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Environmental Sustainability Communication in the Oil Industry

The effects on attitudes and purchase intentions

by

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Abstract

Global environmental issues concern a growing number of people and businesses are expected to communicate efforts towards environmental sustainability. Due to the controversial nature of its business practices and contribution to environmental problems, the oil industry holds a poor reputation and is considered to have a special need to communicate their efforts towards more sustainable business practices. The purpose of this thesis is to increase the understanding of how people perceive communication about environmental sustainability published by oil companies. Further, we aim to examine how these perceptions affect people's attitudes towards oil companies and the resulting purchase intentions. After reviewing the relevant literature related to the topic of interest, the Hierarchy of Effects Model has been identified as appropriate for fulfilling the purpose of this thesis as it allows a systematic evaluation of the communication effectiveness of an oil company's environmental claims on people's attitudes and purchase intentions. The use of the model is twofold. Firstly, it has been used for both designing the questionnaire of this study and secondly, it functions as a framework for analysing the collected data. The study shows that the impact of environmental sustainability communication on people's attitudes and purchase intentions is limited and controversial. People have expressed that they wish oil companies to engage in environmentally sustainable activities, however, respective communication is questioned in terms of credibility and trust, and is approached with scepticism. Moreover, people do not develop a significant more favourable attitudes and purchase intentions due to oil companies communicating environmental sustainability efforts.

Keywords: communications, environmental sustainability, oil industry, image, reputation, credibility, perception, attitude, purchase intention

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1 Introduction

The following chapter introduces the reader to the topic of interest as well as to the problem and resulting purpose of this thesis. Furthermore, the research question and a perspective statement will be presented.

1.1 Background

A considerable amount of time has passed since the 1970s in where people have started to develop an interest in challenging businesses in relation to their way of doing business and their impact on the environment. The 1970s marked a turning point for coining concepts such as globalization, sustainable development and global warming (Godemann & Michelsen, 2011), and has subsequently laid the foundation for increasing attention and continuous discourse (Barkemeyer, Holt, Preuss & Tsang, 2014). As part of this movement, especially the connection between environmental issues and business practices have been examined more carefully (Godemann & Michelsen, 2011). The public is blaming companies that conduct business in a wasteful, irresponsible and exploiting manner that is often harmful to the environment (Goodland, 1995). To this day, the exploitation of finite resources by companies is an issue that is relevant for society and the environment (Johnstone and Tan, 2015). Even though it has been acknowledged already for more than forty years that actions from both businesses and individuals need to be undertaken in order to preserve the basis of life and mother nature, the goal for sustaining the environment appears to be still in its infant stage. More than ever we are being confronted with headlines in media concerning the severity of global warming, air pollution and resource scarcity (Barkemeyer et al. 2014). Slowly but surely, a process of rethinking can be observed and it has become a mission for a growing number of businesses and individuals to undertake actions towards sustainability.

It has been recognized that the general public is increasingly willing to adopt a more responsible lifestyle that is considered favourable for sustaining the environment (Mostafa, 2006). Dach and Allmendinger (2014) found that consumers tend to prefer companies that they perceive as being environmentally sustainable. A higher consciousness and concern among consumers is, among others habits, being more likely to pay extra for ‘green’ products (Kim & Choi, 2005) or to recycle and save energy (Bamber, Blöbaum & Hunecke, 2007). Nonetheless, even though consumers and other stakeholders have developed positive attitudes towards environmentally sustainable initiatives, a gap towards actual behaviour can be detected (Johnstone & Tan, 2015). People claim willingness to ‘do better’ but the actual purchase rate of ‘green’ products remains in contradiction (Albayrak, Caber, Moutinho, & Herstein, 2011).

The concerns about environmental issues also have an effect on businesses and the pressure on companies to address their role in this matter is increasing. *“In the course of establishing*

sustainable objectives, the path between protest movements, NGOs and economic actors has changed in a number of ways, from ignorance to resonance, from confrontation to cooperation. Many economic and other organizations have since taken up sustainability issues, discussed them internally and structurally implemented them in a number of different ways.” (Godemann & Michelsen, 2011, p.95).

As a result, companies take up sustainability issues and attempt to incorporate them in their business operations and communication. One way of informing the public about sustainability initiatives is achieved by publishing Corporate Social Responsibility (CSR) reports in which economic, social but also environmental topics and performances are elaborated on (Livesey & Kearins, 2002). Communicating the involvement in environmentally responsible business practices may not only be considered due to pressure from stakeholders but also because the company hopes for valuable benefits such as an improved reputation, enhanced profitability and competitive advantage (Godemann & Michelsen, 2011; Jo & Na, 2012; O’Connor & Gronewold, 2013). Conversely, companies face the problem that their statements related to efforts towards environmental sustainability are perceived dubiously by the outside audience. Communicated claims are often questioned and people tend to develop scepticism, distrust and more negative attitudes towards such claims (Livesey & Kearins, 2002; Barkemeyer et al. 2014). Especially companies that are operating in controversial industries, such as oil companies, have to tackle the issue of being perceived as poor performers in relation to sustainability concerns (Cai, Jo & Pan, 2012).

1.2 Problem

During the past decades several popular oil companies were known for hitting the headlines in terms of unsustainable and irresponsible behaviour. Shell, for instance, has contributed negatively to the Niger Delta pollution since 1958 and is accused of instigated violent attacks to remain profitable (Edoho, 2008). Later, in 1998, Shell was one of the first companies providing a sustainability report, containing statements about their responsible approaches as well as results. In spite of this, Livesey and Kearins (2002) considered their report as rather reactive to their damaged reputation with the ultimate aim to improve Shell’s corporate image by means of strategic communication. Another example constitutes Beyond Petroleum, formerly British Petroleum (BP), who were eager to promote their sustainable behaviour but attained internationally notoriety for the Gulf Spill in 2010 happened and for which they have been sued for several billion dollars (Lakhani, 2015). Similar to Shell, BP reacted with campaigns and progress reports to recover their corporate image and increase their transparency towards the public and regain trust (Nyilasy et al. 2014).

These examples illustrate that especially controversial industries, such as the oil industry, experience increased public pressure (Eabrasu, 2012). Therefore, they invest more time and effort in communicating their positive environmental impacts and responsible methods of operation (Du & Vieira, 2012) to improve their corporate reputation – but not always with success. There is an increasing amount of literature that examines whether companies in

controversial industries, such as the oil industry, can integrate sustainability engagement into their business practices. However, there has not been reached consensus and the question remains mainly unanswered (Cai et al. 2012). Consequently, the problem that companies struggle with incorporating sustainability aspects into their business also causes other consequences for declaring commitments to the outerworld (Eabrasu, 2012). Such consequences emerge in the allegation of, for instance, greenwashing which is the accusation of framing initiatives as 'green' with the aim of appearing environmentally friendly (De Vries, Terwel, Ellemers & Daamen, 2015). Particularly in controversial industries consumers tend to remain sceptical and question the credibility and sincerity of sustainability claims (Elving, 2013). A thorough literature review revealed that there is a growing research body dealing with businesses' motives of incorporating sustainability communication in their business strategy (such as CSR), but uncovers at the same time a research gap in terms of consumer perceptions regarding those communicated claims. It is suggested that CSR in uncontroversial industries is perceived differently compared to controversial ones in terms of credibility, legitimacy, and trust (Du & Vieira, 2012). Expressly, because the oil industry is considered controversial due to unscrupulous business practices focused specifically on the communication of environmental sustainability engagement. *"In the oil industry sector, CSR initiatives are often presented as protecting and promoting the natural environment, which may appear paradoxical, as this industry is known as one of the largest polluters"* (De Roeck & Delobbe, 2012, p.398). In our opinion, there is a need for research that investigates whether oil companies - that have been involved in several environmental damaging scandals - can effectively communicate environmental sustainability to the public. Sustainability communication has become increasingly important for corporations (Dach & Allmendinger, 2014), however, it is not decided upon how such communication is perceived by the communication recipient and which consequences it may have on people's attitudes and purchase behaviour. Oil companies run a great risk of being considered "profit-focused polluters rather than as environmentalists" (De Vries et al. 2015, p.143), which leads to the assumption that communication about environmental initiatives will be questioned by the public. Hence, there is a need to investigate further how people perceive communication that is specifically related to environmental sustainability initiatives in the context of the oil industry (De Vries et al. 2015), but also how this perception impacts people's attitudes and purchase intentions.

1.3 Research Purpose

The purpose of this master thesis is to increase the understanding how people perceive communication about environmental sustainability published by oil companies. Further, we aim at examining how these perceptions affect people's attitudes towards oil companies and resulting purchase intentions.

1.4 Research Question

RQ: How does the communication of environmental sustainability in the oil industry impact people's attitudes and purchase intentions?

While reviewing the literature we have asked ourselves several questions of which we think will help us to increase the understanding of environmental sustainability communication within the oil industry and which help to answer the main research question (RQ). The reasons for the following five sub-questions (SQ) are threefold: Firstly, the questions aim to guide the reader through the reviewed literature and our mode of thought. Secondly, the questions will be used as basis for the analysis by connecting literature and empirical findings. Lastly, we suggest that finding answers to these questions might lead to a more holistic view on how the communication of environmental sustainability in the oil industry impacts people's attitudes and purchase intentions.

- SQ1: Is the public aware and concerned of oil companies' impact on the environment?
- SQ2: What do people think about oil companies claiming being engaged in sustainability?
- SQ3: Do people expect oil companies to engage in business practices that contribute to environmental sustainability?
- SQ4: Is environmental sustainability communication sent by oil companies perceived as credible source of information and action?
- SQ5: Can the communication of environmental sustainability claims create favourable premise for purchase intention of oil companies' products?

1.5 Perspective

In this thesis, we investigate the perception of environmental sustainability communication from a public perspective. We do not differentiate between specific stakeholder groups, such as 'consumers', 'investors' or 'employees'. In order to express this point of view we will use the terminology 'public' or 'people'.

2 Literature Review

This chapter presents the research departure and gives an overview on the existing research body, focusing on environmental sustainability communication within the oil industry and people's perceptions. The literature review starts with broad concepts to deliver background information and narrows down to the study's field of interest. The presented Hierarchy of Effects Model serves as the research' theory and provides structure for the following chapters.

2.1 The Importance of Sustainability for Corporations

2.1.1 Sustainability

The 1970s and 80s of the 20th Century were characterized by discussions about environmental issues which have led to debates about globalization, sustainable development and similar topics (Godemann & Michelsen, 2011). One famous outcome of those discussions was the Brundtland Report. In 1987 the World Commission on Environment and Development (WCED) published the Brundtland Report 'Our Common Future' which contains the following, commonly used definition for sustainable development; sustainable development is a *“development that meets the needs of the present without compromising the ability of future generations to meet their own needs”* (e.g. cited in Barkemeyer et al. 2014, p. 16). This definition highlights the need for sustainability in a growth context and the concept consists of three pillars: economic, social and environmental considerations (Elkington, 1994; Goodland, 1995). These pillars of sustainable development and sustainability are also referred to as 'triple bottom line' (TBL, see Figure 1) (Elkington, 1994).

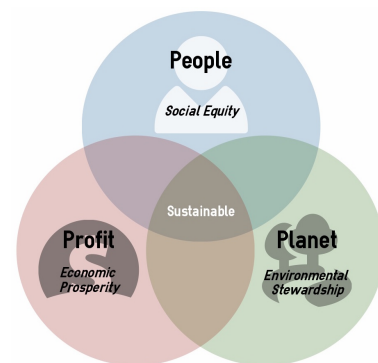


Figure 1: Triple Bottom Line (TBL) based on Elkington (1994)

Over the last two decades' discourse on sustainable development and sustainability has received increased attention by the public (Barkemeyer et al. 2014) and the term sustainability has been coined and used extensively in literature. Barkemeyer et al. (2014) pointed out that the UN Conference on Environment and Development (UNCED) has created a special focus on especially environmental sustainability through agreements noted in Agenda 21, the Framework Convention on Climate Change, and the Rio Declaration on Environment and Development. This demonstrates that the discussion related to sustainability has moved towards a principal focus on the environment but with only little attention to social concerns (Godemann & Michelsen, 2011; Barkemeyer et al. 2014). The need for environmental

sustainability has developed through the acknowledgement that the wasteful, irresponsible and inequitable consumption patterns lead to serious consequences for resources, the global ecosystem, and humans (Goodland, 1995).

2.1.2 Environmental Sustainability

Environmental sustainability is defined as the preservation of natural capital (Goodland, 1995). Exponential population growth combined with finite resources creates an urgent need for approaching environmental sustainability (Goodland, 1995). Even twenty years after these words of warning by Goodland (1995), environmental sustainability and related concerns are unquestionably still topics of interest to academics and practitioners (Johnstone & Tan, 2015) - and the dispute about the environment and the impacts of the exploitation of scarce natural resources has not lost its urgency and reality.

Global environmental issues such as global warming, air pollution and ecosystem degradation are representing a threat to livelihoods and concern a larger amount of people (Elving, 2013; Barkemeyer et al. 2014). The acknowledgement that changes must be made in order to secure ongoing life on earth prompt both businesses and stakeholders to discuss the role of environmental sustainability (Goodland, 1995; Godemann & Michelsen, 2011). The discourse about environmental problems has an impact on the public's perceptions of the environment (Godemann & Michelsen, 2011) and consumers increasingly develop habits and lifestyles that incorporate environmental responsibility (Mostafa, 2006). Meanwhile, the business world integrates this trend into green advertising and marketing strategies in which environmental consciousness has become a matter of market competition (Mostafa, 2006). Accordingly, it is argued that consumers who are concerned about the state of the environment are more willing to pay higher prices for renewable energy (Bang, Ellinger, Hadjimarcou & Traichal, 2000), are buying environmentally friendly products more likely (Kim & Choi, 2005), and are more probable to perform recycling and energy saving activities (Bamberg et al. 2007). However, even though environmental awareness and concerns have increased since the early 1970's, an 'attitude-behaviour gap' still exists (Albayrak et al. 2011; Godemann & Michelsen, 2011). For instance, in the U.K. consumers have favourable attitudes towards organic food but only four to ten percent actually purchase such products. Similar results have been gathered in the U.S. (Albayrak et al. 2011). Explanations for the discrepancy between positive attitudes and inconsistent behaviour are deficient and remain a matter to research (Johnstone & Tan, 2015). This attitude-behaviour gap, or also 'green gap', symbolizes a lack of understanding regarding the concept of environmental sustainability. Even though it is often based on common sense that people and businesses cannot continue with their habits that harm the environment, there must be factors that function as barriers to actual action towards sustainability. To begin with, people repeatedly do not directly notice any environmental changes as a sense of feeling, smelling, seeing and hearing (Godemann & Michelsen, 2011), which indicates that they just do not realize the actual relevance of the abstract concept of environmental sustainability to their personal life. Besides, people's perceptions of their contribution to environmental improvement or damages are limited and the long-term effects are overlooked (Godemann &

Michelsen, 2011). From a customer perspective, research argues that factors such as price, perceived performance and trust prevent people from buying 'green' products (Johnstone & Tan, 2015). Moreover, it is reasoned that people question companies' sincerity about environmental initiatives and have developed a sceptical stance towards sustainability claims and communication (Du, Bhattacharya & Sen, 2010). It is suggested that it is necessary to find a way to overcome barriers related to 'non-sustainable' behaviour and related values, knowledge, attitudes, motivations, norms and habits but also structural and contextual factors (Godemann & Michelsen, 2011).

2.1.3 Corporate Social Responsibility

The increasing emergence of the sustainability concept has led to the practice of publishing sustainability reports that detail the company's efforts towards the triple bottom line (Barkemeyer et al. 2014). The resulting derivative of sustainable development and the underlying triple bottom line is the concept of Corporate Social Responsibility (CSR). The interest in CSR both from academics and practitioners is significant (Bartlett, May & Ihlen, 2012; Jo & Na, 2012). However, there is no consensus on a definition of CSR which may be due to the concept's moral nature (Lindorff, Prior Jonson & McGuire, 2012). The World Business Council of Sustainable Development (WBCSD) defines CSR as "*the continuing commitment by business to behaving ethically and contributing to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large*" (Edoho, 2008, p.211). It is also said that CSR is a concept whereby companies serving their various stakeholders by integrating social and environmental concerns in their business operations on a voluntary basis and beyond legal requirements (Cai et al. 2012; Nyilasy, Gangadharbatla & Paladino, 2014; Shim & Yang, 2016).

CSR reporting has its roots in the 1970s, and in the 1990s pressure on corporations to deliver standardized reports have increased (Livesey & Kearins, 2002) whereby CSR has become an obligation rather than option for companies (Johnstone & Tan, 2015). Nowadays, companies devote significant resources to CSR initiatives such as environmental protection and socially responsible business practices (Du, Bhattacharya & Sen, 2010), and publish online reports on their websites and/or offer actual hard copies (Godemann & Michelsen, 2011). CSR can be beneficial and lead to competitive advantage, as it can achieve (1) a differentiation within industry, (2) increased transparency and reputation, (3) enhanced profitability, (4) insurance-like protection, and (5) access to financial markets (Godemann & Michelsen, 2011; Jo & Na, 2012; O'Connor & Gronewold, 2013; De Vries, Terwel, Ellemers & Daamen, 2015). Also, consumers tend to favor companies that they perceive environmentally responsible (Dach & Allmendinger, 2014), and reward them with greater interest, loyalty and trust (Alhouti, Johnson & Bugg Holloway, 2016). Hence, companies may be able to achieve, maintain or restore legitimacy. Legitimacy is the generalized perception that a company's action is perceived as appropriate and desirable within the normative system of society (Du & Vieira, 2012), or simpler, the public acceptance of the company (Godemann & Michelsen, 2011).

However, Barkemeyer et al. (2014, pp.19-20) stated that “*many organizations claim to be reporting on being sustainable, or more commonly, moving towards sustainability within their narrow and often incomplete reporting, while continuing to contribute to an overall degradation of the natural environment and within a socially inequitable context*”. It is therefore assumed that CSR is often used for bolstering corporate reputation (Scholder Ellen, Webb & Mohr, 2006; Elving, 2013) and that CSR reports are tools for public relations campaigns (Livesey & Kearins, 2002). consequently, it may not be uncommon to argue that not only the increasing public concern for social and environmental issues has prompted companies to integrate CSR in overall business (Nyilasy et al. 2014). Besides meeting the public’s demand, it is also argued that the expected reputational advantages for the company play a crucial role (Elving, 2013). Therefore, it is suggested that in order to increase claim validity and to reduce consumers’ cynicism, regulated green accreditation schemes need to be introduced (Johnstone & Tan, 2015). This may help to guide companies to incorporate CSR initiatives that are both beneficial for their business goals while serving greater society.

2.1.4 Environmental Sustainability in Corporations

Especially in the 1980s and 90s, reporting on environmental performance has become dominant in the movement of CSR reporting (Godemann & Michelsen, 2011). Companies are involved in environmental destruction and need to become accountable for their activities (McDonagh, 1998). The focus on environmental concerns has had, due to global warming, pollution and resource exploitation (Barkemeyer et al. 2014), an impact on companies’ CSR initiatives and reporting. Companies not only need to be responsive to their stakeholders (Cai et al. 2012) but specifically need to address specifically environmental responsibility as well. Environmental concerns ought to be incorporated in companies’ strategies, operations and policies (Barkemeyer et al. 2014) and it is crucial to build awareness of the relevance of environmental issues (e.g. climate change) in the business context.

However, strengthening the engagement in environmental sustainability is not the only task companies have to accomplish. Another task for companies is to communicate their intentions and duties to the public. According to Godemann and Michelsen (2011), companies need to communicate to their stakeholders to what degree their environmental initiatives contribute to sustainable development and how they seek to operate towards sustainability. Hence, engaging in CSR is not sufficient enough but it is crucial to communicate this engagement in a way that achieves perceived credibility among the audience.

