# How consumers assess sustainability claims

**With the focus on exclusiveness of language and consumer's expertise on sustainability**

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# Preface

In front of you lies the master thesis 'How consumers assess sustainability claims'. It has been written to fulfill the Master's programme in Business Administration at Radboud University. I would like to thank my supervisors, Dr. B. Hillebrand and Dr. N.G. Migchels, for their guidance and support during this process. I am grateful to all the participants who took the time and effort to participate in the experiment and helped me to get the data I needed. I also benefited from debating with Henk Steentjes, who helped me in formulation the vignettes. Nijmegen Centre for Academic Writing helped me in writing a clear story. Finishing my thesis was not possible without the help I got from my family and friends. I would like to thank my family, friends and, in particular my parents, for their support and motivation.

# Abstract

Previous research has demonstrated that the perceptions of the stakeholder concerning the sustainability performance of the firm, is likely to be affected by the interaction between exclusiveness of language in sustainability claims and the expertise of the stakeholder on sustainability. However, the role of consumers in this research was minor. Furthermore, the consumer was assumed to have little expertise concerning sustainability. This study focussed on consumers and assumed that consumers can possess different levels of expertise on sustainability. Hence, this study investigated the effects on consumers' perception of sustainability performance of the firm and the consumer perception of the credibility of the claim, caused by the exclusiveness of language in sustainability claims and the level of expertise of consumers in sustainability. An experiment was conducted with 165 participants. Inclusive and exclusive sustainability claims, were used as vignettes to manipulate the participants. The results demonstrated that the consumers' perception of the sustainability performance of the firm was affected by an interaction between exclusiveness of language in sustainability claims and the level of expertise of the consumer in sustainability. The combination of an inclusive sustainability claim and high expertise on sustainability leaded to lower perceived sustainability performance, while this perception for other combinations of exclusiveness of language and level of expertise was assumed to be the same. Therefore, using exclusive language in claims is the most robust option for managers. Furthermore, perceived claims credibility had a positive effect on perceived sustainability performance and perceived sustainability performance had a positive effect on attitude towards the firm. Not as expected, perceived claim credibility was not affected by the level of expertise, exclusiveness of language or their interaction.

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# Chapter 1 Introduction

## § 1.1 Introduction

Sustainability is a major topic for businesses and most managers have accepted corporate sustainability as a precondition for doing business (Dyllick & Hockerts, 2002) since the beginning of the 21st century. Corporate communication has a crucial role to play in forming perceptions about the role of ethics in the firm (Parquel, 2011). Therefore, many companies are eager to lay claim to their commitment to corporate social responsibility (CSR) (Moratis, 2017). Such claims may protect corporate reputation, positively influence public perception, increase market share and improve stakeholder relations. Or in more general terms, companies make public commitments to secure resources and goodwill (King et al., 2005). Since this research focusses on consumers, their beliefs and involvement with sustainable and environmental responsibilities correlate strongly with the intention to buy the more sustainable products (Collins et al., 2007; Schlegelmilch et al., 1996; Vermeir & Verbeke (2006). Consequently, it is important for businesses to understand whether, when and how consumers perceive and react to their sustainability actions (Fatma et al., 2015). Not being able to substantiate such claims in a credible way may involve risks with regard to reputation and trustworthiness for the companies concerned and may result in scepticism and a lack of credibility (Moratis, 2017). When people notice that a firm does not live up to the claims they make, this may harm a firm's credibility. For example, strong sustainability performance enhances consumers' attitude towards the firm (Parguel et al., 2011), but when consumers perceive the company's claim to be greenwashing, their attitude towards the firm is damaged (Peattie et al., 2009).

Companies are not able to mask all the signals that might reveal they do not live up to their claims. Research has shown that firms use a different type of language as they (de)couple policy and practice (Crilly et al., 2016). When company's actions differ from their claims, decoupling policy and practice, they use a less complex style of language. Decoupling is reflected more in how firms structure and express their policy rather than in the content of what they say (Tenbrink & Freksa, 2009), because the content is easier to manipulate than the structure of language (Ireland & Pennebaker, 2010). The type of language that is used more by firms that decouple policy and practice, the so-called decouplers, is inclusive language. Inclusive language is reflected by the use of sweeping statements where relationships between concepts remain vague. Companies that implement policy in their practice, the so-called implementors, often use exclusive language. Exclusive language contains more nuance by highlighting the compromises and trade-offs in their claims (Crilly et al., 2016). The relationship between language and a speaker's mental representation derives from the cognitive linguistic perspective (Hart, 2014).

The cognitive-linguistic perspective not only has implications for how businesses communicate their claims, but also for how stakeholders interpret these claims (Hart, 2011). Identifying nuanced differences in language is difficult (DePaulo et al., 2003; Loftus, 2010). In judging the reliability of claims, many people do not pay attention to linguistic cues (Hancock et al., 2007). The majority of the people are more inclined to associate messages with honesty, because they encounter more truthful than deceptive messages in their daily lives (O'Sullivan et al., 1988). It is interesting to note that some stakeholders, called generalists, do not see through deceptive claims, while other stakeholders, called specialists, are able to see through these claims (Crilly et al., 2016). The deception in these claims is due to the use of exclusiveness in language concerning sustainability, which is part of the cognitive linguistic perspective. The difference between generalist and specialist stakeholders is that generalists focus on different domains while specialists focus on one domain. As a consequence, specialists are expected to have more expertise about that specific domain. This expertise helps them in finding cues in sustainability claims to distinguish between truthful and deceptive claims. To be more precise, stakeholders with higher expertise are better able to notice deception through the exclusiveness of language than consumers with lower expertise.

The results that have been found by Crilly et al. (2016) apply for (1) stakeholders who monitor firms and (2) resource providing stakeholders. However, the role of consumers in this study is minor. Although Crilly et al. (2016) included consumers in their data set, fewer than 7% of stakeholders in the sample (108 numerical evaluation) had direct business transactions as customers or suppliers. Overall, there is a lack of reliable data about the impact of exclusiveness of language in a consumer setting. So, do consumers perceive claims as more or less sustainable depending on the exclusiveness of language? Consumers are very relevant stakeholders for companies because consumers buy their products and services (Looser & Wehrmeyer, 2015). Consumers are frequently dominant stakeholders for firms because of their high levels of legitimacy and power (Mitchell et al., 1997). The impact that are tested in this research are not expected to differ for consumers, compared to the findings for general stakeholders by Crilly et al. (2016). This research does not share the assumption by Crilly et al. (2016) that all consumers are generalists, which means that consumers possess low levels of expertise. This research assumes that the level of expertise differ between consumers.

In conclusion, businesses claim to be sustainable with the aim of securing resources. In a consumer setting this means earning money by selling their products to consumers. The effectiveness and credibility of these claims depend on the exclusiveness of language in their claims and the level of expertise of the consumer. Therefore, the objective of this study is to investigate the effects on consumers' perception of the sustainability performance of companies caused by exclusiveness of language in sustainability claims and the level of expertise of the consumer in sustainability. Claim credibility may play a role in explaining this relationship. The following research question was formulated:

*How does exclusiveness of language in sustainability claims and the level of expertise of the consumer in sustainability affect the consumer's perceptions of claim credibility and sustainability performance of the firm?*

## §1.2 Relevance

A distinction is made between theoretical relevance and practical relevance.

### §1.2.1 Theoretical relevance

Research on linguistic cues as predictors of deception has focussed mainly on the communicator. How people perceive these linguistic cues has been underresearched (Hancock et al., 2007). This study contributes to a better understanding of how exclusiveness of language is perceived. Exclusiveness of language might be a factor that affects claim credibility and credibility might be the underlying mechanism in how exclusiveness of language affects perceived sustainability performance. In addition to referencing Crilly et al. (2016), this research focusses on the consumer as stakeholder and their perceived credibility of the claim. Comparing the results of this research with those of Crilly et al. (2016) may increase our understanding of how representative (general) stakeholder research is for consumers. Since consumers are a subgroup in the stakeholder framework, this research contributes to the question: to what extent are the results for stakeholder studies generalisable for a specific stakeholder group as consumers? Subsequently, is the effect of exclusiveness of language generalisable for all consumers or does level of expertise of the consumer play a role? The result of this study could affect the importance of the level of consumer expertise in the field of cognitive linguistic consumer research.

## §1.2.2 Managerial relevance

For managers it is relevant to know to what extent consumers are able to detect differences in exclusiveness of language and to what extent these differences affect the consumers' perceptions of the firm. By knowing who can detect differences in exclusiveness of language, firms can adapt their claims to the kind of consumers they target in their campaigns. This research gives managers insights about the role of expertise of the consumer on sustainability and how this interacts with exclusiveness of language. The impact of exclusiveness of language, level of expertise and their interaction is measured by perceived sustainability performance. The purpose of sustainability claims is to increase the consumer's perception about the sustainability performance of the claim. As a result, differences in perceived sustainability performance can be seen as the effectiveness of the claims. Companies can increase the effectiveness of their claims by using a specific amount of exclusiveness of language in their claims. They can guard against the negative effect of using the wrong amount of exclusive language on their perceived sustainability performance. The credibility of the claims is also considered in this research. As a consequence of this research, managers may be able to gain insights into how exclusiveness of language might help them in managing the credibility of their firms.

## § 1.3 Structure of the report

In chapter 2, the theoretical background is discussed, focussing on cognitive linguistic perspective as the main theory, and the conceptual model with its corresponding hypotheses. In chapter 3, the methodology is explained. The results are discussed in chapter 4. Chapter 5 includes the conclusions, discussion, implications, limitations and suggestions for future research.

# Chapter 2 Theoretical background

The theoretical background begins with the cognitive linguistic perspective, since this perspective is the main theory in this research. The core variables and the hypotheses are discussed in the theoretical framework. Eventually, the conceptual framework is presented.

## §2.1 Cognitive linguistic perspective

The heart of the theoretical foundation in this research derives from the cognitive linguistic perspective. Exclusiveness of language is part of the cognitive linguistic perspective that deals with the structure, also called grammar, of language used. Language is strategically used by businesses to persuade others and to present themselves in the most favorable ways (Mills, 1940; van Leeuwen, 2008). In addition to content, grammar is used to guide communication in a particular direction through the choices the speaker makes (Hart, 2014). This relationship between language and the speaker's mental representation derives from the cognitive linguistic perspective (Hart, 2014).

The cognitive linguistic perspective affects both how claims are communicated and how claims are perceived (Hart, 2011). Distinct cognitive processes underlie the differences in how thoughts are structured and expressed, and what is in the content (Tenbrink & Freksa, 2009). Grammar is harder to manipulate consciously than the content of communications (Ireland & Pennebaker, 2010). This means that deception in communication rather comes to the fore in linguistic structure than in content. This characteristic makes it useful to focus on grammar for distinguishing between deceptive and truthful claims (Crilly et al., 2016).

To communicate the distinction between different points of view or to describe contingencies, complex linguistic structures are often needed to transfer the correct understanding (Pennebaker & King, 1999). In practice, grammatical words are used as cues to mental models (Axelrod, 2015) by linking concepts as contradictory or parallel to each other (Langacker, 2008). For example: *Strawberries and bananas are fruits, but a cauliflower is a vegetable*. The word "and" indicates that strawberries and bananas are parallel, because they are in the same category, namely fruits. The word "but" indicates that cauliflowers are not part of the category of fruits.

Truthful communication links and contrasts ideas in a more nuanced way than deceptive communication does, which shows evidence of simpler structures. Deceiving claims, or deceptive communication in general, are less cognitively complex than truthful claims (Newman et al., 2003). Deceivers reduce cognitive complexity in their communication, because not being truthful is assumed

to be cognitively demanding (Vrij et al., 2010). So, lacking complexity in language might be an indication of lacking a good understanding of the situation or of deception. Having established an understanding of how difference in the complexity in language is formed, paragraph 2.2.3 elaborates on the differences in complexity and how they are perceived.

## §2.2 Theoretical framework

In the theoretical framework the following variables are discussed consecutively: perceived sustainability performance, perceived claim credibility, exclusiveness of language and level of expertise.

### §2.2.1 Perceived sustainability performance

This research focusses on claims on the subject of sustainability. Sustainability can be defined as economic, ecological and social initiatives that help companies meet their short-term financial needs without compromising their (or others') ability to meet their future needs (Bansal & DesJardine, 2014). Sustainability is a broad concept that can be segmented into six domains: economic, environmental, social (labour practice and decent work), human rights, society and product responsibility (Global Reporting Initiative (GRI), 2002). See appendix 4 for more details on the domains of sustainability. Although sustainability is acknowledged as a comprehensive concept, this is not discussed further since exclusiveness of language is the main focus of this research. There is a considerable amount of literature of how to measure the sustainability performance of a firm. These measurements are often objective and of a technical nature. Since this research focusses on consumers, the overall perception of the consumer about the sustainability performance of a firm is measured.

It is difficult for consumers with little expertise on sustainability to assess sustainability performance in a very specific way. The data lacked reliability when consumer were asked about objective sustainability performance using very specific items on domains they had barely heard of. Therefore perceived sustainability performance is measured in a more abstract and subjective way, as the perceived engagement of the firm in sustainability. Perceived sustainability performance is defined as the extent to which the consumer believes that the firm is engaged in sustainability.

In the research literature, perceived performance of the firm is also referred to as attitude towards the firm. Or, to put it another way, attitude towards the firm is often measured by the perception of the performance of the firm. For example, attitude towards the ad is formed as a perception on the basis of an analysis of the ad (Lutz et al., 1983). The reason for this is that attitude is a hypothetical construct

that is not observable, but is derived from responses (Van Der Plight & De vries, 1995), and is, therefore, similar like perceived performance. So in this theoretical framework, theories about attitude towards the firm are used to make hypotheses about perceived performance.

## §2.2.2 Perceived claim credibility

Credibility is in an important area of research in communication research and is mostly focussed on source credibility (Appelman & Sundar, 2016). In this research, the focus is on message credibility and not on source credibility because type of language is a characteristic of the message. Message credibility and source credibility are related to each other since the *a priori* image of the source affects the credibility of the claim, especially when consumer process it carefully (Goldberg & Hartwick, 1990). In other words, when the source is perceived as not credible, their claim is perceived as not credible too. In support Lutz (1985) has suggested that message credibility is affected by source credibility and claim discrepancy. To complete the concept of credibility, medium credibility also affects the credibility of the message (Metzger et al., 2003). For that reason, it is important to allow for these effects in research methodology.

There is a lack of appropriate definitions for perceived claims credibility. The problem in credibility studies is that there is no definition provided or credibility is often defined by its own components. Message credibility in the context of news obtained from the media can be defined as an individual's judgment of the veracity of the content of communication (Appelman & Sundar, 2016). In this research, a consumer or brand context is more applicable and, hence, ad credibility fits better with claim credibility than the general terms of message credibility. Lutz (1985) has defined ad credibility as the extent to which a consumer perceives the claims made about a given brand to be truthful. Goldberg and Hartwick (1990) have stated that the concept of ad credibility encompasses truthfulness and believability. Combining the definitions above, in this research perceived claims credibility is defined as the extent to which a consumer perceives the claims to be veracious.

In this research, a sustainability claim is made by a firm, which immediately makes the claim less credible, because claims from a corporate source are considered biased in contrast to non-corporate sources (Du & Vieira, 2012). Ad credibility, and other perceptions of an ad, influence individual attitudes concerning both the brand being advertised and the ad itself (MacKenzie & Lutz 1989). So the attitude of the the firm that advertises, and in this study the perceived performance of the firm that made the sustainability claim, are affected by the credibility of the ad or the claim. On that account, the following hypothesis was formulated:

*Hypothesis 1: More perceived claim credibility leads to more perceived sustainability performance.*

Moreover, in the context of sustainability performance, compliance is a very important topic that relates to credibility. If firms do not live up to the claims they make about their sustainability policy, people will not believe their claims anymore, and, thus the firms will lose credibility. In other words, when companies deliberately do not honor their sustainability claims,consumers' attitudes towards the firm are damaged (Peattie et al., 2009). Therefore, it is important to find out if exclusiveness of language affects the credibility of the claim and, subsequently, affects the perceived sustainability performance. Eventually, the importance of compliance is also emphasized by GRI (2002) (see appendix 4) since three out of six domains has compliance as an aspect.

## §2.2.3 Exclusiveness of language

The element of the cognitive linguistic perspective that is applied in this research is the exclusiveness of language. In the existing literature, the general term 'type of language' is often used to indicate differences in language. Exclusiveness of language is chosen as the term to point out the specific differences in language that this research is concerned with. Exclusiveness of language is seen as a continuum with two extremes, exclusive language and inclusive language, and a space in between when exclusive language is combined with inclusive language. Despite the fact that there are no prevailing definitions available, exclusiveness of language is defined by its characteristics. Exclusiveness of language is the extent to which a text contains restrictive, nuanced and well considered formulations, rather than additive, open-ended and vague formulations.

Exclusive language draws distinctions between ideas by contrasting concepts, qualifying statements and providing caveats (König, 1991). For example: *The objective of firm x is to maximize value for the firm, but not at the cost of its stakeholders.* In this example a distinction is drawn between the interest of the firm and its stakeholders. Exclusive language uses a category of words consisting mainly of conjunctions, prepositions, and negations, such as 'versus', 'but', 'only', 'not' and 'if' (Pennebaker & King, 1999). These words make a distinction concerning what belongs to a category, but, most of all, what does not (Toma & Hancock, 2012). Exclusive language is used to highlight necessary trade-offs and compromises (Crilly et al., 2016). In the example above, 'but not' is used to indicate the trade-off between the interest of the firm and the interests of their stakeholders.

Inclusive language consist of additive particles (König, 1991), that, compared to exclusive language, lack specification of the relationship between ideas. For example: *The objective of firm x is to maximize value for the firm and all its stakeholders.* In this example there is no difference in what is more important. Inclusive language connects ideas as essentially equivalent using conjunctions such

as 'all' and 'also' (Crilly et al., 2016). Inclusive language uses a category of words, mainly conjunctions, prepositions, and some adverbs, including 'and' and 'additionally' (Pennebaker & King, 1999). In the example 'and' is used to connect the firm and its stakeholders as equal and 'all' is used to indicate that the stakeholders of the firm fall in the same category.

The exclusiveness of language differ on the point of cognitive complexity, because of the number of interdependencies that are communicated. As stated in paragraph 2.1 of this chapter concerning the cognitive linguistic perspective, communicating interdependencies between different dimensions of performance is consistent with complex thinking (Conway et al., 2008). So, exclusive language is cognitively more complex than inclusive language because the restrictive particles in exclusive language point out more interdependencies between different concepts, compared to the additive particles in inclusive language. Comparing both examples, the example for inclusive language treats the firm and its stakeholders as equal, while in the examples of exclusive language they are not. In the example of exclusive language, maximizing the value of the firm is paramount, under the condition that the value for its stakeholder is not damaged.

