Norwegian School of Economics
Bergen, Spring, 2022

NHH

Judging Corporate Ostriches?

A Study of Consumers' Attitude Towards the Chain Liability and Green Characteristics of a Focal Firm during Sustainability Crises

Arvid Skage and Terje Hjelset

Supervisor: Aksel Ivar Rokkan

Master thesis, Economics and Business Administration
Major in Energy, Natural Resources and the Environment

NORWEGIAN SCHOOL OF ECONOMICS

Acknowledgments

With this thesis, we conclude our master's degree at the Norwegian School of Economics and a 5-year long higher education. We appreciate the rather challenging degree and the following personal development that suits us well as we make our way to a future workplace and challenge ourselves continuously.

We are thankful to our families and friends for their continuous support and interesting discussions during the semester. Also, we would like to thank the participants who took part in our pre-test and survey and, hence, their support of education.

A special thanks is rightfully owed to Aksel Ivar Rokkan, our supervisor, for his clever contributions and support throughout the semester. We are grateful for an interesting collaboration and many exciting discussions. His input and advice were highly valuable.

Norwegian School of Economics

Bergen, June 2022

Arvid Skage

Terje Hjelset

Abstract

When sustainability crises occur, and these are revealed to the consumers, scandals may arise, triggering reactions among the consumers. Even though the crisis may happen far away, both geographically and organizationally, the focal firm may be held accountable by the consumers, triggering a “chain liability” for their chain members.

This paper uses the consumers as a “jury.” It assesses the chain liability of a focal firm for unsustainable supplier behavior and the effect of organizational distance between the focal firm and sustainability crises, measuring accountability for the crisis at the first supplier tier level as opposed to integration. Also, following the green shift, we assess how certain green characteristics - green marketing and ecolabels, affect the degree to which the focal firm is held accountable. Lastly, accountability is tested towards consumers' purchase intentions.

Using an experimental design consisting of eight experimental groups obtained through convenience sampling, we found that organizational distance increases accountability at this tier level. This trend means the focal firm is punished for outsourcing or equally rewarded for integration of production that becomes subject to a crisis. They are also rewarded for using ecolabels, and accountability is significantly negatively correlated with purchase intentions. We found no effect of green marketing on accountability or any interaction effects between any of the variables in the study.

The findings that integration and ecolabel act as mitigating circumstances suggest that consumers adopt a somewhat simplified judgment and merely evaluate the degree to which the focal firm has faced the risks and reward them for taking preventive steps to lower the chance of a crisis. On the flip side, they seemingly punish firms for the act of “sticking their heads in the sand” and being “corporate ostriches.”

Table of Contents

List of Tables

List of Figures

List of Appendices

1.0 Introduction

“United Victims of Benetton” was a slogan following the collapse of a large garment factory in Dhaka, Bangladesh, in 2013, resulting in 1132 deaths and more than 2500 injured (ILO 2022). This incident, later known as “The Rana Plaza Accident,” had this slogan derived from the more famous brand “United Colors of Benetton” (Mirjam 2014). However, how can a company in Italy be blamed for a collapsed building in Bangladesh that they did not own?

United Colors of Benetton is a focal firm and has extended responsibility beyond its organization as focal firms do. The purpose of such companies is, among others, to connect with consumers and assure standards on quality, product and production (Pohlmann et al. 2020). They link the often long chain of companies that process the product and the end consumers. (MyEducator 2022).
Usually, the supply chains are long stretched both organisationally and geographically and may best be described as a complex network of suppliers. It is often impossible for the end consumer to exert any form of surveillance or control over these chains; hence they have to rely on the focal firm to attain ethical standards and sustainability on their behalf, in alignment with the values and standards promised by the focal firm (Nygaard 2019).

Nevertheless, the Rana Plaza accident and several other crises like the deepwater horizon or the horsemeat scandal are examples that such ethical standards are hard to ensure. The focal firms find it hard to control or influence these networks. The end consumers do not differentiate who causes these crises among the chain members. They simply hold the focal firm responsible and, as such, create a chain-liability effect (Hartmann and Moeller 2014, 281-294). Also, (Hjelset and Skage 2020) have found that organizational distance significantly mitigates this responsibility, but this study has weak empirical grounds.

Incidents of this nature have triggered a growing realization that CSR needs to be implemented chain-wide to protect the chain from scandals and deliver according to consumer expectations (Aswini et al. 2020).
Also, to help ensure chain standards, many companies partner up with certification partners through ecolabeling (Morali and Searcy 2012, 635-658). These are third parties overseeing compliance with communicated certification criteria. Upon successful compliance, the

product receives a certification label, from which the customers are assured that the product is verified on communicated requirements by the third party.

Lastly, we may perceive chain liability in the light of market communication and brand reputation. Focal firms develop an identity from which consumers recognize them (Pohlmann et al. 2020). This identity frequently includes certain values or priorities that the consumer base often mirrors, as they continually support the brands they relate to (Pickard-Whitehead 2020). There is often some kind of relationship between the focal firm and its consumers, and the focal firm typically invests in this relationship to create brand trust (Shelman et al. 2016). However, improved brand trust and reputation may also trigger a harsher market penalty for misconduct, at least documented through sloppy manufacturing in product recalls (Rhee and Haunschild 2006, 101-117). Therefore, it is likely to believe that this applies to chain liability and, hence, the misconduct of chain members as well.

1.1 Motivation and Relevance for the Research Question

With the emergence of the green shift, we see a megatrend that disrupts traditional trading and economic behavior, calling for new knowledge on new trends. We see a situation where supply chains have become long and complicated and suffer sustainability crises in a time where the end consumers pay more attention to sustainability. Supply chains are essential to this discussion, as the average footprint of the chain is several times greater than that of the focal firm itself (Porat 2020, 5). Also, most emissions stem from the production sector (Tess 2017), which means we have an essential part of human emissions occurring in places that are hard to control. In addition, the field of multi-tier supply chains remains relatively unexplored in the literature (Mena et al. 2013), from which we seek to make a contribution.

In an effort to guide corporations on the newly evolved green supply chain management (GSCM), that is, the incorporations of environmental considerations in traditional supply chain management (Srivastava 2007, 53-80), we see the need to gain more profound knowledge of new consumer preferences regarding supply chains and sustainability crises. We want to shed light on consumer preferences, as these possess the consumer power, a force to which companies adapt to secure their economic lifeline (Wixcey 2016). We expect to see that the focal firm is held more responsible when the crisis occurs at their production sites rather than with a supplier. This is because control and responsibility should be positively

correlated (Weiner 1995), and the focal firms are better in control of the situation at their own sites (Fu and Gong 2018, 114-146). There are, however, conflicting trains of thought to challenge this expectation, on which we will elaborate in this paper.

The perspective on chain-liability using consumer preferences from (Hjelset and Skage 2020) will be the point of departure from which we look to expand with firm characteristics, a stronger empirical ground and test one chain position closer to the consumers.
We want to test whether organizational distance mitigates responsibility for an environmental-related sustainability crisis for the focal firm. In doing so, we measure consumers' responsibility attribution for a crisis at the focal firm's own site (vs. the site of a supplier) and how this, in turn, affects their purchase intentions towards the focal firm.
As a result, we derive the following research question for this paper:

"How does, according to the consumers, outsourcing affect responsibility for a climate-related sustainability crisis, and how does this, in turn, affect their purchase intentions?"

The word "responsible" may be interpreted in two ways: one can be positive (like careful, thoughtful and dealing with risks in a preventive manner) or responsible for an outcome negatively (like being careless, shortsighted or taking excessive risk). The latter interpretation is what is relevant in this paper. From this point forward, we use the terms "*attribution of responsibility*" and "*accountable*" to describe the addressation of negative responsibility and the state of being held responsible for an outcome (state of guilt), respectively. The positive interpretation of responsibility will still be referred to as "responsibility."

The crisis will be staged in an experiment, using the consumers as a "jury" to take a stand on the matter. We seek to capture the consumer reactions when unsustainable behavior is uncovered. The consumers shall then be unaware of this behavior prior to the crisis, that is, the uncovering of severe unsustainable behavior. They will be faced with a crisis in integrated production, or one tier out, at the suppliers' production site. We will ask consumers to determine the accountability of the focal firm and thereafter test their purchase intentions towards the focal firm to see how different responsibility attributions result in different purchase intentions between otherwise similar groups. With a "crisis," we refer to misconduct

with severe consequences that typically mimic some famous incidents, like the Rana Plaza with 1132 casualties, rather than general supplier wrongdoing.

1.1.1 Underlying research questions

To provide a more informative guide on GSCM efforts, we want to expand this study to include certain company characteristics to tell the difference between key contexts. Some of these characteristics, like firm size, are already covered by (Hartmann and Moeller 2014); thus, we will not test those once more.
Even though it is reasonable to believe that both company and consumer characteristics influence accountability, we focus on company characteristics, as it is necessary to delimit the scope of this study due to scarcity of time and resources. Thus, this paper describes how certain company characteristics affect accountability (guilt) for such a crisis. While consumer characteristics may be equally important, they will not be the focus of this paper.

During the green shift with its evolving consumer preferences, market communication and marketing also evolved to restore alignment between segment preferences and customer value propositions (Ansar 2013); "customer value proposition" (CVP) being the market communication of customer value to a targeted segment (Payne and Eggert 2017, 467–489). Hence, with the increased focus on clean production and fitting marketing promises, it is likely to believe that increased promises and expectations drive the severity of sustainability crises. Like when recalled products triggered a harsher market penalty with higher brand trust (Rhee and Haunschild 2006, 101-117). So, we believe consumers expect cleaner supply chains in a world where marketing gets greener. Hence, we expect a sustainability crisis to be punished more severely by the consumers. Also, there are presumably variations in market response between different CVPs, from which we seek to test propositions of neutral character.

Additionally, we want to test a context that occurs ever more frequently with the green shift, namely, whether using certification through ecolabeling affects responsibility attribution. (European Commission 2022). As we may have a pulverization of accountability "vertically" between different chain members, we may likely see a similar type of pulverization "horizontally" between ecolabeling and the focal firm, branding the same commodity subject to a crisis. This has to do with the kind of "bureaucracy" that we see both in the chain and

with several brand labels, possibly due to "the rule of no one" (Phillips 2010, 533-543). That is, more actors cause less accountability on each one, the focal firm being amongst them, often due to unclear areas of responsibility (Ibid.). Precariously, co-branding may also be perceived as a sustainability measure by itself, which may mitigate the accountability of a focal firm in that they have taken some steps to prevent a sustainability crisis. Consequently, we expect to see less accountability in a situation where preventive steps are taken using ecolabel, and more organizations may be held accountable for the same crisis.

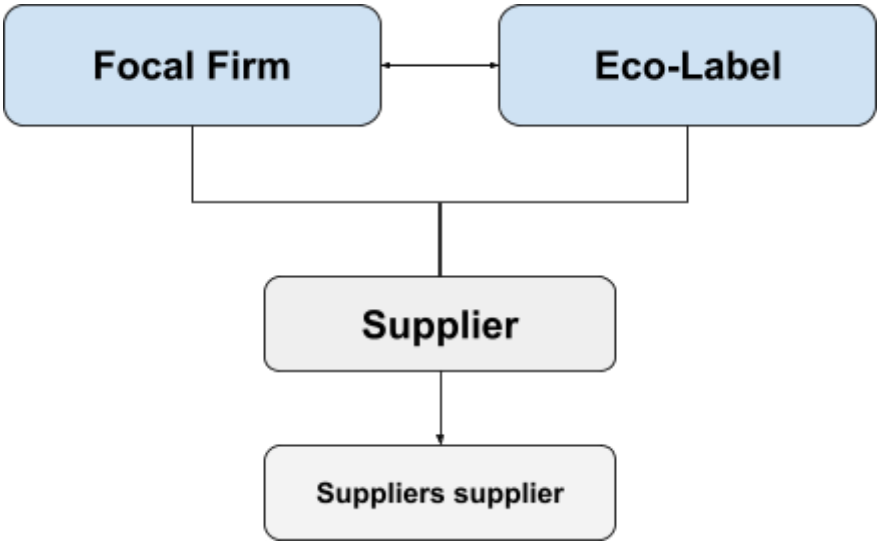


Figure 1: Horizontal and Vertical Pulverization of Accountability

As a result, we expand this study with the two underlying research questions:

"How *does green marketing affect consumers' responsibility attributions towards the focal firm?"*

"How does ecolabeling affect consumers' responsibility attributions towards the focal firm?"

With green marketing, we target relevant promises that a crisis needs to be in conflict with instead of regular use of the marketing mix. With ecolabeling, we target certification brands that provide relevant certification criteria to the crisis, as opposed to no ecolabeling. This has to do with the measurement of broken promises and failed surveillance on the matter, respectively.

1.2 Structure

To address our research question, we will adopt the structure described in this section.

Figure 2: Structure

Our theory and hypothesis section will clarify and operationalize terms from the research questions and outline what we know about the themes so far, along with theories suitable to make predictions of our measurements. In turn, we will derive hypotheses from this theory. The method section will describe the process from which we have attained data from the market, along with arguments supporting and stressing our methodical decisions. We then analyze, break down the numbers, and clarify what they constitute and how to consider them. We also accept and reject the hypotheses based on our findings. Finally, we thoroughly discuss implications and limitations, tie our findings to theory and the real world, and recommend further research.

1.3 Visualizing the Research Question

To summarize the measurement intended and the variables included in this study, **Figure 3** shows our conceptual model for clarity.

