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# **Determinants of consumer evaluation of sustainability claims**

*The moderating effect of regulatory focus*

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This thesis was written as a part of the Master of Science in Economics and Business Administration at NHH. Please note that neither the institution nor the examiners are responsible – through the approval of this thesis – for the theories and methods used, or results and conclusions drawn in this work.

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## **ABSTRACT**

Green communication has become the hot topic of this decade. With environmental problems and sustainability issues increasing at an alarming rate, regulating authorities have started pressurizing companies all over the world to focus on sustainability initiatives. As a result, many companies started focusing on green communication strategies to improve their environmental positions. While, some companies genuinely reduced their environmental footprints, several others started claiming to be environmentally responsible when they were not, which is commonly referred to as Greenwashing. Unrestrained use of green marketing coupled with misalignment of CSR initiatives adversely affected the perceived green performance of many companies. This negatively affected the stakeholder's preformed impression about the company's green commitment, which is also referred to as Green Brand Equity. This research work targets to identify the important ethical principles that influence Green Equity and perceived Greenwashing. Structural equation modeling (SEM) was used to test four hypotheses on two main determinants of Green Equity and perceived Greenwashing. The two main determinants were identified from the ethical principles of stakeholder evaluation. Perceived contribution to a sustainability problem and Perceived opportunity to solve a sustainability issue were studied as the two main determinants in this Master Thesis. Perceived opportunity to solve showed a significant positive effect on Green Equity and a negative effect on Greenwashing. While Perceived contribution to the sustainability issue demonstrated a negative effect on Green Equity and a positive effect on Greenwashing. This finding suggests that green messages communicating about a company's initiatives to solve its own sustainability problems triggers negative responses and suspicion of Greenwashing. Testing the moderating effects of consumer's regulatory focus revealed promotion focus to strengthen the causal effect of both determinants while prevention focus to have no significant interaction effect.

# CONTENTS

|   |             |
|---|-------------|
| <b>ACKNOWLEDGEMENTS .....</b>   | <b>ii</b>   |
| <b>ABSTRACT .....</b>   | <b>iii</b>  |
| <b>LIST OF FIGURES .....</b>  | <b>vii</b>  |
| <b>LIST OF TABLES .....</b>   | <b>viii</b> |
| <b>LIST OF ABBREVIATIONS .....</b>  | <b>ix</b>   |
| <b>CHAPTER 1 – INTRODUCTION.....</b>                                      | <b>1</b>    |
| <b>CHAPTER 2 – THEORETICAL BACKGROUND .....</b>                           | <b>4</b>    |
| <b>2.1 Sustainability .....</b>   | <b>4</b>    |
| <b>2.2 Green Brand Equity .....</b>                                       | <b>5</b>    |
| <b>2.3 Perceived Greenwashing .....</b>                                   | <b>6</b>    |
| <b>2.4 Stakeholders &amp; Corporate social responsibility (CSR) .....</b> | <b>7</b>    |
| <b>2.5 Concept of Materiality (Materiality Analysis) .....</b>            | <b>9</b>    |
| <b>2.6 Ethical principles of Stakeholder Evaluation .....</b>             | <b>10</b>   |
| 2.6.1 Good Samaritan principles .....                                     | 13          |
| 2.6.2 Do-no-harm principles- .....  | 14          |
| 2.6.3 Formulation of hypothesis 1 and hypothesis 2 .....                  | 15          |
| <b>2.7 Factors affecting green communication.....</b>                     | <b>16</b>   |
| 2.7.1 Claim Typology .....  | 17          |
| 2.7.2 Source Credibility.....   | 18          |
| 2.7.3 Chronic regulatory focus .....                                      | 19          |
| 2.7.4 Formulation of hypothesis 3 and hypothesis 4 .....                  | 21          |
| <b>CHAPTER 3 – RESEARCH METHODOLOGY .....</b>                             | <b>23</b>   |
| <b>3.1 Conceptual Model .....</b>   | <b>23</b>   |
| <b>3.2 Methodology .....</b>  | <b>25</b>   |
| <b>3.3 Variables involved .....</b>                                       | <b>26</b>   |
| <b>3.4 Priming stimuli .....</b>  | <b>26</b>   |
| <b>3.5 Survey Logics used.....</b>  | <b>30</b>   |

---

|  |           |
|--|-----------|
| <b>3.6 Complete Questionnaire design .....</b>               | <b>31</b> |
| <b>3.7 Data collection procedure.....</b>                    | <b>33</b> |
| <b>3.8 Data summary.....</b>                                 | <b>34</b> |
| 3.8.1 Respondent demography .....                            | 34        |
| <b>CHAPTER 4 – DATA ANALYSIS.....</b>                        | <b>37</b> |
| <b>4.1 Confirmatory factor analysis (CFA) .....</b>          | <b>37</b> |
| <b>4.2 Testing of hypotheses (SEM) .....</b>                 | <b>41</b> |
| 4.2.1 SEM model 1- without interaction .....                 | 42        |
| 4.2.2 Result interpretation from `SEM model 1` .....         | 44        |
| 4.2.3 Testing of hypotheses 1 and hypotheses 2 .....         | 45        |
| 4.2.4 SEM model 2- with interaction effects.....             | 47        |
| 4.2.5 Result interpretation from `SEM model 2` .....         | 49        |
| 4.2.6 Testing of hypothesis 3 and hypothesis 4 .....         | 50        |
| 4.2.7 Additional Test Results .....                          | 52        |
| <b>4.3 Summary of the analysis.....</b>                      | <b>53</b> |
| <b>CHAPTER 5 – DISCUSSION .....</b>                          | <b>56</b> |
| <b>5.1 Main Findings.....</b>                                | <b>56</b> |
| <b>5.2 Theoretical Implications .....</b>                    | <b>59</b> |
| <b>5.3 Managerial Implications .....</b>                     | <b>61</b> |
| <b>5.4 Validity .....</b>                                    | <b>63</b> |
| 5.4.1 Construct Validity .....                               | 63        |
| 5.4.2 Internal Validity .....                                | 64        |
| 5.4.3 External Validity.....                                 | 65        |
| 5.4.4 Statistical Conclusive Validity .....                  | 66        |
| <b>5.5 Reliability.....</b>                                  | <b>66</b> |
| <b>5.6 Limitations and Future Research .....</b>             | <b>68</b> |
| <b>REFERENCES .....</b>                                      | <b>70</b> |
| <b>APPENDIX.....</b>   | <b>84</b> |
| <b>Appendix A: CSR Claims evaluated by respondents .....</b> | <b>84</b> |
| <b>Appendix B: Survey Questionnaire .....</b>                | <b>87</b> |

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|  |           |
|--|-----------|
| Dependent Variables Section .....  | 87        |
| Independent Variables Section .....  | 90        |
| Moderating Variables Section .....   | 91        |
| <b>Appendix C: United Nations Sustainable Development Goals (UNSDGs) .....</b> | <b>95</b> |

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## LIST OF FIGURES

|  |    |
|--|----|
| Figure 1: Hypothesis formulation framework.....                                      | 22 |
| Figure 2: Conceptual Framework .....   | 23 |
| Figure 3: Chevron priming stimuli 1 - (Both independent variables manipulated).....  | 28 |
| Figure 4 : Chevron priming stimuli 2 - (Both independent variables manipulated)..... | 28 |
| Figure 5: Nike priming stimuli 1 - (Both independent variables manipulated).....     | 29 |
| Figure 6: Nike priming stimuli 2 - (Both independent variables manipulated).....     | 29 |
| Figure 7: Survey logic 1 - (Filtering question & operational logic) .....            | 30 |
| Figure 8: Frequency polygon – respondent gender.....                                 | 34 |
| Figure 9: Frequency polygon – respondent age.....                                    | 35 |
| Figure 10: Frequency polygon – respondent Income .....                               | 36 |
| Figure 11: Estimated path coefficients for the conceptual model.....                 | 55 |

---

## LIST OF TABLES

|  |    |
|--|----|
| Table 1: Reference Table for Complete Questionnaire measurement scales ..... | 33 |
| Table 2: Frequency distribution – respondent gender.....                     | 34 |
| Table 3: Frequency distribution – respondent age .....                       | 35 |
| Table 4: Frequency distribution – Respondent Income .....                    | 36 |
| Table 5: Measurement items used in the study .....                           | 38 |
| Table 6: Standardized factor loadings of the identified constructs .....     | 39 |
| Table 7: Correlations between latent constructs .....                        | 40 |
| Table 8: Standard errors of the correlations.....                            | 40 |
| Table 9: Discriminant Validity - Calculated Values .....                     | 41 |
| Table 10 Estimated path coefficients (SEM model -1).....                     | 43 |
| Table 11: R-squared values. - Both independent variables manipulated.....    | 43 |
| Table 12: R-squared values. - One independent variable manipulated .....     | 44 |
| Table 13: Testing hypothesis 1 and hypothesis 2 .....                        | 45 |
| Table 14: Estimated path coefficients (SEM model 2).....                     | 48 |
| Table 15: R-squared values (SEM model 2).....                                | 49 |
| Table 16: Testing of hypothesis 3 and hypothesis 4 .....                     | 50 |
| Table 17: Additional Test Results.....                                       | 52 |
| Table 18: Summary of Hypothesis testing.....                                 | 54 |



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## LIST OF ABBREVIATIONS

|       |   |
|-------|---|
| NHH   | Norwegian School of Economics               |
| PCS   | Perceived Consumer Skepticism               |
| CSR   | Corporate Social Responsibility             |
| EOI   | Economics of Information Theory             |
| SCT   | Source Credibility Theory                   |
| PCE   | Perceived Consumer Effectiveness            |
| UN    | United Nations                              |
| SDG   | Sustainable Development Goals               |
| UNFFS | United Nations Forum on Forests Secretariat |
| CLS   | Code Leadership Standard                    |
| RFQ   | Regulatory Focus Questionnaire              |
| BIS   | Behavioral Inhibition System                |
| BAS   | Behavioral Activation System                |
| CFA   | Confirmatory Factor Analysis                |
| SEM   | Structural Equation Modeling                |
| MLR   | Maximum Likelihood Estimator                |
| RMSEA | Root Mean Square Error of Approximation     |
| SRMR  | Standardized Root Mean Square Residual      |
| CFI   | Comparative Fit Index                       |
| TLI   | Tucker Lewis index                          |
| AVE   | Average Variance Extracted                  |
| CR    | Composite Reliability                       |
| LMS   | Lambda Mu Sigma                             |

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## CHAPTER 1 – INTRODUCTION

Since the 1960s there has been a notable increase in the use of green messages to communicate sustainable initiatives (Easterling et al., 1996). But this increase has not always resulted in creating favorable consumer brand attitude. Instead, consumers have become increasingly doubtful of the environmental claims from organizations (GfK, 2014). In many situations, consumers lack the ability to verify the environmental claims of green products, which results in consumer skepticism and misinterpretation of the green claims (Ottman et al., 2006; Hamann & Kapelus 2004). In 2015, the United Nations Member States adopted the 2030 Agenda for Sustainable Development in which the 17 Sustainable Development Goals (SDGs) were formed (A detailed illustration of the UNSDGs can be found in Appendix C of this research paper). The 17 Sustainable development goals were created to function as a blueprint for the developed and developing countries to reach a sustainable future. ‘Goal 12’ of the United Nations Sustainable Development Goals (UNSDGs) directs nations to “*ensure sustainable consumption and production patterns*”. Accordingly, most countries started incentivizing and, in some cases, pressurizing their industries to act in accordance with the SDGs.

Inadvertently, this pressurization has moved environmental management as a priority target in many corporate agendas (King and Lenox 2002). As a result, most companies are striving to better their environmental positions through various green communication strategies. While, some companies genuinely reduced their environmental footprints, several others started exaggerating their green efforts (Garfeld, 1991). When companies started claiming to be environmental responsible when they were not, researchers started diverting their attention towards the concept of ‘Greenwashing’.

Thus, it is important to communicate responsibly and prudently to match the communication with actual measures being undertaken in the business. Providing relevant information to consumers function as an important factor to create positive consumer outcomes (Gunningham, 2009). To communicate corporate character and to develop consumer support, firms often implement Corporate social responsibility (CSR) initiatives. Unfortunately, many of the social responsibility activities are perceived as stakeholder driven or egoistic, thus creating a negative consumer response to the initiatives. But researchers propose a set of universal ethical principles that stakeholders evoke when evaluating different CSR initiatives. Analyzing these ‘ethical principles’ helps researchers to identify the normative principles used by stakeholders

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to evaluate the CSR activities of a company. Thus, the first Research question being answered in this Master Thesis is

**RQ1:** *Which ethical principles are relevant when consumers evaluate sustainability claims?*

As illustrated in the previous paragraph, companies should give much importance to aligning the social issues they partake in and the business they deal with. The CSR communication framework (Wong & Dhanesh, 2017) and the two-stage model of attributions (Gilbert, 1989) points out the increase in perceived threat of Greenwashing (GW) due to improper alignment of CSR initiatives. Additionally, Calabrese et al., (2015) proposed that consumers consider a company's green commitment to be inadequate when their CSR disclosure is misaligned with the expected CSR activities of the company. This misalignment can negatively impact the green commitment communicated to the stakeholders, thus reducing the perceived measure of Green Brand Equity (GE). Therefore, stakeholders expect companies to involve in those social issues that have a logical association with their core corporate activities (Haley, 1996). Combining the above-mentioned aspects, which regulate stakeholder evaluation of green claims, the second research question is coined together as

**RQ2:** *How do ethical principles influence (a) perceived greenwashing, and (b) green equity?*

Cesario et al., (2004) propounded the 'credibility and attitude towards green messages' to be determined by the strategic manner of goal pursuit in consumers. To analyze this proposition, the concept of 'Chronic regulatory focus' (Higgins et al., 1997) was brought to the research framework. Regulatory focus theory Higgins (1997) states that, individuals have two distinct types of orientations in their goal pursuits. The pursuit of positive outcomes (*promotion focus*), or the avoidance of negative consequences (*prevention focus*). As most green messages utilize one of the two goal orientations in their communication process, analysis of this topic would prove beneficial to both academic and managerial literature. Regulatory focus theory predicts that messages stressing on the pursuit of gains is expected to be more persuasive for individuals exhibiting a *promotion focus* and messages that stresses on the avoidance of losses are expected to be more persuasive for *prevention focused* individuals (Kareklas, Carlson, & Muehling, 2012). Thus, the moderating effect of consumer's regulatory focus when evaluating green claims is brought forward through the third research question in this study.

**RQ3:** *Does regulatory focus moderate the effects of ethical principles on perceived greenwashing and green equity?*

While many research works have provided critical insights into the sociodemographic and psychographic makeup of green consumers, comparatively fewer studies to date have examined the impact of message framing (specifically, regulatory focus) on perceived threat of Greenwashing and Green Brand Equity.

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## CHAPTER 2 – THEORETICAL BACKGROUND

Even though the research questions were introduced in Chapter 1, to answer them accurately, an encompassing study of literature needs to be done. While the first section gives a general idea about sustainability, the subsequent sections elucidate Green Equity (GE) and perceived Greenwashing (GW), which forms the two dependent variables used in this thesis. As illustrated in RQ1 and RQ2, the role of ethical principles in green claim evaluation is to be studied. Accordingly, subsequent sections of this chapter explore various aspects surrounding the ethical principles of stakeholder evaluation. Based on concepts of materiality analysis and with reference to previous literature, two ethical principles are identified to have a significant influence on consumer evaluation of green claims. The two identified ethical principles of stakeholder evaluation are explained in detail as it forms the independent variables later in this research paper. Final part of this chapter expounds on the characteristic factors affecting green communication. As touched upon in RQ3, theoretical aspects surrounding the Regulatory focus of consumers is discussed in detail since it forms the moderating variable for the research paper.

### 2.1 Sustainability

‘Sustainability’ as a word is defined by Cambridge Dictionary as “*the ability to continue at a particular level for a period of time*”. Additionally, Brundtland Commission Report (1987) described the concept of ‘sustainable development’ as “*development that meets the needs of the present without compromising the ability of future generations to meet their own need*”. Additionally,

As introduced in Chapter 1, the Sustainable Development Goals (Appendix C) help to simplify complex sustainability issues for corporates and stakeholders (Bridges & Eubank, 2020). Even though the SDGs are formulated as guidelines for countries, they can also be used as directional framework by companies. But Ranangen et al., (2018) points out the difficulty for companies in identifying and prioritizing organizational activities that align with the sustainable development goals. SDG implementation often lack a clearly visible competitive advantage, causing managerial skepticism leading to a misalignment between the external and internal stakeholder perceptions (Biedenbach & Manzhynski, 2016).

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Sustainability' as a concept is well known across all research domains, but when it comes to quantitatively measuring the relative sustainability scores of green activities, other predictor of green performance needs to be depended upon. Accordingly, Green Brand Equity (GE) and perceived Greenwashing (GW) have been used in this research paper as the measures to predict *'How sustainable an activity is as perceived by the consumers (Stakeholder)'*?

## 2.2 Green Brand Equity

Aaker (1996) defined 'Brand Equity' as *"The assets or liabilities associated to the name, term, logo or emblem of a brand, which may enhance or depreciate the value provided by a good or/and service to the company's brands or customers"*. Also, Brand Equity has been put forward as a set of associations formed between attributes of a brand and the corresponding benefits received as perceived by its consumers (Keller, 1993; Krishnan, 1996). Combining the inferential propositions of several researchers, Brand Equity can be identified as a relational market-based asset, which creates a differential effect in consumer evaluation of identical marketing claims (Srivastava et al., 1998; Keller, 1993 & Falkenberg, 1996). When the inferential propositions of Hooley et al., (2005) is combined with the consumer perspective-based exploration of Brand Equity by Aaker (1991) and Keller (1993), it can be said that Brand Equity is the 'consumer's memory-based brand associations, which exists outside the firm and resides in the relationships final users have with brands. Even though researchers have defined Brand Equity in several related ways, recent branding literature has expanded its definition to include a wider set of attributes that drive customer choice (Yoo et al., 2000). And the expansion most relevant to this study was done by Chen (2010), when the novel construct 'Green Brand Equity' was proposed.

Based on Aaker's (1991) definition of brand equity, Chen (2010, p. 313) defines 'Green Brand Equity' as *"a set of brand assets and liabilities about green commitment and environmental concerns which are associated to the brand name, symbol and logo that can either elevate or decrease the value given by the eco-friendly goods and services"*. Chen (2010) also identified the three drivers of Green Brand Equity, which are Green Brand Image, Green Trust and Green Satisfaction. Conclusive interpretation of Chen (2010) proved that green brand image, green satisfaction, and green trust are positively related to green brand equity. As the identified drivers contribute to the total measure of Green Brand Equity, the three components stated above need to be analyzed in detail. Like the concept of 'Green Brand Equity' being derived

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from concept of Brand Equity, each driver of Green Brand Equity is explained with reference to their counter parts in the normal Brand Equity definition.