Also explained in paragraph 2.1, deceptive communication is less cognitively complex than truthful communication. In deceptive communication, low complexity come to the fore in a low prevalence of exclusive language (Hancock et al., 2007; Newman et al., 2003). For example, firms use different levels of exclusiveness of languages depending on to what extent they (de)couple actions and statements (Crilly et al., 2016). Implementers use more exclusive language while decouplers use more inclusive language (Crilly et al. 2016).

Identifying these nuanced differences in language is difficult (DePaulo et al., 2003; Loftus, 2010). There are studies that provide evidence for perceiving deceptive claims successfully and studies that demonstrate that there is no convincing evidence for the perception of deceptive claims. The existing research has focussed on deceptive claims or (cognitive) linguistic cues in general.  For example when people chat online with each other, they do not pay attention to linguistic cues for judging each others communication as deceptive or not (Hancock et al., 2007). Furthermore, except for the number of words in a sentence, there are no linguistic cues that were found to be significant predictors of deception when trustworthiness is measured (Toma et al., 2012). Also when stakeholders judge the sustainability claims of companies, some stakeholders (specialists) are better at detecting deceptive claims than other stakeholders (generalists) (Crilly et al., 2016). Due to these two-sided results in detecting deceptive claims by cognitive linguistic cues, it is interesting to consider what causes the differences in these results.

Businesses that used exclusive language in their sustainability claims were perceived as more sustainable than businesses that used inclusive language. The mechanism that underlies this effect might be credibility. The starting point is that inclusion of details in statements enhances the credibility of the statement (Vrij et al., 2010). Exclusive language includes more details about the relationship between two or more concepts, because restrictive particles in exclusive language points out more interdependencies between different concepts, compared to the additive particle in inclusive language. Consequently, exclusive language should be perceived as more credible than inclusive language.

> *Hypothesis 2: More exclusiveness in language in sustainability claims leads to more perceived claim credibility.*

## §2.2.4 Level of expertise

Some stakeholders, the generalists, do not see through decoupled claims, while other stakeholders, the specialists, are able to see through these claims (Crilly et al., 2016). The argumentation for this is that some stakeholders might lack adequate information and might fail to understand whether companies consistently implement the policies they lay claim (Crilly et al., 2016). Crilly et al. (2016) have defined specialists as stakeholders who focus their attention on a single issue and generalists as stakeholders who attend to a broad range of issues. Moreover, specialist stakeholders have a narrow focus, and they are likely to develop domain specific expertise. This research utilises the concept of specialist and generalist stakeholders, taking into account the level of expertise on sustainability topics by consumers. The definition of level of expertise used in this research is based on the definition concerning expertise with green products, which is defined as the degree to which a consumer reports having a lot of knowledge and experience with so-called green products (Gleim, 2013). This research focusses on sustainability performance and therefore level of expertise is defined as the degree to which a consumer reports having a considerable amount of knowledge and experience with sustainability.

Expertise in a domain increases the capacity to process noisy data and to ask relevant questions (Fredrickson, 1985). Compared to consumers with a low level of expertise (novices), consumers with a high level of expertise (experts) have a more complex cognitive structure, need less cognitive effort to make decisions and are better able to analyze, elaborate and recall information (Alba & Hutchinson, 1987). Thus, experts are better in processing new information, have more information and have a stronger ability to recall information that can help to assess sustainability claims. This information on

the topic of sustainability can serve as a frame of reference in assessing sustainability claims as corresponding with general information on sustainability practices. If the claims contain more details, as in exclusive language, consumers with high expertise are better able to validate these details as they are more likely to have a frame of reference. Being better able to assess a claim as valid or not, affects the perception of credibility of the claim. If the consumer is certain that a claim is valid, the claims seems completely credible. If they know that the claim is not valid, the claim does not seems credible at all.

In this research, it is assumed that, in the field of information processing, exclusiveness of language is perceived as a heuristic cue rather than analytical evidence. In literature, cognitive linguistic elements are often referred to as cues (DePaulo et al., 2003; Hancock et al., 2007; Newman et al., 2003; Vrij et al., 2010). This term also applies to complexity (Anderson et al., 1999; Hancock et al., 2007). The dual-process paradigm of individual information processing is applied to substantiate the role of level of expertise. This paradigm has two models that can be applied in validity-seeking: the elaboration likelihood model (ELM) and the heuristic systematic model (HSM) (Watts & Giddens, 2017). The ELM states that attitudinal responses to new information are formed immediately through two mechanisms. One, mainly intuitive, mechanism that applies heuristic cues, which makes it possible to form attitudes very quickly. The other, mainly analytical, mechanism that functions through the application of rational arguments, which takes more time than the intuitive mechanism. While the ELM posits that people use the intuitive or the analytical mechanism, the HSM posits that people use both intuitive and analytical mechanisms continuously. The heuristic systematic model also posits that in assessing the reliability of received information, people try to reduce the efforts of their cognitive capacity by using heuristic cues (Chaiken et al., 1989). So, in judging information as truthful, people do not use their full cognitive capacity to make an analytical argumentation about whether the information is true or not. People, rather, use cues, to assess whether the new information is in line with the information they already have.

Research has been done about how experts and novice use heuristics and how experts benefit from their expertise in assessing the validity of communication. According to the ELM, the higher the expertise of the user, the less likely they are to be influenced by heuristic cues (Chaiken et al., 1989). People with higher expertise rely more on rational arguments. Chaiken (1980) has argued that this effect is due to the level of involvement of the consumer in processing the message. Processing intensity and attention effort are important factors for information acquisition (Mitchell, 1981). In other words, more involved participants use more of the analytical mechanism to process information. As a result, they are less likely to be influenced by heuristic cues. Consequently, the level of message

involvement is included as a control variable in this research. According to the HSM, high expertise users have the cognitive capacity to process the heuristic cues systematically, as additional argument (Chaiken et al., 1989). Because of these additional arguments, people with high expertise are better able to distinguish between the truthful and deceptive claims than people with lower expertise. Making a clearer distinction between truthful and deceptive claims enables people to make a better assessment of the credibility of the claim.

In this research, the HSM merges as the most pertinent model. The level of expertise moderates the effect of exclusiveness of language on perceived claim credibility because a higher level of expertise makes a consumer better able to detect linguistic cues, such as exclusiveness of language A higher level of expertise also enables the consumer to take these cues into account when assessing the credibility of sustainability claims. It is expected that the variation of perceived claim credibility scores for higher levels of expertise is greater between inclusive and exclusive sustainability claims than for lower levels of expertise. This is the basis for the following hypothesis:

> *Hypothesis 3: Higher level of expertise increases the effect of exclusiveness of language on perceived claim credibility.*

## §2.3 Conceptual model

The following conceptual model is a visual representation of the effects hypothesized above.
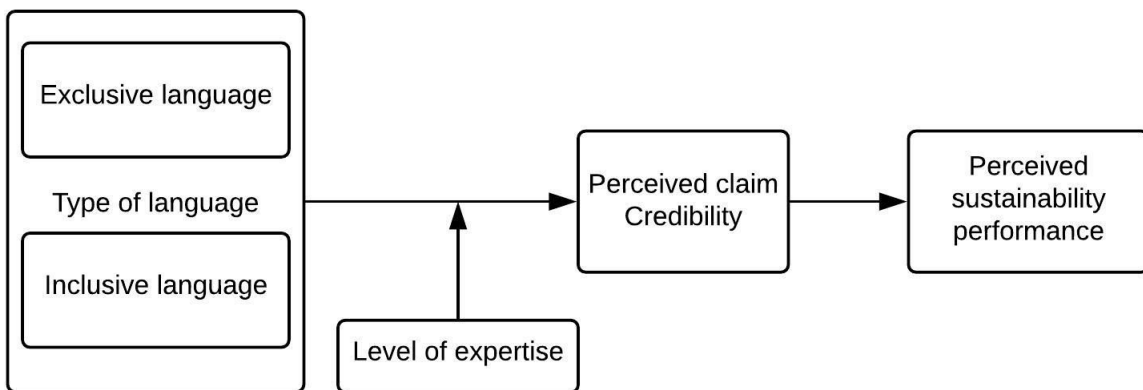


*Figure 1: conceptual model*

# Chapter 3 Methodology

This chapter on methodology begins with an explanation of why the experiment used in this research was the most appropriate tool for this study. Subsequently, the sample, research ethics and the pilot studies are discussed. In addition, the construct is operationalized. The quality of the data is assessed by the reliability, discriminant validity and convergent validity. Finally, the manipulation check is discussed.

## §3.1 Experimental design

The objective of this study is to investigate how exclusiveness of language in sustainability claims and the consumer's level of expertise on sustainability affect the perceived credibility of the claim and the perceived sustainability performance of the firm. Since this research is concerned with causal effects, an explanatory research design was used to measure these causal relations. An experiment is ideally suited for determining a causal relationship (Vennix, 2011) and, that being the case, it was employed in this research.

In order to make a distinction in exclusiveness of language, the participants were manipulated by vignettes (sustainability claims) that were shown to them in the experiment. An exclusive sustainability claim or an inclusive sustainability claim was shown to the participants. This experiment applied a between groups approach that uses separate groups of participants for each of the two sustainability claims. Participants were tested only once (Field & Hole, 2003). Which of the two claims was shown to the participant was randomized by the survey software. It was important that participants were allocated randomly to our experimental condition in order to isolate the effect of our manipulation (Field & Hole, 2003), namely the independent variable: exclusiveness of language. A post-test only design was used, which meant that there was a control group and the measurements of the scales were only completed after the stimulus was applied (Field & Hole, 2003). The control group was shown an inclusive sustainability claim while the experiment group was shown an exclusive sustainability claim. As scales were developed, the manipulation check was used in order to measure whether the stimulus for the experimental group significantly differed from the control group.

## §3.2 Sample

Participants were recruited online. The experiment was posted on Facebook to reach a network of people and a link was posted in a Facebook group that was established in order to exchange surveys and experiments. The unit of analysis was Dutch speaking consumers in the Netherlands. The

experiment was held in Dutch to decrease the chance of language problems for the respondents. In particular, for this research on exclusiveness of language, it was important that respondents had a good understanding of the Dutch language in order to be able to perceive the characteristics of inclusive or exclusive language. Although participants were not selected on the basis of level of expertise, it was assumed that a normal distribution of level of expertise on sustainability would occur in the sample. The sample had to contain diverse levels of expertise of the consumer to assess the effect of level of expertise on perceived claim credibility and perceived sustainability performance. A normal probability plot of residuals (see appendix 9) demonstrated that the level of expertise in the sample is normally distributed.

The following numbers are based on the descriptives that can found in appendix 5. A total of 223 participants began the experiment and 165 participants finished. Most of those who dropped out did not even answer the first question. The 165 participants who finished the experiment were used in the analyses. This number of participants exceeded the target of 100 participant. This experiment had two conditions, inclusive and exclusive language, and for every condition there needed to be at least 50 participants (Simmons et al,. 2013). A few single items were missing in the data. List-wise deletion was used for the missing data. The sample consisted of 62 (37.6%) male and 102 (61.8%) female participants. One participant (0.6%) did not wish to or was not able to give their gender. More than half the sample (53.7%) were in the category 20-30 years old. The most common categories for highest level of education were WO and HBO, which indicated that 61.2% of the participants were well educated. The overrepresentation of people in their twenties and the high level of education indicated that many participants were students. This is probably due to their strong presence on online platforms and a greater willingness to participate.

## §3.3 Research ethics

Participants were informed that they were participating in research for a master's thesis at Radboud University. Participants were free to withdraw from the research at any time. Participants remained anonymous and the data were handled with extreme confidentiality. The e-mail address of the researcher was mentioned at the beginning and the end of the experiment so that participants were able to contact the researcher in case of questions or comments. To date, no mail has been received regarding the experiment.

## §3.4 Pilot studies

Two pilot studies were conducted. The first pilot tested the whole survey and the second focussed on the manipulation and manipulation check. Pilot study 1 can be found in appendix 1 and pilot study 2 in appendix 2.

## §3.4.1 Pilot study 1

The purpose of the first pilot study was to check whether the survey items were clear and comprehensible for the participants. Some researchers have argued that the sample size for a pilot survey should contain between 10 and 30 respondents (Hill, 1998), while others take 10% of the sample (at least 100 participants) as sufficient (Connelly, 2008). Both criteria were met since the first pilot experiment was conducted with 10 participants. Amendments were made to the experiment based on the feedback from participants. Some items were reformulated to make them less ambiguous. The manipulation, the inclusive and exclusive sustainability claims, were adjusted because they did not differ significantly from one other. A second pilot study was conducted to test whether the adjusted manipulation significantly differ from one other. The order of constructs was adjusted to enhance the structure of the experiment. The structure of the experiment is amended to: stimulus, questions about the (1) firm, (2)participant's level of expertise, (3) the claim and (4) control questions. A fictitious name 'ChocoSnoop' was used for the firm making the sustainability claim. A fictitious name was chosen to ensure that the participants had no prior knowledge or attitude towards the firm. As far as is known, ChocoSnoop does not exist. As its name suggests, ChocoSnoop produced candy ('snoop' in English sounds like 'snoep', which is Dutch for candy) that contains choco(late). This was also explicitly stated in the sustainability claims that were used as stimuli. Chocolate is a very common product for consumers in the Netherlands, which made ChocoSnoop an appropriate firm name for this experiment.

## §3.4.2 Pilot study 2

A second pilot study was conducted to test if the manipulation was perceived as significantly different and to the test the reliability of the new manipulation check items. The second pilot study was conducted with 16 participants. The inclusive and exclusive sustainability claims were perceived as different. After this second pilot study, items were adjusted to enhance the reliability of the manipulation check.

# §3.5 Operationalization

Exclusiveness of language was the manipulation in the experiment and was operationalized through two stimuli: an inclusive sustainability and an exclusive sustainability claim. The other variables in the conceptual model were operationalized in survey items. The experiment can be found in appendix 3.

## §3.5.1 Manipulation

The manipulation consisted of two types of sustainability claims that differed in exclusiveness of language: one claim was written in inclusive language and the other claim was written in exclusive language. Inclusive language uses additive particles, such as 'and', 'various' and 'all' to connect ideas, while exclusive language uses restrictive particles such as 'but not', 'specifically', 'only if' and 'if possible'. Two sustainability claims were written for the fictitious firm ChocoSnoop (see table 1). The sustainability claim in inclusive language used four additive particles, while the sustainability claim in exclusive language used restrictive particles in approximately the same places.

| *Inclusive* | *Exclusive* |
| --- | --- |
| We at ChocoSnoop produce chocolate candy. ChocoSnoop is committed to the wellbeing of people **and** the environment. Therefore we contribute to projects in **various** countries. In these projects we combat deforestation **and** offer a fair price to the farmers. In this way, we try to compensate for the damage resulting from **all** of our activities. | We at ChocoSnoop produce chocolate candy. ChocoSnoop is committed to the wellbeing of humans, **but not** at the expense of the environment. Therefore we contribute to projects **specifically** in the countries where we operate. In these projects we combat deforestation and offer a fair price to the farmers, **only if** local communities will cooperate. In this way, we try to compensate, **if possible**, for any damage resulting from our activities. |

*Table 1: Stimulus inclusive language and stimulus exclusive language.*

## §3.5.2 Scales

The variables of perceived sustainability performance, perceived claim credibility and attitude towards the firms were the perceptions of the consumer. Level of expertise was bases on the self-perception of knowledge that the consumer possessed concerning sustainability. Message involvement was added to the experiment as a control variable. These variables were well suited to be measured using (adjusted) existing marketing scales. In order to test if participants perceived differences in exclusiveness in the sustainability claims, a manipulation check was added to the experiment.

*Table 2:Construct summary*

| Concept | Definition | Scale | Scale source |
|---|---|---|---|
| Exclusiveness of language (manipulation check) | The extent to which a text contains restrictive, nuanced and well considered formulations, rather than additive, open-ended and vague formulations. | 1. ChocoSnoop describes their sustainability policy in a nuanced way. <br> 2. ChocoSnoop clearly indicates the limits of what they are able to in the field of sustainability. <br> 3. ChocoSnoop clearly shows that it understands that sustainability sometimes requires compromises. <br> 4. ChocoSnoop explicitly states that it depends on others in their sustainability policy. <br> 5. I find the explanation about the ChocoSnoop sustainability policy very specific. | - |
| Perceived sustainability performance | The extent to which the consumer believes that the firm is engaged in sustainability. | 1. ChocoSnoop is most likely very sustainable. <br> 2. ChocoSnoop appears to be socially responsible. <br> 3. ChocoSnoop appears to be honest with its customers. <br> 4. ChocoSnoop seems to really care about people. <br> 5. ChocoSnoop cares about the environment. <br> 6. ChocoSnoop honors its responsibilities in sustainability. | Item 1-5: Folse et al., 2013; Item 6: Crilly et al., 2016; |
| Perceived claims credibility | The extent to which a consumer perceives the claims to be veracious. | 1. I find the claim credible. <br> 2. I think the claim is honest. <br> 3. I think the claim is sincere. <br> 4. The claim is true <br> 5. I think the claim is misleading. | Malär et al. 2012; Verlegh et al., 1990; Goldberg & |

| | | | Hartwick, 1990 |
|---|---|---|---|
| Level of expertise | The degree to which a consumer reports having a considerable amount of knowledge and experience with sustainability. | 1. I have a great deal of knowledge about sustainability. 2. I consider myself an expert on sustainability. 3. I have a great deal of experience with sustainability. 4. I generally know more than my friends about sustainability. | Gleim et al., 2013 |
| Attitude towards the firm | The recipient's affective reactions towards the organization stating the sustainability claim. | The organization is good/bad, useful/useless, and necessary/unnecessary to society | Moore et al., 1995 |
| Message involvement | The motivational state of an individual to process the stimulus. | 1. I carefully read the sustainability claim 2. I paid close attention to the sustainability claims. 3. How much effort did you put into evaluating the information in the sustainability claims? 4.To what extent did you try to evaluate the information in the sustainability claim? | Ellen & Bone, 1998 |

§3.5.2.1 Manipulation check

A subjective manipulation check was included in the experiment by asking the participant about the characteristics of exclusiveness in language. This made it possible to measure whether the participants perceived the cues in the sustainability claim. Since there are no existing scale for exclusiveness of language, the following items were developed based on the characteristics of exclusiveness of language and the items were related to the sustainability claims that were used as manipulation texts. Five seven-point likert-type items were used, varying between totally disagree to totally agree. If the

manipulation succeeded, the exclusive sustainability claim scored highest, which meant that the participants agreed, rather than the inclusive sustainability on the following items:

1. ChocoSnoop describes their sustainability policy in a nuanced way.
2. ChocoSnoop clearly indicates the limits of what they are able to in the field of sustainability.
3. ChocoSnoop clearly shows that it understands that sustainability sometimes requires compromises.
4. ChocoSnoop explicitly states that it depends on others in their sustainability policy.
5. I find the explanation about the ChocoSnoop sustainability policy very specific.

