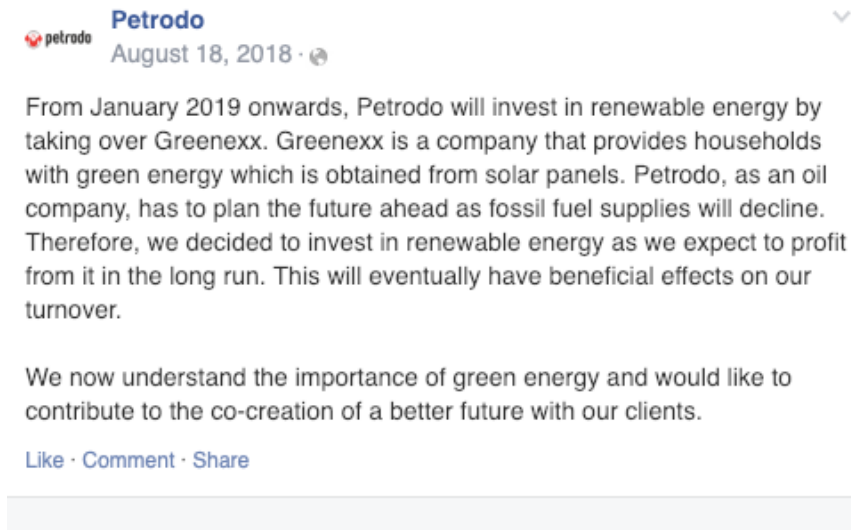


Figure 3.5.4. Social media post with firm-serving motives

### 3.6 Operationalization

The role of the survey<sup>1</sup> was to gather reliable and valid data from the target sample in order to examine the impact of the independent variables (prior crisis and communicated motives) on the dependent variables (trust and eWOM intentions).

#### 3.6.1 Manipulation check

The manipulation checks were included in the experiments to examine the internal validity of the research. The manipulation checks in this research were able to verify if the researcher effectively manipulated the variables which gave more certainty to the fact that the effects were due to the changes of certain constructs (Neuman, 2014). The manipulation checks were simple questions regarding the conditions that participants saw. The manipulation of prior crisis was performed by asking the participants what the cause was of the crisis that they previously read in the news article. The answer option was either “an accident” or “intentional”. On the other hand, the manipulation of the communicated motives was asked based on the social media post in which Petrodo stated that they took over Greenexx because of a certain reason. The answer options were: “they expect to profit from it” or “they want to reduce greenhouse gas emissions”. If participants were able to recall both conditions, it means that they paid attention to the constructs which indicates that the manipulation worked.

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<sup>1</sup> Appendix I contains the whole survey

### **3.6.2 Trust in the organization**

The first dependent variable was trust in the organization which was adopted from previous research done by Leach, Ellemers and Barreto (2007). Additionally, their research suggested that trust could be divided into two measurements: morality and competence of the organization. First, participants had to give their opinion on the morality of the company. This was done through the question “How would you rate ... of this company” on a 7-point Likert scale ranging from 1 (very bad) to 7 (very good). The three items examined for morality were: “honesty”, “sincerity”, and “trustworthiness” of the company. The Cronbach’s Alpha for morality was .85, indicating a good reliability of the scale. After, competence was examined through the same question on a 7-point Likert scale ranging from 1 (very bad) to 7 (very good). The items measured were: “competence”, “intelligence”, and “skillfulness” of the company. Competence had a Cronbach’s Alpha of .78, which also indicated a good reliability of the scale.

### **3.6.3 eWOM intentions**

The last dependent variable, eWOM intentions, was examined through six items which were asked on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). This scale was adapted from previous research done by Eisingerich, Chun, Liu, Jia and Bell (2015) on Word-of-Mouth behavior on online social sites. Their research focused on the social media platform Facebook, which was also utilized in this research. Therefore, it can be assumed that this scale would protect the reliability and validity as it measured the same constructs on the same social media platform. The statements are mostly referred to the social media behavior of participants related to the presented company Petrodo. Example statements were: “I would “like” this post on Facebook”, “I would post a positive response to this message”, and “I would recommend Petrodo to my friends on Facebook”. Also, the Cronbach’s Alpha of the items was .88, which demonstrates a high reliability of the scales. Additionally, it is worth to highlight that the stimulus material of the social media posts did not include any information regarding others’ eWOM behavior, such as likes and comments. Thus, participants were not able to depend their answers on “others” but had to give an answer based on their own opinion instead.

### **3.7 Factor analysis and reliability of the scales**

Although scales of previous research were used, it was still important to analyze whether the scales were reliable and examine whether the factors are uncorrelated. Therefore,

a factor analysis was performed to examine the factorial structure of the scales and assure that the same dimensions were found as previous research.

The first dependent variable for this research was trust, which was divided into two subscales (morality and competence) based on previous research by Leach et al. (2007). The morality and competence items were recorded into Factor Analysis using Principal Components extraction with Varimax rotation which was based on Eigenvalues ( $>1.00$ ),  $KMO = .79$ ,  $\chi^2 (N = 188, 15) = 433.44$ ,  $p < .001$ . The resultant model constituting two components explained 73.2% of the variance in trust. Table 3.7 presents the two factors that were found, which is equivalent to previous research that indicated two dimensions of trust (Leach, Ellemers & Barreto, 2007). Also, reliability tests were conducted to measure the internal consistency of the two dimensions found and determine whether the scales were reliable. Both scales yielded a Cronbach's Alpha of good reliability and it was not considered as necessary to delete any item as it would not improve the Cronbach's Alpha. The items representing each component were then computed into a new variable using a mean index, which resulted in two trust variables: morality and competence. Table 3.7 also consists of the factor loadings of individual items and its Cronbach's Alpha.

Table 3.7. Factors and reliability analyses for scales for trust (N = 188).

	Morality	Competence
How do you rate the honesty of this company?	.87	-
How do you rate the sincerity of this company?	.86	-
How do you rate the trustworthiness of this company?	.82	-
How do you rate the competence of this company?	-	.79
How do you rate the intelligence of this company?	-	.84
How do you rate the skillfulness of this company?	-	.81
R <sup>2</sup>	.38	.35
Cronbach's Alpha	.85	.78

The second dependent variable was eWOM, which consisted of six items on a 7-point Likert scale. Although these six items were not classified into different factors in previous research done by Eisingerich, Chun, Liu, Jia and Bell (2015), it was still relevant to examine whether the six items could represent various factors. Therefore, a Factor Analysis was conducted using Principal Components extraction. The analysis consisted of the Varimax

rotation which was based on Eigenvalues ( $>1.00$ ),  $KMO = .81$ ,  $\chi^2 (N = 188, 15) = 628.27$ ,  $p < .001$ . The resultant model explained 63.2% of the variance in eWOM intentions, however, only one component was found. This indicates that eWOM cannot be classified into multiple factors. In the end, the six items were computed into only one variable using the mean index.

### **3.8 Experimental procedure**

#### **3.8.1 Pre-test**

Before conducting the final experiment, a pre-test was needed in order to examine if the participants understood the questions which, in turn, would minimize errors and increase the response rate in the final experiment (Hilton, 2015). Additionally, a pre-test provided valuable information to the researcher as participants were able to discuss each question separately. The results of each participant were then compared to examine the consistency of the research design.

The pre-test was held on the 30<sup>th</sup> of April and 1<sup>st</sup> of May and conducted with convenience sampling. Convenience sampling was used as it was time efficient and would still deliver valuable information. However, the participants for the pre-test did have to fit the sampling of the final experiment. Also, the pre-test was conducted in an offline setting as a cognitive interview because it would provide opportunities for the participants to express their difficulties and ideas for the survey. The use of probes could examine the usefulness, validity and reliability of the questions (Priede, Jokinen, Ruuskanen & Farrall, 2013). This research made use of probing which indicates that the researcher asks the questions which lowers the burden on the participant. Hence, the participant can concentrate on answering the questions and stay true to themselves (Collins, 2004). For the pre-test, ten participants were contacted whom were separately examined, without having the opportunity to discuss the survey with others. The measurements were standardized, meaning that the same questions were asked to all ten participants. This was important in order to analyze if all participants understood the same question and if the item would measure what it was supposed to measure.