Even though we are aware that sustainability and CSR are based on the ‘triple bottom line’ and respectively economic, social and environmental pillars, in this study the focus will lie on environmental considerations. As discussed in the previous sections, academics, practitioners but also society have put the focus on environmental discourse which has resulted in the fact that the concepts of CSR and sustainability often are mentioned in the same context with environmental concerns (Barkemeyer et al. 2014). Accordingly, for the purpose of this thesis we mainly neglect the social and economic pillars of sustainability and focus on the environmental pillar.

2.2 Corporate Sustainability Communication

Marketing communication is a managerial tool for creating persuasive messages towards stakeholders (McDonagh, 1998). Marketing communication is part of the marketing mix and is interlinked with 'promotion'. Developing and implementing messages aims at creating a dialogue with the audience and promoting a product, service and/or company (McDonagh, 1998). The effectiveness of communication depends on the message sent out and how the audience decodes and perceives the respective message (Bartlett et al. 2012). Hence, in order to achieve a positive promotional effect it is crucial to develop messages that are persuasive, meaningful, credible and appealing to the recipient (Bartlett et al. 2012). According to Godemann and Michelsen (2011), communication models involve the following components:

1. *Who* communicates and how is the communicator's competence, credibility and image perceived?
2. *What* is communicated? Is the information understandable, accurate, relevant, attractive and evoking?
3. What is the *function/intention* of the communicated? Is it of persuasive nature and calls for action or does it purely provides facts, opinions and appeals?
4. What *media* type is used and is the choice appropriate for the target group and the message?
5. What is the *goal* of the communication, does it aim for a behavioural change or shall it purely provide information and strive for building awareness, knowledge, and similar?

Despite the industry a company is operating in, all businesses are using marketing communication as a tool for promoting their offers and to meet both financial and non-profit targets (Mihart (Kailani), 2012). Knowing about the importance of communication and its impact on corporate reputation can help the management to develop and implement more effective communication strategies (Almeida M. Graca & Arnaldo, 2016). One component of the overall communication efforts of companies is sustainability communication. In general, sustainability communication is said to fulfill the task of creating an understanding of the relationship between humans and their environment in the context of society (Godemann & Michelsen, 2011). As a result, social values, attitudes and behaviour towards the environment are mediated by sustainability communication (Godemann & Michelsen, 2011). Among other topics, sustainability communication deals with biodiversity, climate change and consumption (Godemann & Michelsen, 2011).

There has been an increased occurrence of corporate sustainability communications (Dach & Allmendinger, 2014) and it has become a common tool for influencing consumers and differentiating offerings (Becker-Olsen, Cudmore & Hill, 2006). In order to meet expectations, sustainability communication is considered important for delivering necessary information (Dach & Allmendinger, 2014). CSR communication may address multiple issues in respect to its three pillars, however, since this study focuses on environmental issues the role of communication in this respect will be focused upon.

The source of CSR information affects the decoding process of motivations behind CSR and impacts consumers' perceptions (Parguel, Benoît-Moreau & Larceneux, 2011). According to Parguel et al. (2011), information is delivered either through 'company-controlled communication' as part of the corporate identity mix or through 'uncontrolled communication'. It is assumed that *"there is likely to be a tradeoff between perceptions of controllability and credibility of communication channels: the less the channel is perceived as company-controlled, the more credible the CSR message is from the stakeholders' perspective and vice versa"* (Du & Vieira, 2012, p. 16). Uncontrolled communication such as word-of-mouth (WOM), mass media and non-governmental organisations (NGOs) provides independent information and is considered more credible than company generated information (Parguel et al. 2011; Du & Vieira, 2012). In relation to company controlled communication, CSR has become one of the largest budgeted items by a company's communication department (Parguel et al. 2011). CSR communication *"pertains to communicated corporate identity and is supposed to play a crucial role in the formation of ethical corporate perceptions and social legitimacy"* (Parguel et al. 2011, p. 15). Green marketing and advertisement are part of CSR strategies which always originate from the company and have the goal of informing the audience, highlighting the environmental initiatives undertaken and creates a desired image (Bartlett et al. 2012; Nyilasy et al. 2014). The corporate identity reflects on how the company wants to present itself to the public, and, corporate communication is the tool to create respective congruent messages (Parguel et al. 2011). CSR communication sent by the company aims at highlighting the company's CSR efforts through three possible approaches (Parguel et al. 2011). Firstly, the 'reputation management approach' focuses on implicit communication of basic requirements of CSR that helps the company to receive and uphold society's license for doing business. Secondly, the 'virtuous corporate brand building approach' is the explicit communication of a promise to the public about integrating CSR efforts into the business (e.g. website and CSR report). Finally, in the 'ethical product differentiation approach' CSR is at center of the company's brand positioning and the communication is essential for differentiating its products and services (e.g. The Body Shop). Regardless of which approach to CSR corporate identity a company is choosing, the communication of such a green identity aims at promoting a company's image of environmental responsibility (Nyilasy et al. 2014).

Sen, Bhattacharya and Korschun (2006) explained that much of the research related to CSR assumes that awareness exists or that researchers induce it in a study setting. However, in real circumstances it is said that awareness is relatively low and the effect of CSR on beliefs, attitudes, and behaviours needs further investigation (Sen et al. 2006; Du et al. 2010). The general public does not regularly, proactively look for CSR information even with their acknowledgment of the importance of certain issues (Du et al. 2010). Companies are therefore advised to utilize either several communication channels or the most two relevant channels (Du et al. 2010). A company can choose between several channels for communicating its CSR efforts such as environmental and sustainability reports, corporate websites, and PR campaigns (Du & Vieira, 2012). Websites can be considered to be a kind of advertisement (Castañeda, Rodríguez & Luque, 2009) and web-based communications offer from people desired transparency, and offer companies the possibility to communicate their activities

(Dach & Allmendinger, 2014). The Internet is increasingly used for sustainability communication because it enables companies to provide extensive, easily accessible, appealing, and comprehensible information (Godemann & Michelsen, 2011). Especially websites function as source for stakeholders to obtain information about the company's CSR efforts (Bartlett et al. 2012). However, first awareness is necessary to create impact on perceptions of web-based corporate sustainability communications (Dach & Allmendinger, 2014).

CSR initiatives and related green advertisement are pursued because companies want to be perceived as socially and environmentally friendly, which in case of positive perception, may lead to positive brand attitudes and purchase intentions (Elving, 2013; Dach & Allmendinger, 2014, Nyilasy et al. 2014). On the other hand, a company that actively communicates 'green' claims but fails at fulfilling them, experiences a negative change of people's attitudes towards 'green' claims (Nyilasy et al. 2014). Further, companies that remain silent in regards to 'green' claims and are involved in questionable environmental activities experience a less strong attitude change (Nyilasy et al. 2014). Hence, Nyilasy et al. (2014, p. 697) conclude that *"organizations are held accountable for action rather than inaction"* and this finding implies that corporate sustainability communication also bears risks for companies. Communicating CSR activities may improve reputation of those who perform well but may also harm the image of those you struggle to perform as stated (O'Connor & Gronewold, 2013).

2.2.1 Corporate Reputation

A great interest among academics and practitioners in gaining an understanding of the relationship between a company's reputation and its success in the marketplace can be observed (Sen et al. 2006). This interplay between what a company wants to communicate (identity) and how consumers interpret the messages (image) lead to the concept of corporate reputation. In other words, the company's employees' and managers' perception of the company is called 'identity' and the external stakeholder's perceptions is called 'image'. Hence, corporate reputation consists of the components of identity and image of a company which leads to an integrative perspective of a company from the inside and outside (Shim & Yang, 2016). Elving (2013) has defined corporate reputation as the cumulated perceptions of a company that people have collected over time. Raithel and Schwaiger (2015, p. 946) *"advocate for a more balanced conceptualization of corporate reputation that captures people's perceptions of a firm's abilities ("competence") and their feelings about the firm ("likeability")*. Raithel and Schwaiger (2015) frame the term 'overall reputational profile' and divide corporate reputation into two subprofiles. Firstly, the rationale profile consists of perceptions that help to determine stakeholders' confidence about the company's ability to deliver premium performance in terms of financial and quality factors. Raithel and Schwaiger (2015) term this as perceived 'competence'. Secondly, the emotional profile comprises the thought that positive feelings about a company increase the likelihood of developing a relationship with the company, and vice versa. Feelings develop through people's perceptions of factors such as the company's social and environmental responsibility and appeal (Raithel

& Schwaiger, 2015). Raithel and Schwaiger (2015) term this as perceived 'likeability'. This conceptualization is coherent with the description by Almeida M. Graca and Arnaldo (2016), who suggested that corporate reputation represents the degree of trust or distrust in a company's ability to meet expectations on given attributes. The stronger the trust the higher the people's perceived value of the relation which in turn creates satisfaction (Almeida M. Graca & Arnaldo, 2016). If trust and satisfaction is present, it will lead to loyalty which may be the ultimate result of positive corporate reputation (Almeida M. Graca & Arnaldo, 2016). Additionally, corporate reputation is considered a crucial intangible 'social approval asset' which (1) is difficult to imitate, (2) enhances differentiation in the marketplace, and (3) can provide competitive advantage (Sen et al. 2006; Raithel & Schwaiger, 2015; Almeida M. Graca & Arnaldo, 2016; Shim & Yang, 2016).

Corporate reputation is influenced by a company's CSR activities and communications (Elving, 2013). Past actions of companies leave an impression on its stakeholders which therefore influences the stakeholders' beliefs about performances in the future and shapes the processing of latest CSR information (Elving, 2013; Raithel & Schwaiger, 2015; Shim & Yang, 2016). Hence, the corporate reputation functions as frame of reference for stakeholders to evaluate companies' behaviour (Elving, 2013). Ideally, CSR initiatives are used to communicate positive company traits and to develop a favourable image among stakeholders (Nyilasy et al. 2014). Companies with a good reputation enjoy higher source credibility (Du et al. 2010) and legitimacy (Elving, 2013). A good reputation leads to positive relationships, greater intentions for employment search, purchase and investment (Sen et al. 2006; Du et al. 2010). However, good reputation can also backfire on companies in bad times as the failure to fulfill high expectations leads to a feeling of betrayal among stakeholders (Shim & Yang, 2016). On the contrary, if the corporate reputation is bad, the communication about CSR activities is more likely to enjoy low credibility and legitimacy, and high perceived scepticism (Elving, 2013; Shim & Yang, 2016). To summarise briefly, companies with good reputation are attributed with internal attribution (e.g. good character) whereas companies with bad reputation are attributed with external attributes (e.g. improving reputation) (Elving, 2013). CSR communication may differ considerably when stakeholders have negative corporate associations (Sen et al. 2006). If a company is performing poor the risk of negative effects on reputation and behaviour, such as boycotting, is higher and can backfire (Du et al. 2010; Nyilasy et al. 2014). People are more sceptical when a company states that it will engage in activities that will contribute to the minimization of problems that have occurred by the company's own product (Yoon et al. 2006; Elving, 2013). Hence, companies that experienced environmental failure or crisis should be careful with using CSR as tool for defense and reparation of reputation (Nyilasy et al. 2014) since it can develop towards a vicious cycle: the more a company tries to repair its reputation the greater the scepticism among stakeholders (Elving, 2013; Shim & Yang, 2016).

2.2.2 Hierarchy of Effects Model

“In a competitive economic system, survival and development of the companies involve existence of accurate and detailed information about consumers, so the concept of modern marketing highlights the need for having detailed and correct information about the consumer needs, motivation, attitude and actions” (Mihart (Kailani), 2012, p.975). In order to understand people’s attitudes and responses towards green marketing, it might be beneficial to apply theories that have been developed in psychology, advertisement and marketing literature (Nyilasy et al. 2014). Johnstone and Tan (2015) acknowledge that environmental knowledge and positive attitudes do not necessarily translate into actual purchase behaviour due to perceived barriers such as (1) time, (2) knowledge, (3) sacrifices, (4) lack of information and choice, and (5) cynicism. Hence, marketers face many challenges to convince people of a product’s or service’s attributes and qualities in order to achieve the ultimate goal of purchases. It is recognized that it is crucial to understand the processes that drives people to purchase or not to purchase (Lavidge & Steiner, 1961).

The effectiveness of communication may be determined by both understanding the message and by receiving a desired reaction and response from the message recipient (Mihart (Kailani), 2012). In the article ‘A Model for Predictive Measurement of Advertising Effects’ the authors Lavidge and Steiner (1961) have developed a model in which consumers pass through six steps from being being exposed to advertisement for building awareness until the actual purchase. Nowadays, this marketing communication model is known as ‘Hierarchy of Effects Model’. The term ‘hierarchy’ implies that the amount of people decreases as they the move from one stage to the next one. Hence, a considerably smaller amount of people purchase the product compared with the amount of people that were exposed to the advertisement in the very beginning. It is therefore necessary for companies to create marketing communication that is not only appealing in the short-run but is also creating a long-term effect on people’s thinking, feeling, and behaviour to ensure that people reach the final stage.

The Hierarchy of Effects Model enjoys great popularity among practitioners and academics because it is (1) simple, (2) logic, and a (3) conceptual tool to predict behaviour (Tucker & Massad, 2005).

The model and its six steps has respectively two dimensions (Lavidge & Steiner, 1961): the first dimension is related to the three main functions of advertising whereas the second dimension links classical psychological components of behaviour to the advertising functions (Figure 2).

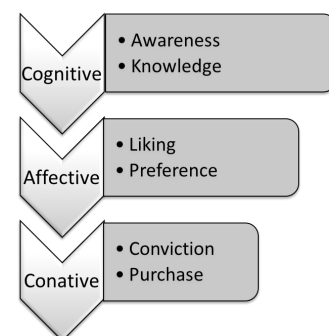


Figure 2: Hierarchy of Effects Model (adapted from Lavidge & Steiner, 1961)

Functions of Advertising: (step 1) ‘awareness’ and (step 2) ‘knowledge’ are functioning as information and ideas about the product. (Step 3) ‘liking’ and (step 4) ‘preference’ are related to attitudes and feelings towards a product. Finally, (step 5) ‘conviction’ and (step 6)

‘purchase’ describe actions undertaken for the purchase of the product (Lavidge & Steiner, 1961).

Psychological Components of the Advertising Functions: It is assumed that the consumer is moving through several cognitive, affective and conative stages (Lee, Haley & Yang, 2013). Firstly, the cognitive component describes ‘rational/thinking’ states of step one and two (Lavidge & Steiner, 1961), hence, it incorporates the process of gaining knowledge and understanding through making sense of retrieved information (Tucker & Massad, 2005). Furthermore, the process of encoding, storing, processing, and retrieving information in the cognitive stage leads to elements such as attention, awareness, comprehension and learning (Tucker & Massad, 2005). Secondly, the affective component is the ‘emotional/feeling’ state related to step three and step four (Lavidge & Steiner, 1961). In the affective stage it is described how people interpret perceptions, information and knowledge and how this leads to (un)favourable responses as precedent to behaviour (Tucker & Massad, 2005). In this stage attitudes are formed which are defined by Castañeda et al. (2009, p. 9) as “*learned predisposition to respond in a consistently favourable or unfavourable manner towards advertising in general*” and are direct determinants of behaviour. Thirdly, the conative component represents the ‘striving’ state of step five and six (Lavidge & Steiner, 1961) and presents ultimate action such as purchasing (Tucker & Massad, 2005).

Applying the Hierarchy of Effects Model is considered to serve the purpose of this research as it allows us to systematically evaluate the communication effectiveness of an oil company’s environmental claims on people’s attitudes and purchase intentions. Firstly, the model was originally conceived for evaluating the effectiveness of advertisement, however, in our opinion, the model can be also applied to CSR communication since it is used as promotional tool and has similar traits as conventional advertisement (Mostafa, 2006). Secondly, it should be acknowledged that most sustainability reports are published on companies’ websites. Websites and their impact on attitudes is similar than attitude development towards advertisement (Castañeda, et al. 2009), which implies that the model can be applied to this specific communication channel. Finally, the concept of corporate reputation with its cognitive and affective components (Raithel & Schwaiger, 2015) can be applied to the model, too. It is of great interest for companies to know to which state in the hierarchy people can be assigned to in order to understand their state of mind and in order to being able to plan appropriate activities (Mihart (Kailani), 2012).

2.3 Corporate Sustainability in Controversial Industries

2.3.1 Controversial Industries

Controversial industries - also called ‘unmentionables’ (Wilson & West, 1981) or sinful industries (Lindgreen, Maon, Reast & Yani-De-Soriano, 2012), offer “*products, services or concepts that for reasons of delicacy, decency, morality, or even to fear to elicit reactions of*

distaste, disgust, offense or outrage when mentioned or when openly presented” (Wilson & West, 1981, p. 92). Companies that operate within industries such as alcohol, tobacco, gambling, weapons and oil belong to the controversial industry sector and face exceptional challenges related to sustainability concerns (Cai et al. 2012). It is a widely held opinion that companies operating in such industries are considered to be unethical, immoral and irresponsible (Cai, et al. 2012). Also, it is commonly acknowledged that companies in these sectors operate in a “*legitimate arena of moral disagreement*” (Lindorff et al. 2012, p.458) and the question whether they can behave responsibly is open for discussion.

Most of the research on CSR has been conducted in the context of neutral or non-controversial industries (Du & Vieira, 2012). However, it should not be underestimated that CSR may also play an important role for companies in the context of controversial industries. Even though a greater interest in the role of CSR in controversial industries can be observed (Lindorff et al. 2012), the question whether such companies can develop towards responsible actors is mostly unanswered (Cai et al. 2012). Furthermore, even within the controversial sector it is assumed that the role of CSR differs - a company in the gambling or alcohol sector, for example, may have different issues to deal with and communicate about than companies in the oil industry. Thus, the question arises how the relation between controversial companies CSR can be evaluated (Jo & Na, 2012; Lindgreen et al. 2012). The fact that environmental issues related to globalization, global warming and resource exploitation have gained tremendous interest with the public (Godemann & Michelsen, 2011), it triggers the need to investigate why companies that contribute to environmental destruction should be looked at more closely. Oil companies are closely interlinked with negative perceptions, bad reputation and scepticism when it comes to their communication of environmental initiatives. However, it seems unclear what people actually know, think and do when being confronted with such communication. There seem to be a gap in research that contributes to an understanding of how the public perceives messages (Shim & Yang, 2016), how the communication of this specific industry affects people’s attitudes and purchase intentions (Nyilasy et al. 2014), and how it correlates with corporate reputation (Jo & Na, 2012).

2.3.2 Corporate Social Responsibility in the Oil Industry

In recent years, CSR engagement of companies in controversial industry sectors has gained growing interest among shareholders, regulators and academics (Cai et al. 2012; Jo & Na, 2012). It is an ongoing debate as to whether companies in controversial industries can engage in CSR activities or whether they are ‘incompatible’ (Cai et al. 2012; Eberasu, 2012; Jo & Na, 2012; Lindgreen et al. 2012). Advocates explain that although no company is perfect, they should have the freedom to decide upon business strategies and should be granted to use CSR as tool for improving reputation and corporate practice (Jo & Na, 2012). Furthermore, CSR may help controversial companies to improve their relationship to employees (De Roeck & Delobbe, 2012) and could represent an opportunity for risk reduction (Jo & Na, 2012; Lindgreen et al. 2012). On the contrary, due to negative perceptions of oil companies’

engagement in CSR might result in reduced reputation, increased cost, and decreased shareholder value (Jo & Na, 2012; Lindgreen et al. 2012). Critics claim that companies in controversial industries should not engage in CSR because they are said use it for hiding reality and malignance but also due to deeply rooted distrust and lacking trustworthiness (Cai et al. 2012; Jo & Na, 2012). Besides, even though critics demand stricter regulations and standards enforced by governments (Cai et al. 2012), however, this should not be considered negatively for companies but rather as an opportunity for achieving harm minimization, benefit maximization and respectively shared value (Lindorff et al. 2012; Johnston & Tan, 2015).