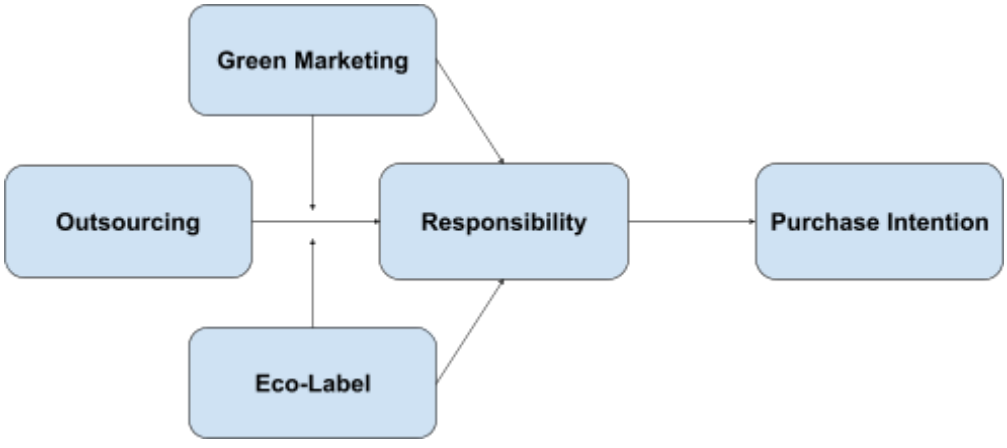


Figure 3: Conceptual Model

2.0 Literature review

This chapter will outline the literature concerning consumer perceptions on supply-chain liability and the firm characteristics and constructs from our research questions. We hope to clarify what is already known on the matter and how this can support our paper.

2.1 Theoretical Constructs and Definitions

First, we look to theory to clarify the language and constructs used in our research questions. Such operationalization is essential to construct validity (Mochon and Schwartz 2020, 208-214) to measure these theoretical constructs at the empirical level with the absence of inherent imprecision from subjective understandings among the respondents (OER 2022). In other words, we must define our constructs in an inter-subjective manner. The terms “green marketing” and “Ecolabeling” from the underlying research questions are discussed and defined in the next section, so we will not define them here.

2.1.1 Outsourcing

From our main research question, we have the term “outsourcing,” which may be familiar to most but from which we seek an accurate definition. According to (Dolgui and Proth 2013), outsourcing is defined as obtaining finished or semi-finished products or services from an outside company in the case that these were performed internally before the buyer-seller relationship. Also, (Svensson and Bååth 2008) clarify that this buyer-seller relationship is a contractual one.

Outsourcing needs to be distinguished from “subcontracting,” which is the act of transferring some of the work to a company with unique expertise within a limited area. So, while subcontracting refers to another company that works for the buyer in a specific area, outsourcing captures the buyer-seller relationship as described above (Dolgui and Proth 2013).

2.1.2 Climate-related Sustainability

Furthermore, we have the case of “a climate-related sustainability crisis” from our main research question, from which we find it reasonable to define the climate dimension of sustainability that a crisis necessarily needs to be in breach.

The following elaboration concerns the concept of “absolute sustainability,” which may be summarized as to which degree an organization operates within the limits of the planetary boundaries (Kara et al. 2018, 3-10). However, some polluting sectors, like the oil industry, might see most of their organizations being unsustainable by this definition. As such, they should all (in theory) have sustainability crises. This problem introduces the concept of “relative sustainability,” that is, to which degree an organization achieves relative environmental improvements perceived in a life cycle assessment compared to their earlier environmental performance and that of their competitors (Hauschild et al. 2020, 533-553).

Although the crisis in our experiment will breach both absolute and relative definitions due to its severity, we adopt the concept of “absolute sustainability.” This is because we experiment with neutral consumer value propositions that a company should manage to produce without challenging the planetary boundaries. In addition, relative sustainability is counterintuitively enough, ever more decoupled from the concept of absolute sustainability since the rate of eco-efficiency improvements does not suffice to offset the increase in demand (Bjørn et al. 2015). As such, we believe relative sustainability to be less of a proxy for the consumers in the future. From here, absolute sustainability will be defined and referred to as “sustainability.”

The term sustainability refers in its broadest sense to the activities that can go on forever sustained (Santillo 2007, 60-66). The Brundtland Commission originally defined sustainable development as the development that meets the needs of today without compromising the needs of the future (Brundtland Commission 1987). The definition entails the simultaneous addressation of the inter-linked economic, environmental and social concerns (Santillo 2007, 60-66), from which (Elkington 2007) proposed the triple bottom line.

From the triple bottom line, we have the environmental dimension (along with economic and social). The environmental dimension, the focus of this paper, aims at the preservation of global “life-support” systems to sustain them indefinitely (Goodland 1995, 1–24) and is of strategic and competitive value for firms (Elkington 2007). The main reason for environmental preservation is argued to be because of human life, as non-human life and environmental systems are precarious for humans to exist (Goodland 1995, 1–24). Also, our economy and society are dependent on a constant flow of natural resources (material, energy etc.). As such, we can only have a sustainable society with a sustainable environment. On the

other hand, the environment is not dependent on human society and can sustain itself naturally (Morelli 2011).

(Goodland 1995, 1–24) provides a simple definition of environmental sustainability as the "maintenance of natural capital," which is rather vague. (Morelli 2011) adds that the definition of environmental sustainability is one of balance, resilience and interconnectedness. The latter refers to human society as an overlay on the ecosystem and the ability of this society to satisfy its own needs without destroying the ecosystems supporting them.

(Goodland 1995, 1–24) claims that for such sustainability to occur, zero impairment on the two natural services called "source and sink functions" is required in-definitely.
The source and sink services are commonly used when talking about carbon dioxide and are the factors that emit and remove co2 from the air, respectively (Herring 2020). There is a natural cycle of carbon. Sources that release carbon into the air (like volcanoes, animals and wildfires) and sinks that remove carbon from the air (like oceans and photosynthesis) are generally in balance. Any activities that help tip the natural emitting and cleansing effect out of balance are unsustainable by definition. This supports the claim of (Morelli 2011) that balance is an essential part of environmental sustainability.

2.2 Thematic Review

As the context is key for theory applicability, we will adjust the outline to fit the variables we intend to measure and inform our exact approach. Thus, we pay special attention to the following areas:

(1) Green Marketing and consumer perceptions
(2) Ecolabeling and verifications on consumer perceptions
(3) Outsourcing and organizational distance on supply chain liability
(4) Attribution theory and the attribution process
(5) Responsibility attribution and its link to purchase intentions.

We would also like to draw the parallels of this outline with the study's conceptual model, as shown in **Table 1.**

Area of focus in theory outline	Variables from conceptual model
Green Marketing and consumer perceptions	*Green Marketing*
Ecolabeling and verifications on consumer perceptions	*Ecolabelling*
Outsourcing and organizational distance on supply chain liability	*Outsourcing*
Attribution theory and the attribution process	*Responsibility attribution*
Responsibility attribution and its link to purchase intentions.	*Purchase intentions*

Table 1: Theory outline and relevance to conceptual model

As we test for consumer response, the mentioned areas will be discussed consumer-centric, linking their perceptions to the subject in question.

2.2.1 Green marketing and Consumer Perception

This section will define our independent variable green marketing, and how it affects the consumers. This is to make qualified predictions on responsibility attributions following the use of green marketing prior to a crisis.

Green marketing

According to (Polonsky 1994), green marketing is a broad concept involving a wide range of activities. In addition to the greening of advertising, we have the greening of packaging, product modifications and even changes to the production process (Ibid.). The latter is essential because it should lower the risk of an environmental crisis occurring in production.
Additionally, (Henion and Kinnear 1976) define green marketing as all marketing activities that have previously caused environmental detriment and now can be used to solve or remedy environmental concerns. Hence, we see green marketing as all aspects of traditional marketing, provided they are used to pursue environmental quality.

It follows from (Yusiana et al. 2020, 105-109) that green marketing uses and involves the greening of the marketing mix (the four p's). Traditionally, the marketing mix has been described as the key element of conventional marketing. Green marketing uses the same elements to fulfill the triple bottom line and put the concept of green marketing to life (Ibid.).

A survey done by (Nielsen 2015) found that 66% of consumers were willing to pay more for green products. This number is increased the younger the consumers are (77 percent of millennials), indicating an expanding trend in consumers' interest in green products. This study primarily concerns claimed behavior, though, because the study was conducted with an online survey and hence is subject to social desirability bias. It is not clear to what degree these attitudes convert into green purchases in reality.

However, even though green marketing is a broad concept, not all activities are visible to the consumers or understood to be part of this concept. As claimed by (Polonsky 1994), consumers are likely to think that green marketing refers merely to the promotion of products that have environmental characteristics. Nonetheless, these promotions are environmental claims about the firm's environmental performance, which are not always true.

Greenwashing

The false claims of environmental performance and environmental benefits of products and services are called greenwashing (Delmas and Burbano 2011, 64-87). It is suited to create illusions among the consumers about the firm's environmental performance. So, while some businesses adapt to the green shift by actually internalizing their externalities, that is, taking into account the unpaid cost of their damages to their surroundings (Eidelwein et al. 2018, 1316-1327), others only do the talk, making their green effort limited to positive communication about green performance (Delmas and Burbano 2011, 64-87).

Then we have those that make no such green claims but still maintain a bad environmental performance, called brown firms.

(Delmas and Burbano 2011, 64-87) categorized firms into four categories based on how they communicate to consumers, and their actual environmental performance, put together in a matrix (defined through green and brown firms). We seek only to clarify consumer reactions towards firms with bad environmental performance, measuring their communication differences. Thereby only focusing on greenwashing firms and(as opposed to) silent brown firms, as shown in the figure below and defined above.

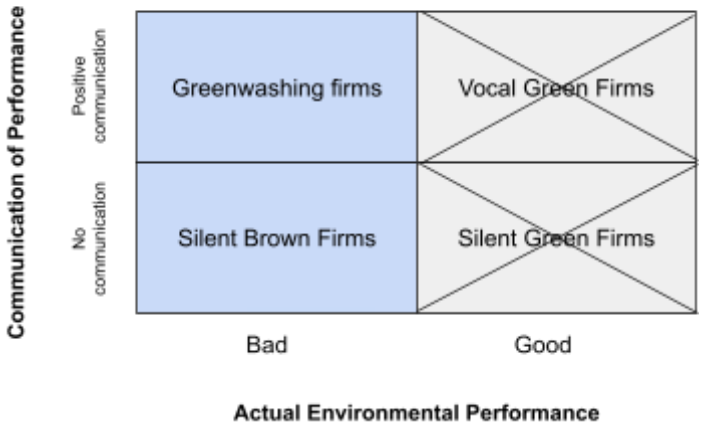


Figure 4: Greenwashing Firms and Silent Brown Firms

The influence of green marketing on consumers

If successful, green marketing increases the consumers' brand trust (Shafiee and Shahin 2021, 97-109). Among the elements in a green marketing mix, only green price and green product affect brand trust positively (Dangelico and Vocalelli 2017), the green price being the use of the price mechanism to favor green products. This is often done by incorporating an internal carbon tax to make "dirty" products more expensive, or provide discounts for the return of recyclable products (Leonidou et al. 2013, 151-170). A good reputation also causes a sort of "halo effect," that is, the impression that the firm by character is good and well-meaning, protecting its reputation from harm (Coombs 2006, 241-260).

Also, the use of green marketing, especially in advertising and green product promotions (which are visible to the consumers), causes the firm to be associated with green values and be recognized with green characteristics (Moravcikova et al. 2017). Such impressions also tend to alter the consumer base in that environmental-oriented consumers are drawn towards firms they believe to represent environmental values, as they incorporate the needs of the broader society with their own (Lewandowska et al. 2017). Hence, firms recognized with green characteristics typically have a more environmental-oriented consumer base.

2.2.2 Ecolabeling and Verifications on Consumer Perceptions

The paper includes an independent variable measuring the effect of ecolabeling using certification criteria. So the certification collaborations are what will be covered in this section, along with the consumer impressions from such labeling.

Ecolabels categorize as co-branding as it combines the label of the focal firm and the label of a certifying third party, which is also an important component of packaging and consumer communication (Mincic and Li 2020). It is used to assure consumers about the environmental conduct and differentiates between products that might obtain different environmental quality (Amacher et al. 2002).

We distinguish between mandatory ecolabels enforced by law in the relevant market and those adopted voluntarily (Mincic and Li 2020). Also, partnerships with ecolabels are typically part of the firm's CSR activities (Sorsa and Chaudhuri 2018). Only the voluntary version fits the CSR definition that we introduce later, which solely comprises voluntary actions (Dahlsrud 2006, 1-13). These ecolabels certify voluntary practices for environmental conduct and possess expertise within a specific area so that they might guide and constrain companies in their environmental behavior (Hamish 2019).

Among the voluntary labels, we distinguish between three types (Rusko and Koraus 2013). according to the same article, these three types are defined as follows:

- Type 1: The third-party certifications of predetermined requirements in accordance with and regulated by the ISO 14024.
- Type 2: Only represent a self-declaration from the focal firm about some environmental characteristics. Regulated by ISO 14021. No third-party certification or control.
- Type 3: Also, a self-declaration from the focal firm regarding the entire lifecycle of the product. Regulated by ISO 14025. No third-party certification or control.

Only type 1 involves third-party certification, thus being the most important voluntary solution and the one subject to focus on in this paper.