First, participants were asked to complete the survey and fill in the answers as how they would normally do it. While participants were completing the experiment, the researcher timed the duration of the survey. This was needed in order to compare the estimation of time given by Qualtrics and the actual duration. The average time (5-10 minutes) was then add onto the consent form. After participants were finished, general questions regarding the flow, length and lay-out of the survey and conditions were asked. It was also important to ask about the clearness of the questions and if participants understood everything.

Following, the problems that participants faced were highlighted in order to correct them in the final version. No problems were found for the consent form and the question regarding the general opinion of advertisements. When the participants asked if the crisis condition and social media condition were clear, all ten participants stated that there was no issue in understanding the news article and social media post. Although, they did not have full knowledge of oil pollution, it was understandable for them that the crisis created a significant impact on the environment. However, three participants suggested that a timer for both texts would assure that participants fully read the text instead of skipping to the next question. Therefore, the conditions were also timed in order to calculate the average duration, which was then added to the final version. After the stimulus material, the two manipulation checks followed. Nine out of ten participants answered both manipulation checks correctly. Only one participant was not able to identify the crisis type in the news article. This indicated that the manipulation was successful.

For the remaining survey, all items were clear except for the question regarding the trust in the organization. This was due to the similarity of words as the first two participants immediately stated that some words were confusing as they did not know the exact difference, in particular “honesty” and “sincerity”. Both suggested that a short definition of the words could help the participant in answering the questions. Therefore, before starting the pre-test with other participants, the researcher made a small list of definitions of the words. Half of the remaining participants got to see the survey with the definitions, and the other half did not. This was done in order to test if a list of definitions would make a difference in understanding the questions. Results indeed showed that the participants with the list did not occur any problems, but the majority of the other half encountered complications. The latter were then presented the definition list and were asked if it would be helpful to include this into the description. All of the participants agreed and stated that it would be useful as not everybody is a native English speaker. Thus, a definition list was included in the final version.

To conclude, the changes that were implemented in the final version were related to timing of the procedure (survey as a whole), timing of the stimulus material (adding a clock), and further explanation of some words by including a definition list. All scales (7-point Likert) and other questions remained the same for the final version.

### **3.8.2 Final experiment**

The final experiment started with a consent form and a brief introduction of the research. After giving consent, participants were then directed to the first block of questions

regarding their skepticism towards advertisements. Proceeding, participants were shown one of the four experimental conditions. First participants were shown either an intentional or accidental crisis, followed by either a firm-serving or public-serving social media post. The stimulus material was followed by manipulation checks and further questions regarding the dependent variables. It ended with questions regarding basic demographic information such as age, education level and country of origin. The final page was a debrief of the experiment where the participants were thanked once again and explained that the company Petrodo was created specifically for this research.

### **3.9 Validity and reliability**

This research adopted measures to strengthen the validity and reliability. First off, validity referred to constructs that are measuring what they are supposed to measure (Neuman, 2014). On the other hand, reliability referred to achieving the same results when the research is replicated and repeated (Neuman, 2014). When conducting an experiment, several factors can cause a threat for internal and external validity. However, the validity of this research was strengthened by utilizing scales from previous research. These scales were tested and re-used in various research and obtained a high value of Cronbach's Alpha ( $\alpha$ ) of at least .80 (Leach et al., 2007). Moreover, including manipulation checks ensured the fact that the effect on the dependent variables was a result of the presence of the independent variables. These isolated other possible external factors that could influence the experimental outcomes. Although the scales were used in previous research, it was still important to carry out a pre-test to verify if the used scales are indeed measuring what it is supposed to measure. The pre-test helped in recognizing various problems and making sure that the questions and manipulation checks were valid for this research. Also, in order to establish the reliability, a pre-test examined the survey in detail which could ensure that the methodology was consistent and would deliver the same results in future research.

## 4. Results

This chapter illustrates the reporting of the results based on the statistical analyses of the collected data. These findings are essential in order to investigate the research question and test the hypotheses. This section begins with the manipulation check which is analyzed using the Chi Square test, followed by descriptive statistics regarding the general opinion about advertisements. After that, the results of the hypothesis testing will be presented.

For this research, four hypotheses were formulated and investigated through Two-way ANOVA tests and PROCESS macro. Two-way ANOVA was chosen due to the fact that the means of four groups were examined and determined whether there were significant differences between the means on the independent variables. Crisis type and communicated motives were examined on the dependent variables trust-morality, trust-competence, and eWOM using the Two-Way ANOVA. PROCESS MACRO by Hayes was used in order to investigate the mediation of trust. PROCESS is a macro that is able to conduct mediation analysis with Model 4. This analysis was used in order to find out whether the relation between the independent and dependent variable can be explained by a mediator. In this research, trust was regarded as a mediator between the independent variables and eWOM.

### 4.1 Manipulation check

For the first manipulation check, participants were asked to indicate whether the crisis introduced in the news article was intentional or accidental. This was followed by the second manipulation check, where participants were asked if the company invested in renewable energy to make profit or to help the environment based on the previous social media post. To examine the successfulness of the manipulation checks, a Chi-Square test was conducted. The Chi-Square test was used to determine if the condition a participant saw, was also the same condition that they identified. First, the manipulation of the crisis type was examined. Table 4.1.1 represents the response from participants in each crisis type condition. Although a significant interaction was found,  $\chi^2 (N = 188, 1) = 20.80, p < .001$ , it is surprising that 52 participants in the intentional condition were more likely to identify the crisis as being an accident, whereas 40 participants did identify an intentional crisis as intentional. For the accidental condition, 83 participants identified the crisis correctly, whereas 13 participants thought it was intentional. The Chi-Square test demonstrated that the manipulation was partially successful, meaning that the effects are caused by the manipulation of the crisis type. However, the score for the intentional crisis type indicated that people were more likely to identify the crisis as accidental.

Table 4.1.1. Distribution of the manipulation check – crisis type

Condition	Accidental	Intentional
“it was an accident”	83	52
“it was intentional”	13	40
Total	96	92

Additionally, the Chi-Square test of the manipulation of communicated motives was also significant,  $\chi^2 (N = 188, 1) = 47.06, p < .001$ . Table 4.1.2 shows the response of participants in each communicated motive condition. It can be seen that, unlike the crisis type, a large number of participants identified the same motive as the communicated motive condition they were exposed to. Thus, it can be assumed that the manipulation of communicated motives was also successful, indicating that effects are related to the manipulation.

Table 4.1.2. Distribution of the manipulation check – communicated motives

Condition	Firm-serving	Public-serving
“they expect to profit from it”	60	12
“they want to reduce greenhouse gas emissions”	37	79
Total	97	91

Although both manipulation checks are significant, it should be mentioned that the following results should be interpreted with caution due to a relatively high number of incorrect answers for the manipulation check crisis type. However, additional results were included where the data with incorrect answers to both manipulation checks were removed. This was done to analyze whether the results would differ, but it should be noted that the sample size of the data (with removed answers) was fairly low (91) and cannot be considered as highly reliable. Additionally, the sample sizes of crisis type are not equally distributed. Instead, the accidental condition has more data than the intentional condition. Therefore, the results of the cleaned data should also be interpreted with caution.