Research on companies' ability for social responsibility is in a premature stage (Cai et al. 2012; Jo & Na, 2012) and *"to date, management literature has just begun to explore how CSR initiatives could mitigate stakeholders' usual defiance towards controversial companies, and therefore better contribute to these companies' long-term legitimacy and performance"* (De Roeck & Delobbe, 2012, p.398).

Question: Do people expect oil companies to engage in business practices that contribute to environmental sustainability?

2.3.3 Environmental Sustainability in the Oil Industry

As specific example for an industry within controversial sectors, the oil industry is subject to constant debate about their impact on the environment (De Roeck & Delobbe, 2012). The oil industry is considered to be controversial since business practices entail the extensive and continuous engagement in detrimental social, environmental, and ethical consequences (Du & Vieira, 2012). The industry's business is linked to global warming, air pollution, resource exploitation and catastrophes such as devastating oil spills (Du & Vieira, 2012). The consequences of business operations undertaken by oil companies have created public criticism, outcry and litigation (Du & Vieira, 2012). Concerns about extraction and production of oil have increased and people demand greater environmental sustainability and responsibility (O'Connor & Gronewold, 2013). Due to the contribution of high CO₂ emissions (nearly 12 million tons in 2013) and the extraction of a finite resources, the oil industry responds with communication to the demand for more responsibility (O'Connor & Gronewold, 2013). Therefore, the oil industry seeks legitimacy by engaging in CSR (Edoho, 2008; Du & Vieira, 2012).

The industry has realized that CSR initiatives can be a helpful tool to increase acceptance (De Roeck & Delobbe, 2012). As an answer to the pressure from stakeholders, 77 percent of the petroleum refining companies have compiled and published reports about CSR activities (O'Connor & Gronewold, 2013). However, due to their perceived link to global warming and climate change oil companies are *"unanimously pushed outside the sphere of CSR"* (Eabrasu, 2012, p. 31). Belonging to the oil industry, it is more likely to achieve lower effects of CSR initiatives than 'uncontroversial' companies because of a low level of perceived credibility and unfavourable or even cynical attitudes held by consumers (Du & Vieira, 2012). *"In the oil industry sector, CSR initiatives are often presented as protecting and promoting the natural environment, which may appear paradoxical, as this industry is known as one of the largest polluters"* (De Roeck & Delobbe, 2012, p.398).

Still, if oil companies sincerely want to alter their long record of contribution to exploitation, environmental destruction and neglect of responsibility (Edoho, 2008), they will need to gain a deeper understanding of how to use CSR more effectively towards stakeholders (Du et al. 2010) and take a serious strategic approach towards responsibility rather than only minimizing harm (Lindgreen et al. 2012). It is not utterly out of question that companies in controversial industry sectors cannot be a credible source for advocating environmental sustainability (Lee et al. 2013).

Question: Is the public aware and concerned of oil companies' impact on the environment?

2.4 Corporate Sustainability Communication in the Oil Industry

Increased level of sensitivity towards environmental issues (Du & Vieira, 2012) and greater availability and ease of access to information has created a society that challenges environmental performance of companies in the age of globalization (Edoho, 2008). Certainly, communication for oil companies in terms of promoting its products, creating a dialogue with all stakeholders and evoking positive purchase intentions is equally important as for 'uncontroversial' companies. Furthermore, oil companies are involved in CSR as strategic means to develop a strong corporate image, counter negative reputation, and to gain social legitimacy for long-term prosperity (Parguel et al. 2011; Du & Vieira, 2012). However, weak CSR performance has the opposite effect on these factors (Parguel et al. 2011; Nyilasy et al. 2014). Hence, oil companies that are harmful need to reflect on how to communicate CSR in order improve reputation rather than worsening its already damaged one.

Full disclosure of information to the public may help to balance negative effects of low environmental performance and related attitudes and purchase intentions (Nyilasy et al. 2014). Even though the communication for environmental activities may evoke positive reactions, it is also very likely that companies are subject to negative accusations of framing such activities as 'green' for simply appearing environmentally friendly (De Vries et al. 2015). CSR communication in the controversial oil industry appears reactive rather than proactive, and attempts to achieve long-term improvements regarding environmental footprints may be questioned (Du & Vieira, 2012).

Question: What do people think about oil companies claiming being engaged in sustainability?

2.4.1 Corporate Reputation in the Oil Industry

Corporate reputation is the result of the cumulated perceptions of factors such as likeability, trust, perceptions and performance (Elving, 2013; Raithel & Schwaiger, 2015; Almeida M. Graca & Arnaldo, 2016). Furthermore, reputation may also depend on whether the company's

activities align with the environmental concerns of its stakeholders (Nyilasy et al. 2014). Certain industries may be particularly vulnerable to scepticism related to environmental communication and behaviour (Nyilasy et al. 2014) and are accused of ‘greenwashing’ and ‘window dressing’ (Elving, 2013; Nyilasy et al. 2014). It is not an uncommon opinion that companies operating in controversial industries, such as oil companies, are considered to be unethical, immoral and irresponsible (Cai et al. 2012). Oil companies are continuously connected to environmental issues and have a record of negative environmental performance, which has had a rather negative effect on their reputation. Oil companies are increasingly communicating their CSR activities to the public, however, they should be careful about claims of ‘doing good’ or even remain silent if they have an already bad reputation (Elving, 2013). Furthermore, such companies often fail to live up to stakeholder perceptions which leads to them perceiving them as unsustainable (De Roeck & Delobbe, 2012). Consumers are sceptical, voice disbelief and distrust (De Roeck & Delobbe, 2012; Elving, 2013), and question companies’ intentions for CSR engagement (Jo & Na, 2012). They may question whether the claims about pursuing environmental activities are meant genuinely as such activities embody the contrast to the oil companies’ core business (De Vries et al. 2015). ‘Greenwashing’ and ‘window dressing’ are prevalent issues and terms that describe such negative reactions regarding oil companies’ environmental sustainability involvement (Elving, 2013; Nyilasy et al. 2014). Firstly, the oil industry is frequently accused of ‘greenwashing’ which is the perceived discrepancy between intentionally misleading and deceiving stated environmental intentions and an organization’s effective initiatives (De Roeck & Delobbe, 2012; Nyilasy et al. 2014). Further, it crystallizes stakeholders’ scepticism and distrust towards organizations’ environmental initiatives (De Roeck & Delobbe, 2012). Secondly, ‘window dressing’ describes the public’s perception that there is neither true intention for the long-term integration of CSR practices into overall business strategies nor attempts to minimize negative impacts (Jo & Na, 2012). Moreover, literature elaborating on the oil industry’s engagement and communication of environmental sustainability initiatives does most often contain the terms ‘scepticism’, ‘cynicism’ and ‘hypocrisy’. This terminology describes the industry’s reputation held among the public (e.g. Yoon et al. 2006; Du & Vieira, 2012). In general, it can be determined that the reputation of the oil industry is characterized by negative associations and attributions, and people believe that companies operating in this industry claim to be something that they are not (Wagner, Lutz & Weitz, 2009). Du and Vieira (2012) suggested that the improvement of the industry’s reputation may make the joint effort of all oil companies necessary. One possibility for oil companies to improve reputation and perceived sustainability may be through the marketing tool communication. Almeida M. Graca and Arnaldo (2016) explained that communication can help to engage with stakeholders in order to develop a more stable and steady corporate reputation.

It seems that people have ambivalent perceptions related to green initiatives, that they are sceptical towards companies, questioning motives of engagement, and suspect hypocrisy in communications (Alhouthi et al. 2016). Due to its delicate business operations, oil companies have two specific key challenges in regard to CSR communication: (1) convey intrinsic motives of CSR initiatives and (2) minimize scepticism (Du et al. 2010).

Motives

Consumers are overwhelmed by companies' CSR claims and have trouble to detect which of them are genuinely responsible companies (Parguel et al. 2011). Elving (2013) explained that people care more about companies' motives for being involved in CSR than about the specific actions. Although a company aims for acting responsibly it does not necessarily mean that it will be viewed as doing so (Alhouti et al. 2016). People's perception of a company's motivation for engaging in sustainability initiatives has an impact on their attitudes, beliefs and purchase intentions towards the company (Becker-Olsen et al. 2006; Elving, 2013).

Consumers perceive CSR motives as either extrinsic or intrinsic (Scholder Ellen et al. 2006; Du et al. 2010). If the company undertakes actions for its business' benefit, e.g. increasing profit and sales, the motives are perceived as extrinsic or firm-serving (De Vries et al. 2015). Becker-Olsen et al. (2006) suggested that attitudes towards the company declines. Intrinsic or public-serving motives are assumed if it people perceive that the company acts out of genuine concerns related to e.g. environmental protection or community development. It is assumed that attitudes, credibility and purchase intentions change for the better (Becker-Olsen et al. 2006).

In general, De Vries et al. (2015) explain that it is more beneficial for companies to be honest about the motives of environmental activities rather than whitewashing them as it reduces the risk of perceived greenwashing. CSR initiatives need to be credible if the company wants to achieve positive outcomes (Alhouti et al. 2016). *“Regardless of the company's intentions, in the end it is all about whether or not people perceive corporate greenwashing”* (De Vries et al. 2015, p. 143). Efforts can easily backfire if the consumer perceives discrepancies between what the company states and what consumer perceives to be (extrinsic) intentions (Du et al. 2010; Nyilasy et al. 2014). Eabrasu (2012) suggested that companies with business concepts that are considered incompatible with CSR surrender to public pressure and try to create an impression of meeting requirements of minimum moral engagement demanded by public. Consequently, it is suggested that companies in controversial industries should be careful about claiming purely altruistic motives for their engagement in environmental activities (De Vries et al. 2015). Rather, it is advisable to honestly state that environmental investments are made due to both intrinsic and extrinsic reasons (Parguel et al. 2011; De Vries, 2015).

Scepticism

Achieving credibility of CSR messages is a crucial challenge especially for companies in controversial industries (Du & Vieira, 2012). The same holds true for oil companies, that are linked to devastating environmental catastrophes (Nyilasy et al. 2014). Due to its bad reputation, the oil industry faces sceptical consumers who question the credibility of companies' actions (Nyilasy et al. 2014) which may also represent a barrier to successful communications (Alhouti et al. 2016). *“Especially when implementing an issue or crisis-related CSR campaign to mitigate negative publicity or criticism of a company's unethical business operations, a company should acquire, listen to and examine a wide range of stakeholders' opinions”* (Shim & Yang, 2016, p.76). Companies which have applied CSR recently and maintain no established CSR record, face consumers that are sceptical of the company's motivations (Nyilasy et al. 2014). Scepticism develops from people's beliefs that a

company is pursuing actions due to self-interest rather than unselfish, society-oriented benefits, hence, people question companies' motives (Elving, 2013).

Companies hope for positive results of communicating CSR activities (Elving, 2013) such as regaining public trust or maintaining legitimacy (Du & Vieira, 2012), improving corporate reputation (Almeida M. Graca & Arnaldo, 2016) and overcoming scepticism (Du et al. 2010; Shim & Yang, 2016). Perceived legitimacy ensures the company the support of stakeholders and a stable flow of resources for continuous business operations (Du & Vieira, 2012). However, CSR communication of oil companies seems to generate rather unfavourable consequences more so than the desired positive effects. People are sceptical to environmental marketing and often have negative attributions towards CSR initiatives because of claims being perceived as false, exaggerated and misleading (Mostafa, 2006; Albayrak, et al. 2011; Shim & Yang, 2016). As a result, the communication of CSR in controversial industry sectors may boost suspicions and increase risk for negative perceptions (Du et al. 2010; Parguel et al. 2011), triggers perceived corporate hypocrisy and negative attitudes (Du & Vieira, 2012). Furthermore, scepticism, together with perceived deception, leads to low perceived company credibility and performance (Nyilasy et al. 2014).

The public is increasingly sceptical towards companies that have an opportunistic approach towards the sustainable development trend (Parguel et al. 2011) and are also sceptical about 'green' claims made by companies (Albayrak et al. 2011). One reason why scepticism arises towards environmental sustainability communication of oil companies may be explained with the concept of 'fit' (Becker-Olsen et al. 2006). Fit is defined as the "*perceived link between a cause and the firm's product line, brand image, position, and/or target market*" (Becker-Olsen, et al. 2006, p.47). It is necessary to decide upon what CSR activities companies want to undertake, whether it should 'fit' with the core business or whether they should address business unrelated issues (Elving, 2013). Elving (2013) further explained that the impact of 'fit' or 'anti-fit' on the effectiveness of CSR communication remains mainly unclear, and so does the effect of reputation on CSR communication (Elving, 2013). However, usually a positively perceived link between a CSR activity and a firm's product can be observed (Elving, 2013). A perceived consistency of the message and the company's business is more likely to be accepted and has minimized probability for occurring scepticism (Lee et al. 2013). This is due to a good fit or the perceived consistency between expectations, knowledge, actions. Being considered a fit, actions of a company and its environmental initiative can be more easily integrated into existing cognitive/memory structures (Becker-Olsen, 2006; Lee et al. 2013). Consequently, the connection between the company and consumers can be strengthened. However, if there is perceived incongruity it will very likely lead to people questioning the company's motives, trigger scepticism and negative attitudes (Becker-Olsen, 2006). Oil companies are regularly associated with environmental catastrophes which represent an inconsistency concerning environmental sustainability communication. Hence, it is more likely that there is negative link between "the said" and "the done" which ultimately leads to scepticism.

Consumers are unlikely to have blind faith in CSR initiatives and tend to punish the firm (Becker-Olsen et al. 2006) in terms of, e.g., switching to another brand and boycotting the company's product (Du et al. 2010) if consumers perceive insincerity in their CSR engagement (Becker-Olsen et al. 2006). They are increasingly sceptical and discerning towards companies as they claim efforts of protecting the environment, however, their mindset is not translated into action (Nyilasy et al. 2014). Hence, companies need to prove that they do what they claim, if they want to reduce scepticism, increase trustworthiness and increase purchase behaviour (Albayrak et al. 2011; Lee et al. 2013).

Question: Is environmental sustainability communication sent by oil companies perceived as credible source of information and action?

Purchase Intention

Growing attention towards environmental concerns have had an impact on consumers' attitudes and consciousness, however, this effect is inconsistent with executed behaviour (Johnstone & Tan, 2015).

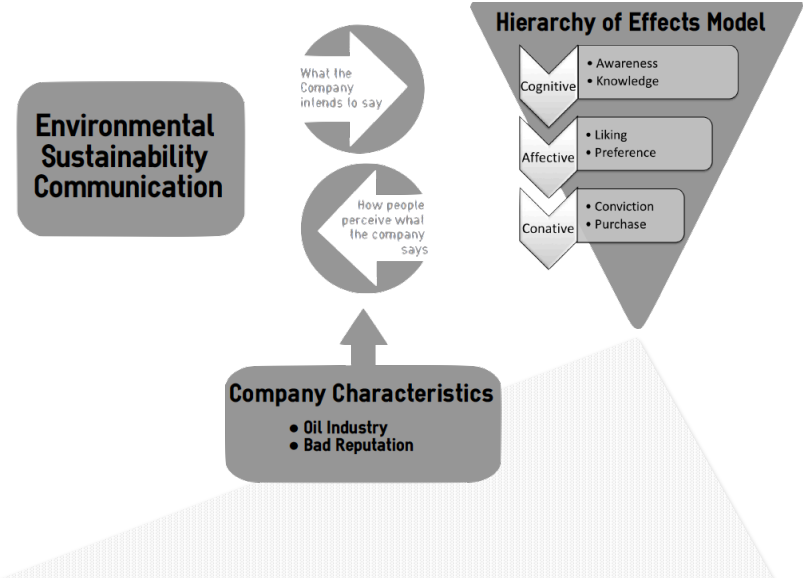
Consumers express more positive attitudes and purchase intentions towards companies that engage in CSR activities than towards those who do not (De Roeck & Delobbe, 2012; Elving, 2013). However, green advertisement does not lead to purchase intention if consumers are sceptical about the communicated content (Albayrak et al. 2011). If the company's motives are perceived with scepticism a negative effect on attitude and purchase intentions can be observed (Ellen et al. 2006; Elving, 2013), which applies to oil companies. Consumers' perceptions of greenwashing can have a significant impact on attitudes and related purchase intention (Nyilasy et al. 2014). A lack of trust in the company's CSR engagement may lead to failure in restoring corporate reputation and increased purchase intention (Elving, 2013). Hence, if the communicated environmental claims are meant to be genuinely honest and altruistic, it is more likely to create trust and to trigger potential purchase (Albayrak et al. 2011; Johnstone & Tan, 2015; Lee et al. 2013). Furthermore, Albayrak et al. 2011 explained the concept of perceived consumer effectiveness (PCE) which "*reflects the belief of people that their actions [...] will make a difference in helping to solve environmental problems, such as a decrease in pollution*" (p.191). Depending on knowledge and experiences, people develop a belief that they have the ability to make a difference. Therefore, the higher the perceived consumer effectiveness - the trust on one self's ability for achieving change - the more likely positive attitudes develop and translate into actual purchase (Albayrak et al. 2011).

Question: Can the communication of environmental sustainability claims create favourable premise for purchase intention of oil companies' products?

2.5 Summary

With the literature that has been reviewed – related to environmental sustainability, communication and controversial industries, especially the oil industry – we have formulated questions that we consider helpful to fulfil the purpose of this thesis. In its very simplest form, the literature has provided a quite extensive overview as to why sustainability efforts have been communicated by companies and it has also been acknowledged that the effectiveness of such communication depends on multiple external (e.g. market demands, differentiation) and internal (e.g. management motives, enhancement of profitability) factors. However, a gap in research has been detected with respect to an understanding of how people perceive communication by oil companies’ claims of being environmentally sustainable. Consequently, we apply the Hierarchy of Effects Model as a tool for investigating what people ‘think’, ‘feel’ and ‘do’ when being exposed to environmental sustainability communication sent by oil companies (Figure 3). Moreover, the research questions presented in the literature review are assigned to the dimensions of the hierarchy as follows (Table 1):

Figure 3: Illustrative Summary and used framework



Cognitive (‘Rational/thinking’)	SQ1: Is the public aware and concerned of oil companies’ impact on the environment?
Affective (‘Emotional/feeling’)	SQ2: What do people think about oil companies claiming being engaged in sustainability? SQ3: Do people expect oil companies to engage in business practices that contribute to environmental sustainability? SQ4: Is environmental sustainability communication sent by oil companies perceived as credible source of information and action?
Conative (‘Striving/doing’)	SQ5: Can the communication of environmental sustainability claims create favourable premise for purchase intention of oil companies’ products?

Table 1: Questions related to the Hierarchy of Effects Dimensions

3 Methodology

The following chapter starts with a case description of Shell, and continues revealing ontological (research philosophy) and epistemological (research design) positions. Moreover, the reasoning style as well as methodology and its ethical dimensions are presented. It is further explained how the collected data is going to be analysed and interpreted. Throughout this chapter potential limitations and the overall trustworthiness of the study are outlined.

3.1 Case Description

This study makes use of a specific case to derive to the answers of our research questions. Therefore, we do not intend to analyse the case company's effectiveness in itself, it rather, it functions as a means to an end.