### §3.5.2.2 Perceived sustainability performance

Perceived sustainability is defined as the extent to which the consumer believed that the firm was engaged in sustainability. An existing scale was used (Folse et al., 2013) that has proven to be reliable with an alpha op .90. The original scale measures a person's belief regarding whether a firm really cares about people and is honest with its customers. Item number 3, 'to be honest with its customer' seems to be an item about credibility but the applicability was assessed in the discriminant validity. Because compliance is an important part of sustainability and the item focusses on the credibility of the source and not on the credibility of the message, this item was retained. Item number 4 was adjusted from 'customers' to 'people' because the manipulation text was more about people in general and not solely focussed on customers. Item number 5 was adjusted to caring about the environment instead of caring about people to reflect more of the comprehensiveness of sustainability. Five seven-point likert-type item were used varying between totally disagree to totally agree.

1. ChocoSnoop is most likely very sustainable.

2. ChocoSnoop appears to be socially responsible.

3. ChocoSnoop appears to be honest with its customers.

4. ChocoSnoop seems to really care about people.

5. ChocoSnoop cares about the environment.

To make good comparisons possible, the original item concerning perceived sustainability performance by Crilly et al. (2012) was included to control for internal validity. To create consistency with the other items, a seven-point likert-type item was used with answer possibilities varying between very poor and very well.

6. ChocoSnoop honors its responsibilities in sustainability.

### §3.5.2.3 Perceived claim credibility

Existing scales for measuring claim credibility have only 1, 2 or 3 items. A combined scale was composed to measure perceived claim credibility. The scale concerning credibility of brand-related communication (Malär et al., 2012) was used because it has proven its reliability( alpha=0.89). The item has answer possibilities that varied between totally disagree to totally agree on a seven-point likert scale.

1. I find the claim credible.

2. I think the claim is honest.

The dimension of sincerity (Goldberg & Hartwick, 1990), was added to the items from Mälar et al.(2012) to increase the reliability of the construct.

3. I think the claim is sincere.

The fourth item was used as a single item measurement of claim credibility (Verlegh et al., 1990) and consisted of a scale concerning credibility of brand-related communication (Malär et al., 2012).

4. The claim is true.

The dimension of 'misleading' (Goldberg & Hartwick, 1990), was added as a reverse item to prevent response sets.

5. I think the claim is misleading.

### §3.5.2.4 Level of consumer expertise

Level of expertise of the consumer was measured with a subjective expertise scale. Thus, level of expertise measured to what extent the consumers perceive themselves to be expert in the field of sustainability. An existing scale was used (Gleim et al., 2013) concerning the self-perception of level of expertise. While the original scale was used to measure expertise with green products, the scale was adjusted for sustainability. Four seven-point likert-type item were used. Answer possibilities varied between totally disagree to totally agree.

1. I have a great deal of knowledge about sustainability.

2. I consider myself an expert on sustainability.

3. I have a great deal of experience with sustainability.

4. I generally know more than my friends about sustainability.

### §3.5.2.5 Attitude towards the firm

A scale for 'attitude towards the firm' was included in the survey. Perceived sustainability performance used a scale to measure attitude towards the firm that focussed on the sustainability aspect of the firm. Attitude towards the firm was different from perceived sustainability performance

because it measured the general attitude towards the firm, which was not focussed on sustainability. It is not surprising that one aspect of performance is likely to affect the whole performance. In other words, a strong sustainability performance enhanced consumers' attitude towards the firm (Parguel et al., 2011).

Including the variables in the survey was likely to increase the gain relevance for this research as it connects this study to other major theories in the field, such as the theory of reasoned actions. In the theory of reasoned actions, attitude towards the firm is defined as an brand evaluation that stems from reaction to both favourable and unfavourable brand information (Fishbein & Azjen, 1975). Concurring with the definition of attitude towards the brand (MacKenzie & Lutz, 1989), attitude towards the firm in this research is defined as the recipient's affective reactions towards the organization stating the sustainability claim. Consistent with the operationalization of attitude towards the organization (Moore et al., 1995), the following three five-point scales were used to measure attitude towards the firm. The organization is … to society:

1. good/bad
2. useful/useless
3. necessary/unnecessary

## §3.5.3 Control variables

Control variables were measured in this research to find out if and how these control variables have influenced the results. Beginning with general socio demographic questions to determine the composition of the sample:

- Gender: Male/Female/Other
- Age <20 year, 20-30 year, 31-40 year, 41-50 year, 51-60 year, 61-70 year, >70 year.
- Educational level:
    - No degree
    - High school degree or equivalent
    - Intermediate vocational education
    - Bachelor's degree
    - Master's degree or doctorate
    - Other / I do not want to say that

A good understanding of the Dutch language was important to interpret the manipulation and the questions in the correct manner. A poor understanding of the Dutch language might render participants numb to the stimulus or a lack of internal validity might have occurred. An excellent understanding of language might give an advantage regardless of the topic of the claim. One might perceive differences in types of language, not because of his or her level of expertise concerning sustainability, but because of level of expertise about language. As a consequence, participants were

asked about their knack for languages. One seven-point likert-type item was used with answer options varying between totally disagree to totally agree.

- I have a knack for languages.

According to the ELM, message involvement might cause the same effect as level of expertise. Consumers with more expertise or involvement use analytical thinking rather than relying on heuristic cues. Message involvement was, therefore, included in the survey as a control variable. Message involvement was defined as the motivational state of an individual to process the stimulus. An existing scale was used (Ellen & Bone, 1998) to measure the involvement of the participants to process the message. This was a subjective scale to measure the cognitive efforts of the participants. Two seven-point likert-type items were used, varying between totally disagree to totally agree. Two seven-point likert-type items were used, varying between 'not at all' and 'very much'.

1. I carefully read the sustainability claim

2. I paid close attention to the sustainability claims.

3. How much effort did you put into evaluating the information in the sustainability claims?

4. To what extent did you try to evaluate the information in the sustainability claim?

## §3.6 Quality of the Data

The quality of the data was assessed by the reliability and the validity of the constructs. Factor analyses were conducted to assess the discriminant and convergent validity of the constructs. Reliability analyses were conducted to assess the internal consistency of the construct.

### §3.6.1 Reliability analyses

A reliability analysis was conducted on each construct in this study consisting of more than one item. The internal consistency of the scale was assessed in terms of the Cronbach's alpha. Constructs were accepted to be reliable if alpha > 0.6. Overall, all constructs were found to be internally consistent without deleting any item. For an overview of the the reliability check see appendix 6. In table 3 the internal consistency is summarized with a preview of the percentage explained variance as a result of the convergent validity.

Perceived sustainability performance (Cronbach's alpha = .900), perceived claim credibility (Cronbach's alpha = .905) and level of expertise (Cronbach's alpha = .871) demonstrated high internal consistency. The Cronbach's alpha for the manipulation check (Cronbach's alpha = .796), attitude towards to firm (Cronbach's alpha = .796) and message involvement (Cronbach's alpha = .756) were also found to be acceptable. Deleting any item would not have improved the reliability of any item.

*Table 3: Internal consistency and convergent validity*

| Construct | Original # items | Cronbach's alpha | Percentage explained variance |
|---|---|---|---|
| Manipulation check | 5 | .758 | 51% |
| Perceived sustainability performance | 6 | .900 | 67% |
| Perceived claim credibility | 5 | .905 | 73% |
| Level of expertise | 4 | .871 | 73% |
| Attitude towards the firm | 3 | .796 | 72% |
| Message involvement | 4 | .756 | 84% |

## §3.6.2 Factor analysis

A factor analysis was conducted to measure the discriminant and convergent validity of the construct. First, the number of constructs was determined by the number of factors in the measurement of the discriminant validity. The convergent validity determined the number of dimensions within each construct. An overview of the results can be found in appendix 7.

### §3.6.2.1 Discriminant validity

All construct items were put in one factor analysis to find out which item loads on which factor. Ideally, the items of one construct load on the same factor and other items do not load on that factor. A principal axis factor was conducted on the items with oblique rotation (direct oblimin). Direct oblimin factor rotation is used to discriminate between factors. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis. KMO = .866, which indicates that patterns of correlations are relatively compact and, as consequence, factor analysis should yield distinct and reliable factors (Field & Hole, 2003). Seven factors had eigenvalues of Kaiser's criterion of one, and these seven factors combined accounted for 71.65% of the variance. Table 4 shows the factor loadings after rotation. Beginning with the factor with the highest eigenvalue and the item with the highest loading on that specific factor.

*Table 4: Summary discriminant factor analysis results*

| Item | Rotated factor loadings | | | | | | |
|---|---|---|---|---|---|---|---|
| | Perceived claim credibility (PCC) | Level of expertise (Exp) | Message involvement - Dimension 1 (MI) | Attitude towards the firm (Att) | Manipulation check (MC) | Perceived sustainability performance (PSP) | Message involvement - Dimension 2 (MI) |
| PCP2 | .837 | | | | | | |
| PCP4 | .766 | | | | | | |
| PCP1 | .744 | | | | | | |
| PCP5 | .620 | | | | | | |
| PCP3 | .593 | | | | | | |
| Exp3 | | .861 | | | | | |
| Exp1 | | .811 | | | | | |
| Exp4 | | .790 | | | | | |
| Exp2 | | .735 | | | | | |
| MI3 | | | .866 | | | | |
| MI4 | | | .714 | | | | |
| Att2 | | | | .861 | | | |
| Att3 | | | | .775 | | | |
| Att1 | | | | .581 | | | |
| MC2 | | | | | .809 | | |
| MC5 | | | | | .658 | | |
| MC3 | | | | | .486 | | |
| MC1 | | | | | .455 | | |
| MC4 | | | | | .453 | | |
| PSP2 | | | | | | -.935 | |
| PSP5 | | | | | | -.663 | |
| PSP3 | | | | | | -.610 | |
| PSP1 | | | | | | -.493 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PSP4 | | | | | | -.471 | |
| PSP6 | | | | | | -.432 | |
| MI1 | | | | | | | .842 |
| MI2 | | | | | | | .703 |
| Eigenvalues | 8.625 | 3.218 | 2.147 | 1.681 | 1.399 | 1.92 | 1.085 |
| % of variance | 31.944 | 11.918 | 7.950 | 6.226 | 5.180 | 4.415 | 4.020 |
| Cronbach's alpha | .905 | .871 | .802 | .796 | .758 | .900 | .787 |

*Notes:Factor loading below .4 not shown, extraction method: principal axis factoring, rotation method: Oblimin with Kaiser normalization.*

All the items load on the same factor as expected, except for message involvement. Message involvement loads on two factors, which suggests that message involvement has two dimensions. This can be explained theoretically, because the items that load on the first dimension are concerned with evaluating the text and the second dimension was concerned with the extent of accuracy in reading the text. Both dimensions and the construct as a whole were reliable (see table 5), therefore, message involvement was assumed to have two dimensions.

*Table 5: Reliability message involvement*

| Construct | Original # items | Cronbach's alpha | Means | Standard deviation | Percentage explained variance |
|---|---|---|---|---|---|
| Message involvement | 4 | .756 | 4.85 | .0822 | 84% |
| - Dimension 1 | 2 | .802 | 4.25 | 1.02 | 84% |
| - Dimension 2 | 2 | .787 | 5.45 | 0.95 | 82% |

§3.6.2.2 Convergent validity

To assess the convergent validity, a factor analysis was conducted on each construct separately to find out if the items correspond with the dimensional structure of the construct. As in the principal axis factoring analysis for discriminant validity, all the construct load on one factor each, except for message involvement, thats load on 2 factors. Eigenvalues and % explained variance are summarized in table 6. An overview of the results of the convergent factor analyses can be found in appendix 7.

*Table 6: Eigenvalues and variance explained*

| | Perceived claim credibility | Level of expertise | Message involvement - Dimension 1 | Attitude towards the firm | Manipulation check | Perceived sustainability performance | Message involvement - Dimension 2 |
|---|---|---|---|---|---|---|---|
| Eigenvalues | 3.640 | 2.890 | 1.670 | 2.169 | 2.564 | 4.017 | 1.649 |
| % of variance explained | 72.807 | 72.250 | 83.513 | 72.316 | 51.282 | 66.953 | 82.466 |

## §3.7 Manipulation check

The effectiveness of the manipulation was assessed by analyzing the items for the manipulation check. The scale for the manipulation check was found reliable without deleting any items (Cronbach's alpha = .796). The effectiveness of the manipulation was measured using an independent sample t-test. See appendix 8 for an overview of the data used to assess the manipulation check.

An independent t-test was conducted to measure whether the means of the manipulation check for both groups (inclusive and exclusive) significantly differed. The result of this test was that the means for the manipulation check significantly differed between groups ($t=-2.367$, $p<.05$). As expected, the mean for the exclusive group (mean= 4.2619) was significantly higher than for the inclusive group (mean= 3.8667). Consequently, exclusive language was perceived to be more nuanced than inclusive language. This meant that the participants perceived the manipulation of exclusiveness of language successfully.

# Chapter 4 Results

This chapter begins with descriptive statistics. The linear regression is discussed after the corresponding assumptions were met. The results are completed with the additional analyses.

## §4.1 Descriptive analysis

Table 7 shows the correlation between constructs and the descriptive statistic for each construct. Perceived sustainability performance, perceived claim credibility and attitude towards the firm correlated significantly with each other. This was expected because these constructs were linked to each other in the conceptual model. Level of expertise and message involvement correlated a little, but significantly. A higher level of expertise would have increased the level of involvement rather than vice versa. Reading a sustainability claim seemed to be more interesting for high expertise consumer, because their expertise showed that they were already interested in sustainability. According to the means, consumers perceived the performance of the firm as slightly sustainable and rather credible than not credible, since the means were above four, what meant neutral. Moreover, consumers were quite involved and on average had low expertise on sustainability. Their attitude towards the firm was mainly positive.

*Table 7: Correlation matrix and descriptive statistics*

|  | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| 1. Manipulation |  |  |  |  |  |  |
| 2. Perceived sustainability performance | .006 |  |  |  |  |  |
| 3. Perceived claim credibility | .066 | .723** |  |  |  |  |
| 4. Attitude towards the firm | .065 | .422** | .405** |  |  |  |
| 5. Level of expertise | .069 | -.126 | -.084 | -.058 |  |  |
| 6. Message involvement | -.26 | .080 | .059 | .023 | .183* |  |
| Mean | .51(a) | 4.93 | 4.55 | 3.14(b) | 3.59 | 4.85 |
| Standard deviation | .50 | .94 | 1.06 | .83 | 1.11 | .82 |

n= 155; ** p < 0.01; * p < 0.05
    (a)  Answer options 0 or 1
    (b)  five-point likert scale instead of seven-point likert scale

# §4.2 Regression analysis

Regression analysis was conducted to test the hypotheses. A regression analysis tests the relation between a continuous dependent variable and two or more independent variables and, that being the case, it was employed in this research.

## §4.2.1 Assumptions

Before doing the linear regression analyses, four assumptions had to be met: normality of the error term distribution, linearity of the phenomenon measured, constant variance of the error terms (homoscedasticity) and independence of the error terms. An overview of the data used for testing the assumptions can be found in appendix 9.

To test the assumption for normality of the error terms, skewness and kurtosis were used. The data were assumed to be normally distributed when the the value of skewness and kurtosis was within 1.96 standard error of the skewness and kurtosis. Perceived sustainability performance and perceived claim credibility were transformed using a square root transformation to meet the conditions for normality of the error terms. The data demonstrated that both skewness and kurtosis were less than 1.96 standard error of skewness and kurtosis and therefore it is assumed that the data were normally distributed.

*Table 8: Skewness and kurtosis of the constructs*

| | Perceived sustainability performance (square root transformed) | Perceived claim credibility (square root transformed) | Attitude towards the firm | Level of expertise | Message involvement |
|---|---|---|---|---|---|
| Skewness | -.156 | -.184 | .111 | -.152 | -.103 |
| Std. Error Skewness | .195 | .195 | .195 | .195 | .195 |
| Kurtosis | .006 | -.562 | -.323 | -.399 | -.605 |
| Std. Error Kurtosis | .387 | .387 | .387 | .387 | .387 |

The plots for standardized residuals versus standardized predicted values demonstrated that the points were evenly and randomly dispersed throughout the plot. Hence, linearity was assumed for perceived sustainability performance, perceived claim credibility, attitude towards the firm, level of expertise and message involvement.

Levene's test for homogeneity of variance was used to test the data for homoscedasticity. No significant results were found for perceived claim credibility, $F(1, 153) = .284$, $p = .595$, perceived sustainability performance, $F(1,153) = .189$, $p = .665$, attitude towards the firm $F(1,153) = .222$, $p = .638$, level of expertise $F(1,153) = .517$, $p = .473$ and message involvement $F(1,153) = .077$, $p = .782$. Constant variance of the error terms, in other words homoscedasticity, was assumed.

The assumption for independence of errors tested multicollinearity in the independent variables. It was important that independent variables did not have too much correlation, because multicollinearity made it difficult to assess the exact individual contribution of an independent variable. No patterns were found in the scatterplots for testing linearity. The results of the Durbin-Watson test and the VIF scores for the regression analysis are noted in appendix 9. Errors were assumed independent when the Durbin-Watson test scored around two. Scores should not be above three or below one to assume independence of error terms. Perceived claim credibility (1.838), perceived sustainability performance (2.278) and attitude towards the firm (1.772) meet both conditions, so independence of errors was assumed. To assume independence of errors, the ideal VIF scores for the independent variables is one. The VIF scores should not be higher than ten and preferably not higher than four. In the sample, VIF scores did not exceed 2.4, what meant that independence of errors could be assumed.

## §4.2.2 Linear regression analyses

Three linear regression analyses were conducted to test the hypotheses and the conceptual model, beginning with the perceived claim credibility as dependent variable, followed by perceived sustainability performance and attitude towards the firm. Model summaries, ANOVA's and coefficients can be found in appendix 10.

### §4.2.2.1 Dependent variable: perceived claim credibility

Hypothesis 2 expected that more exclusiveness in language in sustainability claims leads to more perceived claim credibility. No significant relation was found between the exclusiveness of language and perceived claim credibility (see table 9). As a consequence, hypothesis 2 was not supported. Hypothesis 3 predicted that a higher level of expertise increases the effect of exclusiveness of language on perceived claim credibility. An interaction variable was computed to analyze the effect of

the interaction between exclusiveness of language and level of expertise. Centered scores were used to reduce collinearity between the interaction variable and the independent variables exclusiveness of language and level of expertise. Level of expertise had no interaction effect with exclusiveness of language, nor a direct effect on perceived claim credibility. Moreover, age and gender had a marginal effect on perceived claim credibility. Older people assessed the claim as less credible than younger people. Females perceive the sustainability claim as more credible than males. Other control variables had no significant effect on perceived claim credibility. The independent variables combined explained 9.7% of the variance in the dependent variable. The model was marginally significant $(F_{(8,147)} = 1.978, p = .053)$.