Area of responsibility

An ecolabel is not mandatory for the focal firm but rather a cooperation on certain environmental requirements certified by the ecolabel and communicated to the consumers (Bozowsky and Mizuno 2004). Hence, the focal firm maintains responsibility for its production but seeks to meet these requirements, from which the ecolabel brands their products when the requirements are met, also being a "guarantor" for the production relevant to the communicated criteria (Ibid.). Ecolabels typically pre and post-test for requirements in the production, seeking to control and monitor promised standards (Ibid.).

Also, different kinds of firms require different types of green standards, and who gets to decide what is green remains a challenge; thus, an ecolabel index is established to help firms navigate this complexity (Ecolabelindex 2022). At the time of writing, 455 labels in 199 countries are tracked with this index, with several applicable to supply chains and to provide criteria for clean chain production (Ibid.). It follows from (Song et al. 2019) that such a vast application of different labels confuses consumers and influences them differently.

The consumer impression of ecolabeling.

Although consumers may find ecolabeling reassuring, they usually do not bear this in mind during the purchase decision (Kavaliauske et al. 2013). Still, they tend to consider it when they see it on the packaging (Ibid.). According to (Lihhavtshuk 2015), logo design on the ecolabel is important to both recognition and the perceived credibility of the label. Also, it is essential in consumer communication, from which many designs fail to communicate their purpose (Ibid.).

What's more, ecolabels are often impossible to verify, putting their objectivity in question and lowering consumer confidence concerning the environmental claim that it is (Teisl et al. 1999). Meanwhile, consumers can use and identify the information, meaning they usually possess the necessary knowledge to make informative environmental purchase decisions but lack the ability to verify the information (Cottee and Wong 2000, 615-629).

To summarize, ecolabels are adopted voluntarily and consist of third-party verification on some communicated and pre-determined requirements. The responsibility to ensure environmental conduct is not outsourced by the focal firm but is co-operated upon, the ecolabel being a guarantor on relevant production for the consumers. Though possible,

communicative success and credibility vary, but actual verification and objectivity are difficult. So, if the logo and communication are successful, the consumer may utilize this information, and though it might be credible, it is never fully verifiable for the consumer.

2.2.3 Outsourcing and Organizational Distance on Supply Chain Liability

Concerning our independent variable (integration/outsourcing) measuring organizational distance, we seek to clarify the consumer perception of corporate liability for unsustainable supplier behavior.

We differentiate between the evidence that such a chain liability exists - not legally but enforced by market forces, and what role organizational distance might play in the liability to the focal firm. In order to have any liability, there must be obligations. Therefore, we will shed light on the concept of CSR to see what obligations companies have on sustainability and, thereafter, how this obligation is extended down the chain so that chain liability might exist. Hence, we take the perspective of CSR and how this concept is expected to be chain-wide through supply chain management. Lastly, we scope in at the relevant supplier tier level.

CSR

According to (Maas et al. 2021), it is hard to tell what level of societal and environmental performance is expected by corporations as this is not broadly agreed upon and because of variations between markets. However, the concept of CSR should be a good indication for most companies.

Traditionally, the corporate societal role has been focused on the interest of shareholders. Milton Friedman got vastly influential for his article on CSR, claiming that “the business of business is business” (Friedman 2007, 173-178). However, CSR is not new; with roots dating back to the 1800-hundreds, the concept went from serving a small group of stakeholders to becoming global and far-reaching (Izard 1991). Today, there is a growing realization that the government cannot sufficiently address the climate issue along with poverty and other social needs, so the idea is to dedicate corporate problem-solving capabilities to help solve critical societal needs (Bergkamp 2019).

The definitions of CSR vary in literature and are not fixed. However, most definitions seek to capture how a company treats its employees and the environment (Fliess et al. 2007). (Dahlsrud 2006, 7) made a comprehensive analysis of different definitions from which we derive the most frequently cited, defined by (Commission of European Union Communities, 2001): "A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis*"* (1)

It now becomes clear that CSR is not embedded in law but is what companies do voluntarily to address environmental and societal factors among their stakeholders. CSR is thereby normative and not a legal obligation, from which consumer reactions toward misconduct may be devastating, even though no legal penalty is imposed.

CSR in production

As context specificity is key to literature research, we elaborate further from the rather vague definition of CSR. This paper focuses on misconduct in production and supply chains; hence we need a definition that targets this setting from which we can develop a fictional crisis to present to the consumers. According to (Aswini et al. 2020), CSR is expected to be performed chain-wide, but continuous development of definitions hamper the understanding of supply chain CSR. (Spence and Bourlakis 2009) argue, however, that the following definition from (Aguilera et al. 2007, 836-863) capture the crucial issues from a modern and complex supply chain, which we also agree on: "Consideration of, and response to, issues beyond the narrow economic, technical and legal requirements of the firm to accomplish social (and environmental) benefits along with the traditional economic gains which the firm seeks." (836-837).

From this, we see that adequate implementation of supply chain CSR rests upon a tailored consideration. As different supply chains bear different sustainability risks, the definition is flexible. We will then ensure that our fictional crisis will be subject to a consideration of relevant sustainability issues in the chain.

Furthermore, societal expectations and corporate commitment to CSR in production are closely tied together. Both expectations on the one hand and commitment on the other have been growing in recent decades (Fliess et al. 2007). Hence, CSR and how consumers perceive it shapes corporate conduct, with consumers typically expressing their desire for CSR through purchase decisions.

Compliance with the concept is made applicable to supply chains through the focal firms' supply chain management (Bhardwaj 2016). Consumers expect the whole chain to be properly managed, as they seemingly always hold the focal firm accountable for the unsustainable behavior of their suppliers (Hartmann and Moeller 2014, 281-294).

Proving chain liability

The traditional supply chain management (SCM) has evolved to include the greening of supply chains, comprising the harmonization of environmental performance for the whole network of suppliers in alignment with stakeholder expectations, called green supply chain management (GSCM). (Bhardwaj 2016). This management and cooperation are needed to create supply chain CSR, and according to (Valdez-Juárez et al. 2018), it protects the whole chain against stakeholder critics. Even though many actors need to work on synchronized standards, the consumers cannot observe this production, known in the literature as "structural holes" (Phillips 2010, 533-543). They simply react toward the most accessible chain member when a crisis occurs, namely the focal firm (Hartmann and Moeller 2014, 281-294). It follows from the same article that consumers seemingly do not differentiate on who causes the crisis among the chain members but simply hold the focal firm accountable (guilty), confirming the chain liability, but denying the effect of organizational distance. Some contexts were tested on the chain liability effect (Ibid.), but whether settings exist that might free the focal firm entirely from chain liability remains unclear.

On the flip side, a balance between profitability and sustainability is possible for a focal firm (Tang and Zhou 2012). Still, it may only be the case if "profit, people and planet" are maintained holistically throughout the "ecosystem" of suppliers over a longer period (Ibid.), again documenting the chain-liability.

Also, we have the supply chain position paradox, the phenomenon that actors in a supply chain located closer to consumers adopt greener practices (Schmidt et al. 2017, 3-25). This is because downstream firms are more exposed to consumer scrutiny and reactions than those far upstream. Downstream firms are more visible to consumers, and reactions may target all their products. Upstream firms are less visible and are often exposed to many different end-consumer markets as they attend multiple supply chains, which gives them a "diversification" on consumer reaction risk. Since the downstream firms are held accountable for the misconducts of those upstream, they are expected to enforce GSCM up the supply

chain (Mitra and Datta, 2013). Therefore, the motivational factors for the Green position paradox are in alignment with (Hartmann and Moeller 2014, 281-294), implying chain liability but no effect of organizational distance for the focal firm.

To summarize so far, the often long chain of companies involved in production calls for SCM (now GSCM), and the liability from this management is well documented in the literature. We know that chain-wide commitment to CSR is necessary to capitalize on the effort and that the firms downstream are more exposed to the environmental conduct of the whole supply chain; hence, they are expected to force CSR upstream. Many firms have already experienced being held accountable for the unsustainable behavior of their supplier (Hartmann and Moeller, 2014 281-294), as described in the introduction. Yet, things are far less documented regarding the effect of organizational distance.

Organizational distance in general:

Two studies directly measure the effect of organizational distance on chain liability. Both use a fictional sustainability crisis from which the consumers function as a jury. (Hartmann and Moeller 2014, 281-294) finds no significant effect from the organizational distance on chain liability in a multi-tier chain. However, (Hjelset and Skage 2020) found a significant effect from organizational distance, but with a relatively weak empirical ground. These findings are then contradictory.

These studies, however, only tested the multi-tier chain liability between different suppliers with increasing organizational distance to the focal firm, not the focal firm itself. As we intend to test this effect between the focal firm and a first-tier supplier (integration/outsourcing), we need other theories that might say something about the difference between misconducts or crises occurring in integrated vs. outsourced production.

At the relevant tier level

The GSCM-literature has primarily focused on the direct outsourcing of a focal firm, meaning the first-tier supplier relation (Dou and Sarkis 2018, 95-107). (Lee 2008) focuses on small and medium-sized firms and their lack of environmental knowledge and power to ensure clean production from their supplier, and (Walker and Jones 2012) look into what enables and restricts GSCM on prominent and leading firms. However, there seems to be far less literature on the consumer perspective on crisis or misconduct in such production. For

the most part, these articles are concerned with the consequences rather than the determinants of responsibility attribution (Hartmann and Moeller 2014, 281-294).

According to (Fu and Gong 2018, 114-146), the focal firm bears the entire responsibility and will take the full brunt for infringements in integrated production. The paper also states that they are entirely in control of all actions on sustainability. Meanwhile, (Hartmann and Moeller 2014, 281-294) found that a firm is held less accountable if the crisis occurs as a product of force majeure or the stand-alone decision of one employee. It may seem that even in integrated production, consumers might not attribute all responsibility to the focal firm as a whole but might see contextual factors as mitigating. However, no accountability is "shared" with another firm.

Nevertheless, it also follows from (Fu and Gong 2018, 114-146) that the focal firm will be held less accountable for the infringements or misconducts from outsourced relative to integrated production. This, once again, speaks against the findings from (Hartmann and Moeller 2014, 281-294) that the focal firm will always be held equally accountable. (Wong et al. 2012, 283-294) found that 87% of consumers will hold the focal firm accountable for the misconduct of a supplier, entailing a substantial chain liability but also an effect of organizational distance at this tier level. The finding from (Fu and Gong 2018, 114-146) is that the focal firm receives less blame for unsustainable supplier behavior but is less in control of the level of infringement in that the focal firm may only influence the supplier through production volume. Higher production forces more misconduct among the suppliers (Ibid.).

However, it is the case that outsourced production is subject to contract regulation (Svensson and Bååth 2008). The ability to control and monitor outsourced production by contract should raise the overall level of control with unfortunate outcomes of that production. According to (Hartmann and Moeller 2014, 281-294), control and accountability for an outcome should be positively correlated, hence the degree to which the focal firm may be held accountable for crises should increase with the level of control. One study differentiates between what they call "channel orientation" (chain influence) and "relationship orientation" (direct/contractual influence) concerning ethical production (Svensson and Bååth 2008). They found that a company indeed can enforce corporate guidelines, policies and rules on the supplier, but this is not the case in channel orientation. The case is then that a focal firm has strong control

both with its own production and that which is outsourced directly. This should imply (because control and accountability are positively correlated as mentioned) that the focal firm is held strongly accountable for both integrated and directly outsourced production. This is confirmed by (Hartmann and Moeller 2014, 281-294), saying responsibility attribution is strongly provoked when the firm can influence and exert authority in the supply chain, implying little regard for the effect of organizational distance when on contract. Once again, the literature has contradictory findings and implications, even at the relevant tier level.

The findings from (Svensson and Bååth 2008), together with the statement from (Hartmann and Moeller 2014, 281-294), imply that actual power over the supplier and the ability to exert control and monitoring is more essential for the responsibility attribution than the case of integration vs. outsourcing. However, the fact that we have structural holes (Phillips 2010, 533-543) might hide the degree of control in these relationships to the consumers and, hence, control might best be observed or indicated through organizational distance (outsourcing or integrated production), even though organizational distance and control are not perfectly correlated. This indirect observation of control will then lead to a *perceived* control by the consumers from which they attribute responsibility. This is essential, as responsibility attribution is not a product of objectivity but rather judgments undertaken by an observer based on the information available to him or her (Dawar and Klein 2003).

Lastly, this contractual relationship in direct outsourcing is subject to the more known principal-agent problem (Nygaard 2019). That is, the problem with agents producing on behalf of the principal opportunistically, serving its own interests in the shade of “asymmetric information,” meaning that the agent has an information advantage on its own production relative to the principal (Baqir and Biao 2020). This asymmetric information may be used to cut corners on sustainable standards and may entail more serious misconduct leading to crises (Nygaard 2019). Several factors also limit the principal's ability to promote sustainability, like limited resources to follow up or the degree to which the environment is dynamic and demands ever-changing responses to ensure sustainable conduct (Foerstl et al. 2010, 118-130). This implies that the agent problem does not harm all firms equally. However, this knowledge of the principal-agent theory is probably out of reach for most consumers and, thus, may not be a good predictor of consumers' responsibility attributions.

To summarize, CSR obligations drive liability, and the chain liability effect seems to be well established as supply chain CSR is necessary to protect the chain against critics, and responsibility attributions are measured towards the focal firm in multi-tier testing. However, there are contradictory findings on the effect of organizational distance. Two studies measured this effect directly, and only one found significance. At our relevant tier level, we have findings that suggest less accountability for supplier behavior, claiming a lack of influence between the focal firm and the supplier and one claiming considerable contractual influence. These findings are contradictory as we know control and accountability are tied together, even though control and organizational distance (integration/outsourcing) are not perfectly correlated. One study claims 87% will hold the focal firm accountable for misconducts of its suppliers, entailing a small effect of organizational distance at this tier level as 87%<100%.