## 4.2 Effect of crisis type and communicated motives on trust-morality

### 4.2.1 Main effect of crisis type on trust-morality

The first dependent variable for this research was trust-morality which was analyzed using the Two-way ANOVA test. First off, the main effect of crisis type was examined on trust-morality. Table 4.2.1 illustrates the descriptive statistics of trust-morality for the two crisis types (intentional vs. accidental). The ANOVA revealed a significant main effect for crisis type on morality of trust,  $F(1, 187) = 12.32, p = .001, \text{partial } \eta^2 = .06$ . The analysis showed that the two groups differ significantly regarding trust on morality level and that around 6% of the variance can be explained by the manipulation of crisis type. This indicates that a prior accidental crisis type ( $M = 3.56, SD = 1.12$ ) gained more trust (morality) than a prior intentional crisis type ( $M = 3.00, SD = 1.09$ ). However, it is important to understand that the average of the accidental crisis was still moderately low.

Table 4.2.1. Descriptive statistics – morality (trust) for crisis type

	<i>M</i>	<i>SD</i>	<i>N</i>
Accidental	3.56	1.12	96
Intentional	3.00	1.09	92
Total	3.26	1.14	188

Another Two-way ANOVA for the cleaned data was conducted, in which participants who did not recognize the manipulation as intended were excluded. Results showed that exclusion of these participants did not alter the findings and a significant main effect for crisis type on morality of trust was also found,  $F(1, 90) = 22.14, p < .001, \text{partial } \eta^2 = .20$ . Therefore, H1a regarding trust in morality can be accepted.

### 4.2.2 Main effect of communicated motive on trust-morality

Next, the effect of communicated motives was tested on trust-morality. Table 4.2.2. shows that the total average of communicated motives on morality was rather low (3 = fairly bad). When looking at the ANOVA, it revealed that no significant difference was found between the firm-serving motives ( $M = 3.37, SD = 1.19$ ) and public-serving motives ( $M = 3.19, SD = 1.08$ ),  $F(1, 187) = 1.14, p = .288, \text{partial } \eta^2 < .01$ . The analysis showed that both communicated motives led to fairly low trust and no statistical difference was found between them, indicating that it cannot be assumed that one motive leads to more trust than the other.

Table 4.2.2. Descriptive statistics – morality (trust) for communicated motive

	<i>M</i>	<i>SD</i>	<i>N</i>
Firm-serving	3.37	1.19	97
Public-serving	3.19	1.08	91
Total	3.29	1.14	188

Additionally, another Two-way ANOVA was conducted on the cleaned data. The analysis revealed that there was also no significant effect found for communicated motives on trust-morality,  $F(1, 90) = .43, p = .515$ , partial  $\eta^2 < .01$ . It can be assumed that there is no difference in both conditions when it comes to trust-morality. Thus, H2a regarding trust in morality can be rejected.

#### 4.2.3 Interaction effect on trust-morality

The interaction effect refers to the act of moderation by the type of prior crisis on the relation between communicated motives and the dependent variable trust-morality. Table 4.2.3 represents the descriptive statistics of the four conditions on morality. When looking at the ANOVA, no significant difference was found between the four conditions,  $F(1, 187) = .25, p = .617$ , partial  $\eta^2 < .01$ . In other words, it cannot be assumed that one condition gained more trust than the others, instead, there is no statistical difference between all four conditions.

Table 4.2.3. Descriptive statistics – morality (trust) of all four conditions

	<i>M</i>	<i>SD</i>	<i>N</i>
Firm-serving x accidental	3.67	1.19	52
Firm-serving x intentional	3.03	1.11	45
Public-serving x accidental	3.44	1.02	44
Public-serving x intentional	2.97	1.08	47
Total	3.29	1.14	188

The interaction effect for the cleaned data revealed that the exclusion did not alter the findings. No significant difference was found between the four conditions,  $F(1, 90) = .52, p = .473$ , partial  $\eta^2 < .01$ . Therefore, H3a regarding trust in morality can not be accepted.

### 4.3 Effect of crisis type and communicated motives on trust-competence

#### 4.3.1 Main effect of crisis type on trust-competence

Trust regarding competence was also examined through the use of Two-way ANOVA. First, the main effect of crisis type on trust-competence was analyzed. Table 4.3.1 shows the descriptive statistics of the crisis types, with a total average of around 4 (neutral). The Two-way ANOVA showed a statistically significant difference between prior accidental and prior intentional crisis on trust in competence  $F(1, 187) = 5.42, p = .021, \text{partial } \eta^2 = .03$ . A main effect was found indicating that a prior accidental crisis type ( $M = 4.22, SD = .95$ ) gained more trust than a prior intentional crisis type ( $M = 3.84, SD = 1.26$ ). Around 3% of the variance in competence of trust was attributable to the manipulation of crisis type.

Table 4.3.1. Descriptive statistics – competence (trust) for crisis type

	<i>M</i>	<i>SD</i>	<i>N</i>
Accidental	4.22	.95	96
Intentional	3.84	1.26	92
Total	4.04	1.13	188

Additionally, the ANOVA of the cleaned data revealed that exclusion of participants did not have an impact on the results. The analysis also revealed a significant main effect for crisis type on competence of trust,  $F(1, 90) = 11.89, p = .001, \text{partial } \eta^2 = .12$ . Thus, H1a regarding trust in competence can be accepted.

#### 4.3.2 Main effect of communicated motive on trust-competence

The competence dimension of trust was also analyzed for communicated motives in order to identify possible differences. Table 4.3.2 shows the mean, standard deviation, and total of both communicated motives. It can be noticed that, the total average of competence was 4 (neutral). ANOVA revealed a statistically significant difference for public-serving motives ( $M = 4.21, SD = 1.11$ ) that would lead to more trust than firm-serving motives ( $M = 3.87, SD = 1.12$ ),  $F(1, 187) = 4.16, p = .043, \text{partial } \eta^2 = .02$ . The analysis showed that 2% of the variance was explained by the manipulation of communicated motive, in which the communication of public-serving motives led to higher level of trust in competence than firm-serving motives.

Table 4.3.2. Descriptive statistics – competence (trust) for communicated motive

	<i>M</i>	<i>SD</i>	<i>N</i>
Firm-serving	3.87	1.12	97
Public-serving	4.21	1.11	91
Total	4.04	1.13	188

When looking at the analysis of the cleaned data, the Two-way ANOVA revealed that the exclusion of participants did not result in other findings. A significant effect was found for communicated motives on trust-competence,  $F(1, 90) = 8.68, p = .004, \text{partial } \eta^2 = .09$ . Therefore, H2a can be accepted for trust in competence.

### 4.3.3 Interaction effect on trust-competence

Competence of trust was also examined for a possible interaction effect between crisis type and communicated motives. This was done by using the Two-way ANOVA, from which the descriptive statistics are presented in Table 4.4.3. The ANOVA showed that the interaction was not statistically significant,  $F(1, 187) = .08, p = .783, \text{partial } \eta^2 = < .01$ . Thus, indicating that there is no difference in competence of trust between all four conditions and it cannot be assumed that a condition leads to higher trust-competence than the others.

Table 4.4.3. Descriptive statistics – competence (trust) of all four conditions

	<i>M</i>	<i>SD</i>	<i>N</i>
Firm-serving x accidental	4.08	.90	52
Firm-serving x intentional	3.64	1.31	45
Public-serving x accidental	4.39	1.00	44
Public-serving x intentional	4.04	1.20	47
Total	4.03	1.13	188

The analysis for the cleaned data also revealed that there was no significant interaction found between the four conditions,  $F(1, 90) = 2.56, p = .113, \text{partial } \eta^2 = .03$ . It cannot be assumed that there is a statistical difference between the conditions on trust-competence. Thus, H3a for trust in competence can not be confirmed.