*Table 9: Regression analysis dependent variable: perceived claim credibility*

| | | Coefficients | | | | |
|---|---|---|---|---|---|---|
| | | Unstandardized Coefficients | | Standardized Coefficients | | |
| Model | | B | std. Error | Beta | t | Sig. |
| 1 | (constant) | .885 | .199 | | 4.449 | .000 |
| | Exclusiveness | .039 | .045 | .068 | .862 | .390 |
| | Level of expertise | -.008 | .022 | -.030 | -.350 | .727 |
| | Interaction exclusiveness/level of expertise | -.011 | .041 | -.022 | -.273 | .785 |
| | Gender | .097 | .051 | .165 | 1.920 | .057 |
| | Age | -.032 | .017 | -.151 | -1.845 | .067 |
| | Level of education | .010 | .017 | .050 | .605 | .546 |
| | Knack for languages | .018 | .016 | .098 | 1.181 | .239 |
| | Message involvement | .019 | .028 | .054 | .669 | .504 |

The perception of the credibility of the sustainability claim was not affected by the exclusiveness of language, level of expertise or the interaction between both variables. The exclusiveness of language, level of expertise and the interaction of both variables may have had a direct effect on the perception of sustainability performance and not be mediated by perceived claim credibility. Therefore, the independent variables and their interaction were included in the regression analysis with perceived sustainability performance as dependent variable.

### §4.2.2.2 Dependent variable: perceived sustainability performance

Hypothesis 1 predicts that more perceived claim credibility leads to more perceived sustainability performance. The results supported hypothesis 1. Perceived claim credibility had a positive significant effect on perceived sustainability performance (see table 10). Exclusiveness of language and level of expertise had no significant effect on perceived sustainability performance. The interaction between exclusiveness of language and level of expertise had a significant, direct and positive effect on perceived sustainability performance. Additional analyses were conducted to find out how both variable interact and affect the perceived sustainability performance. The control variables had no significant effect on perceived sustainability performance. The R squared for the model was 0,580, which meant that 58.0% of the variance of perceived sustainability performance was explained by the independent variables. Furthermore, this model was significant ($F_{(9,146)} = 22.360$, $p < .001$).

### §4.2.2.3 Dependent variable: attitude towards the firm

Perceived sustainability performance was expected to have a positive effect on attitude towards the firm. The results supported this expectation(see table 11). Perceived claim credibility, level of expertise, exclusiveness of language and the interaction between exclusiveness of language and level of expertise had no direct effect on attitude towards the firm. On that account, perceived sustainability performance fully mediated the relation between attitude towards the firm as a dependent variable and perceived claim credibility and the interaction between level of expertise and exclusiveness of language as independent variables. The control variables had no significant effect on attitude towards the firm. This model was significant ($F_{(10,141)} = 4.075$, $p < ,001$) and the independent variables accounted for 22.4% of the variance in attitude towards to firm.

*Table 10: Regression analysis dependent variable: perceived sustainability performance*

| | | Coefficients | | | | |
|---|---|---|---|---|---|---|
| | | Unstandardized Coefficients | | Standardized Coefficients | | |
| Model | | B | std. Error | Beta | t | Sig. |
| 1 | (constant) | .555 | .137 | | 4.055 | .000 |
| | Perceived claim credibility | .689 | .053 | .730 | 12.925 | .000 |
| | Exclusiveness | -.021 | .029 | -.039 | -.728 | .468 |
| | Level of expertise | -.020 | .014 | -.080 | -1.362 | .175 |
| | Interaction exclusiveness/level of expertise | .064 | .027 | .130 | 2.391 | .018 |
| | Gender | -.006 | .033 | -.011 | -.181 | .857 |
| | Age | -.012 | .011 | -.060 | -1.057 | .292 |
| | Level of education | -.010 | .011 | -.052 | -.918 | .360 |
| | Knack for languages | -.003 | .010 | -.014 | -.254 | .800 |
| | Message involvement | .019 | .018 | .056 | 1.012 | .313 |

*Table 11: Regression analysis dependent variable: perceived sustainability performance*

| | | Coefficients | | | | |
|---|---|---|---|---|---|---|
| | | Unstandardized Coefficients | | Standardized Coefficients | | |
| Model | | B | std. Error | Beta | t | Sig. |
| 1 | (constant) | 1.602 | .621 | | 2.581 | ,011 |
| | Perceived sustainability performance | .969 | .357 | .311 | 2.712 | .008 |
| | Perceived claim credibility | .498 | .333 | .171 | 1.498 | .136 |
| | Exclusiveness | .079 | .126 | .047 | .631 | .529 |
| | Level of expertise | .010 | .063 | .013 | .157 | .876 |
| | Interaction exclusiveness/level of expertise | -.016 | .117 | -.010 | -.136 | .892 |
| | Gender | .095 | .143 | .055 | .664 | .508 |
| | Age | -.033 | .049 | -.053 | -.670 | .504 |
| | Level of education | -.016 | .048 | -.025 | -.323 | .748 |
| | Knack for languages | -.069 | .043 | -.125 | -1.601 | .112 |
| | Message involvement | -.004 | .078 | -.004 | -.051 | .960 |

# §4.3 Additional analyses

An additional analysis was conducted to clarify the effect of the interaction of level of expertise and exclusiveness of language on the perceived sustainability performance. A univariate ANOVA was carried out to compare the means for perceived sustainability for different groups. These groups were formed by the variables exclusiveness of language and level of expertise.

For exclusiveness of language, a participant had read either an inclusive or exclusive sustainability claim. For level of expertise, two groups were formed depending on the average scores for level of expertise. Participants had to perceive themselves as expert, and above neutral (level of expertise score = 4) to be classified as an expert. But on the other hand, the group of experts needed a particular size to have the statistical power to assess differences between both groups. Therefore, participants who perceived themselves as something of an expert (level of expertise > 4.25) on sustainability were classified as experts, while participants who perceived themselves as neutral or less (level of expertise ≤ 4.25) were classified as non-expert. Profile plot 1 in appendix 11 was used to determine that the score 4.25 4.50 was used to divide both groups. Scores above 4.25 clearly demonstrated that exclusive language consistently scored higher than inclusive language, while scoring 4.25 or lower had a alternating pattern.

The results of the analysis of variance demonstrated a significant difference in means for the perceived sustainability performance, due to the interaction of exclusiveness of language and level of expertise ( $F (1, 162) = 5.534$ , $p<.05$, $r = .184$ ). See appendix 11 for the data used in the additional analyses. As in the regression analysis, level of expertise or exclusiveness of language had no significant effect on perceived sustainability performance. In figure 2 the means for perceived sustainability performance are shown for different combinations of groups. For non-expert, there is a little difference between exclusiveness of language. The group that read the inclusive sustainability claims (mean = 5.0391) perceived the firm's performance as a little more sustainable than the exclusive group (mean = 4.8722). In contrast, experts perceived the firm's sustainability performance to be better if they had read the exclusive sustainability claim (mean = 5.0903), compared to the inclusive sustainability claim (mean = 4.4333). The difference in perceived sustainability performance was also bigger for experts compared with the non-experts. In the independent sample t-test, the means for perceived sustainability performance for the non-experts did not significantly differ between the inclusive and exclusive groups ($t= .983$, $p=.327$), but, for experts, significantly differed ($t=-2.219$, $p<.05$.). Comparing the means of perceived sustainability claims between non-experts and experts, the means for exclusive sustainability claims did not significantly differ ($t=-.932$, $p = .354$), but the means for inclusive sustainability claims significantly differed ($t=-2.358$, $p<.05$). This

indicated that only the combination of an inclusive sustainability claim and an expert on sustainability was likely to lead to lower perceived sustainability performance. This perception can be assumed to be the same for other combinations of exclusiveness of language and non-expert or expert.

*Figure 2: Means non-expert/expert and inclusive/exclusive language for perceived sustainability performance*
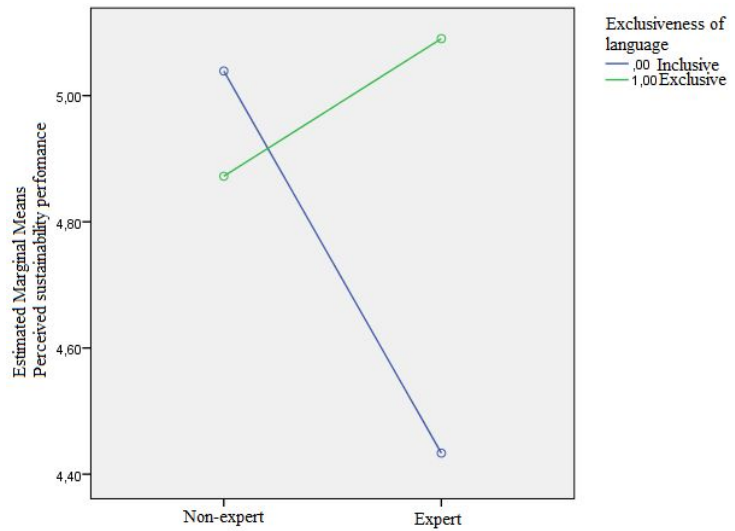


*Figure 3: Means non-expert/expert and inclusive/exclusive language for the construct manipulation check*
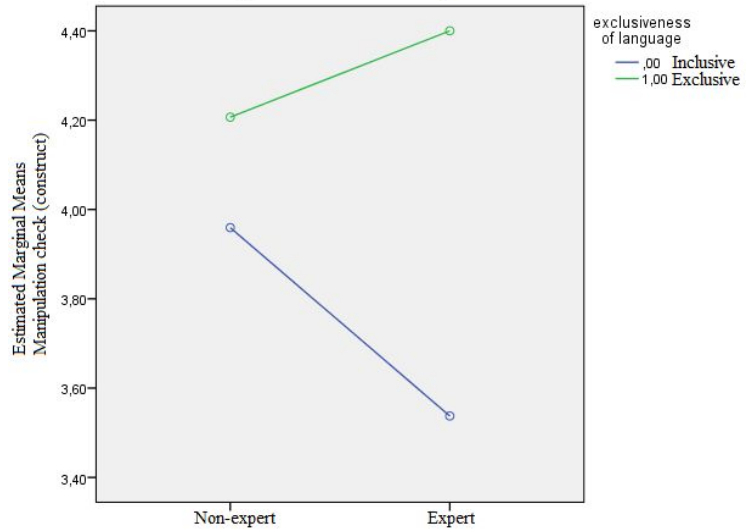


After splitting the sample into experts and non-experts, an independent sample t-test was conducted on the manipulation check, again, to measure whether both groups perceived the manipulation of the inclusive and exclusive sustainability claim differently. While the experts perceived a significant difference between inclusive and exclusive sustainability claims (t= -2.557, p<.05), the non-experts did not perceive the inclusive and exclusive sustainability claims as significantly different (t= - 2.273, p = .205). The means for the manipulation check (see figure 3) demonstrated a similar pattern as the means for perceived sustainability performance (see figure 2). Experts perceived the inclusive sustainability claim as less nuanced than the other combinations of non-expert or expert and inclusive or exclusive language. This means that expert are better able to pick up linguistic cues than non-experts.

# Chapter 5 Conclusions

The research question is answered in this chapter. In the discussion, the results are discussed. Practical implication offers advice to managers on the basis of the results in this research. This chapter ends with the limitations of this research and suggestions are offered for further research.

## §5.1 Conclusion

The research question was formulated as:  How does exclusiveness of language in sustainability claims and the level of expertise on sustainability of the consumer affect the consumer's perceptions of claim credibility and sustainability performance of the firm? In order to answer the research question, Three hypotheses were formulated that represented the conceptual model proposed in chapter 2. The first hypothesis, more perceived claim credibility leads to more perceived sustainability performance, was supported by the data. The second hypothesis, more exclusiveness in language in sustainability claims leads to more perceived claim credibility, was rejected. The third hypothesis, higher level of expertise increases the effect of exclusiveness of language on perceived claim credibility, was also not supported.

*Table 12: summary results hypotheses*

| Hypothesis | Description | Result |
|---|---|---|
| 1 | More perceived claim credibility leads to more perceived sustainability performance. | Accepted |
| 2 | More exclusiveness in language in sustainability claims leads to more perceived claim credibility. | Rejected |
| 3 | Higher level of expertise increases the effect of exclusiveness of language on perceived claim credibility. | Rejected |

The impact of level of expertise and exclusiveness of language was rejected according to the hypotheses, but the results indicated another explanation. The interaction between level of expertise and exclusiveness of language had a significant effect on perceived sustainability performance. Only the combination of an inclusive sustainability claim and an expert on sustainability is likely to lead to lead to lower perceived sustainability performance, while this perception for other combinations of exclusiveness of language and non-expert or expert was assumed to be the same. In addition, perceived sustainability performance enhances the attitude towards the firm. In answering the research

question: Exclusiveness of language in sustainability claims and level of expertise on sustainability of the consumers have an interaction effect on perceived sustainability performance, which manifests in lower perceived sustainability performance for experts when inclusive language was used in sustainability claims. Credibility was not influenced by level of expertise, exclusiveness of language nor the interaction of both.

## §5.2 Discussion

Only the combination of an inclusive sustainability claim and a consumer who is an expert on sustainability is likely to lead to lower perceived sustainability performance. On the other hand, the perceived sustainability performance for other combinations of exclusiveness of language and non-expert or expert can be assumed the same. In other words, expectations concerning the perception of sustainability performance was not satisfied by the inclusive claim for experts as it had been satisfied in the other condition. An explanation for this could be that experts have more capacity to ask relevant questions than non-experts (Fredrickson, 1985). For experts, exclusive claims might answer these questions by nuances in the claims, while inclusive claims do not answer these questions, which results in an unsatisfied demand for information. For example, if the question is: 'To what extent does the firm combat deforestation?', the exclusive sustainability claim makes a distinction between what belongs to a category and what does not. So, an exclusive sustainability claim might state: 'We combat deforestation specifically in the countries where we operate'. This distinction in the exclusive sustainability claim contributes to answering the critical question. An inclusive sustainability claim might assert that: 'We combat deforestation in various countries.' The contribution to answering the question is low, because 'various countries' does not indicate in how many countries they combat deforestation and what criteria is used to select the countries where they combat deforestation. Non-expert have less capacity to ask questions. It does not matter if non-experts read an inclusive or an exclusive claim, because they do not demand nuanced information. In addition, identifying nuanced differences in language is difficult (DePaulo et al., 2003; Loftus, 2010). However, experts have a more complex cognitive structure, need less cognitive effort to make decisions and are better able to analyze, elaborate and recall information than non-experts (Alba & Hutchinson, 1987). In the additional analysis, experts perceived the inclusive and exclusive sustainability claims as significantly different, while non-expert did not. In other words, experts were better able to identify nuanced differences than non-experts.

Level of expertise and exclusiveness of language have an interaction effect on perceived sustainability performance. This effect is not explained by the perceived credibility of the claim since level of expertise, exclusiveness of language and the interaction between both have no effects on perceived

claim credibility. Accordingly, in judging the reliability of the claims, people do not pay attention to linguistic cues (Hancock et al., 2007). It seems plausible that the interaction between exclusiveness of language and level of expertise is an additional argument for assessing the sustainability performance, while this argument is not used for assessing credibility of the claim. Assessing credibility, or validity-seeking behaviour, is used every day and is, therefore, a relatively simple task. In addition, there are arguments that weigh more heavily and are more likely to be considered. For example, most people are more inclined to associate messages with honesty, because people encounter more truthful than deceptive messages in their daily lives (O'Sullivan et al., 1988). Assessing sustainability performance of a firm is not an everyday task and consumers devote more effort to this task in using additional arguments. According to the HSM, experts have the cognitive capacity to process the heuristic cues systematically, as additional arguments (Chaiken et al., 1989). As a result, differences in exclusiveness of language affects only the perceived sustainability performance and not the perceived claim credibility.

Results in this research can be compared with the results in the study by Crilly et al. (2016), since perceived sustainability performance, one of the key variables in both studies, was measured a similar way. For this study, multiple items were used to measure perceived sustainability performance as construct and the item comparable with the item that is used by Crilly et al. (2016), has a good fit with the other items of the construct. The results of this study correspond largely with the research of Crilly et al. (2016). Both use perceived sustainability performance as dependent variable. The interaction between level of expertise and exclusiveness of language was significant for consumers in this research, while the interaction effect was only marginally significant for the stakeholders in the research by Crilly et al, (2016). Crilly et al. (2016) have found a direct effect of their interpretation of expert and non-expert (stakeholders), while for consumers only the interaction effect with exclusiveness of language was found to be significant. Due to this interaction effect for consumers, it was relevant to assume that consumer can possess different levels of expertise. This is a contrast with Crilly et al. (2016) who assumed that consumers did not have expertise. As a consequence, this research contributes to existing literature by pointing out, the relevance of the assumption that consumers possess different level of expertise, and, the interaction effect between level of expertise and exclusiveness of language affects the consumers' perceptions concerning the sustainability performance of the company

## §5.3 Practical implications

The most important findings in this research for marketing manager are that experts on sustainability perceive the performance of the firm as less sustainable if sustainability claims are written in inclusive language compared to claims written in exclusive language. Moreover, non-experts do not perceive any difference in sustainability performance, either for claims that are in inclusive language or in exclusive language. As a consequence, exclusive language is the most robust option to use in sustainability claims. The advice for organizations is to make claims that include restrictive, nuanced and well considered formulations, which is consistent with the characteristics of exclusive language, rather than additive, open-ended and vague formulations. In addition, this research demonstrated that claim credibility affected the perceived performance. As a condition to lay claim concerning sustainability practices, the claim has to be credible.

## §5.4 Limitations and suggestions for further research

This research used some subjective items that were prone to socially desirable answers or self-overestimation. For example, the level of expertise was measured by the self-perception of the participant's level of expertise on sustainability. A person that is confident can overestimate their expertise on sustainability, while a person who has a lot of expertise on sustainability is aware that sustainability is a comprehensive concept with several domains that might be less familiar to that individual. An objective measurement of sustainability in the cacao industry might have yielded more reliable results for the level of expertise. However, focussing on sustainability in the cacao industry bears the risk of not having any expertise in the sample and reducing the generalizability of the results. Message involvement is vulnerable to socially desirable answers because having agreed to participate in this experiment, the participants were expected to read the claim accurately. This aspect was explicitly mentioned in the experiment. Hence, scoring low on message involvement was contradictory, so participants were more inclined to give desirable answers.