2.2.4 Attribution Theory and the Attribution Process

As we seek to measure consumers' responsibility attribution as a dependent variable, it is essential to understand the process from which people make sense of a situation and attribute responsibility to related parties, like a focal firm.

To clarify consumer reaction patterns, we use attribution theory (AT), which is mainly applied at the individual level and tries to predict how individuals process information, attribute causes and attribute responsibility for a situation (Fincham and Jaspar 1980). AT deals with the relatively simple psychology of "the man in the street" and how he reacts to the situations he witnesses (Ross 1987, 118-150). Historically, AT is closely linked to the field of perceived causality, which is vital in directing blame. (Weiner 1995) makes an excellent example from a losing sports team; do we blame the manager, or shall we be angry at the players? This causal determination is then essential for directing blame. Also, (Hamilton 1978, 316-328) adds importance to expectations on what should have been done (as opposed to what was done) as an essential determinant of accountability. The latter includes considerations of the violator´s social role.

The studies on AT have roots in cognitive psychology and approaches to perception (Hamilton 1978, 316-328). As the theory evolved, three causal properties (or dimensions) of responsibility attribution were proposed: Locus of causality, controllability and stability

(Weiner 1986). Later, AT also proposed the severity dimension, as a higher degree of severity seems to trigger harsher reactions and extend responsibility attributions to more people (Affleck and Tennen 1990).

Hence, the characteristics of a situation that:

- Maximize accountability: A controllable incident with no mitigating situational factors that have happened many times before and with severe consequences.
- Minimizing (Eliminating) accountability: Non-controllable incident, entirely explained by situational factors with low severity, the first time it happens.

AT is mainly used on individuals in literature. Still, it may also be applied to attribute responsibility from individuals to companies (Skarmeas and Leoniduo 2013), and (Hartmann and Moeller 2014, 281-294) have extended its use to supply chains, from which we do the same. We now look into how responsibility is attributed and go through the proposed dimensions or properties of causality from which people attribute responsibility. We seek to clarify factors that increase and mitigate judgments of accountability.

Determining accountability

It is crucial to remember that the dimensions of responsibility attribution are not a product of objectivity but rather judgments undertaken by an observer based on the information available to him or her (Dawar and Klein 2003). The same article shows that causal attributions are also affected by the observer's prior beliefs, leading to even more significant judgment bias.

Also, we have "the responsibility process," from which judgment of accountability (guilt) takes form as a chronological process (Weiner 1995). Any step in this process might conclude that there is no responsibility to attribute the actor, and "the responsibility process" stops, eliminating any accountability. First, there has to be personal causality (a person rather than a situation is accountable). The outcome must be controllable, and finally, no mitigating circumstances so strong that it eliminates accountability. Only then might a causal link to an actor be concluded and responsibility attributed (Weiner 1995). This process is not to be confused with "the attribution process," which comprises both "the responsibility process" and the emotional and behavioral reaction that follows when the causal link is determined.

Furthermore, when the causal link is uncertain, meaning the causal role of the actor is unclear, we see more random attribution of responsibility (Leonhardt et al. 2011, 405–413). This is why accountability averse actors tend to seek uncertainty (Ibid.). However, to the degree a causal determination may be reasoned and determined, it is done through one or more of the four following causal dimensions (Weiner 1995):

Locus of causality:
Locus of causality refers to which extent situational factors may explain the situational outcome, and to what degree the outcome can be explained by specific actors (Hartmann and Moeller 2014, 281-294). This is called external and internal attribution, respectively, from which the external attributes responsibility to the surrounding context, while the internal attributes responsibility to the individual (Skarmeas and Leoniduo 2013).
If an outcome is deemed to result from skill/unskilled, intelligent/shortsighted or responsible/accountable behavior, accountability accrues to the individual (internal), while luck, fate or force majeure is assigned to the surroundings (external). (Thompson and O'sullivan 2017, 262-276)

Also, the degree of threat influences how likely people are to use internal attribution (Thompson and O'sullivan 2017, 262-276). This is due to "the fundamental attribution error," that is, the tendency to draw quick conclusions and overestimate the individual (internal) factors and underestimate the situational factors (Tetlock, 1985).

Lastly, the involvement of several actors diffuses the accountability among the actors involved (Hayashida et al. 2021). This diffusion may also be seen as an increase of external attribution in that every actor by itself accrues less accountability and will feel less guilt, even when the consequences are evident (Ibid.).

Controllability:
Refers to the degree the violator controls the situational outcome and to what degree he could have exerted his power to alter the outcome (Weiner 1986). Hence, controllability is associated with the freedom of choice. If such choices are not there, responsibility may not be attributed. (Weiner 1995) exemplifies a car crash caused by a driver who got a heart attack. The fault lies with the driver, but there is no freedom of choice or possibility for the driver to control the outcome, so responsibility will not be attributed.

The degree of controllability is strongly linked with feelings of either anger or pity. We can feel anger towards those in control of an outcome but are too lazy to alter it, and we can feel sympathy towards those who could not avoid the disaster (Weiner 1986). These are called the controllability-anger and uncontrollability-pity relations (Ibid.).

There are also mitigating circumstances to the controllability dimension. Often due to higher moral or higher importance goals, which may both reduce or eliminate accountability for a negative outcome (Weiner 1995). Take the act of failing at school to nurse a sick friend (higher moral) or to hurt someone in self-defense (higher importance).

The degree of control and accountability are positively related (Hartmann and Moeller 2014, 281-294).

Stability:

The stability dimension refers to how the behavior subject to critics is thought to be stable over time (Hartmann and Moeller 2014, 281-294). This dimension primarily affects responsibility attributions through the perceived chance for the behavior to recur (Weiner 1986). This is due to the "expectancy principle," that is, the variation in expected success (or failure) due to stable or unstable conditions (Weiner 1986). To exemplify, abilities (or disabilities) can be perceived as stable, and luck (unluck) is likely to be perceived as an unstable cause of an outcome.

Stability is correlated with higher attributions of responsibility, as the expectancy of an event to recur triggers feelings of hopelessness. In contrast, attribution to unstable events entails feelings of optimism about the future (Bauerle et al. 2003).

Severity:

Severity was the last dimension to be added to the AT and refers to the severity of the consequences of an outcome. People tend to react more substantially to more severe incidents as these are more salient and cause more rumination, while it is easier to forgive incidents with less severe consequences (Hartmann and Moeller 2014, 281-294).

People are more likely to blame others when the accident is more severe, following an increased need to find an explanation for bigger mishappenings, meaning severity stimulates

casual search (Affleck and Tennen 1990). This means a firm might receive more blame when the incident is more severe, even though the causal link is relatively weak.
Also, incident severity drives defensive explanations in that the observer attributes less responsibility to the actor when the two have perceived similarities (Kouabenan et al. 2001, 553-575). For example, a consumer with significant personal emissions might attribute lower responsibility to the firm (relative to others) when the severity of the emission-crisis increases.

However, the causal determination is only one step in a rather extensive process called "the attribution process."

The attribution process

The process starts with an external stimulus that occurs when an individual is faced with an outcome of a situation (Weiner 1995). Then, when the conditions are suitable for a causal determination through one or more of the aforementioned dimensions of responsibility attribution, accountability (guilt) is triggered. This accountability entails blame (an emotional reaction like anger) (Hartmann and Moeller 2014, 281-294) which in turn leads to a behavioral response or punishment (like shouting or boycotting) (Weiner 1995).

As such, the emotional reaction mediates the effect of responsibility attribution on behavioral response. However, the emotional reaction is greatly affected by the perceived causality (like the control-anger and uncontrolled-pity relations), which may motivate different behavior (Weiner 1986). Still, it follows from the same article that the emotional field is complex (Ibid.) and is therefore beyond the scope of this paper.

Figure 5: From Outcome to Behavioral Reaction (Weiner, 1995)

The first two steps decide whether there is any responsibility to attribute. The last three constitute a chronological process with reactions from the observer. Also, this process might appear static but is really dynamic and influenced by time (Lau 1984). This means that it matters both to the causal link and the process how much information the observer possesses

about the observed person or firm and for how long the observations have persisted. If both information and observation time are low, then stereotypes are common. However, if the observer is given enough time and information, he may draw causal conclusions from situations and behaviors that covary, called “the covariation principle” (Lau 1984). This means the observers draw conclusions from previous behavior and situations to determine the causal link and react accordingly. This is important to bear in mind, as we test with low information and time, neglecting this dynamic effect.

The anatomy of accountability.

Finally, we might put together the determinants of casualty with the following reactions to visualize the attribution process and show how “the man in the street” attributes responsibility and behaves accordingly. The framework below is derived from (Weiner 1986,1995) and (Affleck and Tennen 1990) as reproduced by (Hartmann and Moeller 2014, 281-294) to determine consumer reactions to a focal firm’s supply chain crises.

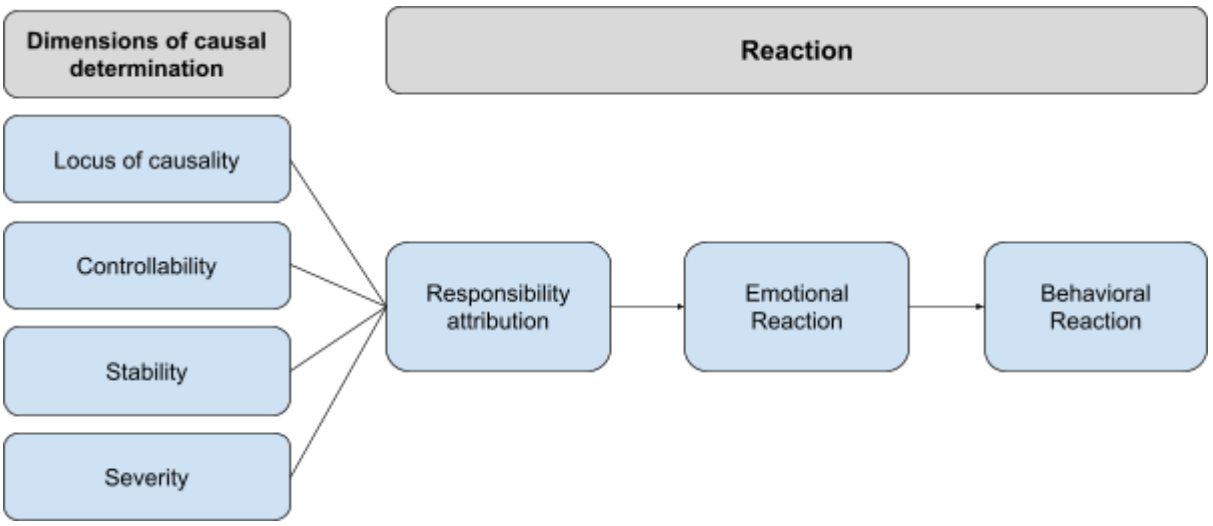


Figure 6: The Attribution Process from (Weiner 1986,1995) and (Affleck and Tennen 1990) as reproduced by (Harmann and Moeller, 2014).

2.2.5 Responsibility Attribution and its Link to Purchase Intentions.

We intend to measure consumers' purchase intentions as the final outcome of their reactions. Hence, we need to draw the link between the responsibility attribution and possible outcomes for their purchase intentions.

We know that the attribution process ends up causing a particular behavior. Still, “intention” is defined as a personal behavior *tendency* (Wang and Tsai 2014) and is not a behavior by

itself. Purchase intentions are defined by (Spears and Singh 2004) as: “An individual’s conscious plan to make an effort to purchase a brand.” (56)

(Spears and Singh 2004, 53-66) also describe purchase intentions as a kind of motivated behavior termed “behavioral intentions,” and behavioral intentions seem to be the mediator between attitudes and behavior. (Allen et al. 2005) describes emotions to be one of three pillars of attitude; Cognitive information, emotional information and past behavior, from which a link between emotional reaction and the formation of attitude is established.

We can now see that attribution of responsibility triggers emotions (as we know from the attribution process), and emotion forms attitude, which guides behavioral intent (as described by (Allen et al. 2005)). We also know that purchase intentions may be seen as behavioral intent. Therefore, there should be a link between the responsibility attributed to the focal firm and the purchase intentions we measure.
Such intentions do not always result in actions. Still, higher purchase intentions entail a higher probability of purchase, and on the flip side, lower purchase intentions lower the likelihood of purchase (Spears and Singh 2004, 53-66).

The link between the responsibility attribution from consumers' causal determination and purchase intentions (behavioral intent) may be depicted as follows:

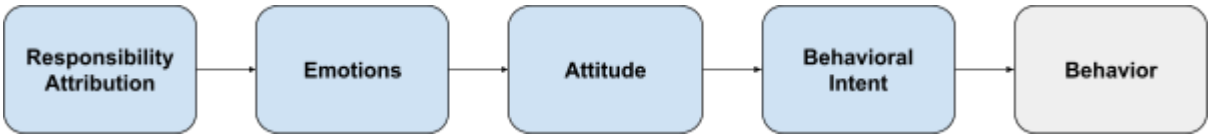


Figure 7: Link Between Responsibility Attribution and Purchase Intentions (behavioral intent) according to (Spears and Singh, 2004, 53-66) and (Allen et al. 2005).

2.3 Hypotheses and Conceptual Model

In this section, we will derive hypotheses from which we form by arguing a causal link through one of the aforementioned dimensions of responsibility attribution. The hypotheses seek to clarify *what* we expect to see from the different stimuli and *why* we expect to see it. Using a conceptual model, we will summarize and visualize all the measures and hypotheses at the end.