## 4.4 Effect of crisis type and communicated motives on eWOM

### 4.4.1 Main effect of crisis type on eWOM

In addition to trust, eWOM was also regarded as a dependent variable for this research. First, the main effect of crisis type was examined on eWOM using the Two-way ANOVA. The descriptive statistics of both crisis types are shown in Table 4.4.1. It can be noticed that the total average of eWOM behavior was around 2 (disagree), indicating that participants had rather low intentions in displaying eWOM behavior. ANOVA revealed that no significant difference was found between a prior accidental crisis ( $M = 2.26$ ,  $SD = 1.09$ ) and prior intentional crisis ( $M = 2.13$ ,  $SD = 1.10$ ) for eWOM intentions,  $F(1, 187) = .68$ ,  $p = .209$ , partial  $\eta^2 < .01$ . This indicates that participants in both conditions had similar eWOM intentions.

Table 4.4.1. Descriptive statistics – eWOM for crisis type

	<i>M</i>	<i>SD</i>	<i>N</i>
Accidental	2.26	1.09	96
Intentional	2.13	1.10	92
Total	2.19	1.09	188

The main effect of eWOM on crisis type was also investigated for the cleaned data. The ANOVA revealed that the exclusion of participants did not result in different findings. No significant effect was found for the conditions,  $F(1, 90) = .02$ ,  $p = .888$ , partial  $\eta^2 < .01$ . Thus, H1b can not be accepted.

### 4.4.2 Main effect of communicated motive on eWOM

Moreover, the main effect of communicated motives was also analyzed on eWOM behavior. The descriptive statistics of eWOM for both conditions are shown in Table 4.4.2. The total average of the communicated motives was around 2 (disagree), indicating that participants' intentions of eWOM was rather low. When looking at the ANOVA, no significant difference was found between the motives,  $F(1, 187) = 2.52$ ,  $p = .114$ , partial  $\eta^2 = .01$ . This means that the participants' eWOM intentions did not statistically differ when firm-serving motives ( $M = 2.07$ ,  $SD = 1.04$ ) or public-serving motives ( $M = 2.32$ ,  $SD = 1.14$ ) were presented.

Table 4.4.2. Descriptive statistics – eWOM for communicated motive

	<i>M</i>	<i>SD</i>	<i>N</i>
Firm-serving	2.07	1.04	97
Public-serving	2.32	1.14	91
Total	2.19	1.09	188

Unlike the previous analysis, the ANOVA for the cleaned data revealed that a significant difference was found between the conditions of communicated motives  $F(1, 90) = 4.28, p = .041$ , partial  $\eta^2 = .05$ . The analysis revealed that 5% of the variance is explained by the manipulation of the communicated motives. Therefore, it can be assumed that public-serving motives ( $M = 2.32, SD = 1.16$ ) gained more eWOM than firm-serving motives ( $M = 1.81, SD = .83$ ). Thus, H2b can only be confirmed for the data excluding the participants that answered the manipulation checks incorrectly. As for the total data, H2b can not be accepted.

#### 4.4.3 Interaction effect on eWOM

The moderating role of the type of prior crisis was also examined on eWOM using Two-way ANOVA. The descriptive statistics of all the four conditions are presented in Table 4.4.3. The analysis showed that no significant difference was found between the four conditions, indicating that all conditions instigate the same level of eWOM intentions,  $F(1, 187) = .36, p = .549$ , partial  $\eta^2 < .01$ .

Table 4.5.3.1. Descriptive statistics – eWOM of all four conditions

	<i>M</i>	<i>SD</i>	<i>N</i>
Firm-serving x accidental	2.18	1.03	52
Firm-serving x intentional	1.94	1.03	45
Public-serving x accidental	2.35	1.15	44
Public-serving x intentional	2.30	1.14	47
Total	2.19	1.09	188

The Two-way ANOVA was also used for the cleaned data, which revealed that exclusion of participants did not alter the findings. No significant interaction was found between the four conditions,  $F(1, 90) = .16, p = .690$ , partial  $\eta^2 < .01$ . Thus, H3b can not be accepted.

#### 4.5 Mediation effect of trust on eWOM

Besides the moderation effects, this research also focused on a possible mediating role of trust on eWOM. In order to investigate this effect, an add-on package of PROCESS macro by Hayes was implemented in SPSS. For Hypothesis 4a, it was assumed that trust would mediate the effect of communicated motives (independent variable) on eWOM, such that more trust would lead to more eWOM. This was also hypothesized for Hypothesis 4b but with prior crisis as the independent variable. Model 4 (see Figure 4.5) denoting a mediation model in PROCESS was selected to test H4a and H4b. This analysis suggests a mediation effect when the conditions of the paths are met. First, path *c*, total direct effect between the independent variable X (communicated motives & prior crisis) and the dependent variable Y (eWOM), should be significant. Second, path *a* should also be significant which is the direct effect between X and the mediating variable M (trust). Next, X and M together should predict Y, but this is divided into two different paths. First, path *b* refers to the effect when M predicts Y, which should be significant. However, when the mediating variable M is included in the model, X should no longer be predicting Y. Meaning that when controlling for M, the effect of X was removed. This last step refers to path *c'*. However, this is only the case when a full mediation is present. If the last path is significant, this can still refer to a partial mediation.

First, PROCESS model 4 was run with communicated motives as the independent variable. It is important to note that trust, in this research, was divided into two factors: morality and competence. Therefore, both variables were put as the mediator M. In order to examine whether trust has a mediating role, the first condition, path *c*, had to be met in which the total direct effect of communicated motives on eWOM should be significant. The model for morality and competence (trust) was found to be nonsignificant, meaning that trust, for both factors morality and competence, cannot act as a mediator between communicated motives and eWOM ( $F(1, 186) = 2.52, p = .114, R^2 = .01$ ). Therefore, the following conditions (paths) for communicated motives were not analyzed.

Second, the same analysis of PROCESS model 4 was run for prior crisis as the independent variable, trust (morality and competence) as the mediator, and eWOM as the outcome variable. The total effect model also had to be significant in order to continue the paths and examine whether trust can function as a mediator. However, the analysis revealed there was no significant effect found for prior crisis on eWOM,  $F(1, 186) = .68, p = .409, R^2 < .01$ . This indicates that trust cannot act as a mediator between prior crisis and eWOM, thus, the following steps will not be analyzed.

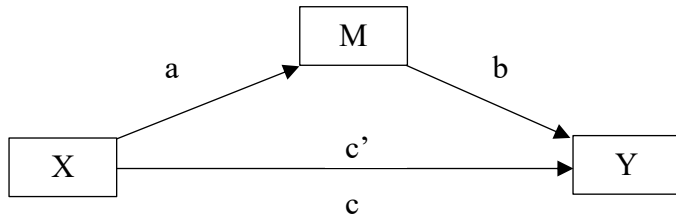


Figure 4.5 Diagram of Model 4 (PROCESS) – mediation

As for the analysis of the cleaned data, the same analysis of PROCESS model 4 was run on communicated motives as the first independent variable, trust (morality and competence) as the mediator, and at last eWOM as the outcome variable. The analysis showed that the exclusion of participants did not result in different findings and the total effect model was still non-significant for communicated motives on eWOM,  $F(1, 89) = 5.74$ ,  $p = .019$ ,  $R^2 = .06$ . This analysis showed that trust does not have a mediating role between communicated motives and eWOM, meaning that the next steps will not be analyzed. Based on the outcome of the analyses, it can be concluded that H4a can not be accepted.

The same analysis of PROCESS model 4 was also used for the next independent variable prior crisis on eWOM, with trust (morality and competence) as the mediator. As for prior crisis, the total effect model also revealed to be non-significant,  $F(1, 89) < .01$ ,  $p = .975$ ,  $R^2 < .01$ . Trust cannot act as a mediator between prior crisis and eWOM, therefore, the following steps will not be analyzed. Thus, the findings show that H4b is rejected.