Due to a lack of literature on the impact of exclusiveness in language, this research relied heavily on the research study by Crilly et al. (2016). Therefore, more research should be done on exclusiveness of language and its outcomes. Existing studies about exclusiveness of language are mainly concerned with what it is and how it is formed. There is a lack of literature about how exclusiveness of language is perceived. The article by Crilly et al. (2016) had used stakeholders as participants, while customers were used as participants in this research. Both research studies included expertise on sustainability as independent variable and sustainability claims of the firm as manipulation. Studies might be conducted using other variables that may interact with exclusiveness of language. For example, how

does exclusiveness of language interact with existing attitudes towards the firm. The use of exclusiveness of language might also play a role in the political arena. It would be interesting to study and analyze the impact of the exclusiveness of language used by politicians on voting behaviour.

This study and the study by Crilly et al. (2016) have used sustainability claims and level of expertise on sustainability in order to assess the effects of exclusiveness of language. To assess the generalizability of the results, one can duplicate this research and focus on other domains than sustainability. For example, how does exclusiveness of language in privacy statements affect the perception of how companies take care of our personal information. The experiment in this study used sustainability claims written in Dutch, while the sustainability claims by Crilly et al. (2016) were written in English. It would be interesting to do research concerning the exclusiveness of language in different countries or to study whether to impact of exclusiveness of language is applicable to different languages. The English and Dutch languages similar structures, but the Chinese language structure is different. Therefore, it is interesting to know how exclusiveness of language manifests in Chinese. When doing research in different countries, the role of cultural properties should be taken into account. For that reason, it is interesting to study how exclusiveness of language is perceived by populations that possess different cultural properties.

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# Appendix 1: Pilot experiment 1

| Concept | Pilot 1 |
|---|---|
| Intro | Beste meneer/ mevrouw,<br>Bedankt voor uw bereidheid om deel te nemen aan dit onderzoek. Dit onderzoek is onderdeel van mijn master Business Administration aan de Radboud Universiteit. Het invullen van de vragenlijst zal ongeveer 5 minuten duren.<br><br>U zal eerst een korte tekst te zien krijgen over het duurzaamheidsbeleid van bedrijf X. Vervolgens wordt u een aantal stellingen voorgelegd. De antwoorden die u geeft zijn niet fout of goed. Uw antwoorden zullen anoniem en vertrouwelijk verwerkt worden. |
| Manipulation: Firm sustainability text (inclusive) | Bedrijf X zet zich in voor het welzijn van mens en natuur. Daarom dragen wij bij aan projecten om iets terug te geven aan de gemeenschappen in diverse landen. Deze projecten gaan over het tegen gaan van ontbossing en een eerlijke prijs voor de boer. Hiermee proberen wij schade van al onze activiteiten te compenseren. |
| Manipulation: Firm sustainability text (exclusive) | Bedrijf X zet zich in voor het welzijn van de mens, maar dit mag niet ten koste gaan van de natuur. Daarom dragen wij bij aan projecten om iets terug te geven aan de gemeenschappen uitsluitend in de landen waarin wij opereren. Deze projecten gaan over het tegengaan van ontbossing en een eerlijke prijs voor de boer, maar niet over de plastic soep in onze oceanen. Hiermee proberen wij de schade van enkel onze activiteiten te compenseren. |
| Manipulation check: subjective | 1. Bedrijf X maakt een duidelijke afweging tussen mens en natuur.<br>2. Bedrijf X geeft de grenzen van zijn verantwoordelijkheid aan.<br>3. Bedrijf X maakt een onderscheid tussen projecten waar zij wel en niet aan bijdragen. |
| Perceived sustainability performance | 1. Bedrijf X is hoogstwaarschijnlijk erg maatschappelijk betrokken.<br>2. Bedrijf X lijkt maatschappelijk verantwoord te ondernemen.<br>3. Bedrijf X lijkt eerlijk te zijn tegenover zijn klanten.<br>4. Bedrijf X lijkt echt om zijn klanten te geven.<br>5. Bedrijf X geeft om het milieu.<br>6. Waar zou u het bedrijf positioneren om zijn verantwoordelijkheden op het gebied van duurzaamheid na te komen? |
| Claim credibility | 1. Ik vind de claim geloofwaardig<br>2. Vergeleken met de meeste claims over duurzaamheid, vind ik de claims van bedrijf X: bedrieglijk /eerlijk<br>3. Vergeleken met de meeste duurzaamheidsclaims, vind ik de claims van bedrijf X: misleidend / oprecht |

| Level of expertise | 1. Ik heb veel kennis over ecologische duurzaamheid.<br>2. Ik beschouw mezelf als een expert op het gebied van ecologische duurzaamheid.<br>3. Ik heb veel ervaring met milieuduurzaamheid.<br>4. Over het algemeen weet ik meer over ecologische duurzaamheid dan mijn vrienden. |
|---|---|
| Message involvement | 1. Ik heb de claim over duurzaamheid zorgvuldig gelezen.<br>2. Ik heb veel aandacht besteed aan de duurzaamheidsclaims.<br>3. Hoeveel moeite besteedde u aan het evalueren van de informatie in de duurzaamheidsclaims?<br>4. In welke mate probeerde u de informatie in de duurzaamheidsclaim te evalueren? |
| Control variables | Geslacht: Man/Vrouw/Anders<br>Leeftijd: … jaar<br>*Hoogst genoten opleiding:<br>- Geen onderwijs / basisonderwijs / lagere school<br>- LBO / VBO / VMBO (kader- en beroepsgerichte leerweg)<br>- MAVO / eerste 3 jaar HAVO en VWO / VMBO (theoretische en gemengde leerweg)<br>- MBO<br>- HAVO en VWO bovenbouw<br>- Bachelor (HBO, WO)<br>- WO Master, doctoraal<br>Arbeidsstatus: Welke arbeidsrelatie past het beste bij uw situatie:<br>- Fulltime werkend (Meer dan 34 uur per week)*<br>- Parttime werkend (hooguit 34 uur per week)<br>- Werkloos (en zoekende naar een baan)<br>- Student<br>- Gepensioneerd<br>- Huisvrouw/huisman<br>- Zelfstandig ondernemer<br>- Niet in staat te werken |
| Language skills | - Land van herkomst: (1)Nederlands (2) anders, namelijk:...<br>- Heeft u professionele ervaring met de Nederlandse taal (zoals: vertaler of onderwijzer in de Nederlandse taal)? Ja/nee<br>- Ik heb een talenknobbel: zeer mee eens / zeer mee oneens (7-point likert item) |
| Ending | Bedankt voor uw deelname aan dit onderzoek. Uw antwoorden zijn geregistreerd. |

# Appendix 2: Pilot experiment 2

| Concept | Pilot 2 |
|---|---|
| Intro | Beste meneer/ mevrouw,<br>Bedankt voor uw bereidheid om deel te nemen aan dit onderzoek. Dit onderzoek is onderdeel van mijn master Business Administration aan de Radboud Universiteit.<br><br>U krijgt een korte tekst te zien van het bedrijf ChocoSnoop over hun duurzaamheidsbeleid. Vervolgens worden hierover 5 stellingen voorgelegd. De antwoorden die u geeft zijn niet fout of goed. Uw antwoorden zullen anoniem en vertrouwelijk verwerkt worden. |
| Manipulation: Firm sustainability text (inclusive) | Lees de volgende tekst van ChocoSnoop over hun duurzaamheidsbeleid nauwkeurig door:<br><br>Wij van ChocoSnoop produceren chocolade snoepgoed. Het welzijn van mens en milieu staat hierbij voorop. Daarom ondersteunen wij lokale projecten in diverse landen. In deze projecten strijden wij tegen ontbossing en geven wij een eerlijke prijs aan de boer. Hiermee proberen wij de schade van al onze activiteiten te compenseren. |
| Manipulation: Firm sustainability text (exclusive) | Lees de volgende tekst van ChocoSnoop over hun duurzaamheidsbeleid nauwkeurig door:<br><br>Wij van ChocoSnoop produceren chocolade snoepgoed. Het welzijn van de mens staat hierbij voorop, zonder dat dit ten koste gaat van het milieu. Daarom ondersteunen wij lokale projecten specifiek in de gebieden waar wij actief zijn. In deze projecten strijden wij tegen ontbossing en geven wij een eerlijke prijs aan de boer, als de lokale gemeenschap daaraan mee wil werken. Hiermee proberen wij, waar mogelijk, de schade van onze activiteiten te compenseren. |
| Manipulation check: subjective | 1. ChocoSnoop geeft een genuanceerd beeld van wat het doet op het gebied van duurzaamheid.<br>2. ChocoSnoop geeft de grenzen van zijn verantwoordelijkheid aan.<br>3. ChocoSnoop laat duidelijk zien dat het begrijpt dat duurzaamheid soms compromissen vereist.<br>4. ChocoSnoop geeft duidelijk aan dat het op gebied van duurzaamheid afhankelijk is van anderen.<br>5. De uitleg over het duurzaamheidsbeleid van ChocoSnoop vind ik erg specifiek. |
| Ending | Bedankt voor uw deelname aan dit onderzoek. Uw antwoorden zijn geregistreerd. |

# Appendix 3: Main experiment

| Concept | Main experiment | Code |
|---|---|---|
| Intro | Beste meneer/ mevrouw,<br>Bedankt voor uw bereidheid om deel te nemen aan dit onderzoek. Mijn naam is Arjan Vieberink en dit onderzoek is onderdeel van mijn master Business Administration aan de Radboud Universiteit.<br><br>Het invullen van de vragenlijst zal ongeveer 5 minuten duren. U krijgt eerst een korte tekst van het bedrijf ChocoSnoop te zien uit hun jaarverslag. Deze tekst gaat over hun duurzaamheidsbeleid. Vervolgens wordt u een aantal stellingen voorgelegd die betrekking hebben op deze tekst. De antwoorden die u geeft zijn niet fout of goed. Uw antwoorden zullen anoniem en vertrouwelijk verwerkt worden.<br><br>Bij voorbaat dank,<br>Arjan Vieberink<br>arjanvieberink@gmail.com | |
| Manipulation Firm sustainability text (inclusive) | Lees de volgende tekst van ChocoSnoop over hun duurzaamheidsbeleid nauwkeurig door:<br><br>Wij van ChocoSnoop produceren chocolade snoepgoed. Het welzijn van mens en milieu staat hierbij voorop. Daarom ondersteunen wij lokale projecten in diverse landen. In deze projecten strijden wij tegen ontbossing en geven wij een eerlijke prijs aan de boer. Hiermee proberen wij de schade van al onze activiteiten te compenseren. | |
| Manipulation Firm sustainability text (exclusive) | Lees de volgende tekst van ChocoSnoop over hun duurzaamheidsbeleid nauwkeurig door:<br><br>Wij van ChocoSnoop produceren chocolade snoepgoed. Het welzijn van de mens staat hierbij voorop, zonder dat dit ten koste gaat van het milieu. Daarom ondersteunen wij lokale projecten specifiek in de gebieden waar wij actief zijn. In deze projecten strijden wij tegen ontbossing en geven wij een eerlijke prijs aan de boer, als de lokale gemeenschap daaraan mee wil werken. Hiermee proberen wij, waar mogelijk, de schade van onze activiteiten te compenseren. | |

| | | |
|---|---|---|
| Manipulation check: subjective | 1. ChocoSnoop geeft een genuanceerd beeld van wat het doet op het gebied van duurzaamheid. | MC1 |
| | 2. ChocoSnoop geeft duidelijk de grenzen aan van wat zij kunnen doen op het gebied van duurzaamheid. | MC2 |
| | 3. ChocoSnoop laat duidelijk zien dat het begrijpt dat duurzaamheid soms compromissen vereist. | MC3 |
| | 4. ChocoSnoop geeft expliciet aan dat het op gebied van duurzaamheid afhankelijk is van anderen. | MC4 |
| | 5. De uitleg over het duurzaamheidsbeleid van ChocoSnoop vind ik erg specifiek. | MC5 |
| Perceived sustainability performance | 1. ChocoSnoop is hoogstwaarschijnlijk erg duurzaam. | PSP1 |
| | 2. ChocoSnoop lijkt maatschappelijk verantwoord te ondernemen. | PSP2 |
| | 3. ChocoSnoop lijkt eerlijk te zijn tegenover zijn klanten. | PSP3 |
| | 4. ChocoSnoop lijkt echt om de medemens te geven. | PSP4 |
| | 5. ChocoSnoop geeft om het milieu. | PSP5 |
| | 6. ChocoSnoop komt zijn verantwoordelijkheden op het gebied van duurzaamheid na. | PSP6 |
| Claim credibility | De volgende vragen hebben ook betrekking op de eerder gelezen tekst van ChocoSnoop over hun duurzaamheidsbeleid. | |
| | 1. Ik vind de tekst geloofwaardig | PCC1 |
| | 2. Ik denk dat de tekst eerlijk is. | PCC2 |
| | 3. Ik denk dat de tekst oprecht is. | PCC3 |
| | 4. De tekst van ChocoSnoop is waar. | PCC4 |
| | 5. Ik vind de tekst misleidend. (r) | PCC5 |
| Level of expertise | 1. Ik heb veel kennis over duurzaamheid. | Exp1 |
| | 2. Ik beschouw mezelf als een expert op het gebied van duurzaamheid. | Exp2 |
| | 3. Ik heb veel ervaring met duurzaamheid. | Exp3 |
| | 4. Over het algemeen weet ik meer over duurzaamheid dan mijn vrienden. | Exp4 |
| Attitude towards the firm (Moore et al., 1995) | ChocoSnoop is… voor de samenleving. | |
| | 1. Goed/slecht | Att1 |
| | 2. Nuttig/nutteloos | Att2 |
| | 3. Noodzakelijk/ Niet noodzakelijk | Att3 |
| Message involvement | 1. Ik heb de tekst zorgvuldig gelezen. | MI1 |
| | 2. Ik heb veel aandacht besteed aan de tekst. | MI2 |
| | 3. Hoeveel moeite heeft u besteed aan het evalueren van de informatie in de tekst? | MI3 |
| | 4. In welke mate heeft u geprobeerd de informatie in de tekst te evalueren? | MI4 |

| Control variables | Geslacht: Man/Vrouw/Anders<br>Wat is uw leeftijd? <20 jaar, 20-30 jaar, 31-40 jaar, 41-50 jaar, 51-60 jaar, 61-70 jaar, >70 jaar.<br>Wat is uw hoogst genoten opleiding:<br>   - Geen onderwijs / basisonderwijs / lagere school<br>   - VMBO<br>   - HAVO<br>   - VWO<br>   - MBO<br>   - HBO<br>   - WO<br>   - Anders / wil ik niet zeggen | |
| --- | --- | --- |
| Language skills | - Ik heb een talenknobbel. | |
| Ending | Bedankt voor uw deelname aan dit onderzoek. Uw antwoorden zijn geregistreerd. Indien u nog vragen kunt u contact met mij opnemen.<br><br>Met vriendelijke groet,<br>Arjan Vieberink<br>arjanvieberink@gmail.com | |

# Appendix 4: Sustainability domains, explanation and aspects by GRI (2002)

| Domain | Explanation | Aspects |
|---|---|---|
| Economic | The economic dimension of sustainability concerns the organization's impacts on the economic conditions of its stakeholders and on economic systems at local, national, and global levels. | • Economic Performance<br>• Market Presence<br>• Indirect Economic Impacts |
| Environmental | The environmental dimension of sustainability concerns an organization's impacts on living and non-living natural systems, including ecosystems, land, air, and water. | • Materials<br>• Energy<br>• Water<br>• Biodiversity<br>• Emissions, Effluents, and Waste<br>• Products and Services<br>• Compliance<br>• Transport |
| Labor practice and decent work | The specific aspects under the category of labor practices are based on internationally recognized universal standards. The labor practices indicators also addressing the social responsibilities of business enterprises. | • Employment<br>• Labor/Management Relations<br>• Occupational Health and Safety<br>• Training and Education<br>• Diversity and Equal Opportunity<br>• Equal remuneration for women and men |
| Human rights | Human rights performance indicators require organizations to report on the extent to which processes have been implemented, on incidents of human rights violations and on changes in the stakeholders' ability to enjoy and exercise their human rights, occurring during the reporting period. | • Investment and Procurement Practices<br>• Non-discrimination<br>• Freedom of Association and Collective Bargaining<br>• Child Labor<br>• Prevention of Forced and Compulsory Labor<br>• Security Practices<br>• Indigenous Rights<br>• Assessment<br>• Remediation |

| Society | Society performance indicators focus attention on the impacts organizations have on the local communities in which they operate, and disclosing how the risks that may arise from interactions with other social institutions are managed and mediated. | • Local Communities<br>• Corruption<br>• Public Policy<br>• Anti-Competitive Behavior<br>• Compliance |
|---|---|---|
| Product responsibility | Product responsibility performance indicators address the aspects of a reporting organization's products and services that directly affect customers. | • Customer Health and Safety<br>• Product and Service Labeling<br>• Marketing Communications<br>• Customer Privacy<br>• Compliance |

# Appendix 5: Sample profile

**Gender**

|  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| Male | 62 | 37.6 | 37.6 | 37.6 |
| Female | 102 | 61.8 | 61.8 | 99.4 |
| Others | 1 | .6 | .6 | 100.0 |
| Total | 165 | 100.0 | 100.0 | |

**Age**

|  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| < 20 years | 12 | 7.3 | 7.3 | 7.3 |
| 20-30 years | 88 | 53.3 | 53.7 | 61.0 |
| 31-40 years | 13 | 7.9 | 7.9 | 68.9 |
| 41-50 years | 23 | 13.9 | 14.0 | 82.9 |
| 51-60 years | 20 | 12.1 | 12.2 | 95.1 |
| 61-70 years | 8 | 4.8 | 4.9 | 100.0 |
| > 70 years | 0 | .0 | 0 | 100.0 |
| Total | 164 | 99.4 | 100.0 | |
| Missing | 1 | .6 | | |
| Total | 165 | 100.0 | | |

**Level of education**

|  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| Geen onderwijs/ basisonderwijs | 0 | 0.0 | 0.0 | 0.0 |
| VMBO | 11 | 6.7 | 6.7 | 6.7 |
| HAVO | 3 | 1.8 | 1.8 | 8.5 |
| VWO | 5 | 3.0 | 3.0 | 11.6 |
| MBO | 44 | 26.7 | 26.8 | 38.4 |
| HBO | 41 | 24.8 | 25.0 | 63.4 |
| WO | 60 | 36.4 | 36.6 | 100.0 |
| Other/missing | 1 | .6 |  |  |
| Total | 165 | 100.0 | 100.0 |  |