Due to its high brand awareness and wide geographical scope, we chose to use Royal Dutch Shell (hereafter Shell) as means to generate our findings. They count to one of the largest multinational oil and gas companies in the world (Statista, 2016), employ more than 92.000 people and generate an annual revenue of 451,253 billion US Dollar in more than 140 countries. Shell was founded in 2005, however, its history started in 1833 (Shell, 2016). In April 2015 Shell acquired the well-known British BG Group for more than 47 billion pounds, underlining their power in the oil industry (Blas & Katakey, 2015). Hence, Shell's share of gas of the total hydrocarbon production counts almost 50%, which again emphasizes its worldwide status and awareness level. Nevertheless, Shell serves as prime example for the industry's overall controversy. Besides their engagement in disputed hydraulic fracturing operations (Wetzel, 2013), Shell was involved in several scandals during the past decades:

- Nigeria: Shell has been accused for the violation of human rights in the Niger Delta region since the 1980s. They have financed the militant oppression of regional ethnic communities and the execution of their leaders. The company is exploiting the region's resources and diminishing livelihoods. Several tremendous oil spills led to severe environmental and human impacts (Hennchen, 2015; Reuters, 2015). Rich croplands have been destroyed and fresh water sources have been contaminated. Natural extracted gases are not captured and harmlessly reinjected into the ground or are burnt and create masses of greenhouse gases (Manby, 1999). Famine, regional climate change, diseases and poverty were the consequences of such irresponsible and unethical behaviour. Combined with this, they are accused of illegal partnerships with national regimes, for the sole purpose of profit, and are responsible for numerous killings (Hennchen, 2015; Manby, 1999).

- Brent Spar: In 1995 Shell was criticized for its plan to sink the oil platform “Brent Spar” into the Atlantic. Many demonstrations, Greenpeace’ widespread criticism and the call to boycott the company increased the public pressure on Shell. Based on the pressure, they decided to disassemble the platform (Entin, 2002; Livesey, 2001).
- Arctic: In the beginning of 2012, Shell announced to start extracting oil in the arctic. According to Greenpeace, the consequences of a potential accident are severe due to its sensitive ecosystem being irreplaceable. The NGO claims that Shell did not seem to learn from the incident with Brent Spar and starts a worldwide campaign against them (Barret & Elgin, 2015).

Those incidents and the risen pressure from media forced Shell to implement CSR and grant the wider public access to the insights. They needed to become transparent in their actions to regain trust and increase their profit. Two decades ago, Shell claimed on their website that *“the organization aims to address social concerns at its operations and works to benefit local communities, protecting our reputation as we do business”* (De Roeck & Delobbe, 2012, p. 398). In 1997 Shell published its first sustainability report, promising transparency and active contribution to sustainable development. The approximately 60-page long report provide insights into their approach but also about their annual performance (Shell Sustainability Report, 2014).

The following paragraph contains information solely derived from Shell’s website (Shell Sustainability, 2016) and illustrates that the report aligns with their website content, which emphasizes their focus on sustainability directly on the front page. They apply buzzwords such as ‘environment’, ‘transparency’ and ‘communities’, which triggers responsible associations in a business context. While Shell aims to preserve communities by means of developing local economies, paying taxes and using cleaner energy, they focus even more on a responsible treatment of the natural environment. They promise to capture more gas, to emit less CO₂ and preserve fresh water as well as the regional biodiversity. Shell claims to work with biodiversity experts to restore ecosystems more effectively. Besides, they state to perform an impact process assessment prior each oil extracting operation. By this they assess potential impacts harming society, health or environment; they conduct studies learning about possible local risks (e.g. water shortage or harm of cultural heritage) and engage with local societies to assess their personal concerns. Above all, Shell promotes honesty, integrity and respect as core values throughout their website and reports.

As mentioned earlier, sustainable implementations in controversial industries remain paradoxical and are prone to evoke scepticism among consumers and pressure groups (De Roeck & Delobbe, 2012).

Incorporated communication material as means to an end

This study makes use of Shell’s website content as this platform is mainly used to communicate their environmental claims to consumers, partners and pressure groups. More specifically, the ‘Impact Assessment Process’ (Figure 4) has been incorporated into the questionnaire to gain insights about consumer perceptions, thoughts and impacts. It demonstrates Shell’s effort to investigate potential consequences on environment, society and

local economy, prior planned oil extraction. By this Shell intends to ensure a responsible and conscious behaviour to not harm any of the involved parties or neglect local interests. Due to its clear and brief formulation, we believe this extract as very suitable as means to an end for our questionnaire as the respondent does not need to command over advanced English skills. This website extract serves as communication example and hence, does not function as evaluation of Shell's communication strategy. Thus, we are solely interested in how such message placed on a company's website is perceived and evaluated by the reader. A set of questions and statements aim to provide us with answers regarding trustworthiness and scepticism which will later allow us to answer the research question more holistically but at the same time ensures in-depth information of one specific example.

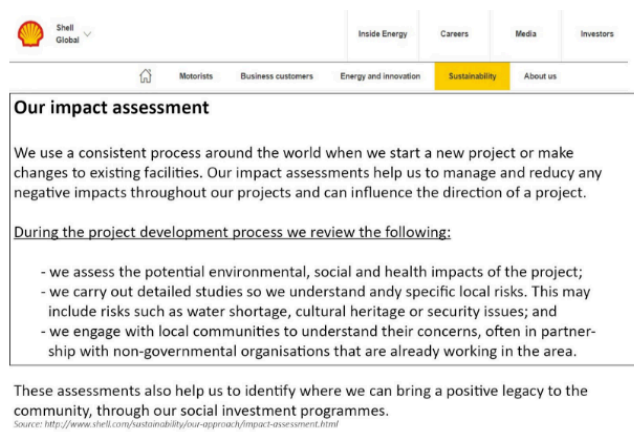


Figure 4: : Impact Assessment Process, extract from Shell's website (April 2016)

3.2 Research Philosophy

In this study we align with the principle of positivism. From an epistemological view, we remain objective and independent from the study object. In other words, the social world is an external construct, which has to be investigated in an objective manner (Easterby-Smith, Thorpe & Jackson, 2012). Our goal is to (1) gain insights into people's awareness and knowledge regarding environmental issues, (2) examine the extent to which people expect green behaviour communicated by oil companies, and (3) investigate general perceptions, image and purchase intentions as objective as possible as we want to portray the reality without influencing or distorting the outcome. Thus, social constructivism, which is seen as the contrast of positivism, does not fit our research goals of this thesis as it involves the researchers as such that they are part of observations and evaluate situations according to their personal understandings (Ramanathan, 2008). While social constructivism relies mostly on a small sample to derive to theoretical abstraction, positivism makes use of a larger sample to draw statistical generalizations (Ramanathan, 2008) – which is the aim of this study. However, we need to bear in mind that due to the quantitative manner, positivism harms the effectiveness in understanding certain motives people attach to actions more thoroughly (Easterby-Smith et al. 2012).

3.3 Research Design

This study contains an exploratory approach and is composed of two types of data: descriptive as well as explanatory. This non-parametric approach entails most potential investigating the stated research question as thorough as possible, given that the literature body on this topic is still emerging and thus, in its early stages.

3.3.1 Exploratory Research

After an extensive literature review, it became evident that the topic of interest, the *perception* of environmental claims communicated by the oil industry, lacks investigation and depth. While the motivation patterns to engage in sustainability has been discussed to a large extent from a business-perspective (Cai et al. 2012; De Roeck & Delobbe, 2012; Eberasu, 2012; Jo & Na, 2012; Lindorff et al. 2012), the receiver side has not yielded significant attention. According to Adler and Clark (2011), exploratory research is suitable when the researcher has to deal with a certain topic for the first time and needs to become familiar. Furthermore, it helps to identify themes, which complement subsequent research (Bryman & Bell, 2011).

To explore a barely researched topic, we make use of both descriptive and explanatory data.

- Descriptive data (*what?*) is needed to elaborate on potential trends (Bryman & Bell, 2011) and to expand our knowledge regarding the “*shape and nature of our society*” (De Vaus, 2001, p. 1). This study is descriptive in nature as we base a range of assumptions on statements and its frequency distributions, obtained from the questionnaire. Descriptive data can be either concrete (e.g. information about ethnic mix of sample) or abstract (e.g. declines/increases) (De Vaus, 2001; Adler & Clark, 2011). An elaborate description can question existing assumptions about the reality, might trigger action and evoke thy *why*-questions (De Vaus, 2001). Adler and Clark (2011) added that descriptive data disclosures also facts about behaviour and attitude, which constitute the major component of this study. Descriptive data is often generated from a large sample to enhance the representativeness and thus, applies quantitative methods (see methodology).
- Explanatory data (*why?*) intends to create a detailed understanding of a situation (Bryman & Bell, 2011). Unlike descriptive, explanatory develops explanations and possible causal relationships (e.g. situation y is affected by variable x). In this study, it is essential to examine the gained descriptive data in terms of potential correlations as we want to identify possible relationships between variables (e.g. does age affect the perception of scepticism?). Adler and Clark (2011) claim that explanatory data derives from a rather deductive study design as it moves from more general to assumptions to more specific statements.

3.4 Reasoning Style

To identify people's perception of environmental claims communicated by oil companies, this study applies a combination of inductive and deductive methods of reasoning. While inductive is mainly applied for exploratory research and starts with observing a phenomenon to theorize the findings, deductive reasoning is narrower in its nature and derives from a theory seeking confirmation (Adler & Clark, 2011; Bryman & Bell, 2011). Hence, the former is characterized through its meaningfulness and the ability to create something new, the latter is rather straight to the point, where rules can easily be applied and saves time in application. One has to bear in mind that inductive methods are time consuming and could lead to false conclusions, while deductive methods are rather passive to the object of study (Adler & Clark, 2011).

Although this study contains predominantly inductive components as we seek to explore the receiver site in a unique way and aim to generalize, we partly rely on deductive components as we incorporate given assumptions from the literature, which will be tested upon confirmation relevant for this study, and implement the Hierarchy of Effects model as starting point, which has been applied to the specific situation within the controversial oil industry to answer our research question in a structured manner.

3.5 Methods

To answer the research question, this study contains the following qualitative and quantitative methods.

3.5.1 Literature Review

An extensive literature review was performed to identify what has already been investigated about the topic of interest so as not 'reinvent the wheel'. While it is not solely about reproducing assumptions and facts, it also seeks interpretation to be able to refine the research question. It is of special interest whether there are any inconsistencies or striking controversies (Bryman & Bell, 2011). Moreover, scanning the literature provides us with unforeseen insights and theories, which leads to the development of unique variables and an analytical framework. Furthermore, a literature review demonstrates research gaps and hence, the relevance of our research. We focus on other researchers' mistakes to eliminate potential limitations (Bryman & Bell, 2011; Easterby-Smith et al. 2012).

An operationalization of the terms sustainability, controversial industries and corporate reputation is provided in the literature review to "*translate concepts into something observable – something we can measure*" (De Vaus, 2001, p. 24).

3.5.2 Self-administered Questionnaire

A self-administered questionnaire (see appendix A) in English served as research instrument. It was distributed online with the survey provider ‘Google Forms’, which enabled us to collect findings across as broad as scope as possible covering wide geographical areas and reaching different populations. The responses were automatically saved into an Excel file, which was subsequently entered into the IBM SPSS Statistics software.

The reasons as to why a questionnaire was applied is due to, on the one hand, the fact that the respectively small research body of this topic lacks a quantitative point of view, especially when it comes to perceptions. On the other hand, several ethical aspects were taken into account, especially when dealing with a controversial topic. Thus, most importantly, such a method allowed the respondent to answer conveniently at home and according to his personal schedule, which affects the response rate positively. Hence, we considered this method as most efficient and inexpensive in relation to the limited amount of time (De Vaus, 2001). Given the controversial topic (oil companies claiming to behave responsibly while extracting oil rather unsustainably), a questionnaire delivers unbiased answers and most importantly, guarantees anonymity. This impacts the truthfulness of answers as the respondents are not unconsciously forced to appear ‘good and responsible’ when the emphasis lies on their behaviour. Lastly, we evaluate a questionnaire as suitable for our study as it increases due to its anonymity the willingness to share more personal information (Adler & Clark, 2011).

Questionnaire Content/Object of Study

The above mentioned research question, the literature review as well as the ‘Impact Assessment Process’ (derived from Shell’s website) form the foundation and content of the questionnaire.

Here, special attention is dedicated to the Hierarchy of Effects model (Figure 5), which serves in the first place as starting point of our study as it categorizes the communication process from a recipient point of view according to the three stages, namely cognitive, affective and conative. Furthermore, we have aligned the model with the design of the questionnaire as the stages match our objective to investigate consumer attitudes and perceptions as well as potential consequences on purchase behaviour. To develop the content of questions and statements, we identified the most important variables (Table 2) derived from the literature review, which help answering the research question.

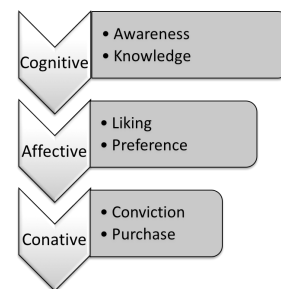


Figure 5: Hierarchy of Effects Model (adapted from Lavidge & Steiner, 1961)

Table 2: Overview of questionnaire variables

Hierarchy of Effects' stage	Variable(s)	Source	Questionnaire location
Cognitive	Awareness/ knowledge	(Bhattacharya & Korschun, 2006; Albayrak et al. 2011; Godemann & Michelsen, 2011; Dach & Allmendinger, 2014; Johnstone & Tan 2015, etc.)	Question 1-20
Affective	Image Attitudes Perception	<u>Image</u> (Bartlett et al. 2012; O'Connor & Gronewold, 2013; Nyilasy et al. 2014, etc.) <u>Attitude</u> (Sen, et al. 2006; Du et al. 2010; Albayrak et al. 2011; Godemann & Michelsen, 2011; Nyilasy et al. 2014; Johnstone & Tan, 2015, etc.) <u>Perception</u> (Godemann & Michelsen, 2011; Parguel et al. 2011; Jo & Na, 2012; Lindgreen et al. 2012; Dach & Allmendinger, 2014, etc.)	Question 21-61
Conative	Purchase intentions	(Lavidge & Steiner, 1961; Becker-Olsen et al. 2006; De Roeck & Delobbe, 2012; Jo & Na, 2012; Elving, 2013; Nyilasy et al. 2014, etc.)	Question 62-69

In particular, the questionnaire seeks to examine the respondents':

1. Awareness/knowledge about environmental issues (cognitive)

This part served as slow introduction to the overall topic and sought to provide a respondent's self-assessment of environmental knowledge. This part contained more general questions/statements, also addressing the oil industry. This assessment was necessary as it provides information, which could be later linked to more specific data to evaluate and compare certain statements, but also to conduct correlations.

2. Liking/preference of oil companies and its communication (affective)

The second part of the questionnaire examined to what extent the respondents believe oil distributors such as Shell contribute negatively to the environment. Here, it was of great importance to remain objective to not steer the respondent to one direction. Again, this part played an important role to later evaluate the perception of the respondents regarding oil companies' environmental claims.

- Presentation of Shell’s website material (‘Impact Assessment Process’) as example for environmental communication of oil company
 - As mentioned before, this website extract served to provide insights regarding the perceived trustworthiness and reliability of such message.
 - Presentation of photos demonstrating environmental catastrophes caused by oil extraction
 - These photos were purposively inserted after evaluating Shell’s communication initiative to not influence the respondents’ answers. They serve to illustrate and emphasize the severe consequences as the subsequent questions/statements focused on potential consequences on environment and society caused by oil extraction.
3. Conviction/purchase (conative)
Based on the presented material we examined the respondents’ emotions and whether this would change their personal purchase behaviour and image of oil companies. We were interested whether there are any variables having an impact on purchase behaviour.
4. Demographics
Lastly, the questionnaire finished with demographic questions to collect data about gender, age, nationality and education. These variables served for correlation analyses, but also to draw general conclusions about the sample.

Questionnaire Design

The questionnaire itself consisted mainly of statements, which had to be rated according to 5-point Likert-scales. This permitted the ability to measure attitudes, values as well as opinions in an ordinal psychometric manner (De Vaus, 2001). Combined with this, it contained dichotomous and multiple choice questions.

Ethical Dimensions

To yield a high response rate and avoid dropout, questionnaires need to follow a set of ethical precautions. According to De Vaus (2001) as well as Bryman and Bell (2011) there are four ethical principles:

- Voluntary participation
The respondent must know that they can withdraw from the study at any point and that they in particular are not required for the study since involuntary input can harm the quality of the data. To increase the participation rate, the researchers must refer to the respondent’s altruism and emphasize the benefits of filling everything in, but also mention that such participation benefits themselves as well in terms of broadening the horizon.

- Informed consent
The researchers have to provide the participant with a set of information *before* filling in the questionnaire.
 - Brief explanation of purpose and procedures (not too much information to ensure unbiased answers)
 - Information about researchers' identity, sponsor and contact details
 - Amount of time needed to fill in questionnaire
 - Use of data
 - Selection process
 - Researchers are available for any kind of question
 - Statement of anonymity, confidential treatment of data
- No harm to respondents
Respondents are aware that they will not experience any kind of harm during or after the participation of the study.
- Anonymity and confidentiality
Although the study's topic does not deal with any intimate or humiliating issues, it is of necessity to guarantee a confidential treatment with the obtained data. This again has a positive impact on the response rate and participants tend to answer more honestly.

Piloting

To test upon validity, data quality and comprehensibility of the questions (Silman & Macfarlane, 2002; Adler & Clark, 2011), the questionnaire has been piloted beforehand by the researchers' supervisor (expertise in subject and research), a German university lecturer (experience with questionnaires), a native English speaker (avoidance of language errors), a student of a non-environmental and non-marketing subject (neutral perception of questions/topic) as well as a student of the researchers' study programme (critical review). Each of them provided the researchers with feedback, highlighted problems regarding ambiguous wording/questions or issues concerning layout/functionality. After consultation, inconsistencies have been eliminated and sent out for a second review. After a successful second consultancy and error elimination, the questionnaire has been launched online.

Target Group

The target of this study constitutes the general public as we are interested in the perceptions and attitudes of those, who are potential recipients of environmental claims communicated by oil companies. Thus, it is not of necessity that the respondents need to consume oil in any manner to participate in this study. On the other hand, the general public is due to time and budget constraints easily to reach (Raithel & Schwaiger, 2015). For means of the analysis respondents of 15 years or younger will be excluded since they would need a permission to participate.

Sampling

In this study we applied a non-probability sampling method due to the fact that we primarily use the social media platform Facebook as a distribution channel for our questionnaire. Since

we expected a rather small amount of respondents (less than 500), we are not allowed to draw generalizations, but rely on findings which represent the reality for this sample population (Adler & Clark, 2011).

Strategy: Our broad range of social media contacts has been by means of personalized and individual messages contacted with the request to fill in the questionnaire. Due to personal relationships the response rate was expected to be high.

Apart from that a diverse set of cluster samplings addressed specific groups directly.

- o Social media groups
- o Discussion forums
- o E-mail distribution list of German lecturer

Limitations sampling method

Since we primarily addressed personal contacts and posted the questionnaire into specific social media groups, a so called size bias took place as certain units had greater chances to become selected since not everyone for example has access to Facebook (Smith & Price, 2010). However, by means of distributing the questionnaire via e-mail lists within networks of employees of a German university and posting it into discussion forums, the mentioned biases sought to be compensated to yield a more diversified sample.

3.6 Data Analysis

Google Forms (questionnaire provider) entered the transmitted data immediately into an Excel table, which subsequently entered into SPSS. To be able to work rule-consistent with the data, it was necessary to adapt several values' measurement of scale, which was needed for the categorization and/or quantification of variables. Some variables have been decoded into different variables to enable measurability (e.g. gender, education). Furthermore, and based on the research question, several variables were newly computed, consisting of summed up variables.