## 5. Discussion

Climate change is an inevitable and urgent global challenge that affects people all over the world. It is not just a problem that can be solved, instead, it is a challenge that must be managed more effectively. Therefore, in 2015, a binding climate agreement was signed by 195 countries who agreed to attack climate change by reducing greenhouse gas emissions (The Guardian, 2015). This has put pressure on the energy sector as their initial business is associated with polluting activities. In order for the energy sector to stay in business and contribute to a better environment, a lot of corporations have begun to take an interest in renewable energy. However, the change in renewable energy can raise suspicion when the public inferences and the company's actions do not match (Terwel et al., 2010). To overcome this dilemma, this study aimed to gain more insights in how companies from the energy sector (mainly oil sector) can communicate their CSR initiative to the public and gain trust and enhance eWOM behavior. In particular, prior experienced crises (accidental vs. intentional) and communicated motives (firm-serving vs. public-serving) were investigated on trust and eWOM intentions. This was done by conducting an online experiment to answer the following research question: "To what extent can communicated motives and type of prior crisis affect the public's evaluation of a CSR message regarding renewable energy?"

### 5.1 Key findings

First off, this research was interested in the role of prior crisis on the evaluation of future CSR activities by the public. This led to the first hypothesis which stated that a prior accidental crisis leads to (a) more trust and (b) more positive eWOM when a CSR message is communicated regarding renewable energy compared to prior intentional crises. One of the key findings was that a prior experienced crisis can indeed have an impact on how future activities are being evaluated by the public. H1a regarding trust in morality and competence was confirmed by the experimental data analysis. The findings of the study supported previous study of Kim and Choi (2018) which stated that an accidental crisis receives more favorable attitudes towards the company than an intentional crisis. The reasoning for that is the attribution of responsibility (Weiner, 1985) which explained that people make attributions for certain activities. Coombs and Holladay (2002) stated that the attribution of responsibility differs for each crisis type. An accidental prior crisis would gain more trust because the responsibility can be attributed to external factors (Kim & Choi, 2018). Whereas, when the responsibility is attributed to the company, it would lead to skepticism and, in turn, less trust. Therefore, based on the findings and previous research, it can be confirmed that a prior accidental crisis does indeed lead to more trust in morality and competence when a CSR

message regarding renewable energy is communicated. It can be assumed that the type of prior crisis can have an influence on how the public perceives the company's future activities. On the other hand, a prior accidental crisis does not lead to more positive eWOM compared to a prior intentional crisis. Therefore, H1b cannot be confirmed, indicating that both crises type result in similar eWOM intentions after a CSR message regarding renewable energy is presented. Though both eWOM intentions were similar, it must be noted that the scores were rather low for both conditions. The findings disapproved with research from Wattegama and Qing (2014) in which they suggested that when a corporation is responsible for a crisis (intentional), it would instigate a negative emotional reaction. This reaction can cause negative eWOM. A possible reason for having contradicting findings is that Wattegama and Qing's study was mainly focused on product harm crisis which refers to a crisis in which the products are defective or dangerous for the consumers. When consumers discover the intention, it will instigate more negative eWOM as the crisis is directly affecting the consumers. As for oil spills, the direct impact can not be measured by customers. Instead, it creates long-term environmental impacts (Kingston, 2002). Therefore, it can be assumed that the findings differ based on the proposed prior crisis. On the other hand, the Attribution Theory (Weiner, 1985) cannot be applied for eWOM. It was expected that when an accidental crisis occurred, the public would attribute the responsibility to external factors. This attribution would create a positive behavioral response, positive eWOM. However, the findings showed that there was no difference between both crisis regarding eWOM intentions.

The second research objective of this research was to explore the influence of communicated motives (firm-serving and public-serving) on trust and eWOM. Hence, hypothesis 2 was stated as followed: Public-serving motives in a CSR message regarding renewable energy lead to (a) more trust and (b) more positive eWOM than firm-serving motives. H2a can be partially confirmed, as public-serving motives in a CSR message lead to more trust than firm-serving motives when it comes to trust in competence. Trust-morality does not appear to differ in both conditions. The findings for trust-competence are in line with research done by Van Prooijen (2019) which revealed that public-serving motives result in more trust. This is contradicting to the results of De Vries et al. (2013) and Terwel et al. (2009), which stated that firm-serving motives would lead to more trust as the actions are congruent with the public's perceptions of the companies' intentions. As solar energy, and also wind energy (Van Prooijen, 2019), are generally more accepted by the public and perceived as less harmful in comparison to carbon dioxide storage (De Vries et al., 2013; Terwel et al., 2009), it can be expected that the public would be less skeptical about this type

of initiative when concern regarding the environment is expressed. However, to explain the difference in trust-morality and trust-competence, it can be assumed that the public believes that the company is capable of accomplishing the initiative (competence) better when public-serving motives are communicated. Trust-morality is related to the sincerity of the company regarding the initiative, which could be associated with greenwashing, especially when it comes to the energy industry. The initial business of energy industries is closely related to polluting activities which could lead to suspicion when the industry tries to switch to renewable energy. Therefore, the sincerity of the CSR initiative could be perceived as greenwashing when the communicated motives are not in line with the public's inferences. Furthermore, the findings for trust-morality are not in line with Van Prooijen's research which could be explained through the fact that the current research showed a crisis to the participants before they were exposed to the CSR message including a certain communicated motive. Van Prooijen (2019) did not have prior crisis as an independent variable, indicating that the findings for communicated motives on trust were not possibly influenced by information regarding a prior crisis.

Additionally, H2b cannot be accepted, because there was no significant difference found between the conditions on eWOM intentions. The findings did not support previous research from Park and Lee (2009) which stated that a positive reputation result in more positive eWOM. Also, the findings are not in line with the vehicle source effect (Shamdasani, Stanaland & Tan, 2001). It cannot be assumed that public-serving motives act as a source variable because it does not influence the confidence of the public in the CSR message. Consumer confidence did not influence the eWOM direction as stated by Park and Lee (2009). Instead, eWOM intentions in both conditions were rather low. The low scores of eWOM intentions and not finding a significant effect may be due to the public's personal motivation to engage in eWOM. Cheung and Lee (2012) mentioned that the stronger sense of belonging to a brand or product can positively affect eWOM intentions. However, current research only looked at the communicated motives which could act as drivers for the eWOM behavior. It was not investigated whether the public's own perception of the product, in this case: investment in solar energy, was positive.

Hypothesis 3 was established based on the previous two hypotheses regarding the main effects of the dependent variables. H3 hypothesized an interaction effect between type of prior crisis and communicated motive on trust and eWOM. The hypothesis is formulated as followed: The effect of communicated motives on (a) trust and (b) eWOM is moderated by the type of prior crisis. Firm-serving motives lead to more trust and positive eWOM

than public-serving motives when the cause of the prior crisis was intentional, whereas public-serving motives lead to more trust and positive eWOM than firm-serving motives when the cause of the prior crisis was accidental. The findings show that H3a and H3b are not confirmed. It was expected that the congruence effect by Speed and Thompson (2000) was also evident in the case for CSR. However, the results are contradicting as the conditions do not differ in trust and eWOM. This indicates that a congruency between a prior crisis and further intentions does not positively influence consumers' attitudes. Moreover, Forehand and Grier (2003) demonstrated that inconsistency between communicated motives and actions of a company would result in lower consumer evaluation. However, the findings showed that there was no difference between congruency and incongruency in trust and eWOM intentions and the type of prior crisis can not act as a moderator. A possible reason for non-significance is that a corporate crisis can have an influence in customer confidence (Sparks & McColl-Kennedy, 2001), regardless of the type of crisis and congruency with communicated motive. An oil spill can have an enormous impact on the environment and is always associated with negative emotions. This could lead to a drop in confidence and the rise of dissatisfaction, resulting in actions directed towards the organization. Therefore, when a CSR message with a certain communicated motive is presented after a crisis, it will not lead to higher or lower trust and eWOM intentions. Instead, the public might perceive it as greenwashing by using environmental claims to attract customers (Furlow, 2010) or to cover up their previous mistakes. Thus, a congruency between prior crisis and communicated motive would not result in more trust and eWOM intentions as the prior crisis already determined the level of dissatisfaction and communicated motives would only strengthen the suspiciousness of greenwashing.