# Appendix 6: Reliability check

| Construct | Manipulation check | Perceived sustainability performance | Perceived claim credibility | Level of expertise | Attitude towards the firm | Message involvement |
|---|---|---|---|---|---|---|
| N of items | 5 | 6 | 5 | 4 | 3 | 4 |
| Cronbach's alpha | .758 | .900 | .905 | .871 | .796 | .756 |
| Item nr. | | Cronbach's alpha if item deleted | | | | |
| 1 | .718 | .886 | .873 | .831 | .773 | .743 |
| 2 | .666 | .879 | .865 | .862 | .609 | .665 |
| 3 | .734 | .880 | .874 | .811 | .782 | .701 |
| 4 | .758 | .888 | .901 | .835 | - | .685 |
| 5 | .688 | .875 | .903 | - | - | - |
| 6 | - | .884 | - | - | - | - |

# Appendix 7: Factor analyses

## 1. Discriminant validity

**Correlation matrix**

| | PSP1 | PSP2 | PSP3 | PSP4 | PSP5 | PSP6 | PCP1 | PCP2 | PCP3 | PCP4 | PCP5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PSP1 | .1.000 | .620* | .574* | .542* | .600* | .584* | .587* | .563* | .578* | .411* | .479* |
| PSP2 | .620* | 1.000 | .378* | .593* | .662* | .551* | .521* | .431* | .534* | .359* | .408* |
| PSP3 | .574* | .678* | 1.000 | .611* | .631* | .588* | .542* | .575* | .609* | .409* | .471* |
| PSP4 | .542* | .593* | .611* | 1.000 | 587* | .532* | .500* | .554* | .616* | .420* | .470* |
| PSP5 | .600* | .662* | .631* | .587* | 1.000 | .700* | .509* | .484* | .598* | .413* | .413* |
| PSP6 | .584* | .551* | .588* | .532* | .700* | 1.000 | .586* | .551* | .636* | .489* | .431* |
| PCP1 | .587* | .521* | .542* | .500* | .509* | .586* | 1.000 | .762* | .766* | .641* | .589* |
| PCP2 | .563* | .431* | .575* | .554* | .484* | .551* | .762* | 1.000 | .783* | .632* | .673* |
| PCP3 | .578* | .534* | .609* | .616* | .598* | .636* | .766* | .783* | 1.000 | .599* | .596* |
| PCP4 | .411* | .359* | .409* | .420* | .413* | .489* | .641* | .632* | 599* | 1.000 | .521* |
| PCP5 | .497* | .408* | .471* | .470* | .413* | .431* | .589* | .673* | .596* | .521* | 1.000 |
| Exp1 | -.081 | .001 | -.100 | -.017 | -.098 | -.094 | -.081 | -.083 | -.035 | -.156** | -.125 |
| Exp2 | -.039 | -.088 | -.159** | -.082 | -.179** | -.111 | -.100 | -.080 | -.069 | -.012 | -.162** |
| Exp3 | -.121 | -.056 | -.108 | -.055 | -.147** | -.136** | -.080 | -.046 | -.057 | -.074 | -.068 |
| Exp4 | -.100 | .019 | -.116 | -.081 | -.107 | -.120 | -.080 | -.026 | -.040 | -.034 | -.034 |
| Att1 | -.445* | -.364* | -.380* | -.542* | -.488* | -.465* | -.378* | -.505* | -.535* | -.311* | -.451* |
| Att2 | -.288* | -.193** | -.327* | -.343* | -.357* | -.302* | -.204* | -.344* | -.412* | -.238** | -.356* |
| Att3 | -.243** | -.098 | -.118 | -.205** | -.294* | -.224** | -.082 | -.168** | -.276* | -.182** | -.200** |
| MI1 | .089 | .216** | .177** | .096 | .142** | .160** | .187** | .120 | .147** | -.033 | .141** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MI2 | .074 | .139** | .032 | .065 | .040 | .084 | .133** | .142** | .118 | .041 | .065 |
| MI3 | .077 | .001 | -.048 | -.009 | -.014 | -.009 | .025 | .030 | .029 | .100 | -.042 |
| MI4 | -.032 | .108 | -.023 | -.050 | -.026 | -.029 | -.073 | -.112 | -.047 | -.062 | -.137** |
| MC1 | .393* | .357* | .442* | .414* | .394* | .335* | .461* | .352* | .482* | .277* | .323* |
| MC2 | .493* | .293* | .373* | .464* | .413* | .424* | .374* | .407* | .465* | .259* | .304* |
| MC3 | .220** | .232** | .324* | .246** | .340* | .347* | .325* | .291* | .352* | .250** | .172** |
| MC4 | .118** | .129** | .292* | .250** | .294* | .294* | 270* | .278* | .261* | .198** | .188** |
| MC5 | .483* | .340* | .353* | .395* | .463* | .463* | .420* | .460* | .428* | .307* | .346* |

| | Exp1 | Exp2 | Exp3 | Exp4 | Att1 | Att2 | Att3 | MI1 | MI2 | MI3 | MI4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PSP1 | -.081 | -.039 | -.121 | -.100 | -.445* | -.288* | -.243** | .089 | .074 | .077 | -.032 |
| PSP2 | .001 | -.088 | -.056 | .019 | -.364* | -.193** | -.098 | .216** | .139** | .011 | .108 |
| PSP3 | -.100 | -.159** | -.108 | -.116 | -.380* | -.327* | -.118 | .177** | .032 | -.048 | -.023 |
| PSP4 | -.017 | -.082 | -.055 | -.081 | -.542* | -.343* | -.205** | .096 | .065 | -.009 | -.050 |
| PSP5 | -.098 | -.179** | -.147** | -.107 | -.488* | -.357* | -.294* | .142** | .040 | -.014 | -.026 |
| PSP6 | -.094 | -.111 | -.136** | -.120 | -.465* | -.302* | -.224** | .160** | .084 | -.009 | -.029 |
| PCP1 | -.081 | -.100 | -.080 | -.080 | -.378* | -.204** | -.082 | .187** | .133** | .025 | -.073 |
| PCP2 | -.083 | -.080 | -.046 | -.026 | -.505* | -.344* | -.168** | .120 | .142** | .030 | -.112 |
| PCP3 | -.035 | -.069 | -.057 | -.040 | -.535* | -.412* | -.276* | .147** | .118 | .029 | -.047 |
| PCP4 | -.156** | -.012 | -.074 | -.034 | -.311* | -.238** | -.182** | -.033 | .041 | .100 | -.062 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PCP5 | -.125 | -.162** | -.068 | -.034 | -.451* | -.356* | -.200** | .141** | .065 | -.042 | -.037** |
| Exp1 | 1.000 | .580* | .699* | .667* | -.028 | .058 | .097 | .161** | .228** | .127 | .221** |
| Exp2 | .580* | 1.000 | .647* | .550* | .047 | .039 | .001 | -.047 | .065 | .134** | .114** |
| Exp3 | .699* | .647* | 1.000 | .674* | .090 | .059 | .096 | .090 | .099 | .091 | .169** |
| Exp4 | .667* | .550* | .674* | 1.000 | .030 | .032 | -.003 | .121 | .163** | .120 | .188** |
| Att1 | -.028 | .047 | .090 | .030 | 1.000 | .643* | 458* | -.146** | -.146** | .015 | .087 |
| Att2 | .058 | .039 | .059 | .032 | .643* | 1.000 | .647* | -.069 | -.041 | .053 | .071 |
| Att3 | .097 | .001 | .096 | -.003 | .458* | .647* | 1.000 | .026 | -.001 | -.072 | .009 |
| MI1 | .161** | -.047 | .090 | .121 | -.146** | -.069 | .026 | 1.000 | .649* | .236** | .271* |
| MI2 | .228** | .065 | .099 | .163** | -.146** | -.041 | -.001 | .649* | 1.000 | .396* | .400* |
| MI3 | .127 | .134** | .091 | .120 | .015 | .053 | -.072 | .236** | .396* | 1.000 | .670* |
| MI4 | .221** | .114 | .169** | .188** | .087 | .071 | .009 | .271* | .400* | 670* | 1.000 |
| MC1 | .000 | -.005 | -.096 | -.028 | -.333* | -.290* | -.156** | .077 | -.066 | -.079 | -.132** |
| MC2 | -.008 | .050 | -.071 | -.103 | -.368** | -.276* | -.250** | -.025 | .028 | -.038 | -.087 |
| MC3 | -.034 | -.010 | -.036 | -.046 | -.230** | -.107 | -.059 | .005 | .011 | .002 | .019 |
| MC4 | -.038 | .010 | .024 | -.060 | -.224** | -.164** | -.197** | .052 | .071 | .057 | -.035 |
| MC5 | .000 | .124 | .014 | -.043 | -.253** | -.192** | -.137 | -.062 | -.066 | -.093 | -.090 |

|      | MC1 | MC2 | MC3 | MC4 | MC5 |
|------|------|------|------|------|------|
| PSP1 | .393* | .493* | .220** | .118 | .483* |
| PSP2 | .357* | .293* | .232** | .129 | .340* |
| PSP3 | .442* | .373* | .324* | .292* | .353* |
| PSP4 | .414* | .464* | .246** | .250** | .395* |
| PSP5 | .394* | .413* | .340* | .259* | .432* |
| PSP6 | .335* | .424* | .347* | .294* | .463* |
| PCP1 | .461* | .374* | .325* | .270* | .420* |
| PCP2 | .352* | .407* | .291* | .278* | .460* |
| PCP3 | .482* | .465* | .352* | .261* | .428* |
| PCP4 | .277* | .259* | .250** | .198** | .307* |
| PCP5 | .323* | .304* | .172** | .188** | .346* |
| Exp1 | .000** | -.008 | -.034 | -.038 | .000 |
| Exp2 | -.005 | .050 | -.010 | .010 | .124 |
| Exp3 | -.096** | -.071 | -.036 | .024 | .014 |
| Exp4 | -.028** | -.103 | -.046 | -.060 | -.043 |
| Att1 | -.333* | -.368* | -.230** | -.224** | -.253** |
| Att2 | -.290* | -.276* | -.107 | -.164** | -.192** |
| Att3 | -.156** | -.250** | -.059 | -.197** | -.137** |
| MI1 | .077 | -.025 | .005 | .052 | -.062 |
| MI2 | -.066 | .028 | .011 | .071 | -.066 |
| MI3 | -.079 | -.038 | .002 | .057 | -.093 |

| | | | | | |
|------|------|------|------|------|------|
| MI4 | -.132** | -.087 | .019 | -.035 | -.090 |
| MC1 | 1.000 | .518* | .333* | .200** | .461* |
| MC2 | .518* | 1.000 | .379* | .331* | .614* |
| MC3 | .333* | .379* | 1.000 | .365* | .318* |
| MC4 | .200** | .331* | .365* | 1.000 | .321* |
| MC5 | .461* | .614* | .318* | .321* | 1.000 |

*p<.001; **p<.05

## KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .866 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2439.586 |
| | df | 351 |
| | Sig. | .000 |

## Communalities

| | Initial | Extraction |
|------|------|------|
| PSP1 | ..646 | .574 |
| PSP2 | .679 | .799 |
| PSP3 | .680 | .637 |
| PSP4 | .589 | .559 |
| PSP5 | .671 | .685 |
| PSP6 | .630 | .586 |
| PCP1 | .758 | .782 |
| PCP2 | .786 | .825 |
| PCP3 | .770 | .768 |
| PCP4 | .567 | .586 |
| PCP5 | .545 | .545 |

| | | |
|------|------|------|
| Exp1 | .643 | .713 |
| Exp2 | .561 | .594 |
| Exp3 | .664 | .738 |
| Exp4 | .594 | .637 |
| Att1 | .629 | .616 |
| Att2 | .628 | .770 |
| Att3 | .531 | .581 |
| MI1 | .531 | .720 |
| MI2 | .564 | .637 |
| MI3 | .563 | .778 |
| MI4 | .570 | .624 |
| MC1 | .497 | .396 |
| MC2 | .561 | .672 |
| MC3 | .306 | .272 |
| MC4 | .328 | .226 |
| MC5 | .560 | .563 |

**Total Variance Explained**

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sum of Squared Loadings Total |
|-----------|-------|----------------|----------------|-------|----------------|---------------|---------------------------------------|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | |
| 1 | 8.625 | 31.944 | 31.944 | 8.268 | 30.622 | 30.622 | 6.236 |
| 2 | 3.218 | 11.918 | 43.861 | 2.897 | 10.730 | 41.352 | 2.821 |
| 3 | 2.147 | 7.950 | 51.811 | 1.814 | 6.719 | 48.071 | 1.796 |
| 4 | 1.681 | 6.226 | 58.037 | 1.349 | 4.996 | 53.067 | 3.370 |
| 5 | 1.399 | 5.180 | 63.217 | .970 | 3.592 | 56.659 | 5.009 |
| 6 | 1.192 | 4.415 | 67.633 | .882 | 3.268 | 59.927 | 5.980 |
| 7 | 1.085 | 4.020 | 71.652 | .707 | 2.618 | 62.545 | 1.913 |

| 8 | .893 | 3.306 | 74.958 | | | | |
|---|---|---|---|---|---|---|---|
| 9 | .725 | 2.687 | 77.645 | | | | |
| 10 | .631 | 2.336 | 79.981 | | | | |
| 11 | .584 | 2.162 | 82.144 | | | | |
| 12 | .516 | 1.910 | 84.053 | | | | |
| 13 | .444 | 1.645 | 85.698 | | | | |
| 14 | .429 | 1.589 | 87.286 | | | | |
| 15 | .415 | 1.537 | 88.823 | | | | |
| 16 | .384 | 1.423 | 90.246 | | | | |
| 17 | .352 | 1.305 | 91.551 | | | | |
| 18 | .321 | 1.190 | 92.741 | | | | |
| 19 | .296 | 1.095 | 93.836 | | | | |
| 20 | .279 | 1.033 | 94.869 | | | | |
| 21 | .251 | .931 | 95.800 | | | | |
| 22 | .248 | .918 | 96.718 | | | | |
| 23 | .223 | 824 | 97.542 | | | | |
| 24 | .192 | .709 | 98.252 | | | | |
| 25 | .185 | .686 | 98.938 | | | | |
| 26 | .158 | .586 | 99.524 | | | | |
| 27 | .128 | .476 | 100.000 | | | | |

| Item | pattern matrix | | | | | | |
|---|---|---|---|---|---|---|---|
| | Perceived claim credibility | Level of expertise | Message involvement - Dimension 1 | Attitude towards the firm | Manipulation check | Perceived sustainability performance | Message involvement - Dimension 2 |
| PCP2 | .837 | | | | | | |

| | | | | | | |
|------|------|------|------|------|------|------|
| PCP4 | .766 | | | | | |
| PCP1 | .744 | | | | | |
| PCP5 | .620 | | | | | |
| PCP3 | .593 | | | | | |
| Exp3 | | .861 | | | | |
| Exp1 | | .811 | | | | |
| Exp4 | | .790 | | | | |
| Exp2 | | .735 | | | | |
| MI3 | | | .866 | | | |
| MI4 | | | .714 | | | |
| Att2 | | | | .861 | | |
| Att3 | | | | .775 | | |
| Att1 | | | | .581 | | |
| MC2 | | | | | .809 | |
| MC5 | | | | | .658 | |
| MC3 | | | | | .486 | |
| MC1 | | | | | .455 | |
| MC4 | | | | | .453 | |
| PSP2 | | | | | | -.935 |
| PSP5 | | | | | | -.663 |
| PSP3 | | | | | | -.610 |
| PSP1 | | | | | | -.493 |
| PSP4 | | | | | | -.471 |
| PSP6 | | | | | | -.432 |
| MI1 | | | | | | |
| MI2 | | | | | | |

# 2. Convergent validity

## 2.1 Construct: perceived claim credibility

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .879 |
|---|---|---|
| | Approx. Chi-Square | 527.550 |
| | df | 10 |
| | Sig. | .000 |

**Communalities**

| | Initial | Extraction |
|---|---|---|
| PCC1 | .683 | .750 |
| PCC2 | .727 | .819 |
| PCC3 | .688 | .742 |
| PCC4 | .471 | .511 |
| PCC5 | .479 | .505 |

**Total Variance Explained**

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.640 | 72.807 | 72.807 | 3.327 | 66.533 | 66.533 |
| 2 | .489 | 9.780 | 82.587 | | | |
| 3 | .435 | 8.692 | 91.279 | | | |
| 4 | .233 | 4.657 | 95.936 | | | |
| 5 | .203 | 4.064 | 100.000 | | | |

**Factor matrix**

| | Factor 1 |
|---|---|
| PCC1 | .866 |

| PCC2 | .905 |
|------|------|
| PCC3 | .861 |
| PCC4 | .715 |
| PCC5 | .711 |

## 2.2 Construct: Level of expertise

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .822 |
|------|------|------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 315.085 |
| | df | 6 |
| | Sig. | .000 |

**Communalities**

| | Initial | Extraction |
|------|---------|------------|
| Exp1 | .558 | .650 |
| Exp2 | .446 | .499 |
| Exp3 | .616 | .752 |
| Exp4 | .542 | .631 |

**Total Variance Explained**

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|-----------|-------|-------------|--------------|-------|-------------|------------|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.890 | 72.250 | 72.250 | 2.533 | 63.323 | 63.323 |
| 2 | .487 | 12.167 | 74.417 | | | |
| 3 | .335 | 8.380 | 92.797 | | | |
| 4 | .288 | 7.203 | 100.000 | | | |

**Factor matrix**

|       | Factor 1 |
|-------|----------|
| Exp1  | .806     |
| Exp2  | .707     |
| Exp3  | .867     |
| Exp4  | .794     |

# 2.3 Construct: Message involvement dimension 1

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .500 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 96.927 |
| | df | 1 |
| | Sig. | .000 |

**Communalities**

|     | Initial | Extraction |
|-----|---------|------------|
| MI3 | .449    | .669       |
| MI4 | .449    | .669       |

**Total Variance Explained**

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 1.670 | 83.513 | 83.513 | 1.339 | 66.940 | 66.940 |
| 2 | .330 | 16.487 | 100.000 | | | |

**Factor matrix**

|       | Factor 1 |
|-------|----------|
| MI3   | .818     |
| MI4   | .818     |

## 2.4 Construct: Attitude towards the firm

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .661 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 169.923 |
| | df | 3 |
| | Sig. | .000 |

**Communalities**

| | Initial | Extraction |
|---|---|---|
| Att1 | .417 | .456 |
| Att2 | .471 | .904 |
| Att3 | .422 | .462 |

**Total Variance Explained**

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.169 | 72.316 | 72.316 | 1.823 | 60.755 | 60.755 |
| 2 | .542 | 18.069 | 90.386 | | | |
| 3 | .288 | 9.614 | 100.000 | | | |

**Factor matrix**

| | Factor 1 |
|---|---|
| Att1 | .676 |
| Att2 | .951 |
| Att3 | .680 |

## 2.5 Construct: Manipulation check

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .769 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 199.817 |
| | df | 10 |
| | Sig. | .000 |