Combining the argumentative suggestions of Park et al. (1986) and the theoretical propositions of (Cretu and Brodie, 2007; Keller, 1993), it can be said that 'Brand Image' is a set of perceptions about the functional, symbolic, and experiential benefits received from a brand as perceived by the consumer. Based on this combined theoretical proposition, Chen (2010) defined the new construct '*Green Brand Image*' as 'The set of brand perceptions linked to environmental concerns and environmental commitments as stored in the consumer's mind'. Mai and Ness (1999) explained satisfaction as the level of contentment perceived by a consumer based on the product's/service's ability to fulfil the expectation, desire and needs of the consumer. Accordingly, Chen (2010) defined the new construct '*Green Satisfaction*' as 'a pleasurable level of consumption-related fulfillment to satisfy a customer's environmental desires, sustainable expectations, and green needs'. Rousseau et al. (1998) explained trust as the willingness to accept vulnerability based on positive expectations of the behavior or intention of another. Based on this definition, Chen (2010) introduced the new construct '*Green Trust*' as 'a willingness to depend on a product, service, or brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance'. Conclusively, to maximize the perceived green brand equity, companies should create green messages and sustainability initiative scoring high on the three drivers expounded above.

To ensure statistical validity (internal validity) in the data collection process, the measurement scales quantifying 'Green Brand Equity' in this research work is the same as used by Chen (2010) in the original research study.

### 2.3 Perceived Greenwashing

Reiterating from the Introduction chapter, The Encyclopedia of Corporate Social Responsibility defines *greenwashing* as "*the practice of falsely promoting an organization's environmental efforts or spending more resources to promote the organization as green than are spent to actually engage in environmentally sound practices*" (Becker-Olsen & Potucek, 2013). Also, Parguel et al., (2011), simplified the definition of 'Greenwashing' to "*the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service*". Before delving deep into the theoretical

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components and drivers of 'Perceived Greenwashing', it needs to be answered 'what activities have been categorized as Greenwashing by researchers?'

Laufer (2003) puts forward 'Greenwashing' as 'different tactics employed defensively by organizations when allegations of deviance surface'. Beder (1997) formulated the 'Three Elements of greenwashing' framework, which categorized greenwashed organizational activities into three: confusion, fronting and posturing. Beder's framework suggests that firms covertly perform greenwashing when they (i) control the flow of information available to the industry regulators (ii) manipulate the information communicated through the organization's public affairs department. Also, it needs to be noted that the defensive tactics used by organizations are aimed at stakeholders both inside and outside the organization (Guo et al. 2017). As this study focuses more on 'How perceived greenwashing is affected by the ethical principles of stakeholder evaluation?', the drivers of greenwashing in external stakeholder communication needs to be analyzed.

The theoretical background to formulate 'Perceived greenwashing' score was based on the research works (Horiuchi & Schuchard, 2009) and (Laufer, 2003). Also, Chen et al., (2012) propounds the measurement of 'Perceived Greenwashing' in external stakeholder communication (green messages) to be comprised of five items: (i) misleading with words (ii) misleading with visuals or graphics (iii) unprovable or vague green claims (iv) exaggerating green functionality (v) masking important information, to make the claim sound better. Comprehending the entire section, 'Greenwashing' is proved to be a solid hindrance when developing green marketing strategies. The perceived threat of greenwashing makes people more skeptical of sustainability initiatives, thus impeding green initiatives of even companies with genuine intentions. This study aims to identify the factors, which reduce the perceived threat of 'Greenwashing' especially in a stakeholder evaluation perspective.

## 2.4 Stakeholders & Corporate social responsibility (CSR)

*Stakeholders* have been defined as "individuals and constituencies that contribute, either voluntarily or involuntarily, to [the corporation's] wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers" (Post et al., 2002). As per the categorization of Post et al., (2002), 'stakeholders' consist of three subgroups, which are essential for the proper functioning of an organization. Providing resources to the firm



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(customer, investors, and employees), forming the industry layout (supply chain associates and strategic alliances) & making up the socio-political realm (communities and governments).

Bellantuono et al., (2016) points out the significant increase in the number and types of corporate reports per company during the previous decade. In addition to engaging in social responsibility activities, many of the Fortune 500 companies has started allocating significant resources to report the CSR initiatives to their stakeholders (KPMG, 2003). *Corporate social responsibility* (CSR) has been defined as “a commitment to improve community well-being through discretionary business practices and contributions of corporate resources,” (Kotler & Lee, 2004). CSR has now become one of the most important topics of discussion between the companies and stakeholders (Berger et al., 2007; Smith, 2003).

Despite this increase in sustainability expositions, CSR reports often face skepticism for lack of clarity and credibility. Although stakeholders indicate positive responsivity to CSR reporting, corporate messages face extreme criticism, especially when communicating sustainable initiatives or green activities. Wong and Dhanesh (2017) point out `problems with brand-cause-fit´ and `inflated claims of CSR commitment´ as two major reasons causing this stakeholder skepticism. As indicated by Braam and Peeters (2017), lack of proper standardization to regulate CSR reporting increases the possibility of corporate manipulation. Also, this lack of strict regulation makes it easy for the corporates to report content of their choice (Milne & Gray , 2013). Effective handling of CSR engagement has created significant scuffle even for companies with a proven history of green performance (Porter & Kramer, 2006). “Perceptions of social performance depend not only on firms’ actions but also on the motives that stakeholders believe to be driving these actions” (Crilly, Ni, & Jiang, 2016).

Previous research works (Ellen et al., 2006; Foreh and Grier, 2003) indicated that consumer evaluation of CSR is highly influenced by the motive’s stakeholders attribute to the company’s involvement in that particular social responsibility initiative. Motives have been categorized into two by Batson (1998): *extrinsic*, in which “the company is seen as attempting to increase their profits”, or *intrinsic*, in which “the company seen as acting out of a genuine concern for the specific issue” (Lichtenstein et al., 2004). Strong attributions to `intrinsic motives´ result in positive stakeholder evaluations of a firm’s underlying character, while perceptions of predominantly `extrinsic motives´ contributes to less favorable stakeholder attitudes and behaviors toward the company (Foreh & Grier, 2003). Stakeholders are found tolerant towards `extrinsic motives´ provided attributions towards `intrinsic motives´ can be established for the CSR activity (Sen et al., 2006). Accordingly, the chief obstacle for CSR communication is to

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minimize 'stakeholder skepticism' and to convey 'intrinsic motives' through the company's CSR activities.

## 2.5 Concept of Materiality (Materiality Analysis)

The last decade has seen a significant increase in environmental concerns and persuasion to engage in environmentally responsible behavior. But organizations have the responsibility to focus on stakeholder value maximization, which makes implementation of unfitting goals impractical (Ranangen et al., 2018). Given the previously mentioned barriers for SDG implementation, research works points out the use of identification techniques, which assists organizations in narrowing down priority goals. 'Materiality analysis' is a common method used by organizations to relate their internal goals to external goals. As pointed out by Unerman and Zappettini (2014), materiality determination technique helps management to identify, prioritize and publish specific information.

The *materiality analysis* approach has been defined as the "analysis method allowing for the categorization and prioritization of sustainable actions in terms of stakeholders' perceived importance, and the organization's perceived importance of the activity" (Ranangen et al., 2018). 'Materiality analysis', comprises of classifying sustainable activities into a spectrum organized by the level of importance, further narrowing down is based on the activity's influence on organizational success and perceived level of relevance to the stakeholders (Ranangen et al., 2018).

Hsu et al., (2013) illustrates the sequential process in materiality analysis as *identification*, *prioritization*, and *validation*. The 'identification' stage consists of identifying relevant sustainability issues using various attributes including dependency, tension, influence, drive, and responsibility, followed by categorization of the issues according to the power, legitimacy, and urgency (Hsu et al, 2013). Most organizations refer to preestablished standards like "the ISO 26000 Social Responsibility Guideline Standard, UN Global Compact 10 principles, SA8000, Series AA1000, and Sullivan's Global Principles" during the identification stage (Hsu et al, 2013). The 'prioritization' stage consists of determining the internal and external criteria that propel strategy and performance based on the relative significance of issues identified in stage one (Hsu et al, 2013). The 'validation stage' focuses on evaluating the prioritized issues based on the scope, boundary, and timeliness of the issue (Hsu et al, 2013).

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Fasan and Mio, (2017) highlight 'materiality analysis' as the main guiding principle to control the issue of low credibility due to a discretionary leeway. 'Materiality analysis' has a high relevance in creating integrated sustainability reports because of its substantial influence on a company's risk management process and execution strategy (Higgins et al. 2014). Materiality is also used to construct strategic communication efforts, which increase the transparency of corporate social responsibility initiatives by leveraging on effective selection and prioritization techniques (Ranangen et al., 2018). But the question raised at the end of a materiality analysis, "are the results of the analysis generalizable"? Are there universal ethical principles that guide consumer thoughts about businesses CSR practices?

## 2.6 Ethical principles of Stakeholder Evaluation

This section expounds on the universal ethical principles evoked by stakeholders when determining the level of importance to different CSR activities. The 'ethical principles' help to identify the normative principles that stakeholders use when they evaluate the CSR activities of a company, this helps to explain why certain stakeholders score high on one activity and low on another in a materiality analysis. This process does not give a complete solution but allows decision-makers to examine the implications of their actions (Langhorne, 2016). Falkenberg and Woiceshyn (2008) segmented the factors driving business ethics into three, Langhorne (2016) proposed six general principles and that guide ethical behavior. Research work of Valle and Borm (2021) suggests nine principles that may be involved in decision- making.

1. Universalism (Respect for Others)

This principle is related to the ethical theory of universalism, the theory is about human consideration for others. Universalism shows that consideration needs to be made to respect the welfare and risks of all individuals (Weiss, 2014). This requires practicing fairness, compassion, cooperation, spiritual respect, humility, and respect for others (Weiss, 2014).

2. Act when you have the responsibility to do so ('Do no harm')

The second principle is connected to the concept "ethics of social responsibility." The ethics for the greater good stated that if someone was in power, they have a higher duty as their behavior can benefit others (Cohen, 2010). Thus, the belief that companies should 'clean up their own mess' is often referred to as "do no harm" social

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responsibility—the process of lessening a firms' negative externalities (Crilly et al, 2016).

3. Virtue Ethics (Do-good Social Responsibility)

Virtue ethics posits that ethical behavior is guided by a person's good character—their values and motives (Weiss, 2014). As a form of pro-social behavior, altruism plays a large part in virtue ethics. Altruistic behavior occurs when the intent of the behavior is entirely to benefit others, without the expectation of any personal gain and often at the expense of the person engaging in the altruistic behavior (Soosai-Nathan et al, 2013).

4. Virtue ethics ('Tell the truth')

One of the key character traits of virtue ethics is being truthful. As per the directions put forward by this principle, it is important to tell the truth to the whole spectrum of stakeholders - employees, clients, vendors, prospective employees, and the public.

5. Practice participation, not paternalism

Business paternalism can be defined as people in places of authority restricting the freedom and responsibility of those subordinate to them. Businesses may interpret this as restricting their actions to only their specific business, and politics determining the social acceptability for the business (Crossley, 1999). As per this principle, letting employees be part of the decision-making process improves employees' sense of ownership, information quality and preserves the executive prerogative (Langhorne, 2016).

6. Rights, Moral & Legal Entitlement ('Obey the law')

Firms must be aware of the fact that every area of business is touched and influenced by law. This principle set the guidelines related to both legal and moral rights in ethics, it also propounds that organization ought to consult professionals to ensure that they are abiding by the legal guidelines that have been set out.

7. Utilitarianism ('The common good')

Utilitarianism is an ethical theory often described by the term, 'the ends justify the means.' As per the Utilitarianism principle, the moral action should give the greatest good to the greatest number of people (Weiss, 2014). The common good is a

utilitarianism principle dictating that decision-makers look past their self-interest to determine how their decision will affect the environment (cultural, social, physical) that they reside in, and to choose the behavior that benefits the common good of all (Weiss, 2014).

#### 8. Justice Ethics

Justice ethics is a principle that focuses on punishment and retribution. It is guided by the principles of fair decision-making practices and ensuring equal treatment for all individuals. As the principle focuses on equal serving of justice, it also provides guidelines on providing compensation for the harmed so as to attenuate the negative consequences.

#### 9. Ethical Relativism

Also referred to as the self-interest principle, ethical relativism is tightly linked to cultural norms and behaviors (Weiss, 2014) . As per the principle, stakeholders place importance on CSR activities as a self-serving action, rather than a moral action. It also states that when judging an individual's behavior, the person's values and self-interest are the only relevant considerations.

Even though the ethical principles of stakeholder evaluation can be categorized into nine principles, Valle and Borm (2021) were able to identify the ethical principles, which were regarded as most important to stakeholder. When making an evaluation of the CSR activities, customers indicated highest importance to 'greater power equals greater responsibility', 'mitigate negative externalities' and 'the common good' principle. In order to check the statistical significance of the previous research findings, the above-mentioned principles were brought under two measurable frameworks. The 'Good Samaritan principle' and the 'Do-no-harm' principle incorporates into its framework all the previously identified principles and helps to formulate a better measurable relationship between the dependent and independent variables.

### 2.6.1 Good Samaritan principles

(The duty to assist)

The biblical parable of the good Samaritan is used to teach the virtue of helping someone in need. Does this virtue carry over to a business perspective? There are three main issues when considering the legal situation of a good Samaritan:

- the legal duty of a citizen to assist someone in need
- the compensation for loss or injury, or the rights of a good Samaritan
- the liability or risk assumed by a good Samaritan.

(Schwartz, 1988).

In Europe, the civil law, a great deal on uniformity exists in the good Samaritan laws (Schwartz, 1988). The common law in most countries generally relies on inducements – to persuade citizens to aid others by minimizing risk to themselves (Schwartz, 1988). However, recent developments have expanded the “Good Samaritan principles” in various business domains into a ‘Duty to assist’. As put forward by Schwartz (1988), situational factors can create a special relationship between the actors involved and evolve the three general Samaritan principles into a more serious duty to assist. For example, in the case of an accident, common carriers must assist passengers, and innkeepers must aid their quests, or an employer is obligated to assist an employee injured at work.

With reference to the ethical principles of stakeholder evaluation, the Utilitarianism “common good” principle resonates with the “Good Samaritan principles” and the duty to assist. “The Common Good” principle derived from the ethical utilitarianism principle states that companies should look past their own self-interests to engage in activities that will positively benefit the greater good (i.e., environmental, social, humanitarian, etc.) (Weiss, 2014). Often referred to using the statement ‘the greatest good to the greatest number of people’, previous research works indicated stakeholders affiliating high importance to the inclusion of CSR initiatives centering around the ‘Common Good’ principle (Valle & Borm, 2021).

In order to facilitate an efficient hypothesis testing, the Good Samaritan (Common Good) principles needs to be brought under a measurable framework. Previous research works indicate that the Stakeholders perceive the focal company in a market segment to have higher responsibility to initiate sustainable activities for the entire segment. “Greater power equals greater responsibility”, stakeholders do not evaluate CSR initiatives in a vacuum. Rather they make comparisons of a focal company with its competitors and peers (Bhattacharya & Sen,

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2004). Stakeholders often evaluate CSR initiatives of a company based on their knowledge of the competitor's CSR initiatives, which creates a moderating influence on the company perceptions (Bhattacharya & Sen, 2004). Previous research on the responsibilities of the focal company indicated three different controlling variables that establish the level of responsibility a company has in a business segment.

The size of the company has been identified as the first factor. Larger companies hold more power and therefore have the responsibility to use this power for good. Even though every company in a segment has the duty to contribute towards sustainability, bigger companies have a greater responsibility because of the scale of the damage they can inflict to the ecosystem. Also, larger companies have greater influence over manufacturers, and therefore can positively moderate the power balance between manufacturers and smaller companies, which helps to bring in new sustainable changes to the segment. The second factor of responsibility is the monetary ability of a company in the business segment. Companies with stronger monetary ability have more obligation to donate money towards CSR and support small companies financially to replicate their model and start sustainability initiatives.

The final factor is the level of expertise possessed by a company in the segment. Companies with stronger innovation departments and research centers should take the leadership to discover new sustainable technologies and to share it with the other players in the business segment, which also aligns with the Good Samaritan (Common Good) principles of stakeholder evaluation. As an illustration: A CSR claim, which involves sharing technological expertise in sustainability with competitors/peers should also receive a relatively high perceived credibility score.

### 2.6.2 Do-no-harm principles-

(Clean up your own mess)

Derived from the "Ethics of social responsibility" concept, the do-no-harm principle states that it is the responsibility of a company to directly clean-up/fix the damage that they have caused from their previous operations. As per this principle, it is important for companies to show that they have started sustainability initiatives to rectify the consequences of their actions. Rather than initiating sustainability activities in a different segment or on a different environmental problem, companies should spend their resources and capability to minimize the impact they have created on the ecosystem in the specific segment/area they operate in. Thus, the belief

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that companies should ‘clean up their own mess’ is often referred to as “do no harm” social responsibility—the process of lessening a firm’s negative externalities (Crilly et al, 2016).

“Mitigate negative externalities”, Diffusion of responsibility is a psychological phenomenon, which shows that people are less likely to take an action when they believe that someone else will do so first. This phenomenon is exacerbated when the number of parties involved is more, which means that greater the number of people present, less likely that any individual will act (McCombs, 2021). At its core, this principle is about the lack of responsibility that individuals feel to act ethically. Diffusion of responsibility points to the fact that it is important to determine who the responsible party is. When applying this principle to business, the term ‘externalities’ is relevant. Firms create negative externalities when their operations cause negative by-products that do not affect the firm but rather negatively affect society at large (Porter & Kramer, 2011).

A common example of a negative externality is pollution created by a business or working with an overseas manufacturer that practices child labor or forced labor. Often there are governmentally imposed taxes and penalties to help offset these negative externalities and force companies to take responsibility, but increasingly companies are choosing to participate in CSR activities to mitigate these externalities. As an illustration: Exposure of stakeholders to CSR activities focusing on mitigating negative externalities (Clean up your own mess) principles should receive a higher perceived message credibility score than when the stakeholders are exposed to a CSR activity that directly benefits the internal functioning of the organization.

### 2.6.3 Formulation of hypothesis 1 and hypothesis 2

Combining the above illustrated aspects, it is assumed that CSR activities aligning with the two ethical principles “(Good Samaritan Principle) & (Clean up your own mess principle)” would improve a company’s Green Equity and reduce the threat of perceived Greenwashing. But the assumption needs to be verified by statistical testing. To facilitate an accurate measuring framework for the two stakeholder evaluation principles, the principles have been quantitatively reformulated into two measurable metrics: ‘Perceived contribution to sustainability problem [PCP]’ and ‘Perceived opportunity to solve [POS]’ (Figure 1). Formulation of the first two hypotheses (H1 & H2) helps to test the causal relationship and the



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level of significance attained by the interaction between the two dependent variables (GE & GW) and the two identified independent variables (PCP & POS).

**H1(a):** *Perceived contribution to a sustainability problem has a positive effect on Green Equity.*

**H1(b):** *Perceived contribution to a sustainability problem reduces the threat of Greenwashing.*

**H2(a):** *Perceived opportunity to solve a sustainability issue positively affects the Green Equity.*

**H2(b):** *Perceived opportunity to solve a sustainability issue reduces the threat of Greenwashing.*

## 2.7 Factors affecting green communication

The 'Attribution theory' forms the most salient explanatory framework to analyze situations involving consumer skepticism. As attribution of responsibility theory illustrates, "characteristics of the actor", "the organizational context", and "characteristics of the perceiver" can influence how individuals attribute responsibility (Gailey & Lee, 2005). Nyilasy et al., (2014) propounds social responsibility initiatives to be a subset of a firm's green marketing activities. Accordingly, the same theoretical explanatory tools, which analyze the effects of green advertising on consumers can be used to measure the interaction of corporate environmental performance and consumer evaluation of green claims. But the actions of companies in terms of sustainability and the awareness of the consumers about it is not always aligned with each other (Grubor & Milovanov, 2017). Therefore, before finalizing a measurable framework to conduct the analysis, individual components of the framework are to be analyzed.