Finally, some interesting findings were revealed from the mediation analysis of trust on eWOM. Hypothesis 4a and 4b were stated as followed: Communicated motives lead to more trust which in turn leads to more eWOM (a), prior crises lead to less trust which in turn leads to less eWOM (b). The findings showed that trust can not act as a mediator between prior crisis / communicated motives and eWOM. Therefore, H4a and H4b are not confirmed. The aforementioned results are contradicting with research done by Park et al. (2014) and Vlachos et al. (2009) on trust as a mediator between CSR initiatives and corporate reputation and recommendation intentions. Their findings suggest that CSR activities would create trust and lead to a positive attitude towards the company. A reasoning for not finding a mediation effect for trust, in comparison to Park et al. (2014) and Vlachos et al. (2009) is that current research analyzed a different dependent variable, eWOM. Although their research found an effect for trust on positive attitude, it can not be concluded that the same is evident for

eWOM. As previously mentioned, the eWOM behavior in the conditions for prior crises and communicated motives were rather low. Indicating that the public did not have high intentions for the engagement for eWOM in the first place. Therefore, it can be argued that trust does not function as a mediator due to already low eWOM intentions for both the independent variables. Additionally, although the analysis showed that trust can not act as a mediator, it should be mentioned that only the first step of PROCESS macro was analyzed. The first step is the examination whether X (communicated motives / prior crisis) has a significant effect on Y (eWOM), and this was not significant in this research. The insignificance of the first step resulted in not analyzing the other conditions, which indicates that trust is not a mediator. However, this does not necessarily imply that trust is not an important motivator for eWOM as path b was not examined. Path b analyzes the effect between M (trust) and Y (eWOM). Thus, based on the findings, trust does not have a mediating role between communicated motives / prior crisis on eWOM, but trust might be an important antecedent to eWOM behavior as stated by Chu and Kim (2011) and Lovelock and Wirtz (2007).

## **5.2 Theoretical and practical implications**

Overall the findings of this research impact existing literature and present practical implications for CSR managers and marketers. In terms of theoretical implications, the current study helped in expanding the understanding of the use of CSR by the energy sector when introducing an initiative regarding renewable energy. Previous research mainly focused on the use of communicated motives in a CSR message regarding renewable energy (De Vries et al., 2013; Terwel et al., 2009; Van Prooijen, 2019). However, this study also investigated the impact of a prior crisis and the combination with communicated motives on a CSR message. These findings show that prior experienced crises do indeed have an impact on trust in the company: an accidental crisis would lead to more trust than an intentional crisis. The concept of prior crisis and the combination with communicated motives has not been raised by previous scholars before, thus adding additional scientific insights to existing studies on the implementation of CSR strategy after a crisis. Moreover, given the importance of customers' online communication regarding products and services, it was also necessary to investigate the influence of a CSR message on eWOM behavior. Previous research mainly focused on consumers' engagement in eWOM and its personal factors that act as drivers for eWOM intentions (Cheung & Lee, 2012; Hennig-Thurau et al., 2004, & Lee et al., 2015). Current research was interested in eWOM intentions regarding renewable energy and exploring which external determinants beyond the consumers' personal traits can influence

eWOM intentions. The findings of this research contribute to literature on eWOM intentions regarding renewable energy as it explains that the difference in type of prior crisis and type of communicated motives do not have an influence on eWOM intentions. Additionally, this research also wanted to test if the Attribution Theory (Weiner, 1985) is applicable in a CSR message. In other words, examine whether the type of attribution of responsibility of a crisis can instigate more trust and more positive eWOM. This research provides implications to literature regarding the Attribution Theory, as the findings proved that an accidental crisis leads to more trust than an intentional crisis.

In terms of practical implications, CSR managers and marketers can use the findings of this study to optimize their CSR strategy when they want to invest in the market of renewable energy. This research provides insights into which approach should be used when different factors are present. CSR managers are able to determine what impact a prior crisis can have on their future initiatives and marketers can utilize this information to gain the trust and engagement of existing and future customers. Furthermore, this research can be seen as a guideline for marketers to understand the use of different communicated motives. The stimulus material regarding the social media posts with communicated motives were successfully manipulated and are good indicators for CSR messages with firm-serving and public-serving motives. Additionally, this research mainly focused on the oil industry and the findings are based on an experiment that was conducted using a fictitious oil company. Therefore, this study would be a great example for oil companies that have experienced oil spill crisis before. Needless to say, companies from other energy sectors should consider the findings with caution.

### **5.3 Limitations**

The findings of this research contribute to the literature regarding CSR communication post-crisis and the use of communicated motives. Additionally, this research yields new insights into the influence of a CSR communication regarding renewable energy on trust and eWOM. However, the approached used in this research has specific limitations which could explain the aforementioned conclusions.

First, the manipulation checks of the pre-test and the final experiment revealed a disparity. The manipulation checks of the pre-test did not exhibit any problems as nine out of ten participants were able to identify the prior crisis and communicated motives correctly. However, this was not the case for the final experiment. Although the Chi Square tests were significant, the manipulation check for prior crisis was only partially successful due to the high amount of incorrect answers for the accidental crisis. The disparity might be attributed

to the fact that participants of the pre-test might be more conscious about being tested than the participants in the main experiment. Therefore, they are very focused in reading the conditions carefully. As for the final experiment, it is assumed that participants are not as accurate when reading the text, resulting in incorrect manipulation checks. An attempt to solve this issue was to include additional analyses with removed data of incorrect answers to the manipulation checks. The additional analyses gave the same results as the initial data (except for H2b), however, the sample size is too small to consider it as valid. Therefore, the manipulation checks might have impacted the research results, and potentially account for the rejection of hypotheses regarding the main effect of prior crisis on eWOM and the interaction effect between prior crisis and communicated motives. This limitation exposes the need for including a better description of the crisis, perhaps in the title, and emphasize further that the crisis was unintentional.

Second, another possible explanation for the failure of the manipulation check is that an oil spill was used as an example for a crisis. An oil spill has an enormous impact on the environment and is mostly considered as a negative event. However, an intertwining fine line exists between an accidental and intentional oil spill crisis. This notion can be referred to negligence, which means the lack of appropriate care during a process resulting in a failure (Laurent, Nunez & Schweitzer, 2016). Consequently, during a negligence case, an oil spill can be intentional but could eventually lead to an accident. This could have resulted in the public identifying an oil spill as an accident when it was actually intentional, explaining the failure of the manipulation check.

Third, this research used a quantitative method which focused on quantifying a given phenomenon, in this case level of trust and eWOM intentions. It gives the researcher the knowledge of “how” something occurs, but it does not give information on the human experience attached to the numbers. Therefore, a limitation of this research is that it can not answer “why” certain effects occurred or did not occur. Hence, the public may have a good explanation on why their eWOM intention is low, but the researcher would not be able to examine that unless a mixed method approach is used where both the quantitative and qualitative methods are combined. This mixed method would provide a deeper understanding of the findings by capturing both the “how” and “why” answers.