The first hypothesis will be derived based on two conflicting trains of thought. Both reasons seem to make sense, but they cannot co-exist. Hence, an “a and b” hypothesis will be derived, starting with the causes we believe in the most, resulting in hypothesis 1a.

2.3.1 Controllability and Organizational Distance

As mentioned, accountability (guilt) and degree of control are positively related in literature (Hartmann and Moeller 2014, 281-294).

When production is put on contract (outsourcing), it becomes subject to the principal-agent problem. That is, the agent has an information advantage on the principal and may serve its own interests at the expense of ethical production (among others) (Baqir and Biao 2020). Even though contracts can be used to influence the supplier (Svennson and Bååth 2008), it is hard to know whether the contractual standards are met in reality, and the geographical distance might be considerable, further lowering the possibility of monitoring. (Fu and Gong 2018, 114-146) states that production volume might be the best way to control the infringements and hence the possibility that a crisis might occur. Thus, the focal firm possesses far less control over outsourced production due to the principal-agent problem and the following information asymmetry.

At the same time, the focal firm will have complete control of the productions at its own site (Fu and Gong 2018, 114-146) unless there are mitigating contextual factors such as the stand-alone decision of one employee or force majeure (Hartmann and Moeller, 2014, 281-294). We will not include any event of force majeure in our fictive crisis. Still, there might be a chance that consumers do not fully attribute causal links to the focal firm as a whole but also stand-alone employees. Hence, we expect considerable accountability (guilt) on integrated production with only limited possibilities for mitigating circumstances.

To summarize:
We expect the focal firm to have a higher degree of control with integrated production than outsourced production. We also expect this to be intuitive for the consumers and, hence, subject to their causal determination of control. As control and accountability are correlated, a higher degree of control should trigger a higher degree of responsibility attribution, and a lower degree of control should trigger lower responsibility attribution.

Hence, we derive the following hypothesis:

H1a: *The focal firm is attributed less responsibility for a crisis in outsourced production as opposed to integrated production.*

2.3.2 Locus of Causality and Organizational Distance

Importantly, locus of causality refers to the degree to which an actor (as opposed to a situation) may be held accountable for an outcome, causing observers to use internal attribution (Skarmeas and Leoniduo 2013). It is likely to believe that a lack of preventive measures may be attributed to the actor failing to prevent a crisis rather than situational mishappenings.

We argue that integration may be perceived as a preventive measure because it ensures control of production and hence the ability to prevent crises in this production. Flip side, outsourcing may be perceived as an act of surrendering control of production to others, from which the focal firm may be held accountable.

Also, a jury in New York received an "ostrich instruction," from which they should hold the focal firm accountable if they had "willingly ignored" or taken steps to shield themselves from information and control of the matter prior to a crisis (Phillips 2010, 533-543). We argue that the act of surrendering control and moving production to others when this production entails sustainability risks may be perceived as both "sticking the head in the sand" and "willingly ignoring" these risks.

The focal firm chooses whether production should be outsourced or not in its role as "channel captain" (Frostenson and Prenkert 2015, 85-94). So, if the focal firm decides to outsource any part of the production, they simultaneously approve the principal-agent problem and deem it safe. Hence, they act as the architects behind the risk exposure to sustainability crises, thus controlling that exposure. A supply chain crisis may then cause the consumers to find a causal link to hold this "architect" accountable, meaning that even situational explanations may be attributed to the "architect" behind the situation, namely the focal firm.

To summarize:
Integration may be perceived as a measure to avoid crises, the lack thereof to be “sticking the head in the sand” concerning crises, and the decision whether to integrate or outsource rests upon the focal firm in the role as a “channel captain.” Hence, they are the architects behind the risk exposure of the production. If this risk-taking is excessive, the attribution of responsibility may accrue to the focal firm (the architect) for lack of preventive measures.

Hence, we derive the following hypothesis:

H1b: *The focal firm is attributed more responsibility for a crisis in outsourced production as opposed to integrated production.*

2.3.3 Severity and Green Marketing

The consequences of the crisis itself are not influenced by the marketing of the focal firm. However, we know that attribution of responsibility is affected by the opinion on what should have been done (as opposed to what was done) (Hamilton 1978, 316-328). We know that green marketing influences consumers' perceptions and beliefs about the firm's environmental performance (Delmas and Burbano 2011, 64-87). Hence, it is likely that green marketing causes consumer expectations and the reality to diverge, triggering a more severe perception of the same consequences. The brand trust may also trigger harsher market penalties, and especially green brand crisis causes a more powerful impact on the green brand trust (Li and Xixiang 2022). This more powerful impact implies that the responsibility attributions should be stronger if the green marketing has successfully built brand trust. However, it is not likely that this paper will capture this effect, as it is hard to build brand trust in an anonymous brand over a short period, and brand trust is based on experience as well (Ha and Perks 2005, 438 - 452).

What's more, a crisis with the same characteristics by which a company is recognized is perceived to be more severe (Bundy et al. 2016). An example would be the case of Volvo, which we assume is recognized for its level of safety. Hence, a safety-related crisis, like brake failure, is worse for Volvo than for another car manufacturer that does not possess this recognition. When a focal firm practices green marketing, it is likely to believe that it gets

associated with green values and characteristics. Consequently, an environmental crisis is perceived as more severe as it appeals to these characteristics.
In addition, a green firm (or at least perceived to be) will have a consumer base that is more concerned with the environment than the consumer market on average (Lewandowska et al. 2017). Once again, this may trigger harsher reactions than those captured in this paper, as we do not select such a consumer base but expose a random representative sample.

Nevertheless, we have the halo-effect that protects a focal firm by mitigating reactions due to a good reputation (Kaufmann and Stern 1988, 534-552). It is likely to assume that focal firms using green marketing will get a better reputation and hence, be protected by this halo-effect to some extent. This is contradictory to the fact that a good brand reputation triggers harsher market penalties or to the effect of diverging expectations and reality, and it is hard to assume which effect is dominant. However, we believe that it is hard to create or capture any halo-effect in this paper, as there is no time to establish a trustful and lasting relationship in such a short time. The respondents will attribute responsibility only minutes after they get familiar with the brand.
All these factors put together should then increase severity rather than decrease.

To summarize:
Green marketing probably causes the expectations of what should have been done and reality to diverge, triggering a more severe consumer perception. In addition, an environmental crisis will likely appeal to the green characteristics of a greenwashed firm and so boosts the severity of the crisis. Lastly, successful marketing could build brand trust and trigger a harsher market penalty but also a halo-effect mitigating the responsibility attributed; however, there is assumingly no time to establish such effects in this paper.

Hence, we derive the following hypothesis.

H2: *Green marketing increases responsibility attribution for a crisis towards the focal firm, as opposed to the traditional use of marketing.*

2.3.4 Locus of Causality and Ecolabeling

Ecolabels are performed voluntarily and are part of a firm's CSR activities (Sorsa and Chaudhuri 2018). As they are not mandatory, they might signal a sort of “best practice” and be perceived as a sustainability measure by itself. Hence, it is likely to believe that the consumers mitigate their internal attribution of responsibility as a product of ecolabeling and the voluntary effort that it is to prevent sustainability crises. This means that we believe the focal firm to be less subject to causal determination of accountability and that the consumers should attribute more responsibility to the surroundings (external attribution). This is much the same train of thought as that of (H1b), arguing the effect of preventive measures.

Furthermore, as we know from (Hayashida et al. 2021), accountability diffuses between actors when there are several involved, and that may be held accountable for the same outcome, or as we put it, a “horizontal” pulverization of accountability. We argue that both the ecolabel and the focal firm are two separate actors involved in the same crisis when the crisis concerns relevant certification requirements. And so, the accountability should be diffused among them, accruing less to the focal firm. From the perspective of an accountable actor, the internal attribution accruing to co-actors is perceived as external to them (Ibid.). Hence, the effect of diffusion speaks the case for a lower “share of the pie” attributed to the focal firm - “pie” being accountability.

Also, we argue that when two actors fail to prevent a crisis, it tells something about the difficulty of handling the situation, thereby increasing the degree of external attribution. In other words, it is likely to assume that a crisis occurring despite increased control should indicate the degree to which the crisis was unavoidable, causing the consumer to lay more weight on situational factors. We assume that the failure of more actors can be attributed externally, as when two pilots fail to avoid an air disaster, would a third pilot make much of a difference? And if not, the situation must have been rough.
We believe this trend should mitigate the accountability of the focal firm and move attribution outwards.

To summarize:
Ecolabels are adopted voluntarily, and consumers might attribute less responsibility to the focal firm as a response to their voluntary actions to prevent such crises. Also, the

involvement of several actors diffuses accountability and should lower the share attributed to the focal firm. Additionally, the failure of several actors should imply a high level of difficulty in avoiding the situation and hence increase the degree of external attribution.

In all, we believe that ecolabels should lower responsibility attribution to the focal firm. Hence, we derive the following hypothesis:

H3: *The use of ecolabeling makes the focal firm be attributed less responsibility as opposed to not using such labels.*

2.3.5 Interaction Between Green Marketing and Organizational Distance

We believe the independent variables interact and hence cause interaction effects, from which we seek to capture this complexity. So while we proceed with the expected effect of outsourcing from (H1a), which is thought to cause lower accountability to the focal firm (due to reduced control), and green marketing is believed to increase accountability (due to higher perceived severity), we now seek to understand what happens when both occur at the same time. This may add to additional accountability or reduce accountability; that is, the effect may not be additive, but the effect of one variable may depend on that of the other.

We believe that this interaction effect might be best determined using controllability as causal determination and that it deals with the accountability not from the crisis itself but from the false promises made, causing divergence between expectancy and reality as mentioned to increase accountability with green marketing. We believe this presumed increase in accountability may not be equally distributed between crises in integration and outsourcing, causing an interaction effect. This is due to the following reasoning.

Controllability:

As previously stated, green marketing is a claim or promise about environmental performance expressed by the focal firm and is thought to increase accountability from a sustainability crisis (H2). When faced with a severe violation of these promises, we argue that it matters who broke the promise. It is likely to assume that the broken promises are perceived as worse when violated by the one who made them, as he is more in control of whether to comply with the promises made. Flipside, the promise issuer should be less

accountable when the cause of violation is due to an affiliated actor, due to less control with their behavior (Weiner 1995), and in the case of firms, information asymmetry (Nygaard 2019).
As when a political party makes promises and they are elected to government. There should be a difference between the party violating their own promises and when fighting to keep them but getting overruled by other parties in the same government coalition. This point is hard to outline or put words to but should be subject to intuition and speaks the case for higher (lower) accountability in integrated (outsourced) production.

Furthermore, when the level of control (and hence ability to alter an outcome) is known, one can raise questions about the focal firms' boldness in making claims about environmental performance while lacking the ability to ensure them. Put differently, when the degree of control over production is known, they fully control what claims to make on behalf of this production. To exercise their “freedom of choice” and make bold statements to create illusions among the consumers should be perceived as reckless and speaks the case for higher accountability to the focal firm with outsourced production.
As when a minor political party makes promises of substantial political changes from which they have little control to fulfill when elected to government with a coalition of much bigger parties.

Green claims may be even worse for crises in integrated production, though. When production is performed internally (no outsourcing), the environmental claims using green marketing are rightfully made as they have complete control of their production (Fu and Gong 2018, 114-146) and possess the necessary information to back up the claims. However, when a crisis occurs, such claims would not make them bold but false statements, making the focal firm a liar. Hence, such lies should accrue even more accountability to the firm, and on the flip side, a bold statement should accrue less accountability than a straight-out false statement. This speaks to the case that the interaction increases accountability in integration even further compared with a state of outsourced production.
Like when a huge political party makes promises and gets elected into the government alone, possessing complete control of the political agenda but still not fulfilling their promises. They should assumingly be deemed liars in contrast with the aforementioned minor political party making bold promises.

To summarize:

It should matter whether promises are violated by the promise issuer itself or someone affiliated with the promises, as the promise issuer is more in control of whether to comply when they deliver on the promises themselves (integrated production). Then, when the degree of control is known, it matters how the focal firm exercises its freedom of choice to make claims about the environmental performance. If control is low (outsourcing), such claims are bold, and if control is high (integration), they should know about the falseness of the claims, making them liars. Thus, we believe integration to amplify further accountability for the false promises made using green marketing.

Hence, we derive the following hypothesis.

H4: *The increased responsibility attributed to a focal firm when a crisis occurs following a green marketing effort (compared to traditional marketing), is further amplified when a crisis occurs in integrated (vs outsourced) production.*

2.3.6 Interaction between Ecolabels and Organizational Distance

As we also believe that ecolabels and organizational distance (Integration/Outsourcing) interact, we derive a hypothesis concerning this effect as well. In this section, we discuss the possible direction of this hypothesis when we know that ecolabels presumably lower accountability (due to a weaker causal role for the focal firm) and we still use the effect from (H1a) from which organizational distance presumably also reduces accountability (due to less control over the outcome). We believe this might best be explained by discussing the locus of causality as the most relevant dimension of responsibility attribution.

Locus of causality:

The most obvious thought on the interaction between organizational distance (Integration/outsourcing) and ecolabel may be that the mitigating effect from ecolabels should matter the most where there is the most accountability to mitigate, namely in a state of integration. This should at least be true unless there exist arguments for a disproportionate reduction in accountability when production is outsourced. However, further examination revealed that such arguments exist.