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### 2.7.1 Claim Typology

(Factors affecting message credibility)

Empirical findings show that credibility is one of the most important factors determining the effects of a persuasive message (Petty, Cacioppo, & Goldman, 1981). Economics of information theory argues that consumers will continue to look for information as long as it is more beneficial than it costs (Musgrove et al., 2018). The cost associated with information searching depends on numerous factors, yet the more difficult and time consuming it is for the consumers to verify the information, the chances of the claim being perceived as misleading or deceptive increases (Stigler G. J., 1961).

However, Nelson (1970) expanded Economics of information theory (Stigler G. J., 1961) to include a variety of product qualities beyond price and made a differentiation between search and experience attributes. Search attribute claims are those that consumers can evaluate prior to purchase, while experience attribute claims can only be evaluated after the product has been used. Finally, Darbi and Karni (1973) extended EOI to include credence attributes. Credence attribute claims are those that cannot be evaluated reasonably before or after purchase or use, due to consumer's lack of technical expertise or the benefit of verifying the claim does not outweigh the time or economic costs of doing so. Green marketing claims fall into the credence claim category because it is usually difficult for consumers to evaluate the environmental impact either before or after purchase (Kangun & Polonsky, 1995; Polonsky et al., 1997). Accordingly, EOI suggests that consumers often have negative perceptions and are skeptical of green marketing because often the claims have a vague or unclear meaning and because it is generally difficult for consumers to understand without scientific knowledge (Carlson et al., 1993).

Musgrove et al. (2018) argued that perceived credibility may increase in line with the level of specificity offered to the consumers. Previous research has highlighted the importance of the characteristics of the claim, such as the claim type (Carlson et al., 1993), perceived fit between the brand and the claim (Lafferty, 2007), and specificity in the claim (Musgrove et al., 2018). Researchers have empirically examined and developed typologies for green advertising claims and their differential impact on consumer attitudes and behavior. Carlson et al. (1993) categorized environmental marketing claims as (a) *product orientated* (which focuses on the environmentally positive aspects of their products), (b) *process orientated* (which deals with

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their internal techniques in technology, production, and disposal), (c) *image orientated* (in which a company associates with an environmental cause), and (d) *environmental fact* (which is simply a statement about the condition of the environment in general) (Musgrove et al., 2018). They further developed a typology of misleading or deceptive environmental claims (vague/ambiguous, omission, and false/outright lie).

The typology proposed by Carlson et al. (1993) was further simplified by Polonsky et al. (1997), who suggest that product and process claims, because they make claims of actual changes in environmental behavior, be grouped as “substantive,” while image and environmental fact-based claims be grouped as “posturing,” since they do not require actual modification or real change of the company’s behavior. Substantive claims are more objective in nature, at the same time posturing claims are more subjective (Musgrove et al., 2018). EOI suggests that because subjective claims are harder for consumers to evaluate than objective claims, consumers are more skeptical of subjective than objective claims (Ford et al. 1990; Nelson, 1974).

Even though, EOI suggests more perceived skepticism and lesser credibility for “posturing” claims, the factors affecting message credibility needs to be analyzed with respect to the other components in the green communication system. The moderating effect of Orientation in goal pursuit of the customers and the influence of source credibility needs to be brought into the model to bring out a confirmed direction of relationship.

### 2.7.2 Source Credibility

#### (Actor Characteristics)

Studies of general communication response reveal that source credibility and message credibility directly impact brand attitudes. Thus, creating an influence on consumer purchase intentions (Choi & Rifon, 2002; Goldsmith, Lafferty, & Newell 2000). The credibility of the message source is critical for message and persuasion efficacy (Chaiken & Durairaj, 1994) . With reference to actor characteristics, *credibility* has been described as “a set of perceptions about sources that are held by receivers” (Bettinghaus, 1968). Source credibility theory (SCT), as set forth in Hovland et al. (1953), states that when the message source is perceived as credible, people are more likely to be persuaded. Hovland et al. (1953) put forward two primary dimensions of source credibility as “expertise” and “trustworthiness”. Also, source credibility

theory in Hovland et al. (1953) proposes that the exact same message tends to be judged more favorably when coming from a highly credible source versus a source with low credibility.

Early research on source credibility focused on endorser or spokesperson credibility (Bochner & Insko, 1966; Sternthal, Phillips, & Dholakia, 1978). However, Goldsmith, Lafferty, and Newell (2000) expanded source credibility to include corporate credibility. *Corporate credibility* is defined as “the extent to which consumers feel that the firm has the knowledge or ability to fulfil its claims”, whether the firm can be trusted to care about its customers, and whether the firm is able to be liked by customers (Newell & Goldsmith, 2001) . Meanwhile, Keller (1998) conceptualized corporate credibility as consisting of three dimensions: “expertise”, “trustworthiness”, and “likability”.

Out of the three dimensions of corporate credibility brought forward by Keller (1998), greenwashing puts “trustworthiness” and “likeability” components at the most risk (Musgrove, Choi, & Cox, 2018). “Expertise”, deals with a firm’s technical capabilities in their line of business, which are not clearly linked to environmental issues, positions, or claims , rather than deteriorating the companies perceived level of expertise in their business, greenwashing puts a threat to the “trustworthiness” (perceived corporate credibility) thus giving rise to consumer skepticism (Musgrove, Choi, & Cox, 2018).

### 2.7.3 Chronic regulatory focus

(Respondent Characteristics)

Reiterating from Chapter 1, Regulatory focus theory Higgins (1997) states that individuals have two distinct types of orientations in their goal pursuits. The pursuit of positive outcomes (*promotion focus*), or the avoidance of negative consequences (*prevention focus*). As per the regulatory focus theory (Higgins T. E., 2012) , the type of goal pursuit can sustain or disrupt a consumer’s self-regulatory orientation. Higgins et al. (2001) propounds that *promotion orientation* is associated to eagerness (the desire to get things done), whereas *prevention orientation* is linked to vigilance (ensuring the task is completed correctly). Also, Aaker and Lee (2001) demonstrated ‘promotion-focused messages’ to be more persuasive for consumers with an active, independent self-view, whilst ‘prevention-focused messages’ were proved to be more persuasive when consumers had an active, interdependent self-view (Kareklas, Carlson, & Muehling, 2012). Finally, promotion- focused individuals prefer the strategy of approaching self – states that match their desired end- state, while prevention – focused individuals prefer

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the strategy of avoiding self- states that are mis- matches to a desired end state (Förster et al., 1998).

In the context of sustainable communication, regulatory focus of a consumer, can act as a self – guide on evaluating the duties and obligations of a company as perceived by its stakeholders. Depending on the type of focus the stakeholder belongs to, the evaluation of green claims and CSR alignment to the ethical principles may vary. According to self-discrepancy theory (Higgins, 1987), it is the difference between failing to meet our ideals versus failing to meet our thoughts, which differentiates a promotion and prevention focus of consumers. Research findings emphasize that prevention focused (ought-self guides) stakeholders perceive the CSR activities to lay more emphasis on duties and obligations, which the company is bound to obey as part of the society. While promotion focused stakeholders give more importance to the fulfillment of hopes and aspiration (promotion ideals), which the company needs to do through its CSR work.

Analyzing the regulatory focus theory in detail reveal that, when `promotion focused` individuals feel cheerful after success they are with strong motivation (eager), but when they feel dejected after failure they are with weak motivation (not eager). In contrast, when `prevention focused` individuals feel agitated after failure, they are vigilant (with strong motivation) but when they feel quiescent after success, they are not vigilant (with weak motivation) (Higgins T. E., Regulatory Focus Theory, 2012) .

Thus, for a company with successful positioning (Market Leader). A CSR activity proposing to innovate sustainable methods to reduce negative externalities (`clean up your own mess principle`) might indicate better evaluation from `prevention focused` consumers but might indicate lesser acceptance for promotion focused consumers. This initial measure of perceived Greenwashing (GW) or Green Equity (GE) may reverse after the successful discovery of a new sustainable technology. As indicated in the previous section, attainment of success creates different motivation levels for promotion and prevention focused consumers. Accordingly, a `promotion focused` customer might indicate a positive evaluation for CSR activities, which proposes to share the discovery with other players in the same market segment (*Success creates higher motivation level for promotion focus*). But a `prevention focused` customer might indicate less positive evaluation to a CSR activity proposing to share the discovery (*Success is associated with weak motivation level for promotion focus*) (Idson et al., 2000).

#### 2.7.4 Formulation of hypothesis 3 and hypothesis 4

Through this research work, it is attempted to bring the moderating effect of 'Regulatory focus' to the stakeholder evaluation of sustainability claims. While the Good Samaritan principles act as a set of guidelines or duties, which every consumer (stakeholder) has the liability to follow, the do-no-harm activities can be perceived more like as set of activities, which will create a better image or positive feeling to the concerned company and its stakeholders. This thought process resonates with the logic Higgins (1996) uses to segment people into promotion focused and prevention focused individuals. But it needs to be statistically tested if there is a significant influence of the regulatory focus on the causal relationship between the ethical principles of stakeholder evaluation and consumer evaluation of green claims. Establishing a solid causal relationship in this case is difficult without a properly framed hypothesis that takes both the ethical principles into the framework simultaneously. Accordingly, hypothesis 3 and hypothesis 4 were formulated as a moderated variant of the first two hypotheses. The focus of hypothesis 3 and hypothesis 4 is to study the interaction effects of 'Regulatory focus' on the preestablished causality from hypothesis 1 and hypothesis 2.

**H3:** *Promotion focus strengthens the effect of 'perceived contribution to a sustainability problem' and 'perceived opportunity to solve a sustainability issue' on Green Equity.*

**H4:** *Promotion focus strengthens the effect of 'perceived contribution to a sustainability problem' and 'perceived opportunity to solve a sustainability issue' on the threat of Greenwashing.*

The figure illustrated below summarize all the hypotheses tested in this Master Thesis.

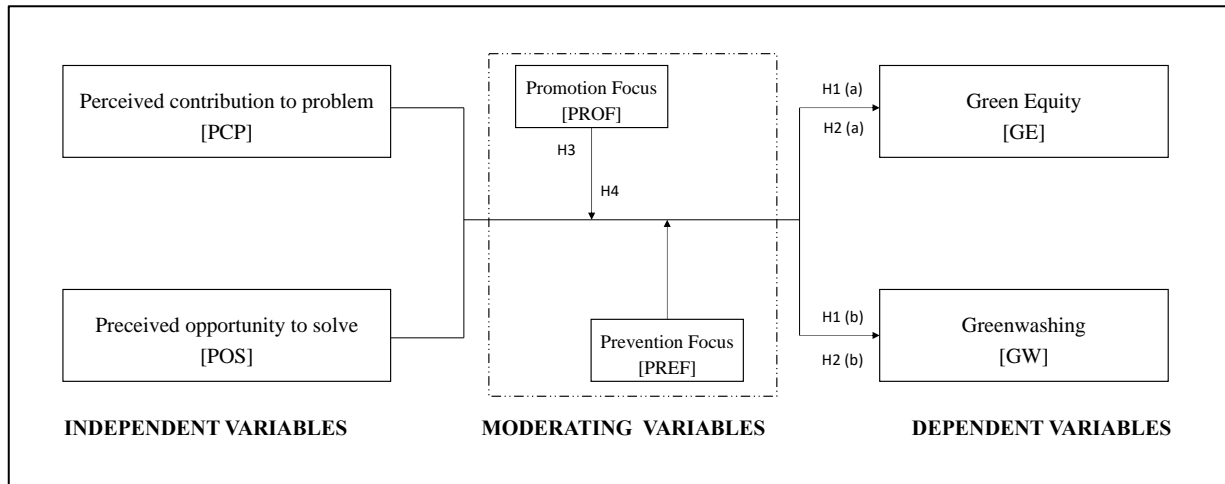


Figure 1: Hypothesis formulation framework

## CHAPTER 3 – RESEARCH METHODOLOGY

### 3.1 Conceptual Model

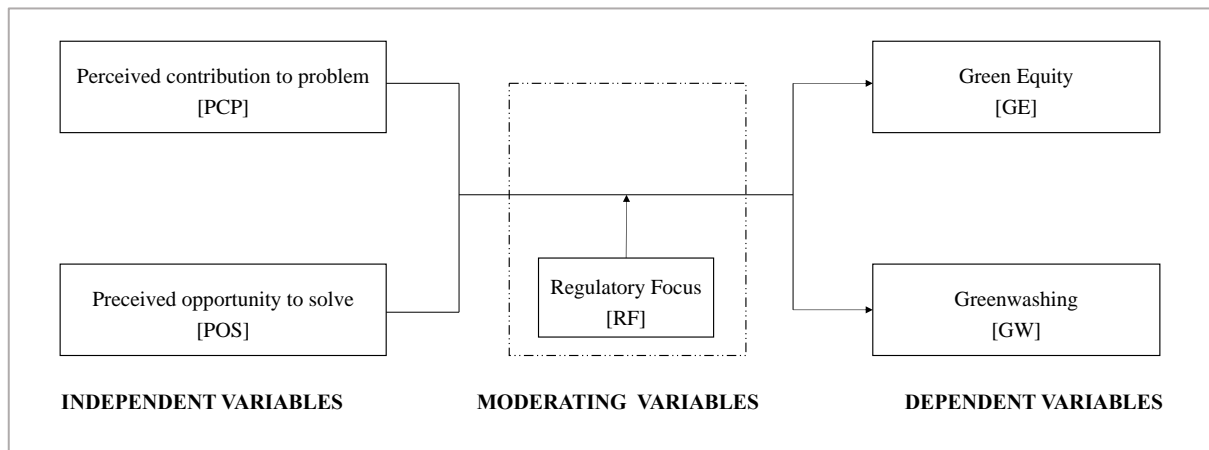


Figure 2: Conceptual Framework

As illustrated in section 2.3, reduced threat of Greenwashing (GW) increases customer trust and contribute directly to the credibility of green communication (Gilbert, 1989; Calabrese et al., 2015; Becker-Olsen et al., 2006). Also, section 2.2 illustrates that the measure of Green Brand Equity (GE) is highly influenced by consumer's memory-based brand associations. Reading together the theoretical inferences from the previous sections, both the dependent variables (GE & GW) are supposed to be positively influenced by a better alignment of the CSR initiatives with the stakeholder expectations (Jiménez et al., 2017; Wong & Dhanesh, 2017; Till & Nowak, 2000). Accordingly, the purpose of this research work is to *statistically test the importance of aligning sustainable initiatives with the logic consumers may apply when evaluating these claims*.

With reference to the ethical principles of stakeholder evaluation (Langhorne, 2016; Falkenberg & Woiceshyn, 2008; Valle & Borm, 2021), 'The duty to assist' (Good Samaritan Principle) and 'Do-no-harm' (Clean up your own mess principle) have been identified as the two principles to be statistically verified in through research work. The qualitative research work of Valle and Borm (2021) concluded with higher relative importance for 'duty to assist' and 'do-no-harm' principles. Accordingly, this research work aims to quantitatively establish the nature of relationship between the dependent variables: Perceived Greenwashing [GW] & Green Brand Equity [GE] and the two principles of stakeholder evaluation mentioned above



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(Figure 2: Conceptual model). As illustrated in section 2.6.3, to facilitate an accurate measuring framework for the two stakeholder evaluation principles, the principles have been quantitatively reformulated into two measurable metrics: ‘Perceived contribution to sustainability problem [PCP]’ and ‘Perceived opportunity to solve [POS]’ (Figure 2: Conceptual model).

Elucidating further on the independent variables ‘Perceived contribution to sustainability problem’ and ‘Perceived opportunity to solve’ reveal them to be comprised of measurable component metrics. The first independent variable *responsibility for solving* sustainability problem pertains to whether the company is ‘held responsible in the society’ for causing that specific sustainability issue. As an illustration, Chevron (American multinational oil producer) or Equinor (Norwegian petroleum refining company) are commonly accepted in the society to be responsible for carbon emission and causing environmental pollution. So, if a petroleum manufacturing company initiates a social responsibility activity targeting to reduce their carbon footprint on the environment, it can be stated that the initiative resonates with the first independent variable ‘Responsibility for solving sustainability problem’.

Scrutinizing the second independent variable ‘*opportunity to solve*’, reveal the construct to comprise of two intrinsic components: ‘technological competence’ and ‘resource availability’. A company is said to have the ‘opportunity to solve’ a sustainability issue if it has both the required technological competence and the availability of financial resources to solve the specific sustainability issue. As an illustration, assume Chevron (American multinational oil producer) or Equinor (Norwegian petroleum refining company) decides to use its technological expertise in drilling oilwells to dig deep water wells in a community suffering from drinking water shortage. It can be said that they have the ‘opportunity to solve’ this sustainability issue. The above-mentioned CSR initiative resonates with both components of the second independent variable. Being financially well-established conglomerates, both the companies have the capacity to ‘divert significant financial resources’ to implement this CSR activity. Also, decades of experience in drilling oil wells proves these companies to possess the required technical expertise to effectively implement this activity.

Referring to section 2.7, it can be seen that the efficiency of sustainable communication is moderated by a number of intermediate factors. While “Actor characteristics” and “Message type” significantly affect the communication efficiency of green advertisements, “Respondent characteristics” can have strong moderating effect on the perceived congruity of CSR activities (Gailey & Lee, 2005; Cesario et al., 2004; Maheswaran & Meyers-Levy, 1990). Moderating

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effect of respondent characteristics originates from two underlying decision-making styles and the level of importance affiliated by a consumer to environmental activities.

This research work analyses the impact created by ethical alignment of CSR activities on the measure of perceived greenwashing and the measure of green brand equity. To increase the statistical validity of the research model, the moderating effect of psychological factors that drive consumer decision making is also included.

### 3.2 Methodology

Based on the hypothesis formulation framework (Figure 1) and the conceptual model explained in the previous section, a quantitative research design was identified to fulfill the data requirement. The research design targets to establish the construct validity of two new constructs (Perceived contribution to a sustainability problem (PCP) and Perceived opportunity to solve a sustainability problem (POS)). The research strategy aims to make a first test of effects of the above-mentioned independent variables on the two dependent variables (Green Brand Equity (GE)) and (Greenwashing (GW)). Additionally, the research design incorporates two new variables (‘Promotion focus’ and ‘Prevention focus’), which are believed to create a moderating effect on the relationship between the dependent and the independent variables.

To do a confirmatory factor analysis (CFA) on the identified constructs (illustrated in section 4.1) and to test the effects of these constructs on the dependent variables (GE & GW), a quantitative survey was conducted. Also, Saunders et al., (2019) suggests the use of *survey questionnaire* for research works, which involve collection of standardized data from large number of respondents economically. It has also been indicated that inferential statistics from survey questionnaires are statistically better representatives of the whole population than an experiment conducted at the same respondent level. The survey questionnaire predominantly consisted of questions derived from standardized measurement scales (Table 1) used previously by researchers to quantify the selected constructs. Measuring the respondent’s evaluation of the priming stimuli consists of questions measuring the ‘dependent variables’, the ‘independent variables’ and the ‘two moderating variables’ (Appendix B). As the data collection process is entirely conducted in an online platform, the priming stimuli was integrated into the starting part of the survey questionnaire.