Lastly, this research employed snowball and convenience sampling by sharing the survey link on Facebook and platforms that were specifically designed for data collection by filling in other surveys. However, this type of sampling did not allow to fully obtain a diverse sample. The participants recruited from the platforms were mostly students that were also searching for others to participate in their study. Therefore, the resulting data set is

representative, as the participants are over 18 years old, but did not contain a diverse range of participants with regards to age. The imbalanced response in age range could potentially hinder the generalizability of the results.

#### **5.4 Directions for future research**

Renewable energy has become a popular concept since the growth of concern for the climate. Extensive research has been done on the idea of renewable energy, however, the implementation of renewable energy as a CSR strategy has been lacking. Especially, when it comes to the utilization of a CSR strategy after a crisis in combination with communicated motives. Undoubtedly, future research regarding this concept is essential for scholars and CSR managers to fully understand the effectiveness of CSR implementation. Therefore, based on the findings of this research and its limitations, several suggestions for future research are proposed.

First off, as mentioned earlier, the manipulation check for prior crisis was only partially successful. In order to improve the research design, it is advised to implement negligence as an extra manipulation check. This would increase the internal validity of the research. Furthermore, it could also be interesting to have negligence as an additional condition as this research proved that participants still do not identify the clear distinction between the two prior crises. When negligence is a separate condition, the researcher is able to detect the differences between the crises and examine whether the level of trust and eWOM would differ between the three conditions.

Second, this research solely focused on the use of a single communicated motive. An interesting research opportunity is to conduct the same research with an additional condition which is to combine both communicated motives in one CSR message. The use of both motives may increase the level of trust and eWOM intentions as the corporation can be perceived as being honest for its own benefits while actually being concerned for the environment. Early research done by Terwel et al. (2009) already proved that the trust in an organization can be protected by the communication of both motives. This is because the incongruency between public-serving motives and the organization's intentions is overruled by the accompany of firm-serving motives which are congruent with the organization's intentions. However, little is known regarding the use of the mixed motives communication on eWOM intentions. Therefore, the findings of this research opportunity could facilitate marketers and CSR managers to better formulate their strategy towards the public.

Third, this research suggested that no differences were found regarding the eWOM intentions when prior crisis and communicated motives are presented. When looking closely



at the results, it can be noticed that the scores for eWOM behavior were rather low for all conditions. A possible explanation is the low engagement in eWOM behavior. The effective use of social media is also dependent on the social interactions of the users (Pagani, Hofacker & Goldsmith, 2011). Future research should take this into consideration when eWOM is being examined. This can be done by asking general questions regarding the participant's eWOM behavior in daily life, which enables the researcher to classify the users based on participation. Furthermore, early research mostly examined active users' participation on social media (Laine, Ercal & Luo, 2011; Wellman, Haase, Witte & Hampton, 2001). However, more research is needed regarding other forms of participation, such as passive users. It should be mentioned that lurking can be considered as a passive but non-negative way of using social media (Malinen, 2015). Thus, the distinction between passive users (lurkers) and active users on social media can gain insights into the effectiveness of a CSR message on social media.

At last, future research should consider the concept of greenwashing when a CSR message is introduced after a crisis with communicated motives. Based on the feedback from participants, some participants believed that greenwashing was apparent despite the fact that this was not examined. De Vries et al. (2015) already examined the suspicion of greenwashing when certain communicated motives were present. Moreover, Chen and Chang (2013) found that the perception of greenwashing could negatively influence trust. However, it would be interesting to investigate whether greenwashing can also act as a mediator between communicated motives and trust. This gives an interesting opportunity for future research to examine the same research with greenwashing as an extra dependent variable and test for a possible mediation effect.

## 6. Conclusion

The proliferation of greenhouse gas emissions around the world is accelerating climate change and should be urgently managed. More and more companies in the energy industry are contemplating the switch to renewable energy in order to mitigate climate change and to continue their growing business as their initial business regarding fossil fuels is associated with polluting activities.

This study provided an elaborate description of the public's perception and behavior towards renewable energy initiated by an energy company. Different factors (prior crisis and communicated motives) were analyzed in order to understand the public's level of trust and eWOM intentions. Additionally, this research can serve as a guideline for practitioners (such as CSR managers and marketers) to optimize their strategy regarding the investment in renewable energy. Furthermore, it provides theoretical implications as new insights regarding post-crisis CSR and the influence on eWOM have been generated. However, new recommendations for future research were also presented that could elevate the topic of this research even higher and provide new insights regarding the use of CSR to implement renewable energy.

In sum, the current research demonstrated that the communication of a CSR initiative regarding solar energy after an accidental prior crisis leads to more public trust than the communication after an intentional prior crisis. Additionally, public-serving motives would also lead to more trust in competence than firm-serving motives, despite the fact that consumers tend to have doubts regarding the environmental activities of the energy sector (Yoon et al., 2006). However, the type of prior crisis and communicated motive did not have an impact on eWOM intentions. Instead, both prior crises and communicated motives appeared to instigate rather low eWOM intentions. Furthermore, the combination of a certain communicated motive after a specific crisis did not influence the level of trust and eWOM intentions regarding a CSR message. This suggests that prior crisis can not be considered as a moderator between the effect of communicated motives and trust / eWOM. At last, this research also demonstrated that trust can not be regarded as the mediator between prior crises / communicated motives and eWOM.

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## Appendix I: Survey

### Welcome Message & Consent Form

Thank you very much for participating in this study regarding corporate sustainability initiatives. This study will take approximately 5 to 10 minutes to complete. Your participation is of invaluable help to this research.

In this research you will be asked to evaluate an oil company. First, a news article will be presented to you about an oil spill that the company was involved in. Next, a social media post of this oil company will be introduced. Afterwards, we will ask you various questions regarding the company. Please read all instructions carefully.

Please be aware that your participation is completely voluntarily, meaning that you can withdraw at any time. Moreover, anonymity is guaranteed at all times. Your information will be kept strictly confidential and the findings will solely be used for this research. There are no “right” or “wrong” answers, so please fill in the questions based on your own experience and opinions.

This research is conducted by Joyce Ng at Erasmus University Rotterdam. If you have any questions or remarks after this questionnaire, please feel free to contact me at 383815jn@eur.nl.

By clicking on the “next” button you confirm that you have read the consent form and that you agree with all mentioned points.

### Skepticism towards advertisement

I am interested in your general opinion about advertisements. Please indicate the extent to which you agree or disagree with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Most advertisements are unreliable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most advertisements are misleading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am skeptical towards most advertisements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Introduction prior crisis conditions

You will now be presented two texts regarding the same oil company, named Petrodo. The first text will be a news article from May 2018 about a crisis that Petrodo was involved in. The second text is a social media post from the official Facebook page of Petrodo. After the two texts, your opinion will be asked regarding the company.

## Condition accidental prior crisis


Please read the following news article regarding an oil spill in 2018 carefully.

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***The Daily Report***  
May 17, 2018

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**Oil Pollution in the Rhine River, Stirring Environmental Fears**



In April 2018, Petrodo (oil company) was involved in the pollution of the Rhine river resulting in the release of a significant amount of oil. The Bureau of Safety and Environmental Enforcement examined the cause of the oil spill. Their findings revealed that Petrodo discovered a small crack at the bottom of the borehole during one of their regular inspections, which was then immediately sealed. However, after a few days, the crack accidentally ruptured again, causing oil and gas to leak into the river.

Environmentalists are concerned about the threat to sea and bird life. Oil spill disasters are environmental catastrophes as the water becomes contaminated by liquid petroleum hydrocarbons. This causes damage to the environment by threatening wildlife and disturbing the ecosystem for decades.

OR

## Condition intentional prior crisis

Please read the following news article regarding an oil spill in 2018 carefully.