**Communalities**

| | Initial | Extraction |
|---|---|---|
| MC1 | .318 | .381 |
| MC2 | .474 | .652 |
| MC3 | .232 | .265 |
| MC4 | .192 | 198 |
| MC5 | .420 | .529 |

**Total Variance Explained**

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative e % |
| 1 | 2.564 | 51.282 | 51.282 | 2.024 | 40.471 | 40.471 |
| 2 | .883 | 17.660 | 68.942 | | | |
| 3 | .663 | 13.255 | 82.197 | | | |
| 4 | .514 | 10.275 | 92.471 | | | |
| 5 | .376 | 7.529 | 100.000 | | | |

**Factor matrix**

| | Factor 1 |
|---|---|
| MC1 | .617 |
| MC2 | .807 |

| | |
|---|---|
| MC3 | .515 |
| MC4 | .445 |
| MC5 | .727 |

## 2.6 Construct: Perceived sustainability performance

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .897 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 537.680 |
| | df | 15 |
| | Sig. | .000 |

**Communalities**

| | Initial | Extraction |
|---|---|---|
| PSP1 | .508 | .563 |
| PSP2 | .596 | .645 |
| PSP3 | .576 | .636 |
| PSP4 | .480 | .532 |
| PSP5 | .620 | .682 |
| PSP6 | .547 | .568 |

**Total Variance Explained**

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative e % |
| 1 | 4.017 | 66.953 | 66.953 | 3.625 | 60.417 | 60.417 |
| 2 | .525 | 8.747 | 75.700 | | | |
| 3 | .456 | 7.593 | 83.293 | | | |
| 4 | .409 | 6.824 | 90.117 | | | |
| 5 | .331 | 5.511 | 95.628 | | | |
| 6 | .262 | 4.372 | 100.000 | | | |

**Factor matrix**

|      | Factor 1 |
|------|----------|
| PSP1 | .750     |
| PSP2 | .803     |
| PSP3 | .797     |
| PSP4 | .729     |
| PSP5 | .826     |
| PSP6 | .753     |

# 2.7 Construct: Message involvement dimension 2

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .500 |
|---|---|---|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 88.971 |
| | df | 1 |
| | Sig. | .000 |

**Communalities**

|     | Initial | Extraction |
|-----|---------|------------|
| MI1 | .422    | .648       |
| MI2 | .422    | .648       |

**Total Variance Explained**

| | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| Component | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 1.649 | 82.466 | 82.466 | 1.297 | 64.843 | 64.843 |
| 2 | .351 | 17.534 | 100.000 | | | |

**Factor matrix**

|     | Factor 1 |
|-----|----------|
| MI1 | .805     |
| MI2 | .805     |

# Appendix 8: Manipulation check

**Group statistics**

| Exclusiveness of language | | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Manipulation | (0)Inclusive | 81 | 3.8667 | .97057 | .10784 |
| | (1)Exclusive | 84 | 4.2619 | 1.16204 | .12679 |

**Independent sample T-test**

| | | Construct: Manipulation check | |
|---|---|---|---|
| | | Equal variance assumed | Equal variance not assumed |
| Levene's Test for Equality of variance | F | 1.132 | |
| | Sig | .289 | |
| T-test for equality of means | t | -2.367 | -2.375 |
| | df | 163 | 159.774 |
| | Sig (2-tailed) | .019 | .019 |
| | Mean Difference | -.39524 | -.39524 |
| | Std. Error Difference | .16699 | .16645 |
| 95% Confidence interval of the difference | Lower | -.72498 | -.06549 |
| | Upper | -.72396 | -.06652 |

# Appendix 9: Assumptions

**Linearity**

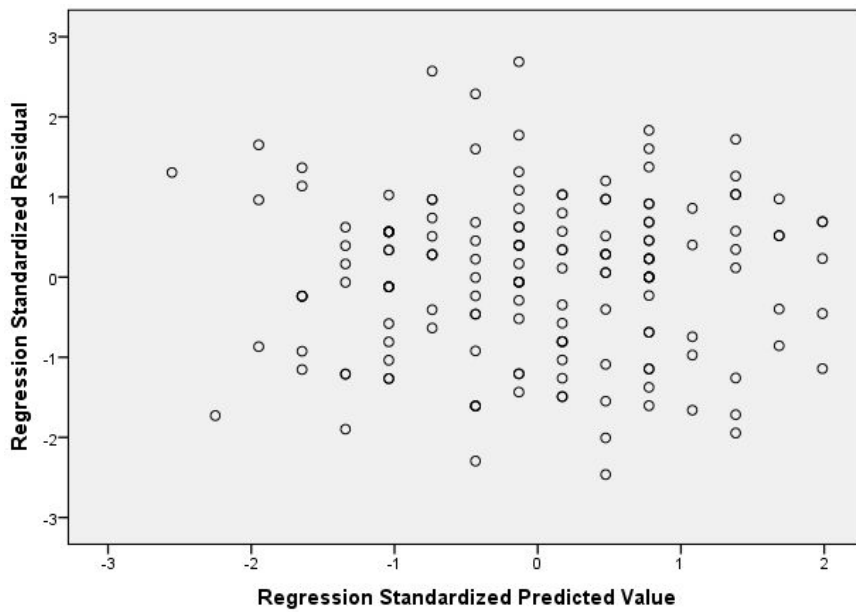Dependent variable: attitude towards the firm
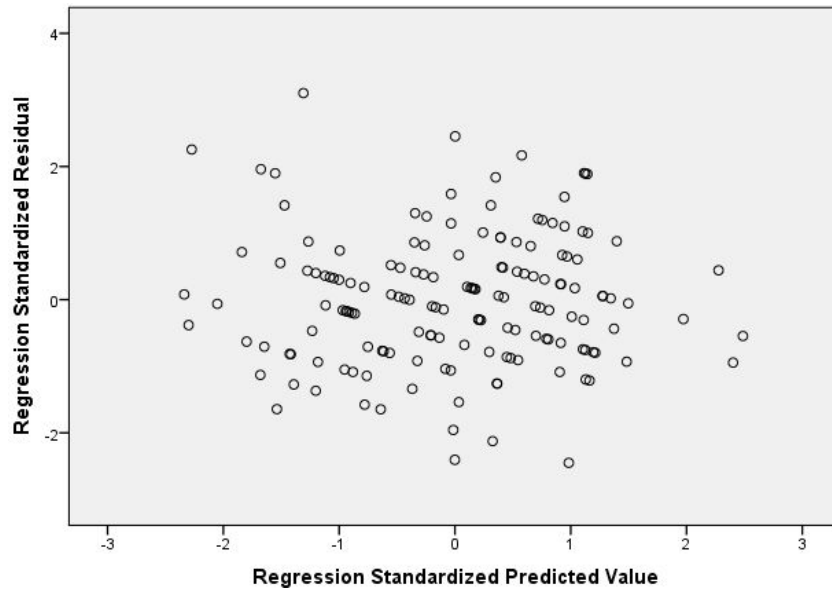


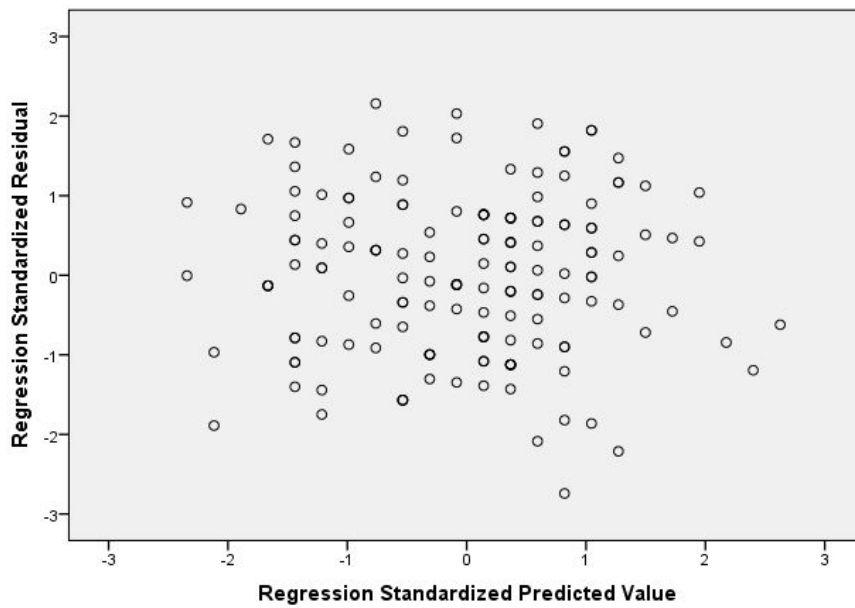Dependent variable: perceived sustainability performance
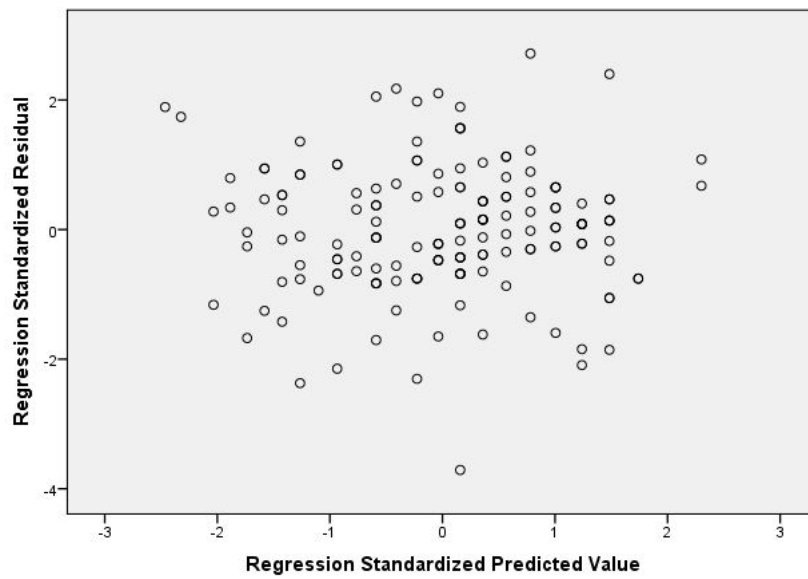
Dependent variable: perceived claim credibility
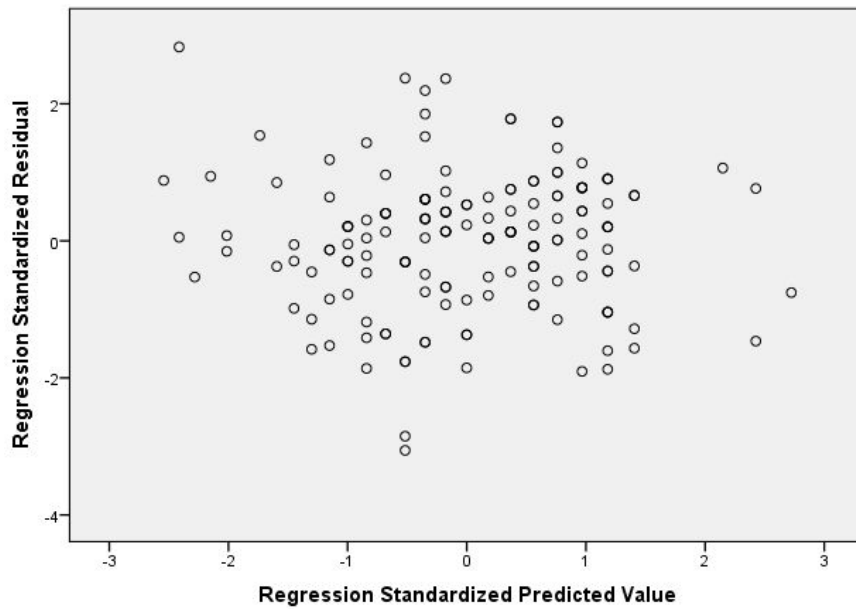


Dependent variable: level of expertise
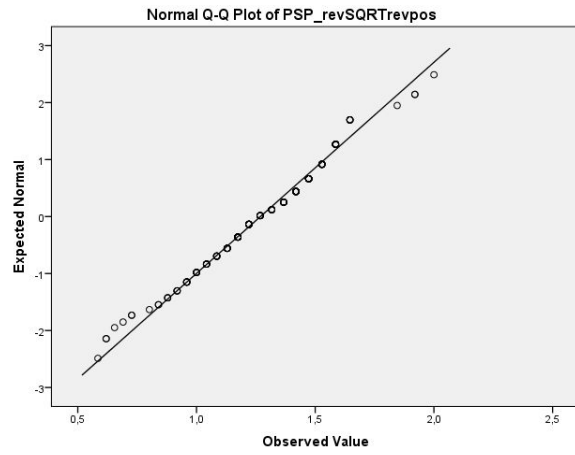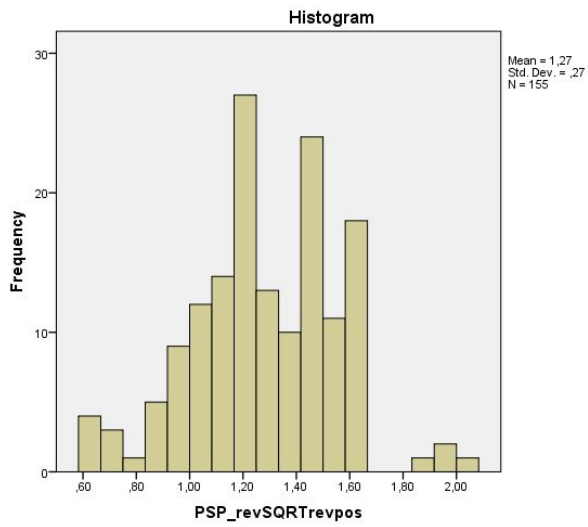
Dependent variable: message involvement



**Test of Homogeneity of Variance**

| | Levene Statistics | df1 | df2 | Sig. |
|---|---|---|---|---|
| Perceived sustainability performance | .189 | 1 | 153 | .665 |
| Perceived claim credibility | .284 | 1 | 153 | .595 |
| Attitude towards the firm | .222 | 1 | 153 | .638 |
| Level of expertise | .517 | 1 | 153 | .473 |
| Message involvement | .077 | 1 | 153 | .782 |

**Normality**

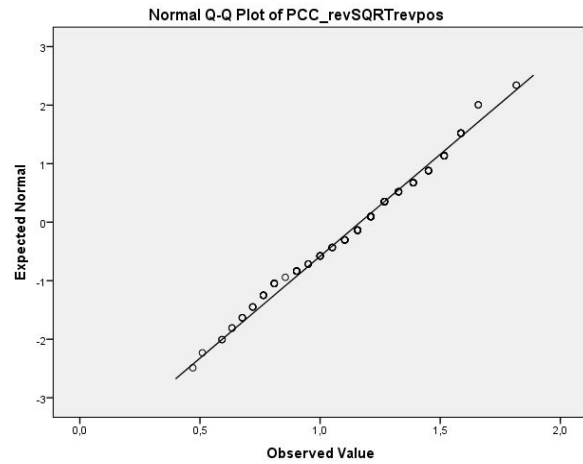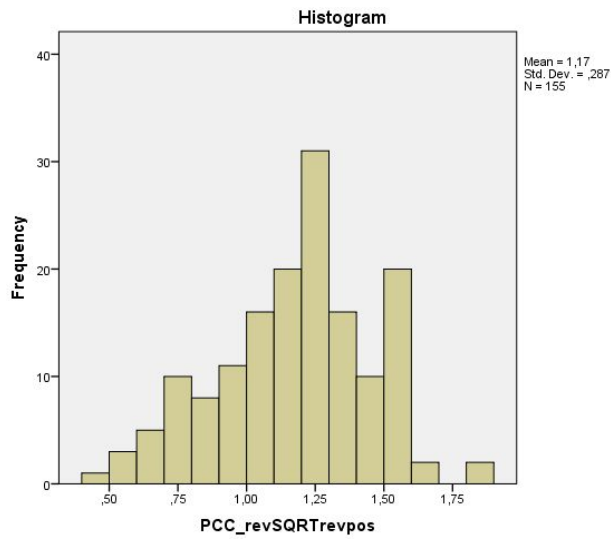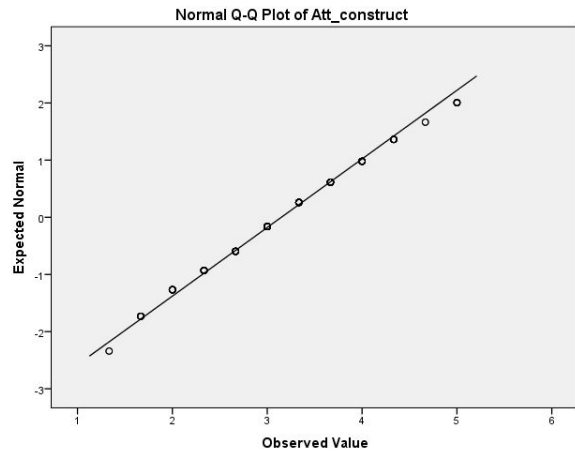| | Perceived sustainability performance | Perceived claim credibility | Attitude towards the firm | Level of expertise | Message involvement |
|---|---|---|---|---|---|
| Skewness | -.156 | -.184 | .111 | -.152 | -.103 |
| Std. Error Skewness | .195 | .195 | .195 | .195 | .195 |
| Kurtosis | .006 | -.562 | -.323 | -.399 | -.605 |
| Std. Error Kurtosis | .387 | .387 | .387 | .387 | .387 |