With the division of labor comes the division of accountability when things go wrong. When several actors are involved in the production, we achieve some kind of "bureaucracy," creating "the rule of no one," that is, the magnified diffusion of accountability between actors, leaving no one accountable (Phillips 2010, 533-543). Consequently, when a focal firm outsources production while simultaneously using ecolabel certification, the involvement of three separate actors may achieve such a bureaucracy.

As stated by (Leonhardt et al. 2011, 405–413), we know that an actor's causal role gets weaker when uncertainty increases, and uncertainty causes random attribution of responsibility. Also, uncertainty is introduced when using a secondary agent (supplier in this case) to create an indirect accountability effect (Ibid.). This implies that the bureaucracy both causes diffusions of accountability among actors but also increases uncertainty in the causal determination. It is the *magnified* diffusion of accountability from bureaucracy, along with uncertainty and the following random attribution of responsibility, we believe to cause an interaction effect (diffusion as a vertical pulverization of accountability is already subject to H1a). Hence, this speaks the case for an even lower attribution of responsibility to the focal firm when ecolabeling is combined with outsourcing, achieving bureaucracy.

We also know that ecolabels possess unique expertise in the requirements they certify, and that they typically guide companies on their environmental conduct (Hamish 2019). As we have the principal-agent problem with information asymmetry in the case of outsourcing (Nygaard 2019), it is likely to assume that the focal firm needs to rely on the expertise of the ecolabel to a greater extent. As stated in (H3), we argued that ecolabeling could be perceived as a measure to prevent sustainability crises. When the firm falls victim to information asymmetry in the case of outsourcing, it is reasonable to think that such a measure seems even more precarious. We believe this reasoning is available to the consumers as well. Additionally, the portion of internal attribution accruing to a co-actor (ecolabel in this case) is perceived as external to the main actor (now, focal firm) (Hayashida et al. 2021). Thus, it is likely to assume that a bigger portion of the responsibility is attributed to the ecolabel rather than the focal firm, when the prevention of the crisis depended on the expertise of the ecolabel to a greater extent. Hence, this also speaks to the case that accountability towards the focal firm should be even lower when ecolabeling is combined with outsourcing.

To summarize:

The arguments support a somewhat counterintuitive trend. When both ecolabeling and outsourcing are introduced simultaneously, a bureaucracy is achieved, causing magnified diffusion and uncertainty around the attribution of the responsibility, also making it random and benefiting the focal firm that is typically held accountable to a large extent for incidents in the supply chain. Also, the ecolabel possesses expertise meant to guide the company in its environmental conduct. This expertise should be more precarious in outsourcing due to information asymmetry, directing more accountability to the ecolabel and less to the focal firm.

Hence, we derive the following hypothesis:

H5: The decreased responsibility attributed to a focal firm when a crisis occurs following the use of ecolabels (compared to no ecolabel), is further reduced when a crisis occurs in outsourced (vs. integrated) production.

2.3.7 Responsibility Attribution and Purchase Intentions

Our final hypothesis concerns the consequences of the responsibility attributed, from which we seek to capture the effect on purchase intentions. The hypothesis will be derived so that it may be measured using a Pearson correlation test.

Attribution of responsibility triggers a process of emotional and behavioral reactions known from the attribution process (Weiner 1995). We also know that purchase intentions are categorized as behavioral intent rather than behavior (Spears and Singh 2004, 53-66). Also, the link between responsibility attribution and purchase intentions goes through emotions that guide attitudes as one of three elements (Allen et al. 2005) which again guides behavior through the mediation of behavioral intent (Ibid.). The mediator role as intent only increases or decreases the probability of behavior (Spears and Singh 2004, 53-66).

When we establish that increasing accountability causes negative emotions like blame (Hartmann and Moeller 2014, 281-294), we see that negative emotions may cause negative attitudes that cause negative behavioral intent (Allen et al. 2005). Hence an increase in

accountability should cause negative behavioral intent, meaning a drop in purchase intentions.

Hence we derive the following hypothesis:

H6: *The focal firm experiences reduced purchase intentions from consumers when attribution of responsibility increases, following a crisis in production.*

3.0 Methodology

Methodology is all about the choices made to answer the research questions truthfully (Johnson 2009, 19-32), from which we aim to clarify our reasoning in this section. We will go through our research design, the population of the study, the procedure from which we collected data, how we developed the case and how our theoretical constructs were operationalized to empirically measurable variables. Lastly, we show how we performed a factor analysis and structured the data for analysis. The validity and reliability of the study are discussed as the decisions concern them, not allocated to their own sections.

The cornerstone of the research methodology is the search for truth as it stands with the absence of any other underlying agendas (Ibid.). Hence, we also seek to reason how truth was preserved throughout the experiment performed.

3.1 Research Design

As our research questions define, this paper aims to describe *how* certain independent variables affect a set of dependent variables and, as such, seeks to establish causal relations. To determine such relations, we needed empirical ground and thus created a quantitative study. Also, the causal effect needed to be separated from an almost infinite number of alternative influences (Johnson 2009, 19-32). As such, we sought to manipulate only the independent variables while leaving everything else as similar as possible, which led us to an experimental research design. Such a design also counters the argument of reverse causality (Nathan et al. 2012). This design had to do with our level of ambition (Gripsrud et al. 2016). We did not simply want to find a relationship; we also wanted to know causal direction so that we could say what caused the observations. Also, perhaps the most considerable advantage of an experiment is the internal validity, that is, the ability to isolate and identify causal links (Godwin et al. 2003, 1-7).

In all, we had three independent variables and hence three different manipulations. To test all these effects in the same case, we performed a quantitative 2x2x2 between-subject experimental research design, providing a total of 8 experimental groups.
The experiment was conducted by creating a case with an artificial sustainability crisis presented to the respondents in an artificial news article. This approach was the same method

used in (Hartmann and Moeller 2014, 281-294, 281-294) and (Hjelset and Skage 2020). We provide a thorough description of the case further down.

3.2 Population

Our target population was every Norwegian consumer above the Norwegian age of maturity, 18 years. This age limit had to do with the simplification of the legal aspects of collecting data and ensuring that the respondents were legally able to make their own consumer decisions with as few constraints as possible. This was so that our study was not influenced by the purchase intentions of those that will never or rarely convert these intentions to actions. Some constraints yet remained, like the age limits on purchasing certain things like strong alcohol, and we also failed to capture those that a legal statement had disempowered. The case, however, should have bypassed most of such constraints.

3.3 Sampling Procedure

3.3.1 Sampling Size

In a quantitative study, more respondents are needed to require sufficient empirical ground (Budiu and Moran 2021). We had eight experimental groups from which we strived to achieve a good normal distribution in each group. The right number of respondents may be seen as a trade-off between empirical ground and available time and effort (Ibid.). Ideally, we should have sampled the entire population, but that was impossible given the population size and the resources available for the study.

Hence we decided we had the resources to acquire 400 respondents, which provided 50 respondents to each group and 200 respondents to each tested stimulus. According to (Gripsrud et al. 2016, 178), this should have provided normally distributed groups, that is, groups with relevant traits equally distributed on both sides of the mean value and with a high enough number of respondents not to be manipulated by outliers.

3.3.2 Sampling Method

Again, due to the resources of this paper, we decided to use convenience sampling (Gripsrud et al. 2016, 173-174). This sampling technique is a non-probability sampling method and is

not preferred in quantitative studies as it can never generate representativity on behalf of the target population (Ibid., 174). Nor does it allow for replicability, as the reliability of the sample is low (Scholzt 2021). In addition, the technique is victim to an infinite number of biases from which the researchers have little or no control (Ibid.).

The problem with such a sampling technique in our case was the ability to generalize, that is, external validity. This is because of the lack of representativity mentioned above. The misrepresentation may have influenced the strength and maybe even the direction of our measurements relative to the measurements we would have obtained from testing the entire target population. This depended on how biased the sample was and how the sample perceived the stimuli relative to the target population. Hence, the external validity was weakened. As discussed below (in sampling mediums), we applied several different techniques to reach various respondents to address this issue. Also, those exposed to the study who decided to answer may have differed in relevant traits from those who declined to answer.

On the other hand, the technique allowed us to reach many respondents with little time and effort, a scarce factor in this study. Hence, we achieved a solid empirical foundation even in a pretty limited timeframe. The biases mentioned were also countered mainly by the randomization into different groups, except for the problem of generalizability to the target population. Nevertheless, even though the sample was not representative, the randomization should have created eight almost identical groups with a large number of respondents, from which the difference in answers should be due to different manipulations only, working to preserve the internal validity, which is of the essence in an experimental study (Godwin et al. 2003, 1-7).

3.3.3 Sampling Mediums

The survey was developed in the survey-program Qualtrics and conducted primarily digitally but also on paper. We published a link to the survey on the two digital platforms, Linked-in and Reddit, as we managed to reach many people there. Also, these are platforms for “weak ties,” meaning we primarily encountered people we did not know really well and, as such, hoped to avoid hypothesis guessing. This method fitted well with the theory of our sampling method, as we had no control over who decided to answer as opposed to ignoring it.

Also, the study was conveyed through QR codes (scanned from paper, conducted digitally) and handed out in paper form in public places. Among others, in the city center of Bergen, along with cafés, libraries, shopping malls and the airport (Flesland). About 75% of the respondents were obtained this way (the remaining online). The variations of places and mediums were used to obtain a sample that was not too biased (in that more of the target population was reached) so that the nearly identical experimental groups would not perceive the manipulations very differently from the target population.

3.4 Instrumentation (Operationalization)

From our main research question, we had two dependent variables that needed to be defined, namely “responsibility attribution” and “purchase intentions". This section shows how we decomposed these terms into empirically measurable variables using question batteries from the literature.

As (Hartmann and Moeller 2014, 281-294) performed a pretty similar study concerning the variable on organizational distance and measured consumers' responsibility attributions regarding supply chains, we wanted to use the same measurement in our research so that the literature is as concise in its measurements as possible. However, we had some critics on this battery, from which we sought to make adjustments. As shown in **Table 2** below, the original battery used the word “responsible.” However, this could easily have been misinterpreted as being responsible (positive) instead of being responsible for an outcome (negative). We found the solution to this confusion by looking at (Rudolpf 2016, 106–130), who says accountability increases when the level of responsibility for an outcome intensifies; hence, we used the word “accountable” as a substitute for “responsible” to avoid misinterpretation and confusion. This means we made the same adjustment to wording for the respondents as we did in this paper not to confuse either respondents or readers of this article.

Also, the battery initially had three measurement items. We risked being left with only two items and a narrow measurement if one of the items was misunderstood and needed to be removed from the analysis. Followingly, we sought to add another item not to be vulnerable to misunderstandings.

(Rickard 2014, 514-528) tested for responsibility attributions in relation to accidents in U.S parks. He distinguishes between items measuring external and internal attribution, from which we were interested in internal attributions (towards an actor, not the surroundings). Among others, the item of excessive risk-taking was used to measure internal attribution, and followingly, we included this item in our question battery with a slite formulation adjustment to fit our context, as shown in **Table 2.**

We then concluded that the dependent variable "responsibility attribution" was a product of the measurement of the questions on the right side in the figure below (original battery on the left side):

Question Battery: Responsibility Attribution			
Please indicate the extent to which you agree with the following statements about the previously described situation:			
Q1	*"Focal firm"* is responsible	Q1	*"Focal firm"* is accountable
Q2	*"Focal firm"* is careless	Q2	*"Focal firm"* is careless
Q3	*"Focal firm"* is thoughtless	Q3	*"Focal firm"* is thoughtless
		Q4	*"Focal firm"* has taken excessive risks
Likert Scale 1-7 (1 = Totally Disagree and 7 = Totally Agree)			

Table 2: Question Battery Responsibility Attribution

As these questions were to be presented to Norwegian consumers, we translated them in accordance with (Hjelset and Skage 2020) as shown in **Table 4** below.

Then we had the dependent variable "purchase intentions," which in literature are operationalized in variables measuring traditional purchase intentions as in (Coyle and Thornson 2001, 65-77; Prendergast et al. 2010; Wu and Chen 2014; Putrevu and Lord 2013, 77-91), but also green purchase intentions (Huang and Yang 2012).

Even though we measured reactions from a sustainability crisis and, hence, some sort of decline in green purchase intentions, we wanted to use the operationalization of traditional purchase intentions. This is because it is claimed to be a behavioral intent (the probability of a purchase) (Spears and Singh 2004, 53-66). Hence, it was the best predictor of economic

damage caused by the crisis, thus documenting the interdependence of the environment and economy.

We then had a question battery consisting of four claims (Coyle and Thronson 2001, 65-77). However, this battery also needed to be criticized. The fourth item concerned the sphere of recommendations rather than the individual's own behavioral intent. Hence, we wanted to substitute this item with another from the literature that measures purchase intentions. (Wu and Chen 2014) measured the purchase intentions using, among others, the item of paying more for a product. We saw this item as highly relevant, as it documents a willingness to acquire a particular product rather than equivalent products in the market. Thus, when purchase intentions towards a specific brand decrease, we expected this item to be hit especially hard.

We then concluded that the dependent variable "Purchase Intentions" was a product of the measurement of the questions on the right side in the figure below (original battery on the left side):

Question Battery: Purchase Intentions			
Please imagine a world where Fresh Fruit inc. and the described situation is real. Please indicate the extent to which you agree with the following statements about the previously described situation:			
Q1	It is very likely that i will buy the "*product*"	Q1	It is very likely that i will buy the "*product*"
Q2	I will purchase the "*product*" next time I need "*product*"	Q2	I will purchase the "*product*" next time I need "*product*"
Q3	I will definitely try the "*product*"	Q3	I will definitely try the "*product*"
Q4	Suppose a friend called you last night to get your advice in his/her search for a "*product*". Would you recommend him/her to buy the "*product*"?	Q4	I will pay more money for "*product*"
Likert Scale 1-7 (1 = Totally Disagree and 7 = Totally Agree)			

Table 3: Question Battery Purchase Intentions

In all, we derived the questions and measurement scales from literature as shown below, from which we translated the latter question battery freely. Also, while not yet introduced, our case made use of the artificial brand "Fresh Fruit inc." which is an international supplier of fruit.