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To assure variance in the independent variables being measured, the respondents were exposed to manipulated sustainability claims in the form of priming stimuli (Appendix A). Each priming stimuli (CSR initiative) had an inherent difference in the variables being manipulated (Figure 3 to Figure 6). As demonstrated in section 3.4, while half of the sustainability claims manipulated both the independent variables, the other half was designed to facilitate single variable manipulation. As illustrated in Table 6, explained variances of the identified constructs were verified before being used for the structural equation modeling.

Final methodological step consisted of designing two structural equation models (section 4.2), the first one without any interaction effects and the second one with the mutual interaction effects incorporated into the model. Each of the structural models formed were used for hypothesis testing and subsequently for result interpretation. It is also to be noted that, throughout the methodological process (CFA & SEM) the values indicating Global fit for the constructs were ensured to be achieved.

### 3.3 Variables involved

As illustrated in (Figure 2: Conceptual model), the research design identifies two dependent variables, Green brand equity (GE) and perceived Greenwashing (GW). The two independent variables identified for the measurement framework are Perceived contribution to a Sustainability Problem (PCP) and Perceived Opportunity to solve a sustainability issue (POS). As indicated in the previous section, the research design targets to *‘identify the nature of causal relationship exerted by the two ethical principles of stakeholder evaluation on the two dependent variables when put under the moderating effect of the consumer’s regulatory’ focus*. The moderating variable incorporated into the framework *‘Chronic Regulatory focus’* (Higgins T. E., 2012) is further classified into *‘promotion focus’* consumers and *‘prevention focus’* consumers. Based on the score attained by the respondents in a quantified scale, they are split into the two subdivisions mentioned above.

### 3.4 Priming stimuli

Fazio et al., (1986) established that mere observation of an affect loaded stimulus can automatically trigger memory of respondents. Also, Hermans et al., (1994) demonstrated that “the time needed to evaluate targeted words decreased significantly when they were preceded

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by a similarly valanced priming word”. Accordingly, the subsequent setup consisted of exposing each respondent to ‘one out of a total of eight priming stimuli’, which resonates with the recent social responsibility initiatives undertaken by two companies in the United States. Exposure to a sustainable claim is followed by a number of questions measuring the respondent’s evaluation of the claim. Measuring the respondent’s evaluation of the priming stimuli consists of questions measuring the ‘dependent variable’, ‘independent variables’ and the ‘two moderating variables’. As the data collection process is entirely conducted in an online platform, the priming stimuli is integrated into the starting part of the survey questionnaire.

The priming stimuli can be categorized into two based on the number of independent variables being manipulated in each claim. Out of the total eight priming stimuli, four of the green claims manipulate one independent variable while the remaining four manipulated both the independent variables identified in the research framework. To avoid preformed consumer biases about the brands or industrial segments being evaluated here, the two brands chosen are from unrelated trade segments. Sustainability reports of ‘Nike’ and ‘Chevron’ from the year 2018 to 2020 were studied to identify and narrow down optimal social responsibility activities to be used as the priming stimuli here. Based on the independent variables being manipulated, four corporate social responsibility (CSR) initiatives of ‘Nike’ and four social responsibility initiatives of ‘Chevron’ were used as the priming stimuli. Even though eight variants of the priming stimuli were used for this step, only four of them with dual independent variable manipulation are used as part of analysis in this Master Thesis. Demonstration of the four priming stimuli (CSR initiatives) can be seen below in Figure 3 to Figure 6. Additionally, a detailed illustration of all the eight priming stimuli and how they were presented to the respondents can be found in Appendix A of this research paper.

**Figure 3 and Figure 4** illustrates the social responsibility initiatives from Chevron, in which both the independent variables were manipulated through the respective priming.

## **CHEVRON**

### **Priming Stimuli 1**

*(Independent variables manipulated = Responsibility for solving + Opportunity to solve)*

Chevron has invested \$1.1 billion in various Research and Development projects to develop technology improvements that reduce carbon emissions. A breakthrough in Carbon Engineering technique, enabled the researchers to capture carbon dioxide directly from the atmosphere and convert it into fuel. As a part of its Social Responsibility activity, Chevron has decided to share the innovative technology with other players in the energy sector. What do you think of the above-mentioned social responsibility activity?

*Figure 3: Chevron priming stimuli 1 - (Both independent variables manipulated)*

## **CHEVRON**

### **Priming Stimuli 2**

*(Independent variables manipulated = Responsibility for solving + Opportunity to solve)*

Chevron is forming a partnership to build and operate wind projects along the US coast located offshore New York and Massachusetts. Chevron will jointly develop four assets in two existing offshore wind leases and aim of having developed 50GW of renewable power by 2030.

What do you think of the above-mentioned social responsibility activity?

*Figure 4 : Chevron priming stimuli 2 - (Both independent variables manipulated)*

**Figure 5 and Figure 6** illustrates the social responsibility initiatives from Nike, in which both the independent variables were manipulated through the respective priming stimuli.

**NIKE****Priming Stimuli 1**

*(Independent variables manipulated = Responsibility for solving + Opportunity to solve)*

Nike is enacting a strict Code Leadership Standard (CLS) that communicates how supplier factories should implement Nike's Code of Conduct. Nike aims to bring strict prohibitions on forced labor and to ensure employee safety & descent wages through this social responsibility activity.

What do you think of the above-mentioned social responsibility activity?

*Figure 5: Nike priming stimuli 1 - (Both independent variables manipulated)*

**NIKE****Priming Stimuli 2**

*(Independent variables manipulated = Responsibility for solving + Opportunity to solve)*

Nike is launching a circular innovation strategy as part of the company's social responsibility initiative. Nike is building a circular supply chain to recapture footwear and apparel scraps and transform them into recycled materials. Also, Nike lays focus on ensuring circularity through sustainable product design, by making sustainable shoes with at least 50% recycled content by weight.

What do you think of the above-mentioned social responsibility activity?

*Figure 6: Nike priming stimuli 2 - (Both independent variables manipulated)*

### 3.5 Survey Logics used

Conducting the data collection phase online facilitated the use of several survey logics or automated data collection techniques, which helped to improve the quality of data collection. As the priming stimuli have been adopted from two companies in the United States, the ideal consumer demography to be studied was identified as people residing in the United States. Also, the online data collection company associated with is a US based company by the name 'Survey Monkey'. Even though, both the companies selected is assumed to have high brand familiarity among the population, the 'level of familiarity' for individual respondents needs to be verified before the data can be used for analysis and result interpretation. Accordingly, the first survey logic used in the questionnaire is the use of a *filtering question* at the start of the questionnaire. Depending on the answer given to the question, the respondents are either lead on to the next evaluation question or diverted from the questionnaire into an exit page. The representation below tries to explicate on the filtering question logic stated above, both the 'filtering question' and the 'operational logic' are depicted below.

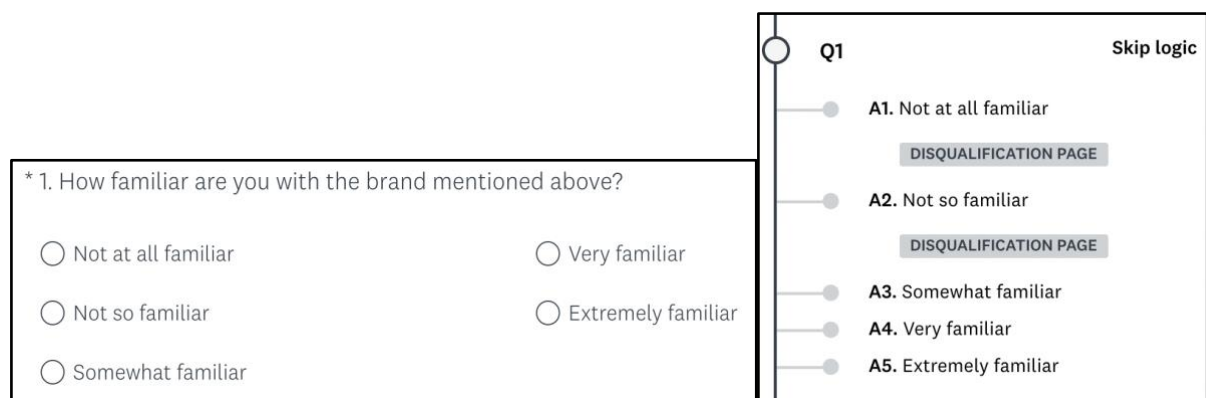


Figure 7: Survey logic 1 - (Filtering question & operational logic)

As illustrated in the previous section, random allocation of the eight priming stimuli is highly essential for ensuring a statistically valid data collection technique (Saunders, Lewis, & Thornhill, 2019). Accordingly, the inbuilt 'randomization function' of Survey Monkey was used to ensure a *homogenous allocation* of the priming stimuli to the respondent sample. Each of the total eight priming stimuli (social responsibility initiative) was allotted a percentage allocation of 12.5 percentage, which means each stimulus would be shown to 12.5 percentage of the total respondents. For example, if the total number of survey respondents are 200, each of the priming stimuli would be shown to 25 different respondents without repetition.

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Prefixing the survey 'Incidence rate' also helped to estimate the total number of responses to target for. As *respondent mortality* can be a significant challenge for online data collection techniques, the 'incidence rate' for this online data collection was kept between 75 – 99 percentage. Opting for a minimum incidence rate of 75 percentage from Survey monkey ensured receiving an optimal number of complete responses. If the targeted number of complete responses from the online data collection is kept at 400, an incidence rate of 75 percentage ensures a minimum of 400 complete responses by sending the survey questionnaire to a total of 534 respondents.

### 3.6 Complete Questionnaire design

A detailed illustration of the 'complete survey questionnaire' can be found in the Appendix B of this research paper. Even though, this section talks about the entire survey questionnaire, it needs to be noted that among the questions evaluating the dependent variables, only two measurable metrics, Green Equity (GE) and perceived Greenwashing (GW) were used for the data analysis in this Master Thesis. The other two dependent variables ('Success likelihood' and 'CSR fit') would be used as part of a research project later in the future. Also, the complete questionnaire has questions measuring the effect of two moderating variables ('Regulatory focus' and 'Consumer Environmental values'), but as illustrated in the conceptual model (Figure 1), only 'Regulatory focus' will be used for analysis in this Master Thesis. All the quantitative questions referred to above are formulated based on the 7-point Likert Scale ((1) *Strongly disagree*, (2) *Disagree*, (3) *Somewhat disagree*, (4) *Neither agree nor disagree*, (5) *Somewhat agree*, (6) *Agree*, (7) *Strongly agree*).

After a respondent is exposed to one of the priming stimuli (section 5.2), the person is shown a total of 15 questions, which measure the dependent variables. The first four questions of this section are derived from the scales measuring perceived Credibility of CSR Reports (Lock & Seele, 2017). The following seven questions are derived from the intrinsic CSR motives concept (Lichtenstein et al., 2004; Horiuchi & Schuchard, 2009; Laufer, 2003; Wagner et al., 2009). As the last four questions intend to measure the Green Brand Equity (BE), the corresponding questions have been derived from the measurement scale for drivers of green brand equity by (Chen, 2010). Following the section on dependent variable evaluation is the section measuring the two independent variables. The first three questions evaluate the independent variable



‘Perceived contribution to a sustainability problem (PCB)’ and the subsequent three questions measure the second independent variable ‘Perceived opportunity to solve (POS)’.

As the research framework (Figure 1: Conceptual model) indicates, in addition to questions measuring the dependent and independent variables, questions quantifying the moderating variables are also to be included. A total of twelve questions have been used to determine the ‘dominant regulatory focus’ of respondents. First five questions measure the level of ‘inherent promotional focus’ traits of the consumers and the subsequent five questions quantify the inherent level of ‘preventive focus traits’ of the consumers. Questions measuring Chronic regulatory focus of the respondents are derived from RFQ scale (Higgins et al. 2001); BIS/BAS scale (Carver & White, 1994) & Lockwood scale (Lockwood, Jordan & Kunda, 2002). It is also to be noted that six questions measuring the moderating influence of ‘Consumer environment value’ derived from the Green Consumption Value scale (Haws, Winterich, & Naylor, 2013) were used in the questionnaire but will not be used for analysis as part of this Master Thesis.

A summarized illustration of the theorems and standardized scales used for designing the complete questionnaire is depicted below in Table 1.

| <b>Construct Measured</b> | <b>Variable Type</b> | <b>Question Number</b> | <b>Theoretical Reference</b>  |
|---------------------------|----------------------|------------------------|---|
| CSR Fit (Congruity)       | Dependent Variable   | 6                      | Derived from scale measuring perceived Credibility of CSR Reports ( Lock & Seele, 2017) |
| CSR Fit (Congruity)       | Dependent Variable   | 8                      | Derived from intrinsic CSR motives concept by (Lichtenstein et al., 2004).              |
| Perceived Greenwash       | Dependent Variable   | 9                      | Derived from (Horiuchi & Schuchard, 2009) and (Laufer, 2003).                           |
| Perceived Greenwash       | Dependent Variable   | 10                     | Taken from Wagner et al. (2009).  |

|                            |                      |         |   |
|----------------------------|----------------------|---------|---|
| Green Brand Equity         | Dependent Variable   | 11 - 15 | Derived from measurement scale for drivers of green brand equity by (Chen Y.-S. , 2010).  |
| Opportunity to solve       | Independent Variable | 22      | Derived from the concept of lessening a firms' negative externalities (Crilly et al., 2016).  |
| Consumer Environment Value | Moderating Variable  | 23 - 28 | Derived from: Green Consumption Value scale ( Haws, Winterich, & Naylor, 2013)  |
| Chronic Regulatory Focus   | Moderating Variable  | 29 - 38 | Derived from: RFQ scale (Higgins et al. 2001); BIS/BAS scale (Carver & White, 1994) & Lockwood scale (Lockwood, Jordan & Kunda, 2002) |

*Table 1: Reference Table for Complete Questionnaire measurement scales*

### 3.7 Data collection procedure

The entire data collection procedure was conducted by the online data collection company 'Survey monkey'. As illustrated in the previous section, only two restrictions (filtering criteria) were prefixed on the respondent demography during the collection stage. The respondents needed to be 'residing in the United States' and possess a 'required level of brand familiarity' (refer Figure 11) on the two companies selected for the study.

The targeted audience feature from 'Survey monkey' enabled data collection procedure to be fast and accurate. Respondents from both the gender and belonging to all age groups were welcomed to participate in the survey. Total time for survey completion averaged at 3.5 minutes with a total percentage completion of 85 percentage. In addition to 'Age' and 'Gender', respondent demography comprised of variables measuring 'Annual household income', 'Regional location' and 'Device used for data collection'. Demographic variables measuring 'Age', 'Gender' and 'Household income' are included in the statical analysis, while variables indicating 'Regional location' and 'device used' were eliminated from the data set during the initial data purging process.

### 3.8 Data summary

In accordance with a prefixed incidence rate of 75 percentage, the survey questionnaire was sent to a total of 546 respondents. Out of the 546 respondents, 79 indicated a low familiarity of the two brands (Chevron & Nike) identified in this study. Thus, logical screening from the brand familiarity question brought down the total number of valid responses to 467. Even though all the questions had a mandatory completion status, 4 respondents failed to complete the entire survey questionnaire, thus respondent mortality brought down the final analyzable sample size to 463 respondents.

#### 3.8.1 Respondent demography

The 463 sample respondents consisted of 216 male candidates and 247 female candidates. Table 2 and Figure 12 illustrates the frequency distribution for `respondent gender`.

| <b>Gender</b> | <b>Frequency</b> |
|---------------|------------------|
| Male          | 216              |
| Female        | 247              |

Table 2: Frequency distribution – respondent gender

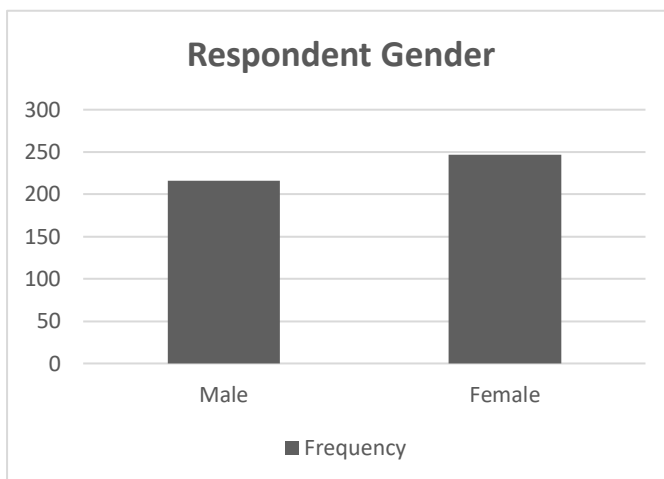


Figure 8: Frequency polygon – respondent gender

Similarly, Table 3 and Figure 13 illustrates the frequency distribution for the second demographic variable `respondent age`.

| <b>Age</b>       | 18 - 29 | 30 - 44 | 45 - 60 | More than 60 |
|------------------|---------|---------|---------|--------------|
| <b>Frequency</b> | 87      | 146     | 157     | 73           |

Table 3: Frequency distribution – respondent age

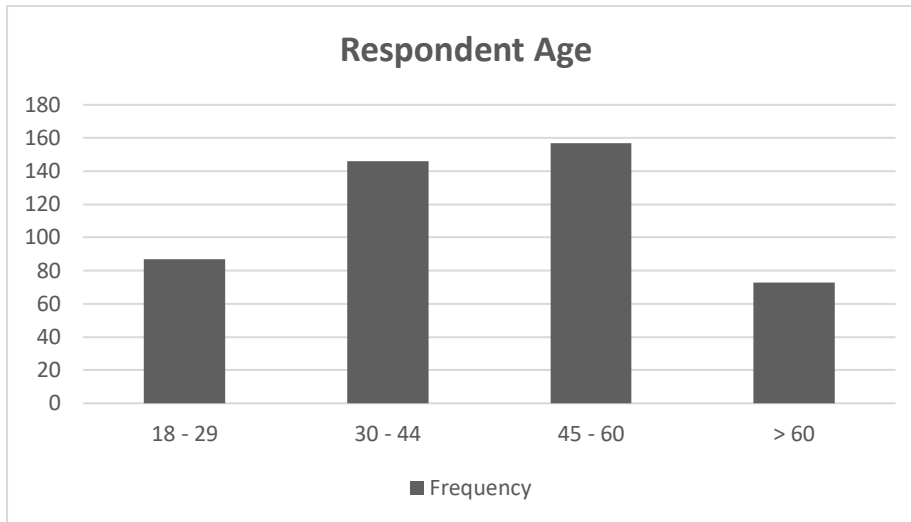


Figure 9: Frequency polygon – respondent age

Frequency distribution for the final demographic variable 'household income' is illustrated through Table 4 and Figure 14 illustrated below.

| <b>Household Income</b> | <b>Frequency</b> |
|-------------------------|------------------|
| \$0-\$9,999             | 31               |
| \$10,000-\$24,999       | 55               |
| \$25,000-\$49,999       | 94               |
| \$50,000-\$74,999       | 79               |
| \$75,000-\$99,999       | 59               |
| \$100,000-\$124,999     | 41               |
| \$125,000-\$149,999     | 15               |
| \$150,000-\$174,999     | 14               |

|                      |    |
|----------------------|----|
| \$175,000-\$199,999  | 8  |
| \$200,000+           | 21 |
| Prefer not to answer | 46 |

Table 4: Frequency distribution – Respondent Income

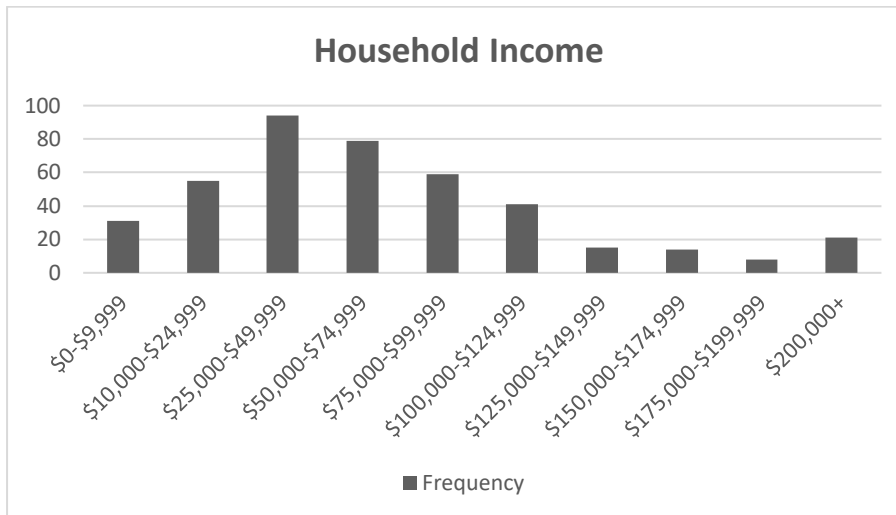


Figure 10: Frequency polygon – respondent Income

## CHAPTER 4 – DATA ANALYSIS

The analysis part consists of two steps: 1) testing the measurement model (CFA model) 2) testing the hypotheses (SEM model).