To answer the research question the following statistical tests have been applied.

Frequency distributions reveal information regarding mean, median and mode (=descriptive statistics) (Field, 2009). Pearson's r-test (correlation, see Table 3) has been used to assess the strength between metric variables (Field, 2009). To determine the strength of correlation the following scheme has been used (Williams, n.a.):

Table 3: Strength of Correlation Overview

R (Pearson's correlation)	
+ 0,7 or higher	very strong positive relationship
+ 0,4 to + 0,69	strong positive relationship
+ 0,3 to + 0,39	moderate positive relationship
+ 0,2 to + 0,29	weak positive relationship
+ 0,1 to + 0,19	no or negligible relationship
0	no relationship
- 0,1 to -0,19	no or negligible relationship
- 0,2 to -0,29	weak negative relationship
- 0,3 to -0,39	moderate negative relationship
- 0,4 to -0,69	strong negative relationship
- 0,7 or higher	very strong negative relationship

R² values (proportion of variance accounted for by model, (R)²) show to what extent the independent variable explains the variance/differences of the dependent variable (Field, 2009).

Furthermore, t-tests have been applied, which prove whether the difference between two groups' (e.g. female and male) averages represents a significant difference. This statistical significance relies on difference size, sample size as well as standard deviation (SD) of those groups (Field, 2009). With the t-test it is helpful to examine the effect size d, which provides information about the strength of a phenomenon, here the mean difference (Field, 2009).

3.6.1 Limitations

Internal Validity

The fact that the participation in the questionnaire was voluntary, which aligns with the ethical standards, there is a risk that this can lead to too few responses (De Vaus, 2001).

According to Seale (2004) internal validity is threatened by history and maturation, testing and instrumentation, experimental mortality and selection. However, since this study is conducted in a rather short period of time (10 weeks), the threats of history and maturation do not affect the outcome. Moreover, through the pilot study the threats of testing and instrumentation are avoided. Since we apply a questionnaire there is no threat of experimental mortality. Lastly, selection constitutes a threat to the study's internal validity as not every individual has the same chance of being selected.

External Validity

Again, due to the voluntary nature of the questionnaire, certain groups of people are more likely to respond than others (higher education levels, English speaking, younger people). Hence, one needs to be aware of biased samples (De Vaus, 2001). Some respondents might struggle with the English language and misinterpret certain questions or statements, which distorts the outcome (Adler & Clark, 2011).

Reliability

It is to expect that the study yields a repeatability of outcome under similar conditions as the same set of questions will be asked to every participant. Hence, the questionnaire can be used elsewhere (Seale, 2004). However, when it comes to the respondents' self-assessment in terms of environmental knowledge, it is questionable whether they over- or underestimate themselves, which has an effect on both, reliability and internal validity (Adler & Clark, 2011).

3.6.2 Interpretation of Results

After reporting the empirical findings, we structured our analysis according to the Hierarchy of Effects model to remain coherent with our applied approach. Furthermore, this allowed us to answer our research question efficiently as our questionnaire was structured and based upon this model. Hence, we distinguished between cognitive, affective as well as conative stages and referred to our identified variables (Table 2).

4 Analysis

This section presents an overview of the obtained data in form of frequency distributions and correlations, retrieved from the self-administered online questionnaire. They are arranged according to structuring questions, which ease the readability. In Appendix B, C, and D you find an overview of the frequency distributions.

Descriptive analysis of the sample

The sample consists of 271 respondents (48,3% male; 51,7% female) with an age range between 17 and 64, where 51,5% is 25 or younger and 24 constitutes the most frequent age (Figure 6). The most represented nationalities are Germany (47,2%), Sweden (17,3%) and the Netherlands (14,4%), which leads back to the researchers' origin and living destinations. Moreover, while almost 51% hold a Bachelor's degree, 29% pursued a Master's degree. Therefore, the majority of respondents has attended academia.

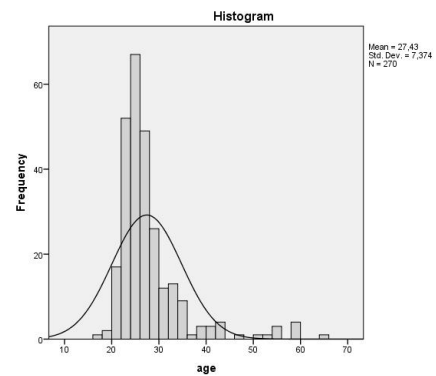


Figure 6: Age Distribution of the Sample

The mean-values (hereafter M) in the following are linked to the applied Likert-scale in the questionnaire (1+2= disagree, 3= neutral, 4+5 agree). The standard deviation will be abbreviated with SD.

Are the respondents aware of environmental problems?

The vast majority (77,1%, see Figure 7) agrees with the statement “I am informed about environmental problems (e.g. global warming, ozone depletion, CO2 emissions)”. The previously mentioned statement as well as statements regarding causes and consequences have been commuted to one variable (‘awareness_total_environment’) with a mean of 4,02. Here, 80,8% of the sample claim to be informed about environmental issues. It is worth mentioning that female and male respondents barely differ in the awareness level. Furthermore, education has no impact on environmental awareness either.

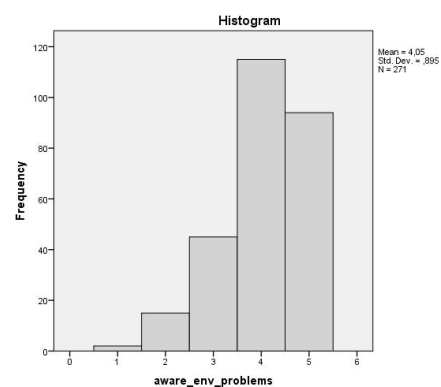


Figure 7: Frequency Distribution of Environmental Awareness

Additionally, the respondents have been asked which of a given set of industries the three biggest contributors to global warming are. It turned out that the majority (67,9%) expected the petroleum refinery among the three biggest contributors, which ranks actually fifth (Kuang, 2010).

How concerned are the respondents about the environment?

80,5% of the respondents are concerned about the environment as a whole (Figure 8). If their concern regarding different environmental issues is evaluated, it becomes evident that the global warming concern is a concern mainly among the respondents (80,1%), followed by water as a resource (72,3%), biodiversity loss (65,3%) and soil pollution (66,8%). Air pollution evokes a lesser concern as 44,5% of the respondents state it. The aforementioned areas of concern areas have been commuted to one variable ('concern_total_environment') with a mean of 4,01. 77,4% of the sample claim their concern about the diverse issues. Here again, female and

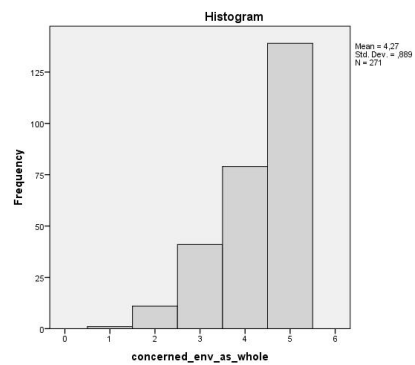


Figure 8: Frequency Distribution of Environmental Concern

male respondents do not differ in the intensity of concern and education does not have an impact either. Besides that, a correlation analysis revealed that the level of awareness and the level of concern show a strong positive relationship ($R= 0,446$, $R^2= 0,199$). Here, the level of awareness shares 19,9% of the variability in level of concern. Thus, 80,1% of the variability is explained by other variables. Furthermore, those respondents who claim to be concerned tend to be angry about environmental catastrophes caused by the oil industry, which have been shown on photographs. Thus, the level of concern and the extent to what the respondents become angry show a moderate positive relationship ($R= 0,367$, $R^2= 0,135$). Here, the level of concern shares 13,5% of the variability of the anger variable, meaning that 86,5% of the variability is explained by other variables. Another correlation analysis revealed that again the level of concern shows a strong positive relationship ($R= 0,400$, $R^2= 0,16$) to the fact that an ocean spill would affect the respondent's image of an oil company negatively. Thus, the level of concern shares 16% of the variability of the extent to what a spill affects the image negatively. Therefore, 84% of the variability is explained by other variables. Moreover, the relationship between the level of concern and the level of scepticism towards environmental claims communicated by the oil industry shows a weak positive relationship ($R= 0,211$, $R^2= 0,044$). This means that 4,4% of the variability of the level of concern is shared by scepticism. Thus, still 95,6% of the variability is explained by other variables.

Lastly, correlation analyses revealed that respondents without access/possession of a car are not more aware ($d= 0,026$) and concerned ($d= 0,013$) about the environment than respondents with access.

How do the respondents stand in relation to cars?

While 38% of the respondents own a car, 28,8% have access. The majority (32,8%) refuels 1-2 times per month, followed by 17,3% who refuel less than that. 14,4% state they refuel once every week.

33,2% neither possess a car nor have access to one. Therefore, 66,4% of the sample refuel (occasionally). While 52% of the sample does not mind about the type of petrol station, 26,9% prefer popular ones (such as Shell, Esso, BP) and 21% prefer unknown (local/regional) ones. Here, however, 72% choose their petrol station according to the lowest price and 66,1%

according to the closest distance. 14% choose depending on the company's reputation and 9,6% depending on the petrol station's communicated environmental claims.

Given the environmental concern, 23,2% agree with the statement "When I refuel my/a car, I automatically have to think about the environment". Thus, 48% disregard environmental issues when refuelling. Moreover, 70,8% are willing to use oil more responsibly in terms of avoiding short distances and the use of public transport. Furthermore, 45% of the sample disagrees with "As an individual it seems that a more responsible oil behaviour [...] will not have a big effect on the environment", while 29,2% state agreement.

- **Differences between respondents who own a car or have access to one and respondents who do not**

T-statistics have been applied to determine the difference on the fact that people have a negative image but need to refuel anyway between respondents who own a car or have access and respondents who do not have either. The results proved that the test was significant ($t = -6,716 < p = 0,05$). It might be self-evident but the respondents with car possession/access (M: 4,16, SD: 0,882) value oil as indispensable as respondents who do not have access to cars (M: 2,8, SD: 1,322). The effect size d accounts 1,21 which suggests a large differentiation. Furthermore, it was also of interest whether there are differences in terms of the respondent's ability to forgive a catastrophe when previous environmental behaviour has been without any issues. The t-test showed besides significance ($t = -1,856 < p = 0,05$) that respondents with car possession/access (M: 2,86, SD: 1,206) forgive such catastrophes more likely than respondents who do not have car access (M: 2,60, SD: 1,216). However, the effect size of $d = 0,215$ shows a small difference.

Interestingly, respondents with possession/access to a car (M: 3,40, SD: 1,201) are more informed about potential negative impacts caused by oil extraction than respondents without a car (M: 3,17, SD: 1,144). Another t-test revealed ($t = -1,813 < p = 0,05$) that respondents with a car possession/access (M: 3,82, SD: 0,967) are more concerned about the negative impacts of oil extraction methods than respondents without a car (M: 3,59, SD: 1,069). However, the effect size $d = 0,226$ presents a small difference.

- **Differences depending on petrol station preference**

T-statistics have been applied to determine the difference on the fact that people forgive a rare oil catastrophe if the company acted responsibly beforehand, compared to respondents who prefer to refuel at popular petrol stations and respondents who prefer less popular ones. The results show that the test was significant ($t = -1,706 < p = 0,05$). The respondents who choose popular petrol stations (M: 3,00, SD: 1,167) forgive such catastrophes more likely than respondents who purchase their oil at less popular ones (M: 2,72, SD: 1,226). The effect size d accounts 0,234 which suggests a small differentiation. Another t-test revealed that respondents who prefer popular petrol stations (M: 2,26, SD: 0,865) tend to believe environmental claims on oil company websites more than respondents, who choose less popular petrol stations (M:

1,91, SD: 0,914). The effect size $d=0,393$ remains rather small. Interestingly, there is no relationship between the choice of petrol station and level of environmental awareness as well as level of concern.

What standing do oil extraction methods have among the respondents?

With a mean of 2,93 a rather small amount of 33,2% agree to the statement “I am interested in how oil companies extract oil”. Furthermore, only 32,8% claim to be informed about applied methods, whereas 46,5% state their awareness about potential negative impacts those methods bring to the environment (Figure 9). These negative impacts concern 59,4% of the sample, while 10,7% claim to be unconcerned. Apart from that the majority of 86% is familiar with negative headlines reporting the catastrophes happening in the oil industry harming the environment. This information is mostly obtained from the internet (84,6%), TV (73,6%) and newspaper/magazines (61,4%). Word-of-mouth informs 36,2% of the respondents about environmental incidents taking place in the oil industry.

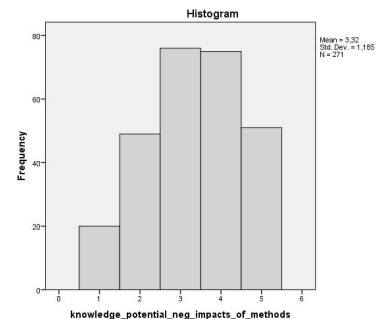


Figure 9: Frequency Distribution of Awareness of potential negative Impacts

Another finding points to the question of whether the respondents would forgive an environmental catastrophe if that oil company performed responsibly before-hand. Here, 39,5% would not forgive a single catastrophe, 30,6% remain neutral and 29,9% would forgive it if the previous behaviour was outstanding.

- **Differences depending on female and male respondents regarding environmental consequences in the oil industry**

An independent-samples t-test has been applied to examine the difference on knowledge of oil extraction methods between male and female respondents. The results indicated that the test was significant ($t= -3,481 < p= 0,05$). Hence, male respondents (M: 3,11, SD: 1,18) are more likely informed about oil extraction methods than female respondents (M: 2,61, SD: 1,21). However, the effect size $d 0,418$ suggests a rather small difference. This test rejects the Null Hypothesis.

To determine the difference on concern regarding oil extracting consequences between male and female respondents, the significant t-test ($t= -2,427 < p= 0,05$) revealed the following: Male respondents (M: 3,50, SD: 1,17) are more concerned about those consequences than female respondents (M: 3,16; SD: 1,18). The effect size $d 0,289$ shows a small differentiation. No noteworthy differences between male and female respondents could be determined in terms of a) scepticism and b) the importance whether oil companies should engage with the environment.

How do the respondents evaluate the interplay between oil companies and the communication of environmental effort?

In general, 52% of the respondents agree with “In my opinion oil companies have the ability to act ethically”, while 19,2% disagree and 28,8% remain neutral (Figure 10). Moreover,

while 81,9% claim that it is important for oil companies to engage with the environment, only 16,6% state that it is trustworthy if oil companies communicate environmental claims (here, 53,9% disagree and 29,5% remain neutral about the trustworthiness). On the contrary, only 19,6% of the respondents claim that such communication is unreliable. The majority, 80,4%, regards such claims sceptically and 8,4% of the respondents prefer oil companies communicating environmental efforts.

Furthermore, 14,7% of the respondents believe that oil companies are successful in minimizing their impacts after claiming (here, 49,1 disagree and 36,2% remain neutral regarding the success).

An increasing amount of oil companies are publishing annual sustainability reports to present the latest green methods and results regarding impact reduction to create a positive relationship between its stakeholders. However, the questionnaire revealed that 11,4% of the respondents are convinced about the report's ability to demonstrate good behaviour. Thus, 43,5% remain sceptical towards the report's trustworthiness and 45% are neutral. It is important to mention that only 11,4% of the sample have read such a report. The statement "If oil companies communicate environmentally friendly behaviour, I tend to purchase their oil" revealed that 23,6% of the sample agree.

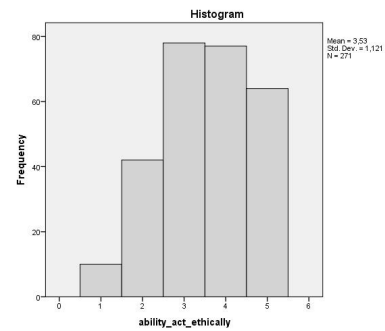


Figure 10: Frequency Distribution of Oil companies' Ability to act Ethically

What image has Shell among the respondents?

While Shell evokes for 11,4% a positive image, 66,8% have a negative image (42,1% state to have no opinion). Respondents with a positive image consider Shell to be credible and legitimate (67,5%) and purchase there more frequently (32,5%). The ones who have a rather negative image doubt Shell's credibility and legitimacy (61,5%), distrust what they say (59%) and sometimes switch to another brand (22,2%). In a few cases, 16,2%, the respondents boycott certain oil companies. It is important to mention is that this group of people states, despite their negative image, refuel regardless, as they have to (26,9%). Above all 65,1% do not consider Shell as credible when communicating their environmental behaviour (here, 23,6% do not have an opinion). Apart from that 27,4% of the sample believes that Shell is not offering a "good" product, while 42% claim to have no opinion.

- **What impact does image have on other variables?**

Several t-tests revealed that image (here, computed into a different variable, containing of either positive or negative image) has no impact on environmental awareness ($t = 0,415 > p = 0,05$) and concern ($t = 1,399 > p = 0,05$), scepticism towards claims ($t = 0,084 > p = 0,05$) as well as knowledge regarding oil extracting methods ($t = 0,713 > p = 0,05$). However, respondents who hold a positive image of Shell (M: 2,73, SD: 0,960) evaluate environmental claims more trustworthy than respondents, who hold a negative image (M: 2,46; SD: 1,102). The effect size $d = 0,275$ reveals a small difference between these two groups. Furthermore, respondents with a positive image

(M: 3,75, SD: 1,032) believe that oil companies have the ability to act ethically more than respondents with a negative image (M: 3,49, SD: 1,134). Here, the effect size $d=0,248$ shows as well a rather small difference.

Interestingly, another t-test revealed that respondents with a positive image of Shell (M: 3,45, SD: 1,239) tend to forgive a rare catastrophe likelier than respondents with a negative one (M: 2,68, SD: 1,176). Here, the effect size $d=0,637$ demonstrates a medium difference between these two groups. Likewise, the ones who hold a positive image (M: 2,95, SD: 1,037) are more convinced about the demonstration of good behaviour in sustainability reports than the remaining respondents (M: 2,40, SD: 0,977). Thus, the effect size $d=0,546$ presents a medium difference. Also, and worth mentioning, the image of the respondents who already hold a positive one (M: 3,98) is less affected in case of an oil spill than the one of negative holding respondents (M: 4,36). A moderate difference also describes the respondents' consequential behaviour. Thus, respondents with a positive image (M: 2,83) tend to avoid oil companies which harmed the environment less than respondents with a negative image (M: 3,22).

How to the respondents evaluate the “Impact Assessment Process” published by Shell?

First of all, it was of necessity to ask whether the respondents understood the content of the presented Impact Assessment Process (hereafter IAP) in the questionnaire. 44,6% confirmed and 38,9% claim to understand most of it. Hence, 16,5% of the respondents who stated to not understand the message were excluded in the following set of question to increase the validity. Regarding the content itself it was first examined how the respondents evaluate the message. In this case, only 15,5% stated to find the message appealing (26,9% disagreed), 33,6% find it interesting (23,3% disagreed), 7,7% find it authentic (45,7% disagreed), but only 14% felt angry after reading it.

For 45,1% of the respondents it is necessary that oil companies publish such statements (10,3% disagree). Intriguingly, 63,4% do not believe such claims just because they are on Shell's website (Figure 11). A correlation analysis revealed that the extent to what respondents believe environmental claims simply because it is mentioned on their website shows a strong positive relationship ($R: 0,470$, $R^2=0,221$) with the extent to what the respondents prefer oil companies communicating environmental behaviour. Thus, website trustworthiness shares 22,1% of the variability in communication preferences. Thus, 79,1% of the variability is explained by other variables.