## Perceived sustainability performance



## Perceived claim credibility

## Attitude towards the firm
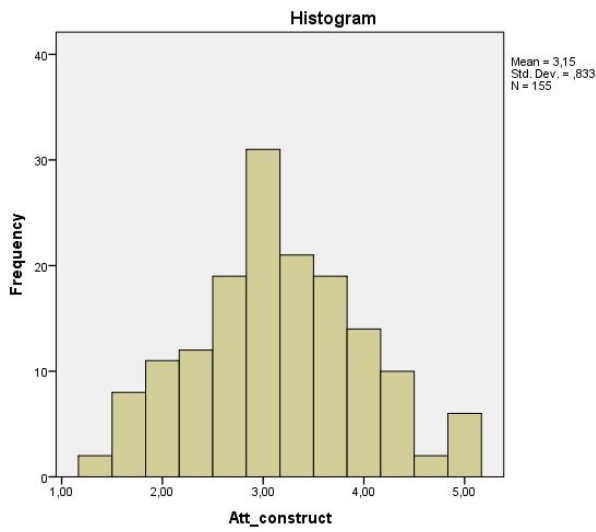


## Level of expertise
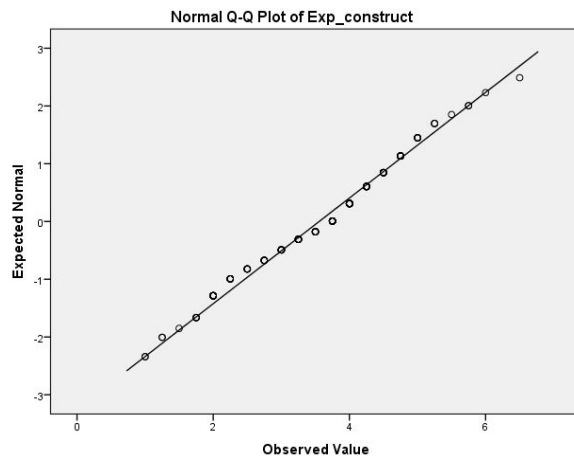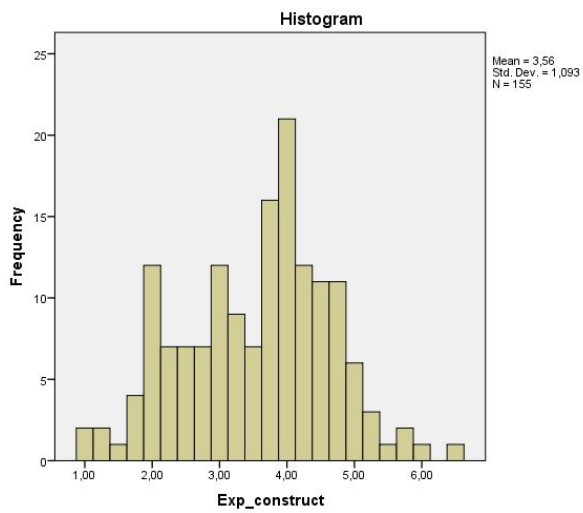


## Message involvement
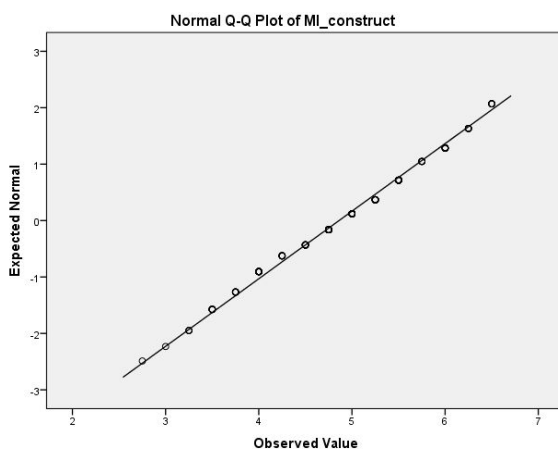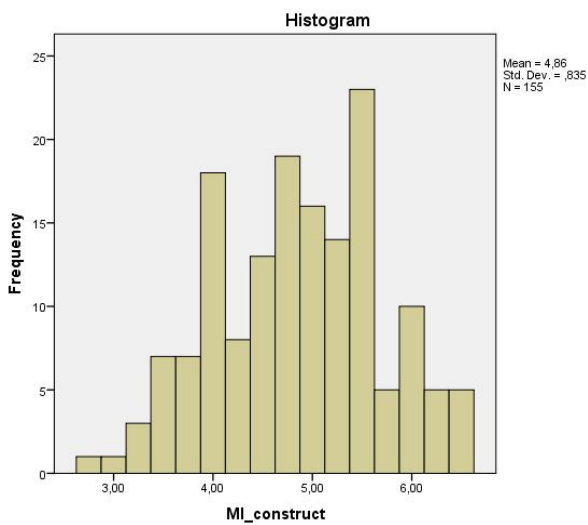
**Indepence of error**

| Dependent variable | Perceived claim credibility | Perceived sustainability performance | Attitude towards the firm |
|---|---|---|---|
| Durbin-Watson test | 1.838 | 2.278 | 1.772 |
| **Independent variable** | **VIF scores** | | |
| Perceived sustainability performance | - | - | 2.390 |
| Perceived claim credibility | - | 1.108 | 2.368 |
| Exclusiveness | 1.012 | 1.018 | 1.019 |
| level of expertise | 1.194 | 1.195 | 1.223 |
| interaction exclusiveness/level of expertise | 1.020 | 1.020 | 1.054 |
| age | 1.097 | 1.123 | 1.118 |
| gender | 1.200 | 1.230 | 1.240 |
| education level | 1.106 | 1.109 | 1.096 |
| Knack for languages | 1.111 | 1.121 | 1.116 |
| Message involvement | 1.076 | 1.079 | 1.082 |

# Appendix 10: Linear regression analysis

## Dependent variable: Perceived claim credibility

**Model Summary**

| Model | R. | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.312a | .097 | .048 | .27902 |

a. Predictors: (constant), exclusiveness, level of expertise, interaction exclusiveness/level of expertise, age, gender, level of education, knack for languages

**ANOVA**

| Model | | Sum of Squares | df | Mean Squares | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1.232 | 8 | .154 | 1.978 | .053a |
| | Residuals | 11.444 | 147 | .078 | | |
| | Total | 12.676 | 155 | | | |

a. Predictors: (constant), exclusiveness, level of expertise, interaction exclusiveness/level of expertise, age, gender, level of education, knack for languages

**Coefficients**

| Coefficients | | | | | | |
|---|---|---|---|---|---|---|
| | | Unstandardized Coefficients | | Standardized Coefficients | | |
| Model | | B | std. Error | Beta | t | Sig. |
| 1 | (constant) | .885 | .199 | | 4.449 | .000 |
| | Exclusiveness | .039 | .045 | .068 | .862 | .390 |
| | Level of expertise | -.008 | .022 | -.030 | -.350 | .727 |
| | Interaction exclusiveness/level of expertise | -.011 | .041 | -.022 | -.273 | .785 |
| | Gender | .097 | .051 | .165 | 1.920 | .057 |

| | Age | -.032 | .017 | -.151 | -1.845 | .067 |
|---|---|---|---|---|---|---|
| | Level of education | .010 | .017 | .050 | .605 | .546 |
| | Knack for languages | .018 | .016 | .098 | 1.181 | .239 |
| | Message involvement | .019 | .028 | .054 | .669 | .504 |

# Dependent variable: Perceived sustainability performance

**Model Summary**

| Model | R. | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .761a | .580 | .554 | .18036 |

a. Predictors: (constant), perceived claim credibility, exclusiveness, level of expertise, interaction exclusiveness/level of expertise, age, gender, level of education, knack for languages

**ANOVA**

| Model | | Sum of Squares | df | Mean Squares | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 6.547 | 9 | .727 | 22.360 | .000a |
| | Residuals | 4.750 | 146 | .033 | | |
| | Total | 11.296 | 155 | | | |

a. Predictors: (constant), perceived claim credibility, exclusiveness, level of expertise, interaction exclusiveness/level of expertise, age, gender, level of education, knack for languages

**Coefficients**

| | | Coefficients | | | | |
|---|---|---|---|---|---|---|
| | | Unstandardized Coefficients | | Standardized Coefficients | | |
| Model | | B | std. Error | Beta | t | Sig. |
| 1 | (constant) | .555 | .137 | | 4.055 | .000 |

| | | | | | |
|---|---|---|---|---|---|
| Perceived claim credibility | .689 | .053 | .730 | 12.925 | .000 |
| Exclusiveness | -.021 | .029 | -.039 | -.728 | .468 |
| Level of expertise | -.020 | .014 | -.080 | -1.362 | .175 |
| Interaction exclusiveness/level of expertise | .064 | .027 | .130 | 2.391 | .018 |
| Gender | -.006 | .033 | -.011 | -.181 | .857 |
| Age | -.012 | .011 | -.060 | -1.057 | .292 |
| Level of education | -.010 | .011 | -.052 | -.918 | .360 |
| Knack for languages | -.003 | .010 | -.014 | -.254 | .800 |
| Message involvement | .019 | .018 | .056 | 1.012 | .313 |

# Dependent variable: Attitude towards the firm

**Model Summary**

| Model | R. | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .474a | .224 | .169 | .76672 |

a. Predictors: (constant), perceived claim credibility, perceived sustainability performance, exclusiveness, level of expertise, interaction exclusiveness/level of expertise, age, gender, level of education, knack for languages

**ANOVA**

| Model | | Sum of Squares | df | Mean Squares | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 23.954 | 10 | 2.395 | 4.075 | ,000a |
| | Residuals | 82.888 | 141 | .588 | | |
| | Total | 106.842 | 151 | | | |

Predictors: (constant), perceived claim credibility, perceived sustainability performance, exclusiveness, level of expertise, interaction exclusiveness/level of expertise, age, gender, level of education, knack for languages

**Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | std. Error | Beta | t | Sig. |
| 1 | (constant) | 1.602 | .621 | | 2.581 | ,011 |
| | Perceived sustainability performance | .969 | .357 | .311 | 2.712 | .008 |
| | Perceived claim credibility | .498 | .333 | .171 | 1.498 | .136 |
| | Exclusiveness | .079 | .126 | .047 | .631 | .529 |
| | Level of expertise | .010 | .063 | .013 | .157 | .876 |
| | Interaction exclusiveness/level of expertise | -.016 | .117 | -.010 | -.136 | .892 |
| | Gender | .095 | .143 | .055 | .664 | .508 |
| | Age | -.033 | .049 | -.053 | -.670 | .504 |
| | Level of education | -.016 | .048 | -.025 | -.323 | .748 |
| | Knack for languages | -.069 | .043 | -.125 | -1.601 | .112 |
| | Message involvement | -.004 | .078 | -.004 | -.051 | .960 |

# Appendix 11: Additional analyses

**Profile plots 1**
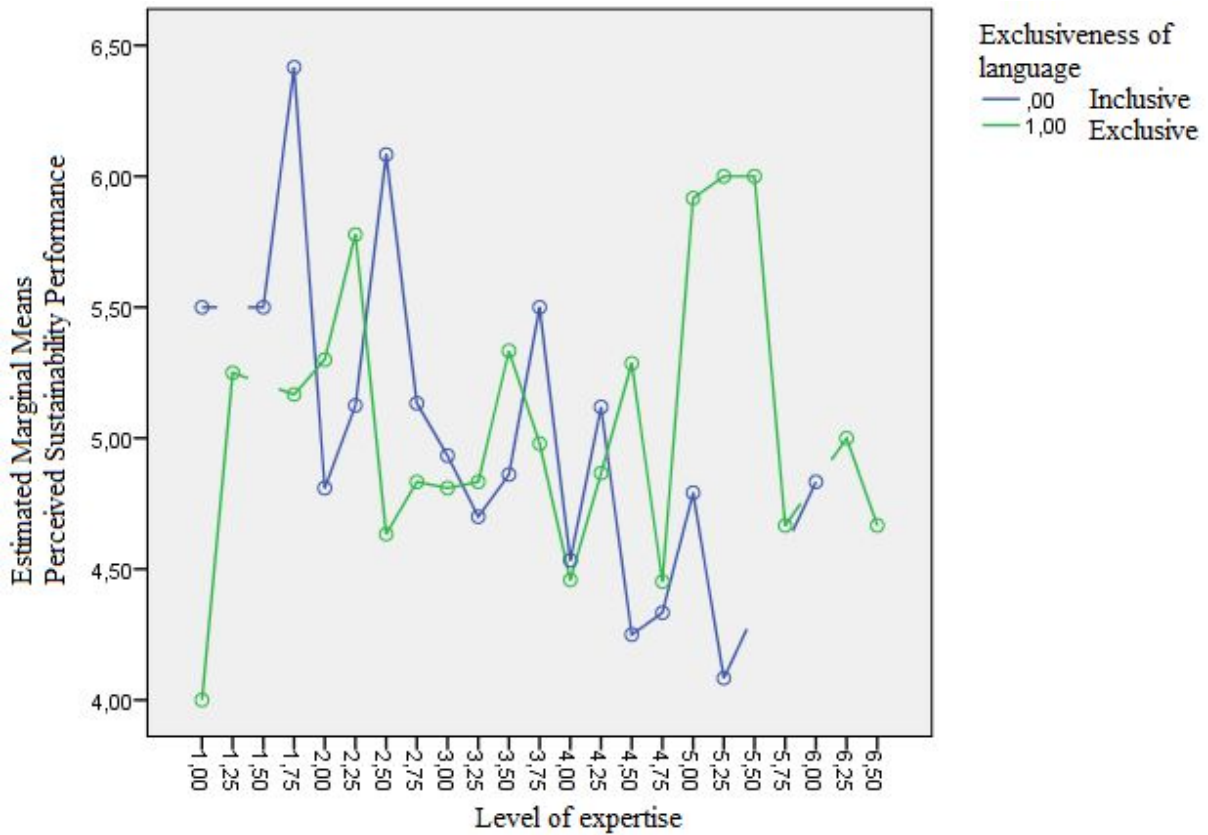


**Descriptive Statistics**

Dependent Variable: Perceived sustainability performance

| Exclusiveness of language | Expert/Non-expert | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Inclusive | Non-expert | 5.0391 | .91323 | 64 |
| | Expert | 4.4333 | .81113 | 15 |
| | Total | 4.9241 | .92134 | 79 |
| Exclusive | Non-expert | 4.8722 | .97587 | 60 |
| | Expert | 5.0903 | .94917 | 24 |
| | Total | 4.9345 | .96769 | 84 |
| Total | Non-expert | 4.9583 | .94392 | 124 |
| | Expert | 4.8376 | .94474 | 39 |
| | Total | 4.9294 | .94261 | 163 |

**Levene's Test of Equality of Error Variances**

Dependent Variable: Perceived sustainability performance

| F | df1 | df2 | Sig. |
|---|---|---|---|
| .396 | 3 | 159 | .756 |

**Test of between-Subject Effects**

Dependent Variable: Perceived sustainability performance

| Source | Type III Sum of Squares | df | Means Squares | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|
| Corrected Model | 5.278 | 3 | 1.759 | 2.017 | .114 | .037 |
| Intercept | 2685.975 | 1 | 2685.975 | 3079.970 | .000 | .951 |
| Exclusiveness of language | 1.708 | 1 | 1.708 | 1.959 | .164 | .012 |
| Expert | 1.069 | 1 | 1.069 | 1.226 | .270 | .008 |
| Interaction Exclusiveness of language* Expert | 4.826 | 1 | 4.826 | 5.534 | .020 | .034 |
| Error | 138.660 | 159 | .872 | | | |
| Total | 4104.750 | 163 | | | | |
| Corrected Total | 143.939 | 162 | | | | |

**Split case by exclusiveness of language**

**Group statistics**

Dependent Variable: Perceived sustainability performance

|  | Exclusiveness of language | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Non-expert | Inclusive | 64 | 5.0391 | .91323 | .11415 |
|  | Exclusive | 60 | 4.8722 | .97587 | .12598 |
| Expert | Inclusive | 15 | 4.4333 | .81113 | .20943 |
|  | Exclusive | 24 | 5.0903 | .94917 | .19375 |

**Independent sample T-test**

Dependent Variable: Perceived sustainability performance

| | | Construct: Exclusiveness of language | | | |
|---|---|---|---|---|---|
| | | Non-experts | | Experts | |
| | | Equal variance assumed | Equal variance not assumed | Equal variance assumed | Equal variance not assumed |
| Levene's Test for Equality of variance | F | .081 | | .946 | |
| | Sig | .776 | | .337 | |
| T-test for equality of means | t | .983 | .981 | -2.219 | -2.303 |
| | df | 122 | 119.937 | 37 | 33.349 |
| | Sig (2-tailed) | .327 | .328 | .033 | .028 |
| | Mean Difference | .16684 | .16684 | -.65694 | -.65694 |
| | Std. Error Difference | .16964 | .17001 | .29604 | .28531 |
| 95% Confidence interval of the difference | Lower | -.16899 | -.16977 | -1.25678 | -1.23718 |
| | Upper | .50267 | .50345 | -.05711 | -.07671 |

**Split case by non-expert/expert**

**Group statistics**

Dependent Variable: Perceived sustainability performance

|  | Exclusiveness of language | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Inclusive | Non-expert | 64 | 5.0391 | .91323 | .11415 |
|  | Expert | 15 | 4.4333 | .81113 | .20943 |
| Exclusive | Non-expert | 60 | 4.8722 | .97587 | .12598 |
|  | Expert | 24 | 5.0903 | .94917 | .19375 |

**Independent sample T-test**

Dependent Variable: Perceived sustainability performance

|  |  | Construct: Non-expert/expert | | | |
|---|---|---|---|---|---|
|  |  | Inclusive | | Exclusive | |
|  |  | Equal variance assumed | Equal variance not assumed | Equal variance assumed | Equal variance not assumed |
| Levene's Test for Equality of variance | F | .856 |  | .000 |  |
|  | Sig | .359 |  | .995 |  |
| T-test for equality of means | t | 2.358 | 2.539 | -.932 | -.944 |
|  | df | 77 | 23.101 | 82 | 43.528 |
|  | Sig (2-tailed) | .021 | .018 | .354 | .351 |
|  | Mean Difference | .60573 | .60573 | -.21806 | -.21806 |
|  | Std. Error Difference | .25690 | .23852 | .23390 | .23111 |
| 95% Confidence interval of the difference | Lower | .09418 | .11242 | -.68336 | -.68396 |
|  | Upper | 1.11728 | 1.09903 | .24725 | .24785 |

**Split case by non-expert/expert**

**Group statistics**

Dependent Variable: construct manipulation check

|  | Exclusiveness of language | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| (0)Non-expert | (0)Inclusive | 64 | 3.9594 | .97732 | .12216 |
|  | (1)Exclusive | 60 | 4.2067 | 1.18176 | .15257 |
| (1) Expert | (0)Inclusive | 16 | 3.5375 | .91132 | .22783 |
|  | (1)Exclusive | 24 | 4.4000 | 1.12366 | .22937 |

**Independent sample T-test**

Dependent Variable: construct manipulation check

|  |  | Non-experts | | Experts | |
|---|---|---|---|---|---|
|  |  | Equal variance assumed | Equal variance not assumed | Equal variance assumed | Equal variance not assumed |
| Levene's Test for Equality of variance | F | 1.357 |  | .748 |  |
|  | Sig | .246 |  | .392 |  |
| T-test for equality of means | t | -1.273 | -1.265 | -2.557 | -.2668 |
|  | df | 122 | 114.739 | 38 | 36.417 |
|  | Sig (2-tailed) | .205 | .208 | .015 | .011 |
|  | Mean Difference | -.24729 | -.24729 | -.86250 | -.86250 |
|  | Std. Error Difference | .19426 | .19545 | .33727 | .32329 |
| 95% Confidence interval of the difference | Lower | -.63185 | -.63445 | -1.54528 | -1.51790 |
|  | Upper | .13726 | .13986 | -17972 | -.20710 |