### 4.1 Confirmatory factor analysis (CFA)

(Testing the measurement model)

To test the Hypothesis formulation framework (Figure 2), confirmatory factor analysis (CFA) was performed using the *lavaan* package (version 0.6-9) in R (version 4.1.2). As a directional framework to execute the confirmatory factor analysis, analytical methodology used in (Rosseel, 2012) was taken as the standard. As proposed by in the (Rosseel, 2012), the maximum likelihood estimator (MLR) that is robust to nonnormal data was used for the initial part of the analysis.

|   |
|---|
| <b>Variable</b>   |
| <b>Perceived Greenwashing</b> (1 = Strongly Disagree, 7 = Strongly Agree) |
| grn_wash1: Genuine concern for sustainability issue                       |
| grn_wash3: General wellbeing of society                                   |
| <b>Green Brand Equity</b> (1 = Strongly Disagree, 7 = Strongly Agree)     |
| grn_eqty1: Meets my expectations of sustainable performance               |
| grn_eqty1: Generally reliable sustainable initiatives                     |
| grn_eqty3: Keeps it green commitments                                     |
| grn_eqty4: Prefer this company to others                                  |
| grn_eqty5: Trust green initiatives over other companies                   |
| <b>Promotion Focus</b> (1 = Strongly Disagree, 7 = Strongly Agree)        |
| pro_focs2: Doing well at something  |
| pro_focs3: Excited at opportunities                                       |
| pro_focs4: Imagine hopes and aspirations                                  |
| pro_focs5: Focus on future success  |
| <b>Prevention Focus</b> (1 = Strongly Disagree, 7 = Strongly Agree)       |
| pre_focs3: Feel worried when done bad                                     |
| pre_focs4: Think about preventing failures                                |

|  |
|--|
| pre_focs5: Focus on preventing negative events                             |
| <b>Contribution to problem</b> (1 = Strongly Disagree, 7 = Strongly Agree) |
| cont_prbm1: Believe the company is responsible                             |
| cont_prbm2: General opinion that company is responsible                    |
| <b>Opportunity to solve</b> (1 = Strongly Disagree, 7 = Strongly Agree)    |
| opp_solv1: Special competence to implement                                 |
| opp_solv2: Right resources for problem solving                             |
| opp_solv3: Unique position to solve problems                               |

Table 5: Measurement items used in the study

Analyzing the measurement items illustrated in Table 5 reveals that, some items were excluded from the model due to poor factor loading. As the standards for multivariate analysis (Hair et al., 2019) suggests, factor loadings below the value of (0.6) should be excluded from the model. Accordingly, measurement items 'green\_washing2', 'pro\_focus1', 'pre\_focus1', 'pre\_focus2' and 'cont\_prbm3' were removed from the measurement model for the next step of the confirmatory factor analysis.

| Variable                      | St. Factor Loading | Error Variance | CR          | AVE         |
|-------------------------------|--------------------|----------------|-------------|-------------|
| <b>Perceived Greenwashing</b> |                    |                | <b>0.83</b> | <b>0.71</b> |
| grn_wash1                     | 0.814              | 0.337          |             |             |
| grn_wash3                     | 0.868              | 0.247          |             |             |
| <b>Green Brand Equity</b>     |                    |                | <b>0.90</b> | <b>0.63</b> |
| grn_eqty1                     | 0.821              | 0.326          |             |             |
| grn_eqty2                     | 0.860              | 0.260          |             |             |
| grn_eqty3                     | 0.811              | 0.342          |             |             |
| grn_eqty4                     | 0.729              | 0.469          |             |             |
| grn_eqty5                     | 0.746              | 0.443          |             |             |
| <b>Promotion Focus</b>        |                    |                | <b>0.81</b> | <b>0.52</b> |
| pro_focs2                     | 0.689              | 0.525          |             |             |
| pro_focs3                     | 0.688              | 0.527          |             |             |
| pro_focs4                     | 0.775              | 0.400          |             |             |
| pro_focs5                     | 0.731              | 0.466          |             |             |
| <b>Prevention Focus</b>       |                    |                | <b>0.79</b> | <b>0.55</b> |
| pre_focs3                     | 0.667              | 0.555          |             |             |
| pre_focs4                     | 0.830              | 0.310          |             |             |
| pre_focs5                     | 0.724              | 0.476          |             |             |

|                                |       |       |             |             |
|--------------------------------|-------|-------|-------------|-------------|
| <b>Contribution to problem</b> |       |       | <b>0.79</b> | <b>0.65</b> |
| cont_prbm1                     | 0.750 | 0.438 |             |             |
| cont_prbm2                     | 0.862 | 0.256 |             |             |
| <b>Opportunity to solve</b>    |       |       | <b>0.84</b> | <b>0.63</b> |
| opp_solv1                      | 0.846 | 0.284 |             |             |
| opp_solv2                      | 0.765 | 0.414 |             |             |
| opp_solv3                      | 0.774 | 0.401 |             |             |

Table 6: Standardized factor loadings of the identified constructs

A confirmatory factor analysis (CFA) model was run and tested using the measurement items from Table 5. The benchmark standards to determine the cutoff values and inferring good fit were based on (Kenny, 2020; Hu & Bentler, 1999). The CFA model shows adequate global fit measures  $\chi^2(137) = 330.668, p < .001$ . Being sensitive to sample size, for a sample size of 200 or more the test is almost always significant. Several researchers rely on the ratio between the Chi-square value and its df ( $\chi^2/df$ ) to analyze model fit. A ratio value less than 2 indicates extremely good fit, but (David, 2020) along with other statisticians suggests ( $\chi^2/df$ ) values less than 5 as a measure of model fit. The CFA model indicated a  $\chi^2/df = 2.414$ , although a bit higher than 2, given the very large sample size and acceptable values of other model fit indices (RMSEA, CFI, TLI) the model is accepted. The analysis indicated RMSEA (root mean square error of approximation) = 0.064 and SRMR (standardized root mean square residual) = 0.048, both being less than 0.08 indicates good model fit. Additionally, the CFA model indicated CFI (comparative fit index) = 0.945 and TLI (Tucker-Lewis index) = 0.931, both being equal or larger than .90 indicates good model fit. Based on the observed good fit indices and the benchmarking standards established by (Kenny, 2020; Hu & Bentler, 1999), the model was accepted fit for (SEM) structural equation modeling.

Table 6 illustrates the standardized factor loadings along with the value of average variance extracted (AVE) and composite reliability (CR). A 'standardized factor loading' value of more than 0.06 indicates very good fit, accordingly all the variables indicated in Table 6 shows good model fit. Additionally, a construct reliability (CR) score of more than 0.6 indicated good construct reliability and an average variance extracted (AVE) score of greater than 0.5 indicated adequate convergent validity (Fornell & Larcker, 1981).



| <b>Latent Constructs</b> | grn_wash | grn_eqty | pro_focs | pre_focs | cont_prbm | opp_solv |
|--------------------------|----------|----------|----------|----------|-----------|----------|
| grn_wash                 | 1.000    |          |          |          |           |          |
| grn_eqty                 | 0.947    | 1.000    |          |          |           |          |
| pro_focs                 | 0.377    | 0.394    | 1.000    |          |           |          |
| pre_focs                 | 0.226    | 0.263    | 0.569    | 1.000    |           |          |
| cont_prbm                | 0.192    | 0.269    | 0.323    | 0.276    | 1.000     |          |
| opp_solv                 | 0.713    | 0.773    | 0.584    | 0.393    | 0.513     | 1.000    |

*Abbreviations:* grn\_wash, Greenwashing; grn\_eqty, Green Equity; pro\_focs, Promotion Focus; pre\_focs, Prevention Focus; cont\_prbm, Contribution to the problem; opp\_solv, Opportunity to solve the issue

*Table 7: Correlations between latent constructs*

As the next step in the CFA, correlations between the latent factors are analyzed to assess the discriminant validity. To ensure discriminant validity, 'correlation value should be less than 1 by an amount greater than two standard errors' (Xie, Bagozzi, & Grønhaug, 2015). Accordingly, correlation between the constructs is calculated and illustrated in Table 7. Also, the value of corresponding standard errors is illustrated in Table 8.

| <b>Latent Constructs</b> | grn_wash | grn_eqty | pro_focs | pre_focs | cont_prbm | opp_solv |
|--------------------------|----------|----------|----------|----------|-----------|----------|
| grn_wash                 | 0.000    |          |          |          |           |          |
| grn_eqty                 | 0.018    | 0.000    |          |          |           |          |
| pro_focs                 | 0.053    | 0.047    | 0.000    |          |           |          |
| pre_focs                 | 0.061    | 0.059    | 0.067    | 0.000    |           |          |
| cont_prbm                | 0.068    | 0.070    | 0.061    | 0.064    | 0.000     |          |
| opp_solv                 | 0.048    | 0.038    | 0.052    | 0.063    | 0.067     | 0.000    |

*Abbreviations:* grn\_wash, Greenwashing; grn\_eqty, Green Equity; pro\_focs, Promotion Focus; pre\_focs, Prevention Focus; cont\_prbm, Contribution to the problem; opp\_solv, Opportunity to solve the issue

*Table 8: Standard errors of the correlations*

As, illustrated before 'correlation values should be less than 1 by an amount greater than two standard errors', which mathematically can be expressed as:  $(1 - \text{Table 7} - (2 \times \text{Table 8})) > 0$ . Accordingly, Table 9 summarizes the calculated values and verifies all of them to be greater than zero.

| <b>Latent Constructs</b> | grn_wash | grn_eqty | pro_focs | pre_focs | cont_prbm | opp_solv |
|--------------------------|----------|----------|----------|----------|-----------|----------|
| grn_wash                 | 0.000    |          |          |          |           |          |
| grn_eqty                 | 0.018    | 0.000    |          |          |           |          |
| pro_focs                 | 0.517    | 0.512    | 0.000    |          |           |          |
| pre_focs                 | 0.652    | 0.620    | 0.297    | 0.000    |           |          |
| cont_prbm                | 0.673    | 0.591    | 0.556    | 0.596    | 0.000     |          |
| opp_solv                 | 0.191    | 0.152    | 0.311    | 0.481    | 0.354     | 0.000    |

*Abbreviations:* grn\_wash, Greenwashing; grn\_eqty, Green Equity; pro\_focs, Promotion Focus; pre\_focs, Prevention Focus; cont\_prbm, Contribution to the problem; opp\_solv, Opportunity to solve the issue

*Table 9: Discriminant Validity - Calculated Values*

Additionally, it needs to be noted that all the correlation scores are strongly significant at 1% ( $p < .01$ ).

## 4.2 Testing of hypotheses (SEM)

(Structural equation modeling)

As the Confirmatory factor analysis (CFA) indicated a good fit, the identified model was used to test the structural relationships between the component variables. Two structural equation models are tested in this section. The first model illustrated in Table 10 tries to establish the structural relationships between the six previously identified measurement variables. The second model illustrated in Table 13 additionally includes the interaction effect between the latent constructs into measurement model.

Referring to Chapter 5 – Research methodology, it can be noted that the respondents were split into two main groups based on the priming stimuli they were exposed to. Participants in one group were exposed to CSR claims manipulating ‘both the independent variables’ and the other group comprises of respondents exposed to CSR claims of single variable manipulation. Even though SEM models were formed for both the subgroups, a relative comparison of R-squared values in Table 11 (Both independent variables manipulated) and Table 12 (Single independent variable manipulation) indicate higher explained variances for the model with both independent variable manipulations. Accordingly, the result interpretation and hypothesis testing for this master thesis is formulated based on the Structural equation model (Table 10) and (Table 13), which represents the respondent group subjected to dual independent variable manipulation.

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The data collected from respondents exposed to single independent variable manipulation will be used as part of analytical studies later in the future.

To test the structural equation models (SEM), the Mplus software version 8.0 (Muthén & Muthén, (1998 - 2007)) was used. Analysis of the first SEM model (Table 10) was conducted using maximum likelihood estimator (MLR) estimator to deal with non-normality. Analysis of the second SEM model (Table 13) was conducted using LMS method to test the interaction effects (Ruge, Le, & Supphellen, 2021). Additionally, the Bayesian estimator (Bayes) was used to deal with non-normality of the data and to reduce the estimation time.

#### 4.2.1 SEM model 1- without interaction

SEM model 1 shows adequate global fit measures  $\chi^2(154) = 250.792, p < .001$ . Being sensitive to sample size, for a sample size of 200 or more the test is almost always significant. Several researchers rely on the ratio between the Chi-square value and its df ( $\chi^2/df$ ) to analyze model fit. A ratio value less than 2 indicates extremely good fit, SEM model 1 indicated a  $\chi^2/df = 1.629$ . Also, the analysis indicated RMSEA (root mean square error of approximation) = 0.055 and SRMR (standardized root mean square residual) = 0.058, both being less than 0.08 indicates good model fit. Additionally, SEM model 1 indicated CFI (comparative fit index) = 0.938 and TLI (Tucker-Lewis index) = 0.924, both being equal or larger than .90 indicates good model fit. Based on the observed good fit indices and the benchmarking standards established by (Kenny, 2020; Hu & Bentler, 1999), SEM model 1 obtained adequate global fit measures.

Table 10 (below) illustrates the hypothesized path coefficients for SEM model 1. As demonstrated in the output table below, `B´ represents the standardized effect size. The value of `B´ has been used to compare among the different predictors based on the explanatory power they have on the same outcome. To narrow down significant relationships, the accepted confidence interval was set at  $p < .01$  (significant at 1 %). In addition to the variables indicated in Table 5, measurement items used in SEM model 1 consist of a new variable `BRAND´. BRAND = 1 for CSR claims on Chevron and BRAND = 0 for CSR claims based on Nike.

| <b>Dependent Variables</b> | <b>Independent Variables</b> | <b>B</b> | <b>SE</b> | <b>t- value</b> | <b>p -value</b> |
|----------------------------|------------------------------|----------|-----------|-----------------|-----------------|
| GE                         | PROF                         | -0.128   | 0.126     | -1.021          | 0.307           |
| GE                         | PREF                         | -0.007   | 0.118     | -0.062          | 0.951           |
| GE                         | CP                           | -0.292   | 0.110     | -2.649          | 0.008 ***       |
| GE                         | OS                           | 1.019    | 0.105     | 9.669           | 0.000 ***       |
| GE                         | BRAND                        | 0.057    | 0.054     | 1.045           | 0.296           |
| GW                         | PROF                         | -0.061   | 0.150     | -0.403          | 0.687           |
| GW                         | PREF                         | 0.079    | 0.110     | 0.719           | 0.472           |
| GW                         | CP                           | -0.363   | 0.114     | -3.192          | 0.001 ***       |
| GW                         | OS                           | 0.956    | 0.120     | 7.997           | 0.000 ***       |
| GW                         | BRAND                        | -0.001   | 0.062     | -0.024          | 0.981           |

*Abbreviations:* GW, Greenwashing; GE, Green Equity; PROF, Promotion Focus; PREF, Prevention Focus; CP, Contribution to the problem; OS, Opportunity to solve the issue; BRAND, Variation in CSR exposure

Significance level: \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

*Table 10 Estimated path coefficients (SEM model -1)*

‘SEM model 1’ was able to estimate four path coefficients within the indicated significance level ( $p < .01$ ). Before finalizing the model for result interpretation, a relative comparison of the R-squared values (explained variances) needs to be conducted. Table 11 below illustrates the explained variances for SEM model 1, in which both independent variables were manipulated for the respondents. Concurrently, Table 12 illustrated below represents the R-squared values for the SEM model, in which only one independent variable was manipulated for the respondents.

| <b>Variables</b> | <b>Explained.Variiances</b> |
|------------------|-----------------------------|
| <b>GE</b>        | 0.646                       |
| <b>GW</b>        | 0.679                       |

*Abbreviations:* GE, Green Equity; GW, Greenwashing

*Table 11: R-squared values. - Both independent variables manipulated*

| Variables | Explained.Variances |
|-----------|---------------------|
| <b>GE</b> | 0.519               |
| <b>GW</b> | 0.620               |

*Abbreviations:* GE, Green Equity; GW, Greenwashing

*Table 12: R-squared values. - One independent variable manipulated*

Relative comparison of the 'explained variances' in Table 11 and Table 12 indicates higher representation of both the dependent variables in Table 11. While Green Equity (GE) had an R-squared value of 0.646 in Table 11, it only had an R-squared value of 0.519 in Table 12. Also, Greenwashing (GW) had a higher score of explained variance in Table 11 (0.679) when compared to the explained variance score in Table 12 (0.620). Inferentially, Table 11, which represents 'SEM model 1' has a higher representation of both the dependent variables. Therefore, SEM model 1 comprising of data extracted from respondents subjected to dual independent variable manipulation is selected for the result interpretation and hypothesis testing.