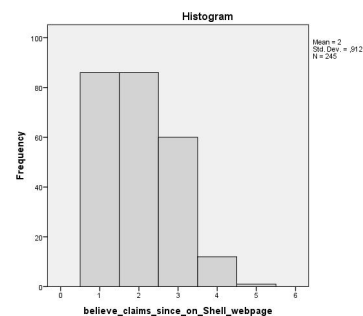


Figure 11: Frequency Distribution of claims' trustworthiness

Besides this, we were also interested how the respondents evaluate Shell's motivation to claim green behaviour. Here, 56% believe that Shell is communicating such a message to please the consumers (only 8,8% disagree). Another question revealed that 4,4% believe that Shell implies these claims intrinsically, or in other words as genuine interest. While, 49,4% believe that Shell is communicating such claims solely for their own benefit, 36,5% believe the reason why Shell communicates green claims depends on both, their own benefit as well as genuine interest.

What effect do environmental catastrophes have on the respondents?

In this section a collection of photographs illustrating environmental consequences caused by oil refineries was presented to the respondents. 86% of them stated their awareness of such consequences. In addition, it was of interest as to what emotions those photographs evoke. Hence, 77,5% of the respondents are angry, 92,9% claim to be sad, 44,7% feel guilty (here, 27,33% remain neutral) and 73% are scared for the future. All in all, 54,2% disagree with the statement “I think that environmental catastrophes linked to oil extraction are (completely) unavoidable” (here, 24,4% agree). After viewing the photos 60,1% question the truthfulness of Shell’s IAP, which has been previously presented.

Another question focused on the consequences triggered when reading negative headlines. Here, the majority of respondents (75,6%) tends to read to more about what happened, while others talk to friends and family (53,1%). 18,5% choose another petrol station and 14% tend to ignore the news as they claim not to be interested.

Beyond the practical consequences, it is of interest as to what extent the company’s image is affected. Hence, 82,3% of the respondents claim that an ocean spill would affect the image negatively. Going further, 52,4% state that in case of an ocean spill the communication of environmental efforts would have the ability to regain trust (here, 13,3% deny that).

What are possible consequences of environmental catastrophes on the respondent's' oil behaviour?

While 35,8% tend to avoid oil companies, which performed poorly with the environment, 12,9% actively boycott certain petrol stations and 23,2% consider to do so. The question whether negative headlines would stop the respondents from refuelling cars at certain petrol stations revealed that 38% would continue purchasing oil and 31% would not.

5 Discussion

The following chapter is discussed in the light of the Hierarchy of Effects model and thus, structured according to its cognitive, affective and conative stages. These stages contain the sub questions presented in the first chapter, which connect empirical findings to the reviewed literature in order to reveal confirmations or contradictions. Hence, results are examined in relation to our research questions but also more broadly in relation to existing research.

5.1 Cognitive

SQ1: Is the public aware and concerned of oil companies' impact on the environment?

The findings showed that a great number of respondents claimed to be informed and concerned about environmental issues, such as global warming, air pollution, and biodiversity loss. What's more, based on the questionnaire findings we can suggest that the higher the awareness the higher the concerns. The majority of respondents further considers the oil industry to be one of the main contributors to the worrisome environmental state. These findings represent an indication that nowadays a sufficient amount of people is at least aware of environmental concerns and that those people command over a basic understanding of 'who' and 'what' contributes to environmental issues. Sen et al. (2006) observed that awareness is relatively low, however, ten years later it can be said that the level of awareness has improved towards the better. Also, our findings are coherent with Goodland (1995) and Elving (2013), who explained that an increasing amount of people acknowledge the existence of global environmental issues and that they are concerned of the consequences of consumption, resources exploitation and similar for livelihoods.

According to O'Connor and Gronewold (2013) the level of concern regarding oil extraction methods has been growing, however, we have found that a considerably small portion of respondents is actually interested in the methods of oil extraction and less than half considered themselves informed about such methods. On the contrary, a considerably large part of respondents is aware of potential accidents taking place in the oil industry and that it is of interest to what extent the respondents are actually aware of oil extracting methods applied in the oil industry. Especially 'hydraulic fracturing' has due to its fresh water contamination and methane pollution tremendous impacts on soil and living beings. The questionnaire revealed that a respectively small amount of respondents claimed to be informed. This raises the question as to what extent the rather uninformed people process negative headlines which often originate through accidents taking place while extracting oil. The study revealed that people, who are not informed about extraction methods, tended to care less about the environment. We argue that the lack of sincere interest in increasing understanding and in

gaining more comprehensive knowledge about oil companies and their business practices may be explained by people's limited cognitive ability. People tend to underestimate to what extent they and their actions contribute to environmental damages in the long run (Godemann & Michelsen, 2011) and we suggest that this missing acknowledgment leads to a more indifferent state of mind and a lack of interest in becoming more informed. Connecting these findings and thoughts to our thesis' focus, it seems of great importance to what extent the recipient is familiar with oil extraction methods and potential dangers as this has an effect on the general evaluation of the communication itself. If people do not command over any knowledge regarding those issues, they might not be able to decode news reporting oil catastrophes as either their background knowledge or general interest is lacking or even missing (Godemann & Michelsen, 2011; Dach & Allmendinger, 2014). In the same breath one could argue that people who lack such knowledge tend to evaluate communicated environmentally friendly behaviour as trustworthy - or in other terms, they might not be able to get to the bottom of those messages. Nevertheless, this study did not reveal any correlations between the overall knowledge and the trustworthiness of communication, but leaves due to our rather small sample room for future research.

Almost half of the respondents stated, as an individual, one can have a noteworthy effect on the environment by pursuing a more responsible oil behaviour. This indicates that there is still a need to create awareness and knowledge in public about the current environmental situation and about possibilities how everybody can contribute to improvements. This finding is coherent with Sen et al. (2006) who explained that it is often assumed that people possess awareness related to CSR, however, awareness is still low and it is necessary to further investigate the effect of CSR on beliefs, attitudes, and behaviours. We were not only interested in the level of awareness and concern but we considered it also necessary to draw conclusions from our findings in regards to people's ability to comprehend information provided in communication messages. We have therefore utilized Shell's website as an example for how oil companies communicate their environmental sustainability communication towards the audience and we have been able to gain an understanding of how people comprehend this environmental sustainability communication.

The Internet is a popular channel for sustainability communication (Godemann & Michelsen, 2011) and websites function as advertisement (Castañeda et al. 2009) as well as information sources about companies CSR efforts (Bartlett et al. 2012). The study revealed that the majority uses the Internet to obtain information about oil companies when, for example, being involved in a natural catastrophe. This high portion may be explained by the fact that the Internet offers access to extensive, easily accessible, appealing, and comprehensible information (Godemann & Michelsen, 2011).

In order to create an impact on the perceptions of web-based corporate sustainability communications the presence of awareness is necessary (Dach & Allmendinger, 2014). Hence, the lower the awareness level, the lower the impact on perceptions and comprehension. Besides, the effectiveness of communication depends on how the audience decodes and perceives the message (Bartlett et al. 2012). Coherent with Du et al. (2010) our

findings indicate that people do not actively look for information related to CSR which also leads to the assumption that people only have a limited amount of knowledge. Only a small amount of the sample had read an annual sustainability report, slightly more were interested in learning about oil extraction methods, and only almost half of the respondents understood the presented example of 'Impact Assessment Process'. Combining these findings suggests that people's awareness level is considerably low which in turn leads to the assumption that web-based endorsement of environmental sustainability engagement by oil companies may not be very effective.

A website is considered to be a 'company-controlled communication' since the information originates from the company (Parguel et al. 2011) which appears to have a rather negative impact on people's perceptions of information. Du and Vieira (2012) stated that the more the communication channel is perceived company-controlled, the less credible the CSR message is from the stakeholder's perspective. Corresponding, a considerably great share of respondents did not believe the statements made in the 'IAP' as they are presented on the company's website. Consequently, we suggest that the communication of environmental sustainability through the website is not sufficient enough to create a feeling of reliability.

After evaluating our findings, we agree with already existing literature that companies are advised to make use of multiple communication channels such as environmental and sustainability reports, corporate websites, and PR efforts (Du et al. 2010; Du & Vieira, 2012). Since people are not actively looking for information in regards to environmental efforts we suggest that oil companies need to engage more visibly with their audience. If they are genuinely interested in being transparent related to their efforts and if it is of importance to them to be recognized, it might be beneficial for oil companies to draw attention to efforts rather than expecting people to look for information. However, if a company is performing poor there is an increased risk of negative effects on reputation and behaviour, such as boycotting, and communication can backfire (Du et al. 2010; Nyilasy et al. 2014). It should not be neglected to consider that also the government, NGOs and other public institutions, of company uncontrolled source, may be taken into responsibility to educate people regarding environmental concerns and how both people and businesses are contributing to negative and positive environmental developments (Parguel et al. 2011; Du & Vieira, 2012).

5.2 Affective

SQ2: What do people think about oil companies claiming being engaged in sustainability?

To elaborate on people's thoughts and attitudes towards oil companies and their environmental claims, the following can be suggested. As stated in the literature review, people prefer companies which appear truly environmentally responsible (Dach & Allmendinger, 2014). This, in return, has a positive impact on loyalty and trust (Alhouti et al.

2016). Due to the fact that oil companies operate in a rather controversial industry and evoke scepticism (Cai et al. 2012), which often translates into perceived greenwashing (Elving, 2013; Nyilasy et al. 2014), it was of special interest as to whether those companies even have the ability to act ethically in the eyes of the respondents. The study revealed that half of the respondents believed in oil companies' ability of acting ethically, which emphasizes that oil companies in general, despite potential catastrophes, should focus on responsible behaviour. It is noteworthy to mention that respondents who held a positive image of an oil company tended to believe that more than people who held a negative image. This could lead to two assumptions. Firstly, if oil companies do not focus on an ethically correct behaviour, people might be disappointed and the likeability of the company decreases. This assumption is supported by the fact that a great number of respondents claimed that it is important for oil companies to engage with the environment in general, which is also supported by Godemann and Michelsen (2011), who claimed that consumers even expect green initiatives. Thus, people do not only see the ability to act ethically, they also see the necessity of an active engagement with the environment. Secondly, if the oil company's image affects the believe whether oil companies are able to act ethically or not, it might be of great importance to invest in the company's image management to eliminate such company harming beliefs.

While it is crucial to communicate messages which are credible and persuasive to increase the reliability on environmental sustainability communication (Barlett et al., 2012), we found out that even though the respondents claimed the importance to engage responsibly, the questionnaire revealed that only a small share evaluated the communication of such engagement as trustworthy. Since we did not undertake any further investigations concerning the trustworthiness in terms of a potential driver (e.g. individual norms and values, culture, origin), we can only assume that the message and distribution channel of such communication plays an important role and possibly affects the trustworthiness. Needless to say, media, especially Internet, TV and newspaper articles have a tremendous power on consumers' minds and perceptions as nearly everyone is aware of negative headlines focusing on environmental catastrophes caused by oil extraction accidents. These mediums have the capability of reporting the 'reality' to the general public without any company protecting filters. A similarly strong force constitutes word-of-mouth since almost more than half of the sample claimed to exchange knowledge with family and friends. In times of interconnectedness and social media, people increasingly (seek to) belong to reference groups which, given the growing body of environmentally responsible people, stimulates opinion-building, often against the interest of oil companies.

Apart from the fact that we were also interested how people classify oil companies' motivation to claim environmentally friendly behaviour, Eabrasu (2012) differentiated between either genuine feelings of responsibility or following a trend, using it as business opportunity or as reaction to public pressure. The study revealed that more than half of the respondents were convinced that Shell is communicating such messages solely to please the consumers. In contrast, not even five percent believed that Shell implies these claims intrinsically which matches with the study of Du et al. (2010), where consumers tended to perceive company claims as either extrinsically or intrinsically. Thus, referring back to the

study, almost half of the respondents believed that Shell is communicating green behaviour for their own benefit, while almost almost as many perceived it as a combination of both. This brings us to the assumption that it is highly necessary for oil companies to specifically address this perception. Here, it is important to admit that certain communication strategies are both environmentally - but also profit-oriented as honesty contributes to the perceived authenticity (Parguel et al. 2011; De Vries, 2015), which might in return has an impact on loyalty and purchase power (Nyilasy et al. 2014). Oil companies need to actively improve their strategies to convince their customers that they do not operate solely profit-oriented.

SQ3: Do people expect oil companies to engage in business practices that contribute to environmental sustainability?

It is difficult to draw conclusions about people's expectations for companies to engage in environmentally sustainable business practices. The majority of respondents stated that it is important for oil companies to engage in environmentally sustainable initiatives, however, at the same time our findings suggest that people tend to not trust oil companies' claims. It appears paradoxical that people seem to expect oil companies to engage in environmentally sustainable business practices while further investigations have shown that this engagement does not ultimately lead to increased credibility and likeability or a development of preference.

While a great share of the respondents considers it important that oil companies are involved in environmental initiatives, however, only a very small amount developed a preference for oil companies that communicate environmental efforts. Besides, respondents with a positive image evaluated environmental claims more trustworthy than respondents who hold a negative image of an oil company. The occurrence of a negative image and a lack of trust are factors that contribute to the general acknowledgment that the oil industry enjoys a generally bad reputation in the eyes of the public (Elving, 2013; Raithel & Schwaiger, 2015; Almeida M. Graca & Arnaldo, 2016). Almeida M. Grace & Arnaldo (2016) explained that bad reputation is related to the distrust in the company's ability to meet expectations on a given attribute. In the context of this paper, it can be assumed that the bad reputation of the oil industry has created distrust in the industry's ability to meet expectations on the attribute of environmental sustainability. Therefore, it is supposed that people wish for oil companies communicating sustainability efforts, however, they do not seem to have expectations that companies will fulfil their promises as respondents with a negative image doubted the credibility and tend to distrust claims.

Expectations may also depend on reputation and whether the firm's activities align with the environmental concerns of its stakeholders (Nyilasy et al. 2014). A great amount is concerned about environmental issues, especially global warming. Air and soil pollution evoked lesser concern, however, oil extraction methods actually affect air and soil pollution the strongest (Du & Vieira, 2012). Consequently, it appears necessary to increase knowledge about the impact of oil companies on the environment, especially in terms of air and soil, in order to create expectations. The general public does most often not proactively look for CSR

information even with their acknowledgment of the importance of certain issues (Du et al. 2010) which is illustrated by the finding that only a small share has read a CSR report. Hence, the wish for people to gain more comprehensive knowledge about the impact of the oil industry on the environment is relatively low and fragmented. This leads to the assumption that the current level of knowledge and concern is creating lower customer expectations towards oil companies to engage in business practices that contribute to environmental sustainability.

Furthermore, about half of the respondents stated that the communication of environmental efforts would help to regain trust in an oil company if being involved in an ocean spill. This finding would lead to the assumption that the better the perceived image, the higher the chance that claims are perceived trustworthy. However, taking into consideration that most people have a negative image on their mind when thinking of oil companies, it may be questioned as to whether reactive communication after a spill really contributes to trustworthiness and credibility. Literature revealed that efforts can easily backfire if the consumer perceives discrepancies between what the company states and what consumers perceive to be (extrinsic) intentions (Du et al. 2010; Nyilasy et al. 2014). Half of the respondents believed that communication is created for achieving the company's own benefits rather than intrinsic, genuine interest. For this reason, combining bad reputation, scepticism and questionable motives leads to the assumption that people do not have high expectations for oil companies to engage in business practices that contribute to environmental sustainability. This is aligned with Scholder et al. (2006) who found out that if consumers have pre-existing beliefs that the company engages in CSR in order to compensate poor performance, CSR might lose its validity as marketing tool.

SQ4: Is environmental sustainability communication sent by oil companies perceived as credible source of information and action?

Speaking of the aforementioned perception of trustworthiness brings us to the presumption that the better the company's reputation, the stronger is the source credibility (Du et al. 2010) and legitimacy (Elving, 2013) among the consumers. Thus, good reputation leads to higher brand loyalty and impacts purchase decisions positively (Sen et al. 2006; Du et al. 2010). These issues have been confirmed through the questionnaire as respondents who held a positive image of Shell evaluated their business as credible as well as legitimate and a little more than one third of the respondents stated to purchase more frequently. The contrary is proven by the fact that the respondents who held a negative image of Shell, doubted to a large extent their credibility as well as legitimacy and more than the half tended to distrust what they say or eventually switch to another brand. As mentioned in the literature review, if the corporate reputation is bad, the communication of CSR activities is more likely to enjoy low credibility and legitimacy, and high perceived scepticism (Elving, 2013; Shim & Yang, 2016). Since certain activities are perceived as greenwashing, scepticism and distrust among stakeholders become increased (Elving, 2013; Nyilasy et al. 2014).

Due to its delicate business operations, oil companies have two specific key challenges in regard to CSR communication: (1) conveyance of intrinsic motives of CSR initiatives and (2) minimization of scepticism (Du et al. 2010). This raises the question whether only people holding a positive image of a particular company are open for environmental communication. We have found that the majority of respondents had a negative image of Shell and questioned the existence of altruistic motives. This means that oil companies continue to face a dilemma when communicating environmental behaviour to (potential) consumers – while it is expected from the general public that oil companies engage with the environment, those who hold a negative image could feel vindicated in their personal, negative perception which could backfire in terms of brand switch or even a boycott. On the other side, however, those who hold a positive image might feel even stronger emotions towards that brand as they operate according to their ‘expectations’.

As stated in the literature, it is shown that consumers remain sceptical towards sustainability claims (Du et al. 2010), especially when the company’s product is causing significant harm (Yoon et al. 2006; Elving, 2013). This study revealed that people, who are specifically concerned about the environment, tended to be slightly more sceptical about environmental communication. Since a great amount of respondents is concerned, scepticism seems to be a widely distributed feeling among people, whose impact should not be underestimated. Interestingly, however, scepticism has according to our study no relationship to the respondent’s image, which means that no matter whether the people hold a positive or negative image, the level of scepticism remains the same. Thus, having a positive image does not protect an oil company for being viewed as controversial and should be by means of actions and honest results specifically addressed to eliminate such feeling. According to De Vries et al. (2015), companies which operate honestly, reduce the risk of perceived greenwashing among consumers.

While an increasing amount of oil companies have published annual sustainability reports, containing the demonstration of environmentally responsible oil extraction methods, plans and visions as well as annual improvements, only a small share of the respondents was actually convinced that these reports have the ability to demonstrate good behaviour. Since almost half remained sceptical towards the reports’ trustworthiness, it is proven that even formal mediums are not able to erase the scepticism among people. However, it is important to mention that only a few of the respondents have read such a report, which tells us how prejudiced people might evaluate it beforehand. We assume that it is irrelevant which type of medium oil companies use to communicate environmental behaviour, whether formal (annual sustainability reports) or informal (claims on their website without specific evidence), constitute an obstacle for the company to be perceived as genuinely good. Therefore, we can suggest that external organizations, such as NGOs, enjoy much higher credibility as they are perceived as honest, critical and with no financial intentions. Johnstone and Tan (2015) suggested to introduce externally regulated green accreditation schemes to increase claim validity, which might constitute a solution for decreasing the questioned trustworthiness about environmental claims.

Lastly, while people tend to be sceptical towards environmental sustainability communication sent by oil companies, the questionnaire revealed that more than half of the respondents stated that in case of an oil spill, the communication of environmental efforts would have the ability to regain their trust. In this case, communication seems necessary, accepted and required. It remains questionable, however, whether such reaction to a disastrous accident can actually repair the lack of trust.

5.3 Conative

SQ5: Can the communication of environmental sustainability claims create favourable premise for purchase intention of oil companies' products?