---

***The Daily Report***  
May 17, 2018

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**Oil Pollution in the Rhine River, Stirring Environmental Fears**



In April 2018, Petrodo (oil company) was involved in the pollution of the Rhine river resulting in the release of a significant amount of oil. The Bureau of Safety and Environmental Enforcement examined the cause of the oil spill. Their findings revealed that Petrodo discovered a small crack at the bottom of the borehole during one of their regular inspections. However, Petrodo decided not to immediately seal the crack to save time and money. They continued using the borehole until it ruptured even further, causing oil and gas to leak into the river.

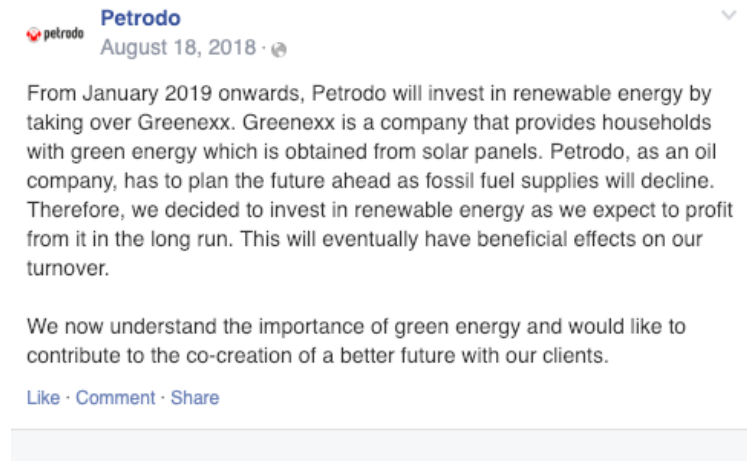
Environmentalists are concerned about the threat to sea and bird life. Oil spill disasters are environmental catastrophes as the water becomes contaminated by liquid petroleum hydrocarbons. This causes damage to the environment by threatening wildlife and disturbing the ecosystem for decades.

### Introduction communicated motives conditions

The following text is a social media post that Petrodo posted on their official Facebook page in August 2018, after several media outlets highlighted the oil spill crisis. The post is about their step to renewable energy in 2019 by taking over an all green energy company, named Greenexx.

### Condition firm-serving motives

Please read the following text carefully.



**Petrodo**  
August 18, 2018 · 🌐

From January 2019 onwards, Petrodo will invest in renewable energy by taking over Greenexx. Greenexx is a company that provides households with green energy which is obtained from solar panels. Petrodo, as an oil company, has to plan the future ahead as fossil fuel supplies will decline. Therefore, we decided to invest in renewable energy as we expect to profit from it in the long run. This will eventually have beneficial effects on our turnover.

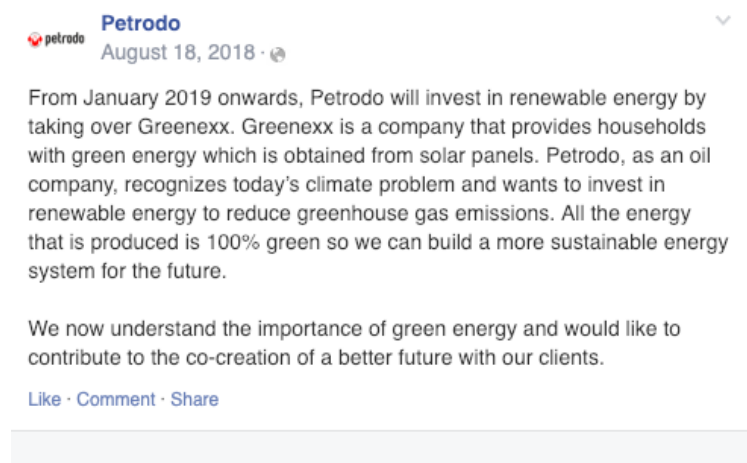
We now understand the importance of green energy and would like to contribute to the co-creation of a better future with our clients.

[Like](#) · [Comment](#) · [Share](#)

OR

### Condition public-serving motives

Please read the following text carefully.



**Petrodo**  
August 18, 2018 · 🌐

From January 2019 onwards, Petrodo will invest in renewable energy by taking over Greenexx. Greenexx is a company that provides households with green energy which is obtained from solar panels. Petrodo, as an oil company, recognizes today's climate problem and wants to invest in renewable energy to reduce greenhouse gas emissions. All the energy that is produced is 100% green so we can build a more sustainable energy system for the future.

We now understand the importance of green energy and would like to contribute to the co-creation of a better future with our clients.

[Like](#) · [Comment](#) · [Share](#)

### Manipulation Check prior crisis

Based on the news article, what was the cause of the oil spill by Petrodo?

- It was an accident
- It was intentional

### Manipulation Check communicated motives

In its social media post, Petrodo states that it wants to take over Greenexx because...

- they expect to profit from it
- they want to reduce greenhouse gas emissions

### Trust – morality

I am interested in your overall opinion about the oil company Petrodo.

Please read the following statements regarding the **sincerity** of the oil company Petrodo carefully and indicate how much you tend to agree or disagree.

Notes:

**Honesty** means telling or showing the truth.

**Sincerity** refers to having pure intentions, with no hidden motives.

**Trustworthiness** is referred to the level of trust.

	Very bad	Bad	Fairly Bad	Neutral	Fairly good	Good	Very good
How do you rate the honesty of this company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How do you rate the sincerity of this company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How do you rate the trustworthiness of this company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Trust – competence**

Please read the following statements regarding the **competence** of the oil company Petrodo carefully and indicate how much you tend to agree or disagree.

Notes:

**Competence** is referred to the ability to do something successfully.

**Intelligence** means the ability to understand/learn/deal with new situations.

**Skillfulness** is the capability of professional performance.

	Very bad	Bad	Fairly bad	Neutral	Fairly good	Good	Very good
How do you rate the competence of this company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How do you rate the intelligence of this company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How do you rate the skillfulness of this company?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Involvement with the organization**

Please read the following statements regarding the involvement with the oil company Petrodo and indicate how much you tend to agree or disagree.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I feel connected to this company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel solidarity with this company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel involved with this company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Motives: public-serving**

Please read the following statements carefully and indicate how much you tend to agree or disagree with the **norms and values** of the oil company Petrodo.

*I think that the company ...*

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
... is genuinely concerned about the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... has a hidden agenda	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... presents itself as more environmentally conscious than it actually is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is investing in environmentally conscious business for ethical reasons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is investing in environmentally conscious business because it is in line with the norms and values of the organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**Motives: firm-serving**

Please read the following statements carefully and indicate how much you tend to agree or disagree with the **economic motives** of the oil company Petrodo.

*I think that the company ...*

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
... invests in environmentally conscious business in order to attract more customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... hopes to make more profit by investing in environmentally conscious business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is trying to improve its reputation by investing in environmentally conscious business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... is investing in environmentally conscious business because it is currently trendy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Motives: egocentric**

Please read the following statements carefully and indicate how much you tend to agree or disagree with the egocentric motives of the oil company Petrodo.

*I think that the company ...*

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
... abuses current environmental issues in order to increase its success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... invests in environmentally conscious business for selfish reasons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**eWOM**

I will now ask questions regarding the **social media post** on Petrodo's official Facebook page. Please read the following statements carefully and indicate how much you tend to agree or disagree.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I would "like" this post on Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would post a positive response to this message	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would share this message on Facebook with my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would say positive things about Petrodo on Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend Petrodo to my friends on Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would follow the Facebook page of Petrodo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Demographic Questions

### *Age*

What is your age?

---

### *Gender*

What is your gender?

- Male
- Female
- Other
- Prefer not to say

### *Country*

What country are you from?

---

### *Education*

What is the highest level of education you have **completed** or are **currently enrolled in**?

- High school not completed
- High school graduate
- Secondary vocational education (MBO)
- Higher professional education (HBO)
- Bachelor's Degree
- Master's Degree
- Doctorate