Hence, this artificial focal firm and its products are included in the translated version of the question batteries. In addition, some adjustments were made following a pre-test, which is also incorporated in the translated version and marked with "**."

Translated Question Batteri			
English		**Norwegian**	
Question Battery: Responsibility Attribution			
Please indicate the extent to which you agree with the following statements about the previously described situation.		Vennligst ta stilling til i hvilken grad du er enig i de følgende påstandene om situasjonen ovenfor.	
Q1 Q2 Q3 Q4	*"Focal firm"* is accountable *"Focal firm"* is careless *"Focal firm"* is thoughtless *"Focal firm"* has taken excessive risks	Q1 Q2 Q3 Q4	Fresh Fruit Inc. er å holde ansvarlig Fresh Fruit Inc. handlet likegyldig** Fresh Fruit Inc. handlet korttenkt** Fresh Fruit Inc. har tatt overdreven risiko
Sources: (Hartmann and Moeller 2014, 281-294) and (Hjelset and Skage 2020) (translation)			
Question Battery: Purchase Intentions			
Please imagine a world where Fresh Fruit inc. and the described situation is real. Please indicate the extent to which you agree in the following statements about the previously described situation.		Forestill deg en verden der Fresh Fruit inc. og situasjonen ovenfor er ekte. Vennligst ta stilling til i hvilken grad du er enig i de følgende påstandene om situasjonen ovenfor.	
Q1 Q2 Q3 Q4	It is very likely that i will buy the "*product*" I will purchase the "*product*" next time I need "*product*" I will definitely try the "*product*" I will pay more money for "*product*"	Q1 Q2 Q3 Q4	Det er veldig sannsynlig at jeg vil kjøpe frukt og grønnsaker fra Fresh Fruit inc. Jeg vil kjøpe frukt og grønnsaker fra Fresh Fruit inc. neste gang jeg trenger frukt og grønnsaker Jeg vil definitivt prøve frukt og grønnsaker fra Fresh Fruit inc. Jeg vil betale mer penger for frukt fra Fresh Fruit Inc.
Sources: (Coyle and Thronson 2001, 65-77) and (Wu and Chen 2014)			
Likert Scale 1-7 (1 = Totally Disagree and 7 = Totally Agree)			

**Adjusted according to feedback from our pre-test.

Table 4: Translated Question Batteries

As reported below, the batteries were validated using factor analysis and Cronbach's alpha. They were also tested using a pre-test.

3.5 Pre-test

To ensure the clarity of our case and all questions, we performed a pre-test from which we let six people from our class take the survey as it stood. For the most part, they found the case easily readable and the questions easy to understand. However, two respondents reacted to two of the statements concerning responsibility attribution (the focal firm is careless and the focal firm is thoughtless). They told us they did not know whether to attribute responsibility based on the case alone or their overall impression of the firm. As the firm is anonymous, they felt a considerable lack of info.

Thus, we made a minor adjustment to these statements not to cause confusion and to ensure that the respondents attributed responsibility for this case alone and that we captured its isolated effect on purchase intentions. The pre-test resulted in changes to these statements only, from which we changed the formulation from “is” to “acted,” as shown in **Table 4** above and marked with “**.”

3.6 Data Collection Procedure

The study was formed in the survey program Qualtrics, and we posted the link to the survey online. The platforms used had an audience with primarily weak or no ties to the researchers of this paper to avoid hypothesis guessing as described above.

First, a page with information about the survey was introduced. It contained information about their anonymity, survey length in minutes, storing of data and they were informed that the age limit of this study was 18 years of age. (see **Appendix 1**)

All respondents were presented with a case that described the same crisis. This general introduction gave the respondents the same setting so that the point of departure was equal for all. Hence, different manipulations and nothing else should have caused every measurable difference in the questionnaire. The case and the reasoning behind its development are described further down.

The survey had a randomization feature on the three different stimuli that we had, which randomly assigned respondents to a total of 8 (2x2x2) different groups that should be equal in all relevant characteristics. However, we did not vary the order in which the stimuli were given and hence had no control over whether sequential effects were present or not. Maybe we would have seen different results by simply changing the order in which the stimuli were given. We could have divided each group into two "sub-groups" with the same stimuli in a different order to test for sequential effects, but this would have provided 16 different sub-groups with a weak empirical ground. The chance is that we would have made false conclusions based on outliers, so we skipped this test.

After stimuli, a manipulation check was introduced. It consisted of three questions, one for each stimulus, and were intended to check whether the respondents had understood the stimuli and that the manipulations worked as intended. They were given two options in each question, one for each possible outcome of the dichotomous variables. We further revisit the matter and assess the mismatch between what stimuli were given, what was understood, and how to go about it.

Lastly, the questionnaires were given and presented as reported above. The respondents had to answer eight questions divided into two question batteries. The batteries were presented in the order of the attribution process, starting with the attribution of responsibility and then how it influenced their purchase intentions.

3.7 Case

The case was written in Norwegian as it was presented to consumers in Norway only. Also, it was formed as a news article to mimic the way in which such a crisis is usually presented to consumers in the real world. This should have targeted the external validity and created an increased ability to generalize. We set the context on a fictional fruit farm in Florida, and the crisis was described as the destruction of a large mangrove forest due to irresponsible use of pesticides and fertilizers, which were washed downstream to the mangrove forest nearby. The final consequence of the destroyed forest was vast emissions of co2 that are usually contained in these trees (McSweeny 2018).

To add scale to the crisis, the co2 release was described as equivalent to the yearly emissions from 3,8 million cars, which is realistic to the amount of forest destroyed in the case. This degree of severity was also intended to mirror some severe crises like Rana Plaza or Deepwater Horizon, which is the scope of this paper. However, we do not know how different degrees of severity affects the degree of accountability or casual search through the other dimensions of responsibility attribution. We know that it is positively correlated (Weiner 1995), but not whether the relationship is linear, convex or concave, putting restrictions on the generalizability of the study to other crises with different levels of severity.
Finally, the farm was said to produce for the artificial company "Fresh Fruit inc.", which was described as an international supplier of vegetables.

The crisis described in the case is a consequence of irresponsible farming with a rather indirect causal link. The crisis was described this way to remove the guilt from stand-alone employees in the company, which (Hartmann and Moeller 2014, 281-294) found to mitigate corporate accountability. It is reasonable to think that consumers could attribute a shorter causal link to the person(s) carrying it out rather than the company as a whole (Like if the crisis was caused by the employees directly disposing of farm waste in the mangrove forests). Also, famous crises like the deepwater horizon had indirect causal links like poor well-maintenance leading to a large oil spill (CSB 2014). Either way, all experimental groups were presented with that same causal link, and hence, the difference in answers should again be due to different stimuli.

In this case, the choice to go for fruit and vegetables relied upon its neutral impression as a standard commodity and the fact that most consumers consume this good, giving them the ability actually to express their purchase intentions. Also, we did not want to use a commodity that typically suffers from biased attitudes, or that is subject to political tension (possibly like oil, coal or weapons), as the attribution theory is dynamic and subject to previous experiences of the observer (Lau 1984). While the firm was anonymous, the product and the branch were not. Hence, we did not want to pick a branch with extreme presets to avoid the "pollution" of our measurements. These presets might not have allowed for much breadth of variation due to a "first impression bias," meaning people are strongly influenced by the initial information (Lim et al. 2000, 115-136), and we found the fruit to appear neutral.

Also, the company was made fictional to avoid the measurements from being polluted by pre-existing brand attitudes, increasing the study's internal validity. The problem, however, was to establish brand attitudes in such a short case, so maybe the range of variation was undermined in that every respondent felt distanced from the brand. As such, the case may have compromised the external validity to the real world where brand attitudes exist.

The case, as it was presented to the respondents in Norwegian, is shown below.

Case - General Introduction
Miljøskandale for Fresh Fruits Inc. - Store ødeleggelser av mangrovetrær *En stor fruktfarm i Florida har rystet solskinnsstaten etter svært uansvarlig drift. Ødeleggelsene er enorme og medfører store irreversible utslipp av CO2.* Et satellittbilde av floraen i det rurale Florida har avslørt store områder med døde mangrovetrær. Ifølge den amerikanske miljøetaten svarer det ødelagte området til ca 12% av hele den kjente mangrove-bestanden i landet. Etaten er sjokkert og har krevd øyeblikkelig nedstengning av den ansvarlige farmen som årlig produserer store mengder eksotisk frukt. Ulykken skyldes at farmen har drevet utbredt bruk av giftige sprøytemidler og gjødsling som har blitt med vassdraget ned til den nærliggende mangroveskogen. Kjemikaliene har over tid ført til massedød av trærne og derav store utslipp av co2. Utslippet kommer av at mangrovetrær binder mye co2 som så slippes ut når de dør, og er i dette tilfellet kalkulert å svare til et års utslipp fra 3,8 millioner biler. I tillegg til å binde store mengder co2 er mangroveskogen også vugge for en rekke dyrearter og virker stabiliserende for klimaet på kysten. Fresh fruit inc. er en internasjonal leverandør av diverse frukt og grønnsaker til husholdninger og leverer også til det norske markedet. Farmen i Florida er én av de mange fruktfarmene de har globalt.

Table 5: The Presented Case

3.8 Stimuli

There were three different stimuli in this paper. We wrote these pretty independently from pre-existing literature because we had the capacity to pre-test all of them and hence the opportunity to filter out lousy phrasing and descriptions subject to misunderstanding. All of the stimuli were phrased as similarly as possible. The difference in responses should then be due to different information (stimuli) rather than phrasing and its effect on perception, targeting the study's internal validity.

For the stimulus concerning outsourcing to be consistent with the term outsourcing, we informed the respondents that the production previously had been integrated, then put on contract later on. The supplier on contract was called “Sunny Farm Co.” which is an anonymous name with reference to “the sunny state,” Florida.

The stimulus on marketing was written either with care for nature and future generations as sales arguments, derived from the definition of sustainability according to the Brundtland Commission (Brundtland Commission 1987) (Green) or purely sales-oriented marketing (traditional). However, we wrote the stimulus on ecolabel either as an excerpt from their artificial website displaying logo and certification criteria or in the case of no ecolabel; we simply stated that they did not have a certifying third party. As the logo is part of the ecolabels green marketing (Tang et al. 2004, 85-105), we created our own fictional logo with the anonymous name “Green Harvest". Both name, logo and the certification criteria concerned sustainable practices in farming, directly appealing to the crisis.

The different stimuli are shown below as presented to the respondents in Norwegian:

Integration (A)	Farmen beskrevet ovenfor eies og driftes av Fresh Fruit inc. der de benytter egne arbeidere og står selv for innkjøp og bruk av redskaper og innsatsfaktorer som de nevnte sprøytemidlene og gjødslingen.	
Outsourcing (B)	Tradisjonelt har Fresh Fruit inc. avlet eksotiske frukter selv, men farmen beskrevet ovenfor ble for lenge siden satt på kontrakt til selskapet Sunny Farm Co. som fortsatt eier og drifter den. Det er arbeiderne til Sunny Farm Co. som benyttes her og det er også dette selskapet som står for innkjøp og bruk av redskaper og innsatsfaktorer som de nevnte sprøytemidlene og gjødslingen	
Ecolabel\Marketing	**Green Marketing (A)**	**Traditional Marketing (B)**
Ecolabel (A)	Nedenfor ser du en reklameannonse for Fresh Fruit inc.: *"Fresh Fruit inc. er din bærekraftige leverandør av frukt og grønt. Hver dag går vi på jobb for å dyrke i samspill med naturen, for å kunne levere ferske produkter til deg og samtidig ta vare på klimaet. Slik kan vi tjene både deg, og generasjonene som kommer."* I tillegg er produktene fra Fresh Fruit inc. sertifisert av en uavhengig tredjepart. Du finner også deres logo på frukten der de går god for produksjonen. Under ser du et utdrag fra tredjeparts nettside: "Green Harvest veileder forbrukerne til å ta grønnere valg og sertifiserer produksjonen på våre merkede produkter etter følgende kriterier: * Ingen avskogning eller naturskade * Konservering av artsmangfoldet * Ingen skadelige midler eller kjemikalier"	Nedenfor ser du en reklameannonse for Fresh Fruit inc.: *"Fresh Fruit inc. er din leverandør av frukt og grønt. Hver dag går vi på jobb for å dyrke den ferskeste frukten og en smaksopplevelse verdt å streve for. Husk å se etter vårt varemerke neste gang du handler"* I tillegg er produktene fra Fresh Fruit inc. sertifisert av en uavhengig tredjepart. Du finner også deres logo på frukten der de går god for produksjonen. Under ser du et utdrag fra tredjeparts nettside: "Green Harvest veileder forbrukerne til å ta grønnere valg og sertifiserer produksjonen på våre merkede produkter etter følgende kriterier: * Ingen avskogning eller naturskade * Konservering av artsmangfoldet * Ingen skadelige midler eller kjemikalier"
No Ecolabel (B)	Nedenfor ser du en reklameannonse for Fresh Fruit inc.: *"Fresh Fruit inc. er din bærekraftige leverandør av frukt og grønt. Hver dag går vi på jobb for å dyrke i samspill med naturen, for å kunne levere ferske produkter til deg og samtidig ta vare på klimaet. Slik kan vi tjene både deg, og generasjonene som kommer."* I tillegg til reklameannonsen får du også vite at det ikke finnes noen tredjepartssertifisering av Fresh Fruit inc. sine produkter eller hvordan de er produsert.	Nedenfor ser du en reklameannonse for Fresh Fruit inc.: *"Fresh Fruit inc. er din leverandør av frukt og grønt. Hver dag går vi på jobb for å dyrke den ferskeste frukten og en smaksopplevelse verdt å streve for. Husk å se etter vårt varemerke neste gang du handler"* I tillegg til reklameannonsen får du også vite at det ikke finnes noen tredjepartssertifisering av Fresh Fruit inc. sine produkter eller hvordan de er produsert.