Consumers increasingly develop habits and lifestyles that incorporate environmental responsibility (Mostafa, 2006), however, after evaluating our findings it can be questioned whether such habit change towards sustainability is possible in relation to an indispensable product such as oil. Research revealed that people tend to be more willing to pay extra for renewable energy and to buy more environmentally friendly products (Bang et al. 2000; Kim & Choi, 2005). However, despite environmental awareness and concerns, the pure willingness to consume 'greener' is often not translated into action (Albayrak et al. 2011; Godemann & Michelsen, 2011; Johnstone & Tan, 2015). This existing 'green gap' can also be observed in our findings since respondents considered oil companies as a major contributor to environmental issues while yet purchase oil anyways. In general, our findings confirm that statements about people's' intended behaviour changes are inconsistent with executed behaviour (Johnstone & Tan, 2015). If communicated environmental claims are meant to be genuinely honest and altruistic, it is more likely to create trust and to trigger potential purchase (Albayrak et al. 2011; Lee et al. 2013; Johnstone & Tan, 2015). The better the company's reputation, the stronger is the source credibility (Du et al. 2010) and legitimacy (Elving, 2013) among people. Thus, good reputation leads to higher brand loyalty and impacts purchase decisions positively (Sen et al. 2006; Du et al. 2010). Corresponding, research shows that green advertisement does not lead to purchase intention if consumers are sceptical about the communicated content (Albayrak et al. 2011) or if the company's motives are perceived with scepticism (Ellen et al. 2006; Elving, 2013). The questionnaire revealed that only a small amount of respondents had a positive image of Shell as the exemplified oil company – correspondingly, of this portion more than half considered Shell as credible and legitimate. The majority of respondents had a negative image and most of them doubted Shell's credibility and legitimacy as well as distrusted what Shell claims. Hence, environmental sustainability communication is looked upon with scepticism with leads to the majority to develop distrust and low perceived credibility of communication sent by oil companies. The low level of perceived credibility and high level of scepticism have an effect on the purchase behaviour. Only a small share of the sample stated that they purchase the petrol of a specific oil company because they communicate environmentally friendly behaviour. CSR initiatives and related green advertisement are pursued since companies want

to be perceived as socially and environmentally friendly which, in case of positive perception, may lead to positive brand attitudes and purchase intentions (Elving, 2013; Dach & Allmendinger, 2014, Nyilasy et al. 2014). We found that, in the case of oil companies, the communication of environmentally sustainable initiatives does not seem to be as important for purchase intentions compare to factors such as price, 'perceived consumer effectiveness', and image.

Initially, Johnstone and Tan (2015) argued that price, performance and trust are factors that hinder people to perform 'greener' behaviour. In accordance to this, the questionnaire revealed that in case of the oil industry, price is the most important factor for choosing a petrol station. The majority of respondents chooses the petrol station according to the lowest price and refuels regardless of the occurrence of oil spills and related reputational damage. This finding implies that the resource of oil or petrol is of such importance that people cannot or do not want to stop consuming it. This is exemplified by the finding that half of the respondents who have access to a car disregarded environmental issues when refuelling. We therefore argue that petrol is such a product that is of daily importance for people that they make decisions dependent on the price and neglecting environmental concerns.

Secondly, the concept of 'perceived consumer effectiveness' (PCE) can be applied to explain why people's purchase behaviour is not considerably influenced despite an awareness that oil companies contribute to environmental issues (Albayrak et al. 2011). Almost half of the sample disagreed with the statement that even an individual person can have a big effect on the environment by pursuing a more responsible behaviour towards oil consumption which is a considerably big proportion expressing the trust in one's own ability to being able to make a positive impact. However, depending on knowledge a high trust in one self's ability for achieving change is claimed to more likely to translate into actual purchase (Albayrak et al. 2011). Our findings show that people's knowledge level is fragmentary which minimizes the likelihood for greener purchasing behaviour despite the confidence that one could have the ability to achieve a change.

Thirdly, according to our findings the occasions of oil spills have a negative effect on perceived image for a great share of the sample, whereas the purchasing behaviour is only moderately affected. Despite the noteworthy drop in perceived image only a small amount of respondents chooses to refuel at another petrol station that is not linked to a spill and even fewer respondents boycott affected oil companies. At the same time, many would be willing to increase responsible behaviour by avoiding the car for short distances and switching to public transport, while one third of this sample refuel their car even though they hold a negative image of Shell.

Thus, on the one hand the majority of people expressed that they question oil company's credibility and trustworthiness and that they would like to pursue actions that are considered environmentally friendly. On the other hand, people are sensitive to price and convenience and do not punish oil companies for bad business practices in a significant and consequent way. We agree therefore with Godemann and Michelsen (2011) that is still necessary to find

solutions to create communication for overcoming barriers and to make 'green' purchase more attractive.

6 Conclusion

The last chapter summarizes the key findings of the conducted study, categorized according to the scheme of the Hierarchy of Effects Model to answer the sub-questions. Interrelating these findings allows to answer the study's main research question. Furthermore, this section elaborates on theoretical and managerial implications, limitations as well as further research.

The purpose of this study was twofold since we aimed at (1) increasing the understanding of how people perceive communication about environmental sustainability published by oil companies, and (2) examining how these perceptions affect people's attitudes towards oil companies and resulting purchase intentions. In order to systematically examine perceptions, attitudes and purchase intentions, the Hierarchy of Effects Model suggests that people who are exposed to communication move from a cognitive stage to an affective stage and finally reach the conative stage. During this process, which is influenced by perceptions, people form attitudes that are either positive or negative and lead to respective behaviour.

SQ1: Cognitive

Regarding people's 'rational/thinking' state consisting of the steps awareness and knowledge, we have found that there is a need for informing people more comprehensively about the oil industry and its impact on the environment. Our findings show that the public is aware and concerned about oil company's impact on the environment, however, the higher the awareness the higher the concerns. Further, according to our findings it can be concluded that a company's website is not sufficient enough to act as main communication channel and source of information regarding environmental sustainability performance and efforts. In order to increase the effect on awareness, knowledge and perceptions it is necessary to create environmental sustainability communication that combines company controlled and uncontrolled information.

SQ2-SQ4: Affective

Evaluating the public's 'emotional/feeling' state has led to the conclusion that people desire, expect and appreciate that oil companies address their engagement in environmental sustainability practices. Especially environmental sustainability communication has been found to be of great importance to regain trust of people if the oil company has been involved in business practices or incidents harming the environment. Meanwhile, however, the communication of such efforts has been found to trigger two main issues for oil companies: Firstly, the majority of people approaches delivered messages with scepticism and questions the credibility and trustworthiness. Secondly, most often the motives of communicating environmental sustainable engagement are perceived as being related to the oil companies' intrinsic benefit, namely to increase profit and to please consumers.

SQ5: Conative

The study has shown that the ‘striving/doing’ state is not significantly positive affected by environmental sustainability communication. Purchase intentions are more influenced by factors such as price, perceived consumer effectiveness, and image than by communicating engagement in environmental sustainability efforts. The involvement in negative and harmful incidents for the environment have been found to create the consideration among people of punishing oil companies in terms of, i.e. boycotting the respective company or switching to another brand. However, it could not be concluded whether this change in behaviour can be influenced by environmental sustainability communication.

Returning to the main research question *“How does the communication of environmental sustainability in the oil industry impact people’s attitudes and purchase intentions?”*, it is possible to state that the impact of environmental sustainability communication on people’s attitudes is limited and controversial due to considerably limited cognitive ability, namely fragmented awareness and knowledge. People’s attitudes have been found to be positive towards environmental sustainability in general, however, people tend to have controversial attitudes towards oil companies that utilize environmental sustainability communication since they question oil companies’ motives and credibility. This extends to the findings that environmental sustainability communication does not significantly contribute to the development of more positive attitudes, increased preference for a specific oil company or more probable purchase intentions. Furthermore, company-controlled communication has not been found to create positive premise for perceived credibility, reliability, and trustworthiness of messages among the audience. However, the communication of environmental sustainable initiatives is perceived as a possibility for oil companies to regain trust after involvement in negative environmental impacts.

To summarize, we consider the purpose of this thesis fulfilled by showing that people perceive environmental sustainability communication by oil companies as not credible and also questionable in regards to motives. Further, attitudes towards communication has been identified as being controversial which in turn also results in a significant effect on purchase intentions.

6.1 Theoretical Contribution

To our knowledge, the question of how people perceive communication about environmental sustainability published by oil companies has not yet been researched extensively, which leads to the main theoretical implication of this thesis to fill a gap in existing research.

Firstly, to our knowledge, controversial industries are often discussed in a general term rather than considering the specific industries within this category. We have focused specifically on the oil industry and its respective challenge of how to effectively communicate environmental initiatives towards the public. We found out that environmental sustainability communication

in the context of the oil industry - which is widely considered as polluter - enjoys a considerably high level of scepticism, and low level of credibility and trust. Even though current literature is aware of oil companies controversial position in regards to communicating sustainability efforts (O'Connor & Gronewold, 2013; Nyilasy et al. 2014), we contribute to literature with our findings that negative perceptions and attitudes can be linked to a lack of awareness and knowledge.

Secondly, this thesis examined the public perspective on environmental sustainability communication, and adds to existing literature that is often focusing on specific target groups, such as shareholders and consumers (Jo & Na, 2012; Nyilasy et al. 2014). Exploring the perception of environmental sustainability communication from a public perspective provides general insight on a topic that is of great importance to everyone nowadays. However, this study may be used as groundwork to derive information relevant to specific target groups.

Thirdly, we add to literature (Tucker & Massad, 2005; Lee et al. 2013) that uses the Hierarchy of Effects Model as tool for examining communication effectiveness. The model illustrates how consumers pass through six steps from being exposed to advertisement for building awareness until the actual purchase. We argue that environmental sustainability communication can be considered as advertising and we therefore applied this model to the context of this thesis. It was not surprising that no significant positive effect on people's attitudes and purchase intentions could be detected, however, we contribute with the finding that awareness and knowledge seem to play an important role for the perception of communication by oil companies.

Fourthly, not only do we contribute to the broader literature dealing with CSR communication, we also contribute to a specific research undertaken by Du et al. (2010) and De Vries et al. (2015). Du et al. (2010) asked for research that explores cognitive and affective responses to CSR communication in order to increase the understanding of mechanisms underlying CSR communication effectiveness and related strategic implications. De Vries et al. (2015) suggested that it is necessary for energy companies, such as oil companies, to examine carefully how to communicate environmental initiatives to the public. Confirming that there is a demand for further investigation, our research shows oil companies still struggle with communicating environmental initiatives in a way that limits scepticism and we argue that it is necessary to communicate motives for engagement that evoke the perception of trustworthiness.

Finally, our findings can be used for academics and students who engage with studying sustainability communication. Our research suggests that it is not sufficient enough to engage in sustainability communication due to external, public pressure but that it is crucial to prove genuine motives but also concrete results. Communication effectiveness depends, among other things, on company's characteristics and reputation, and it is therefore necessary to develop messages that address specific issues the company needs to tackle. We argue that such factors need to be taken into consideration in order to prepare messages that relate to reality rather than being perceived as purely rhetorical.

6.2 Practical Implications

Based on our findings and its interrelations we are able to present suggestions for communicating environmental behaviour more effectively - for both companies and audience.

Firstly, given our results that the majority of respondents believed that oil companies communicate environmental behaviour solely for their own profit, it is of necessity to develop communication strategies that reflect motivations in the most honest manner. Being honest about to what extent initiatives towards environmental sustainability are undertaken for extrinsic but also intrinsic reasons, affect positively the perceived authenticity and respectively increases most likely loyalty and purchase power (Parguel et al. 2011; De Vries, 2015). Thus, oil companies need to find communication strategies, which are appropriate to their goals (the more they mean it genuine and the more they want to incorporate it in the overall business practices, the more necessary it is to actively communicate it to the public). In other words, we suggest oil companies to create messages that are supported by proven actions and results since it minimizes scepticism among the audience and creates expectations oil companies can live up to. It appears more suitable for oil companies to only communicate environmental goals that are achievable rather than exaggerating purely due to a feeling of external pressure. A proven record of successful implication of communicated initiatives offer oil companies the chance to establish a sense of trustworthiness which in turn may lead to legitimacy and improved image.

Secondly, it seems of great importance to what extent the communication recipient is familiar with oil extraction methods and related potential dangers as this has an effect on the general evaluation of the communication itself. In times of interconnectedness it is advisable to provide transparency about the applied methods to inform especially consumers. This might have the effect, given an honest documentation, that companies are 'forced' to act as environmentally friendly as possible. Also, extensive and relevant reporting should be supported by introducing guidelines for sustainability reports. Politics is increasingly concerned about the environment and its impacts on businesses and society. It should be therefore in the governments interest to determine rights and duties – both for the public and oil companies.

Thirdly, even if this study did not per se investigate the communication channel, here website, oil companies should invest in communicating their environmental behaviour by means of different distribution channels. Since the minority is visiting an oil company's website to check upon methods or sustainability reports, it might be advisable to address people more actively. We suggest oil companies to develop communication strategies that incorporate offline and online channels in order to achieve integrative communication that triggers interaction and interest. Furthermore, such strategies may benefit from cooperation with third parties such as NGOs that have special expertise within environmental protection. Such an engagement may not only lead to increased credibility but offers also opportunities for enhancing attention, awareness and education.

Fourthly, this study has shown that people perceive oil companies' communication regarding environmental sustainability initiatives with scepticism. However, it should be acknowledged that the general public has shown only limited interest to increase knowledge about the industry's business practices. In order to have a legitimate reason for demanding environmental sustainability reporting it is suggested that the public also has the responsibility to show initiative to educate themselves. 'Green' behaviour and purchase decisions should be based on sufficient awareness and knowledge and, accordingly, people can exert pressure on oil companies. Hence, it should not be taken for granted that people demand reporting while consuming oil in a manner that supports unsustainable business practices and incomprehensive or exaggerating communications.

6.3 Limitations

Given the small sample of 271 respondents, caused due to time constraints, it is not possible to generalize our findings. Due to the fact that most respondents are friends and acquaintances of the researchers, we derive to the following limitation. One can assume that the majority of respondents commanded over similar mind-sets and opinions, which could steer the overall findings towards one direction. This is given as the sample represents a so called super population, meaning that there is a finite number of respondents available (this applies partly as we distributed the questionnaire also by other means than addressing Facebook contacts directly). Furthermore, the sample constitutes of rather young respondents (majority beginning 20) which means that the conclusions made are based on mostly young adults. Older people might have, due to more life experience or other reasons, a different view which would have provided deviant results.

Another reason why this research is not generalizable is that websites as well as perceptions are constantly influenced by external factors, hence, they are rapidly changing (Bryman & Bell, 2011). Apart from that, one has to bear in mind that attitudes and perceptions towards controversial companies are influenced by culture, individual norms and values (Lindgreen et al. 2012). However, given the small amount of respondents and the fact that the majority is living in Europe, we do not have to fear any significant deviations in terms of cultural differences affecting our conclusions.

In terms of content it is important to mention that we did not undertake any further investigations concerning potential drivers of trustworthiness (e.g. if norms and values, culture have an impact determining it), we can only assume that the message and distribution channel of such communication plays an important role and possibly affects the trustworthiness. Furthermore, the 'Impact Assessment Process' is very specific and served as means to an end. However, it is likely that if this study incorporated another communication example, the results would have been different.

As this study sought to investigate perceptions and attitudes, we have not explicitly discussed the relationship of usability, website design and their influence on perceived credibility and motives for why companies engage in web-based corporate sustainability communications (Dach & Allmendinger), which could lead to a more in-depth understanding. Hence, we were interested in how communication is perceived, however, we did not investigate communication itself (e.g. phrasing, rhetorical aspects, formatting or graphical appearance). Moreover, we base our conclusions regarding current and intended purchase behaviour on answers made by respondents, however, we are aware that there is a gap between what people say and what they do. Given the fact that our findings rely solely on our questionnaire, conclusions about the impact of environmental communication on actual purchase intention is not proven by any other evidence (e.g. purchase statistics).

Lastly, as we mentioned in the literature review, the Hierarchy of Effects Model implies that the amount of people that are exposed to the advertisement in the very beginning is considerably higher than the amount of people that purchase the product at the end of the hierarchy. Within the scope of this study we were not able to evaluate the amount of people exposed to communication and how many of those at least intend to purchase as the final stage.

6.4 Further Research

According to the presented implications and limitations we have developed several suggestions for further research that can contribute to a more in-depth understanding of environmental sustainability communication in the context of the oil industry, but also other controversial and even uncontroversial industries.

This study has applied a quantitative research design, however, it might be valuable to apply a qualitative approach, or a mix of qualitative and quantitative approach in order to increase a more holistic perspective on the field of interest. Utilizing mixed methods would contribute to the collection of rich data since correlations between knowledge and trustworthiness, reputation and industry and credibility, and similar variables could be detected while being expanded on in a verbal, more interpretative manner.

Since this study is focusing on the oil industry, which is considered to be part of controversial industries, it might be interesting to conduct research of sustainability communication in other controversial industries, such as gambling. The core business of a company does affect communication strategies and effectiveness, however, further research regarding respective determinants is suggested. We assume that the three pillars of sustainability may be highlighted differently depending on the company's business. Meaning, oil companies highlight environmental initiatives whereas gambling companies may rather engage in social sustainability communication.

Related to the business practices of specific industries, we suggest further research to investigate whether the operation in controversial sectors necessarily leads to perceived unsustainability. This research has found indications for the assumption that scepticism related to controversial industries often trigger distrust, scepticism and other rather negative perceptions. Hence, it would be interesting to find out to what extent predetermined perceptions affect communication, namely to what extent prejudices, reputation and perceptions influence the comprehension of communication and to what extent communication can contribute to an improvement of determines such as image and legitimacy.

Environmental discourses are closely interlinked with societal constructions and cultural variations which implies that it could be of interest to investigate to what extent national, continental and similar cultural or social construct affect the perception of environmental sustainability communication. Also, countries' development level may have an impact on the perception of communication since factors such as awareness and interest may differ and influence perceptions, attitudes and behaviour.

Further research could also be undertaken in regards to differences between so-called controversial and uncontroversial industries. We assume that the company's characteristics, such as reputation and industry, may have an effect on the effectiveness and perception of environmental sustainability communication (Figure 12). It could be valuable to gain a more comprehensive understanding of how these factors influence variables such as trustworthiness, credibility and attitude development among the audience but also how it affects companies' decision making regarding the development of promising communication strategies.

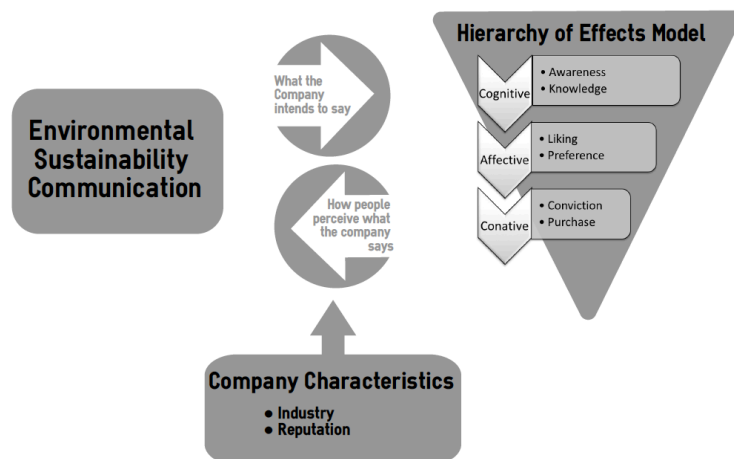


Figure 12: Effects of Company Characteristics on the Perception of Communication

Another suggestion for further research is related to communication channel and its effect on people's perceptions. In order to design effective communication that is accepted and appreciated by communication recipients, it is suggested to investigate further which channels or which combination of media is increasing the likelihood of achieving set communication goals. Studies focusing on communication effectiveness could also take into consideration how messages should be designed and developed in order to evoke greater credibility and more positive attitudes towards messages. Furthermore, it could be of interest to investigate the role of media, governments and non-profit organizations in the communication process

and how they can contribute to greater awareness, education but also regulation and monitoring.