#### 4.2.2 Result interpretation from 'SEM model 1'

As illustrated in Table 10 above, four significant relationships could be inferred from SEM model 1. Perceived contribution to the sustainability problem (PCP) was proved to have a significant causal impact on Green Equity (GE) [ $B = -0.292$  and  $p\text{-value} = 0.008^{***}$ ]. Additionally, perceived opportunity to solve a sustainability problem (POS) was proved to have a significant impact on Green Equity (GE) [ $B = 1.019$  and  $p\text{-value} = 0.000^{***}$ ]. Analyzing the second dependent variable reveal that, perceived contribution to the sustainability problem (PCP) has a significant causal impact on Greenwashing (GW) [ $B = -0.363$  and  $p\text{-value} = 0.001^{***}$ ]. Also, the second independent variable - perceived opportunity to solve a sustainability problem (POS) has a significant causal impact on Greenwashing (GW) [ $B = 0.956$  and  $p\text{-value} = 0.000^{***}$ ]. Independent variables representing both Promotion focus (PROF) and Prevention focus (PREF) failed to establish any significant relationship on either of the dependent variables (GE & GW) in SEM model 1. It is also to be noted that the variable representing company variation in the priming stimuli - 'BRAND' was proved to have no significant impact on either of the dependent variables. This ensures the fact that priming stimuli adopted from CSR initiatives of Chevron resonates with the priming stimuli adopted from the CSR initiatives of Nike. Thus, avoiding any confounding effects into the research

model. Accordingly, the only categorization for respondent groups required is based on the variant of priming stimuli they are exposed to, was it single or double variable manipulation. Value of estimated coefficients in SEM model 1 helps to test hypothesis 1 and hypothesis 2 of this master thesis. Therefore, a detailed interpretation of the inferential statistics from SEM model 1 is expounded in the section below.

#### 4.2.3 Testing of hypotheses 1 and hypotheses 2

To facilitate easy cross referencing, Table 13 illustrated below was formed. Table 13 is an extract from SEM model 1 but with only the 'significant latent constructs' required to test hypothesis 1 and hypothesis 2.

| Hypothesis Tested | Dependent Variables | Independent Variables | B      | SE    | t- value | p -value  |
|-------------------|---------------------|-----------------------|--------|-------|----------|-----------|
| H1(a)             | GE                  | CP                    | -0.292 | 0.110 | -2.649   | 0.008 *** |
| H2(a)             | GE                  | OS                    | 1.019  | 0.105 | 9.669    | 0.000 *** |
| H1(b)             | GW                  | CP                    | -0.363 | 0.114 | -3.192   | 0.001 *** |
| H2(b)             | GW                  | OS                    | 0.956  | 0.120 | 7.997    | 0.000 *** |

*Abbreviations:* GW, Greenwashing; GE, Green Equity; PROF, Promotion Focus; PREF, Prevention Focus; CP, Contribution to the problem; OS, Opportunity to solve the issue

Significance level: \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

*Table 13: Testing hypothesis 1 and hypothesis 2*

Restating hypothesis 1(a) from Chapter 4,

**H1(a):** *Perceived contribution to a sustainability problem has a positive effect on Green Equity.*

A negative value of 'B' in Table 13 indicates that the causal relationship formed is in a direction opposite to what was initially proposed during the hypothesis formulation. As the results indicates a negative explanatory power of the independent variable towards the dependent variable. It can be inferred that, consumers (stakeholders) perceive it is as the inherent responsibility of a company to solve the sustainability issues that they contribute to. The responsibility to 'clean up your own mess' should not visualized by the company as a new

sustainability initiative, rather it should be seen as an activity to be conducted regularly along with the normal proceedings of the company. Additionally, it can be propounded that communicating out loud to the consumers on sustainability issues, which the company has the responsibility to solve can result in a reduction of Green Equity. Summarizing the inferences formed above, despite a significant causality effect, *H1 (a) is rejected* as the direction of causal relationship is opposite to the one anticipated in the hypothesis.

Restating hypothesis 1(b) from Chapter 4,

**H1(b):** *Perceived contribution to a sustainability problem reduces the threat of Greenwashing.*

Before forming inferential statements about the causality, it needs to be noted that the variables measuring Greenwashing (grn\_wash1 & grn\_wash3) – Table 5 were formulated based on survey questions 9 & 11 (Refer Appendix: B), which measures the respondent's perceived credibility for the green claims. Therefore, to get an accurate measure of Greenwashing, reversing the scales needs to be done (the path coefficient signs need to be reversed). Accordingly, a negative 'B' value in Table 13 indicates a negative effect on perceived credibility, thus indicating increased risk of perceived Greenwashing. The resulting interpretation is that communicating sustainability initiatives in which the company has the responsibility to solve increases the perceived risk of Greenwashing for stakeholders. Even though an initial observation seems unclear, clear scrutinization reveal a significant resonance of the findings with the interpretation formed in H1(a). Stakeholders expect companies to inherently atone for the sustainability problems they contribute to. Any attempt at communicating it out loud to the stakeholders increases the 'perceived consumer skepticism' as mentioned in Chapter -2 literature review. Summing up the inferences formed, despite a significant causality effect, *H1 (b) is rejected* as the direction of causal relationship is opposite to the one anticipated in the hypothesis.

Restating hypothesis 2(a) from Chapter 4,

**H2(a):** *Perceived opportunity to solve a sustainability issue positively affects the Green Equity during stakeholder evaluation of green claims.*

A positive value of 'B' from Table 13, indicates that *H2(a) can be accepted*. It is thus interpreted that consumers form positive impressions about a company when the sustainable activities of the company are initiated for an issue, in which the company has a good opportunity to solve. As expounded in Chapter 3, 'Perceived opportunity to solve' comprise of

two intrinsic components: 'technological competence' and 'resource availability'. By accepting H2(a), it is inferred that focusing on sustainability initiatives in which a company has the required technological competence and the ability to divert the required financial resources would positively contribute to the company's Brand Equity.

Restating hypothesis 2(b) from Chapter 4,

**H2(b):** *Perceived opportunity to solve a sustainability issue reduces the threat of Greenwashing, during stakeholder evaluation of the corresponding green message.*

Analogous to the result interpretation of H1(b), reversing the scales principle is to be implemented in this section also. Accordingly, a positive value of 'B' from Table 13, indicates increased trustworthiness and reduced perceived threat of Greenwashing, which results in *H2(b) getting accepted*. As an inferential statement, it can be said that green messages communicating about the sustainability initiatives of a company should align with the 'perceived opportunity to solve' concept to reduce the threat of greenwashing. Perceived threat of greenwashing is minimized when the stakeholders believe that the company has the required competence and sufficient resources to successfully implement this sustainability initiative.

#### 4.2.4 SEM model 2- with interaction effects

SEM model 2 is framed identical to SEM model 1 but with the inclusion of interaction effects into the model. Referring to the global fit statistics in section 6.2.1, it can be interpreted that the SEM model 2 shares the same measured indices of global fit. Additionally, the existence of significant interaction effects (Table 14 below) in SEM model 2 demonstrates the fact that the groups fit the data well. The hypothesized path coefficients for SEM model - 2 are estimated and illustrated below in Table 14.

Analogous to the interpretation of SEM model – 1 in section 6.2.1, value of 'B' in the table 14 below represents the standardized effect size used to compare the explanatory power among different predictors of the same outcome. To narrow down significant relationships, the accepted confidence interval was set at  $p < .01$  (significant at 1 %). As the Bayesian estimator is used to estimate the interaction effects, posterior standard deviations (SD) were reported instead of standard errors of the parameter estimates. The p-values were computed in a Bayesian approach, but the interpretation is comparable to those computed using the frequentist approach. Additionally, the interaction terms added to SEM model – 2 comprises of : PROFPCP



= PROF \* PCP (Interaction effects between promotional focus and the perceived contribution to a sustainability problem) , PROFOS = PROF \* POS (Interaction effects between promotional focus and the perceived opportunity to solve a sustainability issue), PREFCP = PREF \* PCP (Interaction effects between prevention focus and the perceived contribution to a sustainability problem) and PREFOS = PREF\*POS (Interaction effects between prevention focus and the perceived opportunity to solve a sustainability problem).

| <b>Dependent Variables</b> | <b>Independent Variables</b> | <b>B</b> | <b>SD</b> | <b>p -value</b> |
|----------------------------|------------------------------|----------|-----------|-----------------|
| GE                         | PROF                         | -0.239   | 0.129     | 0.040 **        |
| GE                         | PREF                         | 0.087    | 0.104     | 0.192           |
| GE                         | CP                           | -0.262   | 0.087     | 0.001 ***       |
| GE                         | OS                           | 1.001    | 0.093     | 0.000 ***       |
| GE                         | PROFCP                       | -0.387   | 0.146     | 0.002 ***       |
| GE                         | PROFOS                       | 0.366    | 0.171     | 0.011 ***       |
| GE                         | PREFCP                       | 0.210    | 0.132     | 0.041 **        |
| GE                         | PREFOS                       | -0.146   | 0.163     | 0.171           |
| GE                         | BRAND                        | 0.047    | 0.053     | 0.181           |
| GW                         | PROF                         | -0.148   | 0.129     | 0.119           |
| GW                         | PREF                         | 0.164    | 0.114     | 0.062 *         |
| GW                         | CP                           | -0.322   | 0.101     | 0.000 ***       |
| GW                         | OS                           | 0.909    | 0.105     | 0.000 ***       |
| GW                         | PROFCP                       | -0.363   | 0.163     | 0.014 ***       |
| GW                         | PROFOS                       | 0.415    | 0.174     | 0.005 ***       |
| GW                         | PREFCP                       | 0.153    | 0.139     | 0.093 *         |
| GW                         | PREFOS                       | -0.212   | 0.158     | 0.079 *         |
| GW                         | BRAND                        | -0.016   | 0.057     | 0.399           |

*Abbreviations:* GW, Greenwashing; GE, Green Equity; PROF, Promotion Focus; PREF, Prevention Focus; CP, Contribution to the problem; OS, Opportunity to solve the issue; BRAND, Variation in CSR exposure; PROFCP, PROF \* PCP; PREFCP, PREF \* PCP; PROFOS, PROF\*OS; PREFOS, PREF\*OS

Significance level: \*p<.1, \*\*p<.05, \*\*\*p<.01

Table 14: Estimated path coefficients (SEM model 2)

#### 4.2.5 Result interpretation from 'SEM model 2'

As illustrated in Table 14 above, SEM model 2 was able to identify four new significant interaction effects within the indicated significance level ( $p < .01$ ). It can also be noted that the variables that attained significance in SEM model 1 retained the significance level even after addition of the interaction effects. Green Equity (GE) is seen to be significantly affected by the interaction effect existing between promotion focus and perceived contribution to a sustainability problem (PROFCP) at [B = -0.387 and p-value = 0.002\*\*\*]. Similarly, Green Equity (GE) is significantly affected by the interaction effect between promotion focus and perceived opportunity to solve a sustainability problem (PROFOS) at [B = 0.366 and p-value = 0.01\*\*\*]. With reference to Table 14 above, both the interaction effects of prevention focus on Green Equity (GE) failed to attain significance at ( $p < .01$ ). [(PREFCP with p-value = 0.041\*\*) and (PREFOS with p-value = 0.171)].

Perceived risk of Greenwashing (GW) is seen to be significantly affected by the interaction effect existing between promotion focus and perceived contribution to a sustainability problem (PROFCP) at [B = -0.363 and p-value = 0.001\*\*\*]. Similarly, Greenwashing (GW) is significantly affected by the interaction effect between promotion focus and perceived opportunity to solve a sustainability problem (PROFOS) at [B = 0.415 and p-value = 0.005\*\*\*]. With reference to Table 14 above, both the interaction effects of prevention focus on perceived risk of Greenwashing (GW) failed to attain significance at ( $p < .01$ ). [(PREFCP with p-value = 0.093\*) and (PREFOS with p-value = 0.079\*)].

'SEM model 2' was able to identify four new significant interaction effects within the indicated significance level ( $p < .01$ ). Before finalizing the model for result interpretation, analysis of the R-squared values (explained variances) needs to be conducted. Table 15 below illustrates the explained variances for SEM model 2.

| Variables | Explained.Variiances |
|-----------|----------------------|
| <b>GE</b> | 0.725                |
| <b>GW</b> | 0.765                |

*Abbreviations:* GE, Green Equity; GW, Greenwashing

*Table 15: R-squared values (SEM model 2)*

In accordance with the benchmark standards of (Kenny, 2020), R-squared value between 0.7 and 1 indicates 'SEM model 2' to have a good representation of the dependent variables (GE & GW). Value of the estimated coefficients in SEM model 2 helps to test hypothesis 3, hypothesis 4, hypothesis 5 and hypothesis 6 of this master thesis. Accordingly, a detailed interpretation of the inferential statistics from SEM model 2 is expounded in the section below.

#### 4.2.6 Testing of hypothesis 3 and hypothesis 4

To facilitate easy cross referencing, Table 16 illustrated below was formed. Table 16 is an extract from SEM model 2 but with only the 'interaction effects' required to test hypothesis 3 and hypothesis 4.

| Hypothesis Tested | Dependent Variables | Independent Variables | B      | SD    | p -value  |
|-------------------|---------------------|-----------------------|--------|-------|-----------|
| H3                | GE                  | PROFCP                | -0.387 | 0.146 | 0.002 *** |
| H3                | GE                  | PROFOS                | 0.366  | 0.171 | 0.011 *** |
| H4                | GW                  | PROFCP                | -0.363 | 0.163 | 0.014 *** |
| H4                | GW                  | PROFOS                | 0.415  | 0.174 | 0.005 *** |

Abbreviations: GW, Greenwashing; GE, Green Equity; PROFCP, PROF \* PCP; PROFOS, PROF\*POS

Significance level: \*p<.1, \*\*p<.05, \*\*\*p<.01

Table 16: Testing of hypothesis 3 and hypothesis 4

Restating hypothesis 3 from Chapter 1,

**H3:** *Promotion focus strengthens the effect of 'perceived contribution to a sustainability problem' and 'perceived opportunity to solve a sustainability issue' on Green Equity.*

The value of 'B' (corresponding to GE) from Table 16, indicates a negative path coefficient for 'PROFCP' and a positive path coefficient for 'PROFOS'. Retrospection of section 6.2.3 (Table 13) indicate that H3 is the moderated version of H1(a) and H2(a) combined. The moderation effect in both the cases originate from the promotion focus of the consumers. As the path coefficients of 'PROFCP' and 'PROFOS' have the same sign as the path coefficients

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of H1(a) and H2(a) respectively, it can be inferred that the addition of promotion focus into the SEM model strengthened the existing causal relationship established in the previous hypotheses. Accordingly, *Hypothesis 3 is accepted*. It can be propounded that the measure of promotion focus in an individual strengthens the perceived measure of green equity, when exposed to sustainability claims resonating with either of the two identified principles of stakeholder evaluation.

Restating hypothesis 4 from Chapter 1,

**H4:** *Promotion focus strengthens the effect of 'perceived contribution to a sustainability problem' and 'perceived opportunity to solve a sustainability issue' on the threat of Greenwashing.*

The value of 'B' (corresponding to GW) from Table 16, indicates a negative path coefficient for 'PROFCP' and a positive path coefficient for 'PROFOS'. Retrospection of section 6.2.3 (Table 13) indicate that H4 is the moderated version of H1(b) and H2(b). The moderation effect in both the cases originate from the promotion focus of the consumers. As the path coefficients of 'PROFCP' and 'PROFOS' have the same sign as the path coefficients of H1(b) and H2(b) respectively, it can be inferred that the addition of promotion focus into the SEM model strengthened the existing causal relationship established in the previous hypotheses. Accordingly, *hypothesis 4 is accepted*. It can be propounded that the measure of promotion focus in an individual strengthens the effect on perceived Greenwashing (GW), when exposed to sustainability claims resonating with either of the two identified principles of stakeholder evaluation.

#### 4.2.7 Additional Test Results

To facilitate easy cross referencing, Table 17 illustrated below was formed. Table 17 is an extract from SEM model 2 but with only the ‘interaction effects’ not previously analyzed for hypothesis testing.

| <b>Dependent Variables</b> | <b>Independent Variables</b> | <b>B</b> | <b>SD</b> | <b>p -value</b> |
|----------------------------|------------------------------|----------|-----------|-----------------|
| GE                         | PREFCP                       | 0.210    | 0.132     | 0.041 **        |
| GE                         | PREFOS                       | -0.146   | 0.163     | 0.171           |
| GW                         | PREFCP                       | 0.153    | 0.139     | 0.093 *         |
| GW                         | PREFOS                       | -0.212   | 0.158     | 0.079 *         |

Abbreviations: *GW*, Greenwashing; *GE*, Green Equity; *PREFCP*, *PREF \* PCP*; *PREFOS*, *PREF\*POS*

Significance level: \* $p < .1$ , \*\* $p < .05$ , \*\*\* $p < .01$

*Table 17: Additional Test Results*

As illustrated in Table 17 above, neither of the variables representing the interaction effect of prevention focus on Green Equity attained significance at  $p < 0.01$ , (‘PREFCP’,  $p$ - value = 0.04) and (‘PREFOS’,  $p$ - value = 0.171). Table 17 also demonstrates prevention focus to lack any significant interaction effect on the perceived threat of Greenwashing at  $p < 0.01$ , (‘PREFCP’,  $p$ - value = 0.04) and (‘PREFOS’,  $p$ - value = 0.171).

Combining both the above-mentioned statistical inferences, it can be proposed that “*When evaluated based on the ‘perceived contribution to a sustainability problem’ and ‘perceived opportunity to solve a sustainability issue’, prevention focus in consumers fail to demonstrate any moderating effect on Green Equity or the threat of Greenwashing*”.

### 4.3 Summary of the analysis

As the hypothesis testing was conducted in different sections of the Data analysis chapter, it seemed logical to add a section summarizing all the inferences and propositions. Accordingly, Table 18 below summarizes all the four hypotheses tested in this master thesis into an easily understandable framework.

| Hypothesis  | P- value  | Result   | Explanation  |
|---|-----------|----------|--|
| H1(a): Perceived contribution to a sustainability problem has a positive effect on Green Equity.  | 0.008 *** | Rejected | Despite a significant p – value, ‘Perceived contribution to a sustainability problem’ is identified as a significant factor, which <u>decreases</u> ‘Green Brand Equity’.          |
| H1(b): Perceived contribution to a sustainability problem reduces the threat of Greenwashing.     | 0.001 *** | Rejected | Despite a significant p – value, ‘Perceived contribution to a sustainability problem’ is identified as a significant factor, which <u>increases</u> the threat of ‘Greenwashing’.  |
| H2(a): Perceived opportunity to solve a sustainability issue positively affects the Green Equity. | 0.000 *** | Accepted | The p-value is less than 0.01. ‘Perceived opportunity to solve a sustainability problem’ is identified as a significant factor, which <u>increases</u> ‘Green Brand Equity’.       |
| H2(b): Perceived opportunity to solve a sustainability issue reduces the threat of Greenwashing.  | 0.000 *** | Accepted | The p-value is less than 0.01. ‘Perceived opportunity to solve a sustainability problem’ is identified as a significant factor, which <u>reduces</u> the threat of ‘Greenwashing’. |

|   |                                |                 |   |
|---|--------------------------------|-----------------|---|
| <p>H3: Promotion focus strengthens the effect of ‘perceived contribution to a sustainability problem’ and ‘perceived opportunity to solve a sustainability issue’ on Green Equity.</p>                  | <p>0.002 ***<br/>0.011 ***</p> | <p>Accepted</p> | <p>The p-values are less than 0.01. ‘Promotion focus’ in an individual <u>strengthens</u> the perceived measure of green equity, when exposed to sustainability claims resonating with either of the two identified principles of stakeholder evaluation.</p>     |
| <p>H4: <i>Promotion focus strengthens the effect of ‘perceived contribution to a sustainability problem’ and ‘perceived opportunity to solve a sustainability issue’ on threat of Greenwashing.</i></p> | <p>0.014 ***<br/>0.005 ***</p> | <p>Accepted</p> | <p>The p-values are less than 0.01. ‘Promotion focus’ in an individual <u>strengthens the effect</u> on perceived Greenwashing (GW), when exposed to sustainability claims resonating with either of the two identified principles of stakeholder evaluation.</p> |

Significance level: \*p<.1, \*\*p<.05, \*\*\*p<.01

Table 18: Summary of Hypothesis testing

Even though p – value ( $p < .01$ ) helped to sort out significant and insignificant causality relationships. The value of ‘B’ (standardized effect size) was used in the structural equation models (SEM) to analyze the explanatory power among different predictors of the same dependent variable. With reference to the conceptual model (Figure 2) and the hypothesis formulation framework, Figure 15 below represents the estimated path coefficients for all the causality relationships analyzed in this master thesis.