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Appendices

Appendix A: Questionnaire

5/1/2016

Questionnaire - Environmental claims in the oil industry

Questionnaire - Environmental claims in the oil industry

Dear respondent,

Our names are Lisa Schmelz and Michèle Schiermann. We are 'M.Sc. International Marketing and Brand Management' students at Lund University, Sweden. For our master thesis we are examining the public's attitudes regarding environmental claims within the oil/petrol industry.

The following questionnaire will require max. 8 minutes to complete. Please answer every question honestly and keep in mind that there is no right or wrong answer. All obtained data will be treated confidentially and you remain completely anonymous.

If you have any questions, please do not hesitate to contact Michèle Schiermann (gib15msc@student.lu.se).

We appreciate every single participation! Thank you very much.

Lisa Schmelz & Michèle Schiermann

* Erforderlich

PART 1a: General issues about the environment

Please rate the following statements according to the scale. Keep in mind, there is no right or wrong.

1. I am informed about environmental problems (e.g. global warming, ozone depletion, CO2 emissions). *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

2. I am informed about what has caused environmental problems. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

3. I am informed about the consequences of for example global warming on society and environment. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

4. I am concerned about the environment as a whole. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

5. I am concerned about water as a resource. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

6. I am concerned about global warming. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

7. I am concerned about biodiversity loss. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

8. I am concerned about soil pollution. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

9. I am concerned about air pollution. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

10. Environmental problems will not have an effect on my life in the future. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

11. **Me, as an individual, can have an impact on improving environmental problems through action. ***

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

12. **According to you, which of these industries have the biggest contribution to global warming? Choose 3. ***

Wählen Sie alle zutreffenden Antworten aus.

- Air transportation
- Eating and drinking places
- Electric services
- Meat packing plants/factories
- Motor vehicles
- Petroleum (oil) refining
- Retail trade

PART 1b: Status of oil in your life

13. **Do you own a car? ***

Markieren Sie nur ein Oval.

- Yes
- No
- No, but I have access to a car (e.g. of parents, partner, friends, rental)

14. **How often do you fill up your/a car with petrol? ***

Markieren Sie nur ein Oval.

- Several times a week
- Once a week
- 1-2 times a month
- Less than that
- Never

15. **I am interested in how oil companies extract oil. ***

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

16. I know about the methods oil companies apply to extract oil from the ground (e.g. oil platforms in oceans, fracturing). *

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

17. I know about the potential negative impacts these methods have on the environment. *

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

18. These potential negative impacts concern me. *

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

19. Have you heard any negative headlines/news about oil companies harming the environment? *

Markieren Sie nur ein Oval.

- Yes
- No
- Not sure

20. If so, where did you obtain such information? Several answers possible.

Wählen Sie alle zutreffenden Antworten aus.

- Internet
- TV
- Radio
- Newspaper / magazines
- Word-of-mouth (through parents, friends, colleagues etc.)
- NGOs (Non-governmental organizations)
- Web pages of oil companies
- Sonstiges:

Please rate the following statements according to the scale. Keep in mind, there is no right or wrong.

21. In my opinion oil companies have the ability to act ethically. **Markieren Sie nur ein Oval.*

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

22. When I refuel my/a car, I automatically have to think about the environment. **Markieren Sie nur ein Oval.*

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

23. I am willing to use oil more responsibly (e.g. by driving less, avoiding short distances, using more public transport). **Markieren Sie nur ein Oval.*

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

24. As an individual it seems that a more responsible oil behavior (e.g. less driving, avoiding short distances, using public transport) will not have a big effect on the environment. **Markieren Sie nur ein Oval.*

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

PART 2 - Your preferences**25. Where do you preferably buy oil/petrol? ****Markieren Sie nur ein Oval.*

- Popular companies (e.g. Shell, Esso, Sinopec, Chevron)
- Unknown (local/regional) companies
- I do not mind

26. What are crucial factors for your decision where to refuel your/a car? Several answers are possible. *

Wählen Sie alle zutreffenden Antworten aus.

- Lowest Price
- Communicated environmental performance
- Location/convenience
- Promotion activities
- Bonus points/loyalty cards
- Attached supermarket
- Reputation
- No preferences
- Sonstiges:

Please rate the following statements according to the scale. Keep in mind, there is no right or wrong.

27. In my opinion, it is nowadays important that oil companies engage in environmentally friendly business practices. *

Markieren Sie nur ein Oval.

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

28. It is trustworthy, when oil companies claim environmentally friendly behavior. *

Markieren Sie nur ein Oval.

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

29. I prefer petrol stations, which claim environmentally friendly oil extraction. *

Markieren Sie nur ein Oval.

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

30. I am skeptical whether such claims are true. *

Markieren Sie nur ein Oval.

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

31. **I believe oil companies are successful in minimizing their environmental impacts when claiming it. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

32. **I would forgive an oil company a single catastrophe (e.g. spill) as exception, if the company had a record of positive prior environmental achievements. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

33. **Annual environmental reports published by oil companies demonstrate a proof of actual good behavior. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

34. **I have read such an annual environmental report published by oil companies. ***

Markieren Sie nur ein Oval.

- Yes
- No
- No, but I am interested and will have a look into one.

Your opinion

35. **Do you have a positive image of Shell? ***

Markieren Sie nur ein Oval.

- Yes *Weiter mit Frage 36*
- No *Weiter mit Frage 37*
- No opinion *Weiter mit Frage 42*

36. **I have a positive image of Shell, so I... ***

Wählen Sie alle zutreffenden Antworten aus.

- trust Shell more what they say than other brands
- think they are credible and legitimate
- purchase more frequently at Shell
- buy more in total
- Sonstiges:

Weiter mit Frage 39

37. I have a negative image of Shell, so I... *

Wählen Sie alle zutreffenden Antworten aus.

- distrust what they say
- doubt Shell's credibility and legitimacy
- switch to another petrol station
- buy less in total
- boycott

38. I have a negative image of Shell as well as of other oil companies, but I need to buy oil anyways. *

Markieren Sie nur ein Oval.

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

39. Do you think that Shell is offering a 'good' product? *

Markieren Sie nur ein Oval.

- Yes
- No
- No opinion

It is important that you read through the following environmental statement published on Shell's webpage. Afterwards, please rate what you have read (for a better readability press strg and + to zoom).



Our impact assessment

We use a consistent process around the world when we start a new project or make changes to existing facilities. Our impact assessments help us to manage and reduce any negative impacts throughout our projects and can influence the direction of a project.

During the project development process we review the following:

- we assess the potential environmental, social and health impacts of the project;
- we carry out detailed studies so we understand any specific local risks. This may include risks such as water shortage, cultural heritage or security issues; and
- we engage with local communities to understand their concerns, often in partnership with non-governmental organisations that are already working in the area.

These assessments also help us to identify where we can bring a positive legacy to the community, through our social investment programmes.

Source: <http://www.shell.com/sustainability/our-approach/impact-assessment.html>

40. I understand what Shell's "impact assessment process" is about. **Markieren Sie nur ein Oval.*

- Yes *Springen Sie nach der letzten Frage in diesem Abschnitt zu Frage 42.*
- No *Springen Sie nach der letzten Frage in diesem Abschnitt zu Frage 53.*
- Most of it *Springen Sie nach der letzten Frage in diesem Abschnitt zu Frage 42.*

41. Shell, as an oil company, is a credible source for promoting environmental sustainability. **Markieren Sie nur ein Oval.*

- Yes
- No
- I do not have an opinion

Your opinion about Shell's "impact assessment process"

Please rate the following statements according to the scale. Keep in mind, there is no right or wrong.

42. I find the message appealing. **Markieren Sie nur ein Oval.*

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

43. I find the message interesting. **Markieren Sie nur ein Oval.*

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

44. I find the message authentic. **Markieren Sie nur ein Oval.*

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

45. It made me angry reading it. **Markieren Sie nur ein Oval.*

	1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

46. It is necessary for oil companies to publish such statements. *

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

47. Since this is published on Shell's webpage, I believe what they say. *

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

48. I think they only say that to please the consumers. *

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

49. I prefer oil companies/petrol stations, such as Shell, which publish such statements. *

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

50. To emphasize my personal environmentally friendly behavior, it is important for me knowing that certain oil companies claim to do good. *

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

51. I think that Shell's environmental claims are contradicting with their actual business. *

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

52. In my opinion, Shell uses such claims... *

Markieren Sie nur ein Oval.

- for their own benefit (e.g. to increase sales and profit)
- as a genuine interest in doing good
- for both own benefits and doing good

Your opinion about the consequences of irresponsible behavior of oil companies

Please have a look at the following photos illustrating potential dangers within the oil industry.

Explosion on oil rig, pollution of water and air



Oil spill affecting animals' survival



Oil spill affecting coast and people



Deforestation of world's most valuable tropical rain forests to expand palm oil plantations



Please rate the following statements according to the scale. Keep in mind, there is no right or wrong.

53. The media is exaggerating, it is actually not that bad. *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

54. **I know that this can happen when extracting oil. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

55. **Seeing these photos makes me angry. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

56. **Seeing these photos makes me sad. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

57. **Seeing these photos makes me feel guilty. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

58. **Seeing these photos scares me for the future. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

59. **I think that environmental catastrophes linked to oil extraction are (completely) unavoidable. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

60. **I try to avoid those companies, which harmed the environment in such a way. ***

Markieren Sie nur ein Oval.

1	2	3	4	5		
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

61. **These photos let me doubt about the truthfulness of Shell's claims ("We assess the impacts BEFORE taking action"). ***

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

62. **I already boycott certain petrol stations. ***

Markieren Sie nur ein Oval.

- Yes
- No
- Sometimes
- No, but I consider it.

PART 3: Influences on own behavior

63. **If oil companies communicate environmentally friendly behavior, I tend to purchase their oil. ***

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

64. **Negative headlines (e.g. oil spills) do not stop me from refueling cars at certain companies. ***

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

65. **If an oil company spills oil into the ocean, it affects my image of them negatively. ***

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

66. **If an oil company spills oil into the ocean, they should communicate their environmental effort to regain my trust. ***

Markieren Sie nur ein Oval.

1	2	3	4	5	
Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Agree

67. **I prefer oil companies, which do not actively claim environmental behavior.** *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

68. **Oil companies, which communicate environmental friendliness are unreliable.** *

Markieren Sie nur ein Oval.

1 2 3 4 5

Disagree Agree

69. **If I hear that oil companies harm the environment through certain incidents (such as oil spills, emissions, biodiversity loss), I...** *

Wählen Sie alle zutreffenden Antworten aus.

- read more about what happened
- talk to friends and family about it
- choose another petrol station
- participate on demonstrations
- tend to ignore it (I am not interested in it)

Last part: Demographics

70. **What is your gender?** *

Markieren Sie nur ein Oval.

- Male
- Female

71. **What is your age?** *

.....

72. **What is your nationality? (Please use 3-letter country code. For example Germany= GER, Sweden= SWE, Netherlands= NLD. If unsure, check <https://countrycode.org/>)** *

.....

73. What is the highest education you have completed? *

Markieren Sie nur ein Oval.

- Basic school
- High school
- Apprenticeship
- Undergraduate/bachelor degree
- Postgraduate/master degree
- Ph.D.
- Sonstiges:

Bereitgestellt von



Appendix B: Frequency Distribution – Cognitive Stage

Question/ statement	Disagree (1+2)	Neutral (3)	Agree (4+5)	Mean
I am informed about environmental problems (e.g. global warming, ozone depletion, CO2 emissions).	6,3% (n= 17)	16,6% (n= 45)	77,1% (n= 209)	4,05
I am informed about what has caused environmental problems.	5,5% (n= 15)	15,5% (n= 42)	79% (n= 241)	4,00
I am informed about the consequences of for example global warming on society and environment.	5,5% (n= 15)	17% (n= 46)	77,5% (n= 210)	4,01
I am concerned about the environment as a whole.	4,4% (n= 12)	15,1% (n= 41)	80,5% (n= 218)	4,27
I am concerned about water as a resource.	9,6% (n= 26)	18,1% (n= 49)	72,3% (n= 196)	4,01
I am concerned about global warming.	5,9% (n= 16)	14% (n= 38)	80,1% (n= 217)	4,14
I am concerned about biodiversity loss.	12,2% (n= 33)	22,5% (n= 61)	65,3% (n= 177)	3,86
I am concerned about soil pollution.	12,2% (n= 33)	21% (n= 57%)	66,8% (n= 181)	3,83
I am concerned about air pollution.	3,7% (n= 10)	11,8% (n= 32)	84,5% (n= 229)	4,24
Environmental problems will not have an effect on my life in the future.	82,7 % (n= 224)	9,2% (n= 25)	8,1% (n= 22)	1,76
Me, as an individual, can have an impact on improving environmental problems through action.	13,3% (n= 36)	19,9% (n= 54)	66,7% (n= 181)	3,84
I am interested in how oil companies extract oil.	41,3% (n= 112)	25,5% (n= 69)	33,2% (n= 90)	2,93
I know about the methods oil companies apply to extract oil from the ground (e.g. oil platforms in oceans, fracturing).	39,9% (n= 108)	27,3% (n= 74)	32,8% (n= 89)	2,85
I know about the potential negative impacts these methods have on the environment.	25,5% (n= 69)	28% (n= 76)	46,5% (n= 126)	3,32
These potential negative impacts concern me.	10,7% (n= 29)	29,9% (n= 81)	59,4% (n= 161)	3,75

Appendix C: Frequency Distribution - Affective Stage

Question/ statement	Disagree (1+2)	Neutral (3)	Agree (4+5)	Mean
In my opinion oil companies have the ability to act ethically.	19,2% (n= 52)	28,8% (n= 78)	52% (n= 141)	3,53
When I refuel my/a car, I automatically have to think about the environment.	48% (n= 130)	28,8% (n= 78)	23,2% (n= 63)	2,63
I am willing to use oil more responsibly (e.g. by driving less, avoiding short distances, using more public transport).	9,2% (n= 25)	19,9% (n= 54)	70,8% (n= 192)	3,97
As an individual it seems that a more responsible oil behavior (e.g. less driving, avoiding short distances, using public transport) will not have a big effect on the environment.	45% (n= 122)	25,8% (n= 70)	29,2% (n= 79)	2,72
In my opinion, it is nowadays important that oil companies engage in environmentally friendly business practices.	4,4% (n= 12)	13,7% (n= 37)	81,9% (n= 222)	4,26
It is trustworthy, when oil companies claim environmentally friendly behavior.	53,9% (n= 146)	29,5% (n= 80)	16,6% (n= 45)	2,50
I prefer petrol stations, which claim environmentally friendly oil extraction.	23,2% (n= 63)	40,2% (n= 109)	36,5% (n= 99)	3,17
I am skeptical whether such claims are true.	3% (n= 8)	16,6% (n= 45%)	80,4% (n= 218)	4,21
I believe oil companies are successful in minimizing their environmental impacts when claiming it.	49,1% (n= 133)	36,2% (n= 98)	14,7% (n= 40)	2,54
I would forgive an oil company a single catastrophe (e.g. spill) as exception, if the company had a record of positive prior environmental	39,5% (n= 107)	30,6% (n= 83)	29,9% (n= 81)	2,79

achievements.				
Annual environmental reports published by oil companies demonstrate a proof of actual good behavior.	43,5% (n= 118)	45% (n= 122)	11,4% (n= 31)	2,48
I have a negative image of Shell as well as of other oil companies, but I need to buy oil anyways. (missing: 56,8%, n= 154)	17,9% (n= 21)	8,5% (n= 23)	26,9% (n= 73)	3,65
I find the message appealing.	29,8% (n= 73)	53,1% (n= 130)	17,1% (n= 42)	2,82
I find the message interesting.	25,7% (n= 63)	37,1% (n= 91)	37,2% (n= 91)	3,07
I find the message authentic.	50,6% (n= 124)	40,8% (n= 100)	8,9% (n= 21)	2,45
It made me angry reading it.	40,8% (n= 100)	43,7% (n= 107)	14,9% (n= 38)	2,63
It is necessary for oil companies to publish such statements.	11,4% (n= 28)	38,8% (n= 95)	49,8% (n= 122)	3,51
Since this is published on Shell's webpage, I believe what they say.	70,2% (n= 172)	24,5% (n= 60)	5,3% (n= 13)	2,00
I think they only say that to please the consumers.	9,8% (n= 24)	28,2% (n= 69)	62% (n= 152)	3,76
I prefer oil companies/petrol stations, such as Shell, which publish such statements.	46,9% (n= 115)	43,7% (n= 107)	9,3% (n= 23)	2,39
To emphasize my personal environmentally friendly behavior, it is important for me knowing that certain oil companies claim to do good.	30,6% (n= 75)	39,6% (n= 97)	29,8% (n= 73)	2,87
I think that Shell's environmental claims are contradicting with their actual business.	10,2% (n= 25)	38,8% (n= 95)	51% (n= 125)	3,62
The media is exaggerating, it is actually not that bad.	87,1% (n= 236)	9,6% (n= 26)	3,3% (n= 9)	1,56
I know that this can happen when extracting oil.	5,2% (n= 14)	8,9% (n= 24)	86% (n= 133)	4,31
Seeing these photos makes me angry.	6,3% (n= 17)	16,2% (n= 44)	77,5% (n= 220)	4,14

Seeing these photos makes me sad.	2,2% (n= 6)	5,2% (n= 14)	92,6% (n= 251)	4,51
Seeing these photos makes me feel guilty.	28% (n= 76)	27,3% (n= 74)	44,2% (n= 121)	3,23
Seeing these photos scares me for the future.	11,4% (n= 31)	15,5% (n= 42)	73% (n= 198)	3,98
I think that environmental catastrophes linked to oil extraction are (completely) unavoidable.	54,2% (n= 147)	21,4% (n= 58)	24,4% (n= 66)	2,57
I try to avoid those companies, which harmed the environment in such a way.	28% (n= 76)	36,2% (n= 98)	35,8% (n= 97)	3,16
These photos let me doubt about the truthfulness of Shell's claims ("We assess the impacts BEFORE taking action").	10% (n= 27)	29,9% (n= 81)	60,1% (n= 163)	3,77

Appendix D: Frequency Distribution - Conative Stage

Question/ statement	Disagree (1+2)	Neutral (3)	Agree (4+5)	Mean
If oil companies communicate environmentally friendly behavior, I tend to purchase their oil.	36,9% (n= 100)	39,5% (n= 107)	23,6% (n= 64)	2,75
Negative headlines (e.g. oil spills) do not stop me from refueling cars at certain companies.	38% (n= 103)	31% (n= 84)	31% (n= 84)	2,86
If an oil company spills oil into the ocean, it affects my image of them negatively.	4,8% (n= 13)	12,9% (n= 35)	82,3% (n= 223)	4,30
If an oil company spills oil into the ocean, they should communicate their environmental effort to regain my trust.	13,3% (n= 36)	24,4% (n= 66)	62,4% (n= 169)	3,69
I prefer oil companies, which do not actively claim environmental behavior.	43,2% (n= 117)	46,9% (n= 127)	10% (n= 27)	2,49
Oil companies, which communicate environmental friendliness are unreliable.	31,4% (n= 85)	49,1% (n= 133)	19,6 (n= 53)	2,86