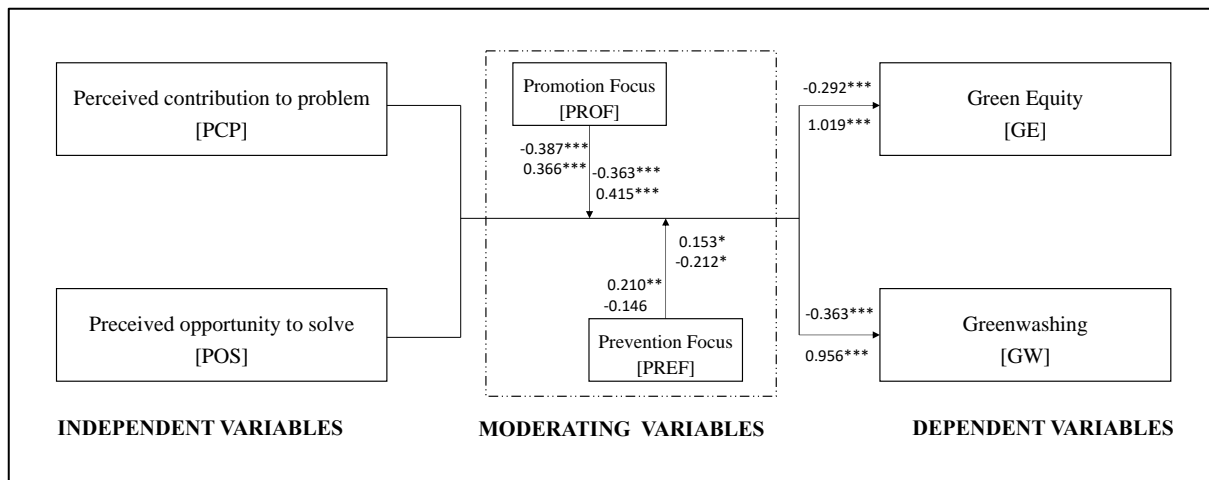


Figure 11: Estimated path coefficients for the conceptual model



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## CHAPTER 5 – DISCUSSION

Even though individual result interpretations were made in sections 4.2.3 and 4.2.6, a summarized illustration of the findings from both the structural equation models and hypothesis testing needs to be made. Additionally, the result interpretation needs to be segmented based on the type of insights derived from them. As the findings from this research study can contribute to both ‘Theoretical’ and ‘Managerial’ insights, two separate sections discussing each of the category are added in this chapter. As it is commonly accepted that no research work would be completely accurate, a section discussing the limitations of this study is also included. As a measure to ensure the effectiveness of this research model, a section talking about the ‘reliability’ and ‘validity’ of the research model is also included. As part of the concluding remarks, the final section of this chapter elucidates on how to extend the findings from this master thesis into a full scaled research project.

### 5.1 Main Findings

Major findings of this research work need to be discussed with reference to the three research questions being studied. Reiterating the research questions from Chapter 1,

*RQ1: Which ethical principles are relevant when consumers evaluate sustainability claims?*

*RQ2: How do ethical principles influence (a) perceived greenwashing, and (b) green equity?*

*RQ3: Does regulatory focus moderate the effects of ethical principles on perceived greenwashing and green equity?*

**RQ1** can be answered based on the interpretations from section (2.6). With reference to previous literature, nine ethical principles of stakeholder evaluation were identified and presented in the starting of section (2.6). Researchers have demonstrated these principles to guide the decision-making behavior of stakeholders when evaluating sustainability claims. Subsequently, based on the interpretative finding from (Valle & Borm, 2021), the concept of materiality (Materiality Analysis) in section 2.5 was used to identify the most important ethical principles as perceived by the consumers. Derived from the Good Samaritan principles (The

duty to assist) and the Do-no-harm principles (Clean up your own mess), two quantitatively measurable metrics were identified as the main determinants of consumer evaluations of sustainability claims: ‘Perceived contribution to sustainability problem [PCP]’ and ‘Perceived opportunity to solve [POS]’. Additionally, in section 4.1, confirmatory factor analysis (CFA) was conducted to verify the accuracy of the identified determinants of sustainability evaluation. Both Perceived contribution to sustainability problem [PCP]’ and ‘Perceived opportunity to solve [POS]’ were identified to have good construct validity (Table 9) and were established as significant determinants of consumer evaluation of sustainability claims. Comprehending the above-mentioned aspects, **RQ1** was accurately answered by this Master Thesis, *“Perceived contribution to sustainability problem and Perceived opportunity to solve a sustainability issue were identified as the two relevant ethical principles evoked by consumers when evaluating sustainability claims.”*

**RQ2** can be answered based on the conclusive interpretations from hypothesis 1 and hypothesis 2 (section 4.2.3).

Conclusive interpretations from H2(a) reveal that CSR initiatives in which the company is ‘perceived to have an opportunity to solve’ is demonstrated to create a significant positive effect on the perceived Green Brand Equity (GE). Elucidating on the inference, a CSR initiative for which the company has the required technical competence and the required financial resources to implement will contribute more to the company’s Green Brand Equity than a CSR initiative in which the company lacks both the above-mentioned ethical aspects.

Also, conclusive interpretations from H1(a) indicate reduced Green Brand Equity (GE) for green messages, which talks about CSR initiatives atoning for sustainability issues the ‘company has contributed to in the past’. When consumers are reminded of the fact that ‘the company is causing the sustainability problem’, it negatively affects the Green Brand Equity score. As illustrated in section 2.2, Green Brand Equity (GE) constitutes an important factor determining a company’s overall Brand Equity. Thus, *“if a company has not already solved the sustainability problems it has caused, it will adversely affect the overall Brand Equity score of the company”*.

Conclusive interpretations from H2(b) reveal that implementing CSR initiatives in which the company is ‘perceived to have an opportunity to solve’ will help to reduce the perceived threat of Greenwashing. Explicating on the inference, a CSR initiative for which the company has the

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required technical competence and the required financial resources to implement will be perceived as more trustworthy (less threat of Greenwashing) than a CSR initiative in which the company lacks both the above-mentioned ethical aspects.

Additionally, conclusive interpretations from H1(b) reveal that perceived threat of Greenwashing is more for green messages, which communicates about CSR initiatives atoning for sustainability issues the ‘company has contributed to in the past’. When consumers are reminded of the fact that ‘the company is causing the sustainability problem’, it increases the perceived threat of Greenwashing for the focal sustainability initiative. Putting forward in simple words, *“If a company has not already solved the sustainability problems it has caused, it triggers negative responses from the consumers thus increasing the suspicion of Greenwashing”*.

**RQ3** is answered based on the conclusive interpretation from hypothesis 3 and hypothesis 4 (section 4.2.6) and additional test results illustrated in section 4.2.7. Referring to section 2.3.1, consumer’s regulatory focus comprises of two elements, the measure of ‘Promotion focus’ and the measure of ‘Prevention focus’. Accepting hypothesis 3 and hypothesis 4 resulted in the interpretation that ‘Promotion focus’ in individuals creates a significant moderating effect on consumer evaluation of sustainability claims. Additionally, it was verified that ‘promotion focus’ in consumers strengthened the causal relationship established in H1 and H2.

Additionally, the level of ‘Prevention focus’ in consumers do not have a significant moderating effect on consumer evaluation of sustainability claims. ‘Prevention focus’ as a moderating variable was unable to demonstrate any significant interaction effects on the causal relationships established through hypothesis 1 and hypothesis 2. As the concluding remark for this section, it can be said that *“While Promotion focus of individuals strengthened the causality relationships established in RQ1 and RQ2, Prevention focus of individuals displayed no moderating effect on the identified causality relationships”*.

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## 5.2 Theoretical Implications

Referring to Chapter 1, Brand equity (BE) has been put forward as a set of associations formed between attributes of a brand and the corresponding benefits received as perceived by its consumers (Keller, 1993; Krishnan, 1996). Accordingly, Chen (2010, p. 313) defines '**Green Brand Equity**' as "*a set of brand assets and liabilities about green commitment and environmental concerns which are associated to the brand name, symbol and logo that can either elevate or decrease the value given by the eco-friendly goods and services*". Inference from the hypothesis testing reveal that aligning the green messages to the ethical principles of stakeholder evaluation creates a significant influence on the measured construct. As illustrated in section 4.2.2, 'perceived opportunity to solve a sustainability issue' created a positive impression on the consumers, thus increasing the perceived Green Brand Equity score, while 'perceived contribution to a sustainability problem' adversely affected the Green Equity score. Aaker (1991) and Keller (1993) propounds Brand Equity to be 'consumer's memory-based brand associations', this Master thesis demonstrates that proper aligning of green messages can create a positive memory-based brand associations while improper aligning can result in negative memory-based brand associations. This Master Thesis has quantitatively analyzed the effect of sustainability determinants on Green Brand Equity (GE). But, Brand Equity (BE) has been defined as a relational market-based asset, which creates a differential effect in consumer evaluation of identical marketing claims (Srivastava et al., 1998; Keller, 1993 & Falkenberg, 1996). Thus, with reference to the three drivers of Green Brand Equity Chen (2010), it can be said that Green Brand Equity constitutes an important component of Brand Equity (GE). And a proper aligning of sustainability indicatives will help the company to increase the overall Brand Equity (BE) score.

As illustrated in section 2.3, perceived threat of Greenwashing makes people more skeptical of sustainability initiatives, thus impeding green initiatives of even companies with genuine intentions. **Perceived Greenwashing (GW)** indicates the measure of suspicion (lack of trust) for a green claim as perceived by the consumers. Hypothesis testing (4.2.3) revealed both the ethical principles to be significant influencers of perceived Greenwashing. But the nature of interaction observed from 'Perceived contribution to a sustainability problem was opposite to what was initially proposed. Rejection of H1(b) results in the interpretation that sustainability initiatives atoning for a company's contribution to the sustainability problem raises suspicion within the consumers resulting in more perceived threat of Greenwashing. As an addition to

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the existing literature on Greenwashing, it can be said that consumers expect companies to have already solved the sustainability problems they caused. Rather than communicating it as a social responsibility initiative, it should be incorporated into the regular functioning schedule of the organization. This finding resonates with the inferences put forward by (Valle & Borm, 2021) and other connected research works. Additionally, this master thesis has ensured a statistical verification of the propositions put forward by previous research works on determinants of perceived Greenwashing.

Several researchers had identified the **ethical principles** driving stakeholder evaluation of sustainability claims. Section (2.6) illustrates the nine ethical principles of stakeholder evaluation (Langhorne, 2016; Falkenberg & Woiceshyn, 2008; Valle and Borm, 2021). Materiality analysis (section 2.5) has allowed previous researchers to identify those principles which were felt as the most important by the consumers (stakeholders). The two ethical principles analyzed in this master thesis brought out new insights about the determinants of consumer evaluation of sustainability claims. Several researchers hypothesized all ethical principles to have a positive effect on consumer evaluation of green claims. But it was surprising to note that 'while 'perceived opportunity to solve' resonated with the previous literature reviews, 'perceived contribution to a sustainability problem' indicated the opposite. This Master Thesis demonstrates that it cannot be concluded that all ethical principles of stakeholder evaluation positively impact consumer evaluation of green claims. While one principle indicates a positive effect on both evaluators one ethical principle created adverse effect on both the evaluators, which was contrary to what was expected. Additionally, ethical principles were demonstrated to be influenced by the moderating effect from psychological factors affecting consumer decision making, which are illustrated in the section below.

Section 2.7.3 has given a detailed illustration on segmenting consumers into 'promotion focus' and 'prevention focus' individuals (Higgins T. E., 2012). The **Regulatory Focus** of a consumer can act as a self – guide on evaluating the duties and obligations of a company as perceived by its stakeholders. Depending on the type of focus the stakeholder belongs to, the evaluation of green claims and CSR alignment to the ethical principles may vary. Reiterating from section 2.7.3, prevention focused (ought-self guides) stakeholders perceive the CSR activities to lay more emphasis on duties and obligations, which the company is bound to obey as part of the

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society. At the same time, promotion focused stakeholders give more importance to the fulfillment of hopes and aspiration (promotion ideals), which the company needs to do through its CSR work. Accordingly, this master thesis attempts to bring good value addition to the concepts illustrated above. Hypothesis 3 and hypothesis 4 indicated promotion focus in individuals to strengthen the effect of ethical principles on the consumer evaluation of sustainability claims. But interpretations from additional test results (Section 4.2.7) revealed 'prevention focus' to lack any significant influence on the ethical principles of stakeholder evaluation. 'Perceived opportunity to solve' aligned with the concept that promotion focused stakeholders give more importance to the fulfillment of hopes and aspiration (promotion ideals), which the company needs to do through its CSR work. While 'Perceived contribution to a sustainability problem' failed to confirm the same. Additionally, prevention focused (ought-self guides) stakeholders perceive the CSR activities to lay more emphasis on duties and obligations the company is bound to obey. Even though this aspect resonates with the 'responsibility of a company to solve', prevention focus failed to demonstrate a significant influence. This master thesis was able to contribute to the existing literature on chronic regulatory focus, but it also paves way for a full scaled project analyzing all the components illustrated above into a single researchable framework.

### 5.3 Managerial Implications

As illustrated in Chapter 1, increased pressure from regulating authorities have pushed corporations to improve their environmental positions. Also, proliferation of green messages has made consumers skeptical about green claims in general. Since green management became a top priority target for most organization, the role of sustainability managers in organizations has been on the rise. Even in organizations where sustainability mangers were not directly employed, the job roles of marketing managers in general were diversified to include more green management responsibilities. When companies started launching green products to win over their competitors, sustainability managers became highly interested in finding out what ethical principles guide the consumers in their decision making.

Nine ethical principles of stakeholder evaluation (Section 2.6) were identified from previous research works. Principles of Materiality analysis (Section 2.5) and inferential statistics from (Valle & Borm, 2021) enabled two ethical principles to be identified as the most important for sustainable decision-making. As referred to in the previous section, sustainability managers

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wish to initiate green messages, which improve the company's Green Brand Equity (Section 2.2), at the same time avoid any perceived threat of Greenwashing (Section 2.3). Interpretations from the hypothesis testing (Section 4.2.3 & Section 4.2.6) reveals how each ethical principle influence Green Brand Equity (GE) and perceived Greenwashing (GW) for a sustainability claim. These inferences are believed to help managerial decision making, especially when trying to effectively design social responsibility initiatives or green claims in general.

To improve a company's Green Brand Equity (GE) and to reduce the perceived threat of Greenwashing (GW), managers should try to implement sustainability activities, in which the company has a high 'Perceived opportunity to solve'. Therefore, as illustrated in section (3.3), managers should verify if the social responsibility activity is one in which the company is perceived to have the 'technical competence to implement' the activity and if the company is believed to 'possess the required financial resources' for an effective implementation. From a managerial perspective, social responsibility initiatives possessing both the above-mentioned components of 'opportunity to solve', will create higher Green Brand Equity (GE) for the company and reduce the perceived threat of Greenwashing (GW) for the corresponding green messages.

Hypothesis testing also revealed 'Perceived contribution to a sustainability problem' as a negative contributor to the company's Green Brand Equity. Also, green claims reminding consumer that 'the company is causing the sustainability problem' triggers negative responses from the consumers thus increasing the suspicion of Greenwashing". Intriguingly, this finding points in the opposite direction of what most companies are doing today. Scrutinizing the sustainability reports of many corporates revealed that, a large share of the social responsibility initiatives focuses on atoning the sustainability problems caused by them in the past. As per the findings of this study, social responsibility initiatives atoning for the company's responsibility to the issue, should be seen as a mandatory activity rather than a sustainability initiative. If a company has not already solved the sustainability problems it has caused, communicating it as a sustainability initiative would reduce the Green Brand Equity and increase the perceived threat of Greenwashing.

Section 2.7.3 illustrates that all green messages are designed to resonate with either of the chronic regulatory focus. Marketers design the components of sustainable communication in such a way that each message evokes either the promotion focus or the prevention focus values inherent in the consumers. Section 4.2.6 demonstrates promotion focus in individuals to have a significant moderating on the two identified determinants of consumer evaluation of

sustainability claims. Thus, in addition to aligning the sustainability initiatives with the two ethical principles of evaluation, managers should also try to design these green messages in a such a way that the promotion focus in consumers are evoked during the evaluation.

## 5.4 Validity

Validity in an experiment has been defined by Saunders et al., (2019) as a gauge, which ensures that the data collected by the researcher measures exactly the concepts originally intended by the researcher. The purpose of this section is to verify if the three type of Validity (Construct Validity, Internal Validity and External Validity) are ensured in the research model used for analysis in this paper.

### 5.4.1 Construct Validity

As defined by Saunders et al., (2019), Construct validity comprises of three validity measures: 'face validity', 'convergent validity' and 'discriminant validity'. Saunders et al., (2019) explains face validity as a subjective measure of whether the questions in the survey measure what they intend to. All the questions in the questionnaire were subjected to pilot testing before being sent to the external data collection firm. Additionally, all the quantitative questions were derived from standardized measurement scales used by researchers before. Table 1 in section 5.4 gives a detailed illustration of the standardized measurement scales used in Questionnaire formulation. Combing both the above-mentioned aspects, it can be inferred that the measurement model possesses the required measure of 'face validity'.

Fornell and Larcker (1981) propounds that an average variance extracted (AVE) score of greater than 0.5 indicates adequate 'convergent validity'. Referring to Table 6 (Section 6.1), all the measurement items used in this study received an average variance extracted (AVE) score greater than 0.5, thereby indicating adequate 'convergent validity' for this research model. Additionally, Xie et al., (2015) indicates that discriminant validity is ensured if the 'correlation value is less than 1 by an amount greater than two standard errors'. Referring to table 7, table 8 and table 9 from section 6.1, it can be inferred that all the variables identified in this model attains 'discriminant validity' at 1% ( $p < 0.01$ ).



#### 5.4.2 Internal Validity

As illustrated by Saunders et al., (2019), internal validity measures the extent to which the findings of a research study can be attributed to the interventions being studied rather than to the flaws in the research design. Also, Malhotra et al., (2017) propounds the existence of extraneous variables as a significant threat to experiment validity. Saunders et al., (2019) proposes flaws in the research design to be caused by any of the extraneous variables, which can be maturation, history, testing effects, instrumentation, selection bias and mortality threats.

The ‘maturation threat’ refers to any mental or physical change occurring within the participants, resulting from influence outside of the study that can affect the overall accuracy (Saunders et al., 2019). As the data collection was done entirely online with an average completion time of 5.5 minutes, it can be said that the attention span of the respondent was not affected severely. Also, online data collection tools reduced the chance for any external interferences, which might happen during a physical questionnaire filling. Priming stimuli in this research project are CSR initiatives of two companies (‘Chevron’ & ‘Nike’), thus the manipulation effect on the respondents is made as realistic as possible to minimize the probability of any past event changing the participant’s perception (History threat).

As the data collection procedure ensured respondent anonymity and avoided the use of any questions, which can be perceived as personal, the respondents were free to indicate their choices thus minimizing the chance of any external testing effects. Questionnaire was derived from standardized measurement scales (Table 1, Section 5.4) and were handed over to the respondents in an online platform without any intermediary change in the method of administration, thus minimizing the chance of any ‘instrumentation’ threat. As random sampling technique was used by the data collection firm, the chance for any ‘selection bias’ to occur is minimized. Unbiased distribution of the respondents can be verified from the descriptive statistics illustrated in section 3.8.1 All the survey questions had a mandatory completion status, additionally the 4 respondents who failed to complete the entire survey questionnaire, were eliminated from the data set to accommodate for the respondent mortality threat.

Finally, hypothesis testing (section 6.2.3) revealed ‘Opportunity to solve a sustainability issue’ as a causal factor positively affecting a company’s Green Brand Equity (GE). But, taking into consideration the aspects of internal validity mentioned above, it can also be that “*companies with existing good measures of Green Brand Equity have a better opportunity to implement*

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*sustainability activities*”. As technical competence and resource availability had been identified as the important components of ‘Perceived opportunity to solve’, this bidirectional causal relationship illustrated above may affect the internal validity of this research study.

#### 5.4.3 External Validity

Saunders et al., (2019) explained external validity as ‘the ability of research findings of a study to be generalized to other relevant contexts’. As indicated in section 5.5 (Data collection procedure), the priming stimuli used in this research study were formed based on the CSR initiatives of two companies (Nike & Chevron) in the United States. Therefore, to maximize the accuracy of data collection, the responses were collected only from residents in United States. The idea that the respondents belong to the same country where the CSR initiatives are predominantly implemented, is believed to maximize the validity of this study. Even though external validity refers to the ability of generalizing the interpretations, the idea of resonating the respondent sample with the CSR initiative being evaluated is believed to make the interpretations more generalizable. The same methodological structure can be adopted for identical research studies, if the CSR claims are being evaluated by respondents who have direct knowledge on the company and their environmental performance. In other words, if the CSR initiatives being evaluated are implemented in the same country as the respondents evaluating the claims are from, the interpretations are expected to be highly generalizable.

According to Higgins et al. (2001) and Aaker and Lee (2001), cultural differences in the respondent population might affect the moderating influence of chronic regulatory focus. Therefore, the level of inherent regulatory focus in individuals can vary across respondents belonging to different cultural backgrounds. A respondent population with cultural values resonating with an active- interdependent self-view might have higher value for the prevention focus compared to individuals from a Western society (Higgins et al., 2001). Therefore, a full scaled research project extending the findings of this Thesis, can increase ‘external validity’ by performing data collection from a respondent population with significant cultural variation.

#### 5.4.4 Statistical Conclusive Validity

As indicated by Austin et al. (1998), statistical conclusive validity refers to the extent to which, adequate statistical techniques have been used in a research study. More precisely, statistical conclusive validity measures how well Type I and Type II errors have been avoided in a research model. Type I ( $\alpha$ ) error refers to situations in which a difference or correlation is found to exist when such an effect is actually not present and Type II ( $\beta$ ) error refers to situations in which a difference or correlation is not found when such an effect actually exists (Cozby & Bates, 2009). Type I error has also been explained as rejecting the null hypothesis, when it is true and Type II error has been referred to as failing to reject a false hypothesis (Austin et al. 1998).

All the statistical inferences drawn in this research paper were benchmarked at a significance level of 0.01. This points out that the chance of making a Type I error in this paper is 1 percentage. Additionally, all the measurement constructs used in this research paper were checked for construct validity, percentage of variances explained through confirmatory factor analysis at a significance level of 0.01. Additionally, all the hypothesis testing was conducted using Structural equation modelling (SEM) with the significance level again fixed at 1 percentage.

Additionally, the use of modern statistical computing techniques (Mplus software and lavaan package in R) helped to maximize the measure of statistical conclusive validity for this research model. Referring to section (4.1), it can be seen that the structural equation models were checked for Global fit statistics based on statistical benchmarking standards such as maximum likelihood estimator (MLR), Bayesian estimator (Bayes), Chi-square value, RMSEA (root mean square error of approximation), SRMR (standardized root mean square residual) and TLI (Tucker-Lewis index). Combining the benchmarking standards used for ensuring statistical significance and the use of advanced statistical computing software guarantees a good statistical conclusive validity.

#### 5.5 Reliability

Saunders et al., (2019) propose that 'Reliability' is determined by the consistency of data collected and the possibility of replicating the research, which points to the concept of 'Internal

reliability' and 'External reliability'. While 'Internal Reliability' refers to ensuring consistency of measurement within the experiment, 'External Reliability' refers to checking whether replication of the results would be possible if the analytical procedures are repeated by different researchers.

Referring to Table 6 in section 6.1, the construct reliability scores (CR) for the measurement variables can be analyzed. As indicated by Fornell and Larcker (1981), construct reliability (CR) score of more than 0.6 indicates good reliability and an average variance extracted (AVE) score of greater than 0.5 indicated adequate convergent validity. As all the six identified constructs (Table 6) in this research model demonstrated a reliability score of 0.8 or more, the research model is inferred to be reliable for analysis and result interpretations can be assumed to be statistically valid.

In addition to the theoretical concepts in Reliability measurement, the 'Possible threats to reliability' in an experiment needs to be discussed. The four possible threats to reliability comprise of 'participant error', 'participant bias', 'researcher error' and 'researcher bias.' Analyzing the first threat to reliability, 'participant error', the chances of participant making an error when filing the survey questionnaire was minimized using online data collection. Since the complete questionnaire was administered to the respondents directly through an online platform, the probability of error from an intermediary is minimized. Referring to section 5.3 (Survey logics), it can be seen that the respondents were subjected to two 'filtering questions' at the start of the survey. The first question measured brand familiarity of the respondents (Figure 11), which helped to segregate the respondents and eliminate respondents with low brand familiarity scores. Additionally, the CSR initiatives used for priming the respondents were taken from 'Chevron' and 'Nike', two companies from entirely different industrial segments. This precautionary measure was taken to remove any preformed bias, which the respondents may have on any industrial segment.

As illustrated in the previous section, the use of online data collection tools reduced the chance of any observation mistakes (researcher error) that could be made by the researcher during data collection. As the data collection procedure did not have any human interference, for administering the questions or recording of data, the chance of researcher bias forming a threat to the measurement reliability is minimized.

## 5.6 Limitations and Future Research

As illustrated in section 6.1, five measurement items from the survey questionnaire were removed from the model due to poor factor loadings. As the standards for multivariate analysis (Hair et al., 2019) suggested, factor loadings below the value of (0.6) were to be excluded from the model, accordingly, measurement variables `green\_washing2`, `pro\_focus1`, `pre\_focus1`, `pre\_focus2` and `cont\_prbm3` were removed from the measurement model prior to the confirmatory factor analysis. Even though removing measurement items with lower factor loadings contribute to a model with better fit, these variables could have brought out other important insights if they could have been included in the analysis.

The online data collection platform (Survey Monkey) indicated the average time completion for the survey questionnaire to be 5.5 minutes per person, which may indicate the chances of some respondents finishing the survey in a speed more than expected. The pilot testing showed the time for survey completion to be between 5 and 7 minutes. Therefore, respondents who participated in the online data collection might have spent less time on analyzing the priming stimuli (CSR activity) than what was expected. But it can also be due to the fact that, pilot testing was conducted in the personal circle of the researcher with people who are not professional survey takers, but the targeted audience at data collection firm consist of experienced and professional survey takers who usually require less time for questionnaire completion.

Explained variances (R- squared value) of Table 11 (Both independent variables manipulated) and Table 12 (Single independent variable manipulation) was used to finalize the SEM model for data analysis in this Master thesis. But a full-fledged experiential set up testing the between group causal effects of single independent manipulation and dual independent variable manipulation needs to be conducted in the next step. As illustrated in Table 1, the data collection has been conducted with four dependent variables and two psychological moderating factors. But only two dependent variables (GE & GW) and one moderating factor (Regulatory focus) is used in the research framework for this master thesis. A full-scale research project analyzing all the factors affecting consumer evaluation of sustainability claims needs to be conducted in the next step.

A detailed literature study needs to be done to ensure that all the ethical principles of stakeholder evaluation is identified and analyzed in this research model. Subsequently,

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experimental analysis needs to be conducted to analyze the effect of these identified ethical principles on all the dependent variables identified in Table 1. Also, the moderating effect of psychological factors other than Chronic regulatory focus needs to be evaluated.

As illustrated in Table 1, 'Consumer environmental values' can be one additional psychological factor which creates a significant influence on consumer evaluation of green claims. Referring to the conceptual model (Figure 2), this model incorporates one moderating factor into the research model 'Regulatory focus of the respondents'. But a full scaled research model needs to bring in more psychological factors of the consumer that may affect the decision-making process. Additionally, A full-fledged literature study needs to be done to identify other possible psychological factors, which may influence the consumer decision making when analyzing green communication. As hypothesis 3 and hypothesis 4 indicated the importance of moderating factors in the research model, identifying other psychological factors of decision making is highly essential to better interpret the interaction effects stemming out from them.

Even though this master thesis along with other research works points out significant interaction effects, very few studies address why these effects are observed. This master thesis was able to identify significant interaction effects sourcing from two ethical principles, but it is not able to answer why these interaction effects are observed. Promotion focus in individuals are observed to create a significant moderating effect, but prevention focus fails to demonstrate any significant moderation. Moderating effect on the identified causality is to be studied in detail so that the researchers can understand why promotion focus had a strengthening effect when prevention focus did not. Finally, the implementation of the identified determinants needs to be studied in detail. Two ethical principles and a moderating factor was identified, but it needs to be researched on how to use these identified principles in green communication. Research is also to be conducted on the communication effectiveness of these identified principles and on the communication channels to be used to maximize the perceived green performance.

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## APPENDIX

### Appendix A: CSR Claims evaluated by respondents

**In this section, you are presented with a social responsibility activity from Nike**

Please read carefully the paragraph below and answer the questions that follow:

Nike is launching a circular innovation strategy as part of the company's social responsibility initiative. Nike is building a circular supply chain to recapture footwear and apparel scraps and transform them into recycled materials. Also, Nike lays focus on ensuring circularity through sustainable product design, by making sustainable shoes with at least 50% recycled content by weight.

OK

*Figure A.1: Nike – Circularity green claim*

**In this section, you are presented with a social responsibility activity from Nike**

Please read carefully the paragraph below and answer the questions that follow:

Nike is enacting a strict Code Leadership Standard (CLS) that communicates how supplier factories should implement Nike's Code of Conduct. Nike aims to bring strict prohibitions on forced labor and to ensure employee safety & decent wages through this social responsibility activity.

OK

*Figure A.2: Nike – Labor safety green claim*

**In this section, you are presented with a social responsibility activity from Nike**

Please read carefully the paragraph below and answer the questions that follow:

As a part of its social responsibility initiatives, Nike has identified 'Promotion of social inclusion' as one important objective to attain. Nike would be capitalizing on its strong fan following, community base and strong social media presence to bring forward this change. By creating equitable playing fields and breaking down societal barriers for all athletes; diverse athlete endorsements; Nike believes that it can increase access to sports for everyone.

OK

*Figure A.3: Nike – Social inclusion green claim*

**In this section, you are presented with a social responsibility activity from Nike**

Please read carefully the paragraph below and answer the questions that follow:

As a part of its social responsibility initiatives, Nike has identified 'Promote Healthy Lifestyles' as one important objective to attain. Nike has decided to use its community base and strong social media presence to promote healthy habits, play and sport in kids and adults' healthy lifestyles. Through this sustainable initiative Nike aims to mitigate the risks to consumer base associated with the spread of obesity and inactive lifestyles.

OK

*Figure A.4: Nike – Healthy lifestyle green claim*

**In this section, you are presented with a social responsibility activity from Chevron**

Please read carefully the paragraph below and answer the questions that follow:

In alignment with the company's sustainability initiatives, Chevron has decided to partake in biodiversity preservation programs across the world. In the year 2021, 30,000 trees were planted on five sites by Chevron's Canada Business Unit. In order to help the afforestation project initiated by the United Nations Forum on Forests Secretariat (UNFFS), Chevron will be supplying the required cutting and digging equipment.

OK

*Figure A.5: Chevron – Biodiversity preservation green claim*

**In this section, you are presented with a social responsibility activity from Chevron**

Please read carefully the paragraph below and answer the questions that follow:

Chevron has invested \$1.1 billion in various Research and Development projects to develop technology improvements that reduce carbon emissions. A breakthrough in Carbon Engineering technique, enabled the researchers to capture carbon dioxide directly from the atmosphere and convert it into fuel. As a part of its Social Responsibility activity, Chevron has decided to share the innovative technology with other players in the energy sector.

OK

*Figure A.6: Chevron – Carbon capture green claim*

**In this section, you are presented with a social responsibility activity from Chevron**

Please read carefully the paragraph below and answer the questions that follow:

As a part of the company's social responsibility activity, Chevron has decided to help a rural community in Africa that suffers from annual drinking water shortage. As per the statement issued by the managing director, "Chevron will use its technological expertise in drilling oil wells, to dig deep water wells in Africa for the communities that suffer from annual drinking water shortage".

OK

*Figure A.7: Chevron – Dig water wells green claim*

**In this section, you are presented with a social responsibility activity from Chevron**

Please read carefully the paragraph below and answer the questions that follow:

Chevron is forming a partnership to build and operate wind projects along the US coast located offshore New York and Massachusetts. Chevron will jointly develop four assets in two existing offshore wind leases and aim of having developed 50GW of renewable power by 2030.

OK

*Figure A.8: Chevron – Renewable power green claim*

## Appendix B: Survey Questionnaire

\* 1. How familiar are you with the brand mentioned above?  0 

- |   |  |
|---|--|
| <input type="radio"/> Not at all familiar | <input type="radio"/> Very familiar      |
| <input type="radio"/> Not so familiar     | <input type="radio"/> Extremely familiar |
| <input type="radio"/> Somewhat familiar   |  |

\* 2. Personally how important do you find the above mentioned social responsibility issue ?  0

- |  |  |
|--|--|
| <input type="radio"/> Not at all important | <input type="radio"/> Moderately important |
| <input type="radio"/> Low importance       | <input type="radio"/> Very important       |
| <input type="radio"/> Slightly important   | <input type="radio"/> Extremely important  |
| <input type="radio"/> Neutral              |  |

---


### Dependent Variables Section

\* 3. I think that this company will succeed with the implementation of this social responsibility activity.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 4. I feel that this social responsibility activity will make a real difference.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 5. I believe that the company will do an excellent job with this activity.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |



\* 6. I believe this is the right social responsibility activity for this company  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 7. I feel that this social responsibility activity fits well to this type of company  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 8. I think that other companies in this industry should implement similar social responsibility activities.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 9. I believe that the social responsibility activity is initiated out of genuine concern for the mentioned sustainability issue  0


- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 10. I find this social responsibility initiative misleading  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 11. I believe that this company is concerned with improving the general well-being of society.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 12. The social responsibility activities from this company meets my expectations of sustainable performance.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 13. I feel that this company 's sustainability initiatives are generally reliable  0


- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 14. I believe that this company usually keeps its promises and commitments for environmental protection  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 15. I would prefer this company to other companies in the same industry segment, because of its environmental commitments  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 16. I trust the social responsibility initiatives of this company over other companies in the segment, even if the sustainable activities are the same.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

---

### Independent Variables Section

\* 17. I personally believe that the company mentioned above is partly responsible for the sustainability issue they try to solve. ☺ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 18. It is a general opinion that the company mentioned above contribute to the sustainability problem they try to solve. ☺ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 19. This social responsibility activity means that the company takes care of its own problems. ☺ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |


\* 20. I believe that the company mentioned above has special competence to implement this type of social responsibility activity. ☺ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 21. The company has the right resources to solve the problems addressed in this social responsibility activity. ☺ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

---

\* 22. This company is in a unique position to solve the problems addressed in this social responsibility activity  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

---

### Moderating Variables Section

**Please answer the following questions based on your personal opinion**  0

\* 23. It is important to me that the products I use do not harm the environment.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 24. I consider the potential environmental impact of my actions when making many of my decisions.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

---

\* 25. My purchase habits are affected by my concern for our environment.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 26. I am concerned about wasting the resources of our planet.  0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |
-

---

\* 27. I would describe myself as environmentally responsible. 🗨️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 28. I am willing to be inconvenienced in order to take actions that are more environmentally friendly. 🗨️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

---

**Please answer the following questions based on your personal opinion** 🗨️ 0

\* 29. I often do well at different things that I try? 🗨️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 30. When I'm doing well at something, I love to keep at it. 🗨️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 31. When I see an opportunity for something I like, I get excited right away. 🗣️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 32. I frequently imagine how I will achieve my hopes and aspirations. 🗣️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 33. I typically focus on the success I hope to achieve in the future. 🗣️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 34. Not being careful enough has gotten me into trouble at times. 🗣️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 35. I worry about making mistakes. 🗣️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

\* 36. I feel worried when I think I have done poorly at something 🗣️ 0

- |  |                                      |
|--|--------------------------------------|
| <input type="radio"/> Strongly disagree          | <input type="radio"/> Somewhat agree |
| <input type="radio"/> Disagree                   | <input type="radio"/> Agree          |
| <input type="radio"/> Somewhat disagree          | <input type="radio"/> Strongly agree |
| <input type="radio"/> Neither agree nor disagree |                                      |

---

\* 37. I frequently think about how I can prevent failures in my life. ☞ 0

Strongly disagree

Somewhat agree

Disagree

Agree

Somewhat disagree

Strongly agree

Neither agree nor disagree

\* 38. In general, I am focused on preventing negative events in my life. ☞ 0

Strongly disagree

Somewhat agree

Disagree

Agree

Somewhat disagree

Strongly agree

Neither agree nor disagree

## Appendix C: United Nations Sustainable Development Goals (UNSDGs)

| <b>The 17 Sustainable Development Goals</b>  |
|--|
| Goal 1: Eradicate extreme poverty for all people everywhere  |
| Goal 2: End hunger and ensure access by all people sufficient food all year round  |
| Goal 3: Ensure healthy lives and promote well-being for all persons  |
| Goal 4: Ensure inclusive and equitable quality education for all   |
| Goal 5: Achieve gender equality and empower all women and girls  |
| Goal 6: Ensuring the availability of water and sanitation for all  |
| Goal 7: Ensure access to affordable, reliable, sustainable, and modern energy for all  |
| Goal 8: Promote full and productive employment and decent work for all   |
| Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation  |
| Goal 10: Reduce inequality within and among countries  |
| Goal 11: Make cities and human settlements inclusive, safe, resilient, and sustainable   |
| Goal 12: Ensure sustainable consumption and production patterns  |
| Goal 13: Take urgent action to combat climate change and its impacts   |
| Goal 14: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development   |
| Goal 15: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss |
| Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels            |



Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

(United Nations: Department of Economic and Social Affairs: Sustainable Development, 2015).