Table 6: Stimuli According to Experimental Groups

3.8.1 Experimental Groups

The stimuli above provide us with the following experimental groups:

1. **AAA** (integration - green marketing - ecolabel)
2. **AAB** (integration - green marketing - no ecolabel)
3. **ABA** (integration - traditional marketing - ecolabel)
4. **ABB** (integration - traditional marketing - no ecolabel)
5. **BAA** (outsourcing - green marketing - ecolabel)
6. **BAB** (outsourcing - green marketing - no ecolabel)
7. **BBA** (outsourcing - traditional marketing - ecolabel)
8. **BBB** (outsourcing - traditional marketing - no ecolabel)

3.9 Preparing the Data for Analysis

The survey, when completed, rendered all respondents in a data file in the survey program. This had to be exported to SPSS, so that we may analyze them. Qualtrics does not specify what randomization block was assigned to what respondent by default, so these settings were adjusted to determine the experimental group and what stimuli were given to each respondent. The result from the exportation was an equivalent datasheet in SPSS, including eight data columns, one for each experimental group, indicating which respondent was assigned to what group.

However, the datasheet contained missing data on several rows, some partly missing and some missing entirely. We remedied the problem with missing data in accordance with theory.

3.9.1 Missing Data

According to (Hair et al. 2010), evaluating the extent of missing data is essential. If the extent, as an overall evaluation, is low enough only to impact the results in a negligible manner, all remedy techniques may be used, including the deletion of data (Ibid.). Also, there is a rule of thumb that one can meet missing data below 10% with any imputation technique (Ibid.). In our case, we had 393 responses, of which 38 of them contained missing data. However, the missing data appeared not to be equally distributed between all experimental groups, but at least all experimental groups had cases of missing data; hence, we suspected

this data to be missing in a non-random fashion. However, no statistical test was done to uncover possible significant differences in missing data between groups, as the total amount of data missing was this low.

Finally, the deletion of missing data is a trade-off between the advantage of reducing missing data and the extent to which the deletion entails a reduction in the empirical ground (Hair et al. 2010). In our case, 35 of the 38 responses containing missing data were non-responses. Hence, the deletion of this data entailed a considerable reduction of missing data compared to the amount of empirical ground lost. All things considered, these 38 responses were removed, leaving us with 358 complete responses distributed between the eight experimental groups, also called a complete case approach, which is not preferable statistically, but resource-wise (Ibid.).

3.10 Factor Analysis and Cronbach's Alpha

Respondents' assessments are not random; they weigh certain factors, sometimes just one, but often several, on a series of questions measuring the same construct. These are unidimensional and multidimensional constructs, respectively (Pelz 2022, Chp 6). Each dimension may be called a factor, subject to be discovered with a factor analysis whose purpose is to find the underlying structure of the variables measuring the construct (Hair et al. 2010). Also, the constructs in this study are well tested in the literature. Thus, a confirmatory factor analysis (CFA) was preferable, as opposed to an exploratory factor analysis (EFA), which is recommended when the researcher has no hypotheses about the underlying structure (Suhr 2022).

However, CFA requires the plug-in AMOS in SPSS or LISREL that were not accessible at the Norwegian School of Economics. Thus, an EFA was conducted instead, the next best thing. Usually, when working deductively, a measurement theory is needed, from which the objective is to confirm this theory (Darhamsyah 2019, 17-24). We see that there are aspects of these constructs: responsibility attribution is an evaluation of the four dimensions as mentioned above (Hartmann and Moeller 2014, 281-294), and purchase intentions is an evaluation according to the "theory of planned behavior" of attitude, subjective norm and perceived behavioral control (Yue et al. 2020). However, we only had four measurement

items for each construct, and no question batteries fit to measure any eventual sub-dimensions.

Hence, we believed that four measurement items were not sufficient to capture such a complex assembly of aspects, so these aspects should never constitute several factors, supported by (Hjelset and Skage 2020) as well, which found responsibility attribution to be a unidimensional construct. Also, we argue that the constructs have face validity in that the items make sense and should have constituted a measurement of the respective constructs. Consequently, we treated these as unidimensional constructs and only ran a factor analysis for both constructs simultaneously. This was to verify that the respondents have differentiated between the constructs and to establish convergent and discriminant validity.

Concerning the individual responses, one may perceive them as bullets on a target, creating clusters on certain hotspots. Factor analysis aims to uncover a “line of best fit” for these clusters (Albano 2020, Chp 8). The analyst may also rotate these lines to maximize the best fit and minimize cross-loadings. The rotations can both be oblique and orthogonal, depending on whether the factors are assumed to be correlated (oblique rotation) or uncorrelated (orthogonal rotation). The former bends the axes' angles and allows the factors to correlate, while the latter maintains a 90-degree angle on the axes between factors (Osborne 2015).

In the real world, the two rotation types will generate equal solutions only in the (unlikely) case that the factors are 100% uncorrelated (Osborne 2015). If the factors do correlate, an oblique rotation will produce a more precise result (Ibid.). As factors usually tend to correlate in the real world, and this study used real-world data, we applied an oblique rotation. Direct oblimin is an oblique rotation technique that may be selected in SPSS (Brown 2009, 20-25) and thus applied to this paper.

In addition, we have Kaiser's criterion for factor extraction, using a lower limit for explanatory power, from which all latent dimensions with an explanatory power greater than one variable are recommended for extraction (Braeken and van Assen 2017, 450-466). We could effortlessly select this criterion in the EFA in SPSS, and so the criterion was applied to the analysis.

Lastly, we included a measure of the question batteries' internal consistency (reliability) using Cronbach's alpha. Cronbach's alpha is a test that measures the degree of correlation between items intended to measure the same construct, and the alpha score, denominated between 0 and 1, increases as the error variance decreases (Tavakol and Dennick 2011, 53–55). The alpha concludes the internal consistency, that is, the extent to which the items measure the same construct consistently, and is also a property of the scores obtained from a specific sample; as such, a scientist should never rely on pre-fabricated alpha scores but should test every time (Ibid.).

3.10.3 Analysis of both Constructs Together

The analysis measured both constructs together to test whether the respondents actually switched evaluations by moving from one question battery to the next. The extraction method was set to PCA, eigenvalue criterion to a value of 1, and rotation to direct oblimin.

Factor Analysis of Both Constructs		
Til hvilken grad er du enig i følgende påstander?	**Factor**	
	1	**2**
Jeg vil kjøpe frukt og grønt neste gang jeg trenger det fra Fresh Fruit Inc	0,876	- 0,383
Det er veldig sannsynlig at jeg vil kjøpe frukt og grønt fra Fresh Fruit Inc	0,864	- 0,451
Jeg vil definitivt prøve Fresh Fruit Inc sine frukt og grønnsaker	0,846	- 0,462
Jeg vil betale mer penger for frukt og grønt fra Fresh Fruit Inc	0,564	- 0,271
Fresh Fruit Inc handlet korttenkt	-0,461	0,875
Fresh Fruit Inc har tatt overdreven risiko	-0,450	0,828
Fresh Fruit Inc handlet likegyldig	-0,354	0,828
Fresh Fruit Inc er å holde ansvarlig	-0,459	0,344

Table 7: Factor Analysis of Both Constructs Together

As we can see, the factor analysis found only one dimension for each construct when measured together.

According to (Gripsrud, et al. 2016, 388), a factor loading of 0,5 is considered acceptable, but 0,7 is preferable. Items that do not load sufficiently or have significant cross-loadings are candidates for deletion (Ibid.); hence, the item “Fresh Fruit inc er å holde ansvarlig" was deleted as it did not satisfy even the lowest cut off score.

With three items left to measure responsibility attribution, we conducted a new factor analysis with both constructs to conclude a final analysis for construct validity. Cronbach’s alpha was added, and measured for each question battery separately. (see **Appendix 2**)

Factor Analysis of Both Constructs			
Til hvilken grad er du enig i følgende påstander?	**Factor**		**Cronbach’s Alpha**
	1	**2**	
Jeg vil kjøpe frukt og grønt neste gang jeg trenger det fra Fresh Fruit Inc	0,876	- 0,383	0,810
Det er veldig sannsynlig at jeg vil kjøpe frukt og grønt fra Fresh Fruit Inc	0,864	- 0,451	
Jeg vil definitivt prøve Fresh Fruit Inc sine frukt og grønnsaker	0,846	- 0,462	
Jeg vil betale mer penger for frukt og grønt fra Fresh Fruit Inc	0,564	- 0,271	
Fresh Fruit Inc handlet korttenkt	-0,461	0,875	0,797
Fresh Fruit Inc har tatt overdreven risiko	-0,450	0,828	
Fresh Fruit Inc handlet likegyldig	-0,354	0,828	

Table 8: Factor Analysis and Cronbach’s Alpha

All measurement items loaded significantly on one factor. Also, all items meant to measure the same construct loaded strongly on the same factor from which convergent validity was established (Sajidan and Gunarhadi 2020), with no significant cross-loadings, also ensuring discriminant validity (Trochim 2022).

As shown in (**Appendix 2**), we had the opportunity to marginally improve the alpha for purchase intentions by deleting the item “Jeg vil betale mer penger for frukt og grønt fra

Fresh Fruit Inc." Still, we decided that the benefit of keeping four measurement items trumped the advantage of the marginal improvement in reliability.

3.11 Coding Variables

In this section, we briefly clarify how the variables were computed so that they could be applied in the data analysis.

3.11.1 Independent Variables

Each experimental group had one data column, denominated by "1" if the respondent was assigned to this group, from which we needed to extract the stimuli and create a data column for each independent variable consisting of two possible stimuli. .

Because the stimuli were distributed as shown in section "3.8 Stimuli", the dichotomous variables were computed:

Integration (**A**)/ Outsourcing (**B**)	Green Marketing (**A**)/ Traditional Marketing(**B**)	Ecolabel(**A**)/ No Ecolabel(**B**)
AAA + **A**BA + **A**AB+ **A**BB > 0	A**A**A + A**A**B + B**A**A+B**A**B > 0	AA**A** + BA**A** + AB**A** + BB**A > 0**
BAA + **B**BA + **B**AB+**B**BB > 0	A**B**A + A**B**B + B**B**A + B**B**B > 0	AA**B** + BA**B** + AB**B** + BB**B > 0**

Table 9: Independent Variable Coding

The variables were given the value 1 for A and 0 for B:

Independent variable	If value 1	If value 0
Integration/Outsourcing	Integration	Outsourcing
Green Marketing/Traditional Marketing	Green Marketing	Traditional Marketing
Ecolabel/No Ecolabel	Ecolabel	No ecolabel

Table 10: Independent Variable Values

3.11.2 Dependent Variable Responsibility Attribution

The purpose of this variable was to reflect the best possible way, the extent to which the respondents attributed responsibility to the focal firm. We summed the score of the three

questions in the battery and divided them by three to conclude an average score for the measurement items. Formula: (Score 1 + Score 2 + Score 3)/3. The formula gave the variable an output range of 1-7 as with the Likert scale.

Because respondents typically give different weights and importance to different questions, one may answer to this by incorporating the factor loadings from the factor analysis, called factor scores (DiStefano et al. 2009). However, this evaluation relies on the degree to which the factor loadings differ (Grace-Martin et al. 2016). As seen in the factor loadings on responsibility attribution, the loadings were almost equal. Consequently, the factors were not incorporated in the variable, as factor scores are subject to choices of rotation and extraction methods which may hamper an accurate representation of responsibility attribution (DiStefano et al. 2009).

3.11.3 Dependent Variable Purchase Intentions

As seen from the factor analysis, one of the factors did not have the same explanatory power as the rest. The minimal requirements for the factor loadings are 0,5 (Gripsrud et al. 2016, 388), meaning that the loading was acceptable.

However, this question could have been weighted less than the other questions to compensate for the lack of explanatory power. Still, for the sake of consistency and compatibility, we decided to use the average of the four questions to calculate this variable, the same way as with the other dependent variable. Formula: (score 1 + score 2 + score 3 + score 4)/4

4.0 Analysis

Data analysis is about determining relationships between the tested variables and the objective presentation of their nature (Johnson 2009, 19-32). Hence, we aim to thoroughly present the numbers without discussions and without drawing conclusions in this section. Nevertheless, we will determine whether the hypotheses were confirmed or not. The hypotheses will be accepted or rejected individually whenever we have presented enough data to do so. A final summarization will be made, showing the whole conceptual model with all hypotheses included. Also, there are no research questions that have not been converted to hypotheses; hence, no additional concrete answers are sought.

Lastly, all p-values in SPSS except for the Dunnett tests in post-hocs (where you can choose to specify a one-tailed p-value) are denoted in two-tailed p-values (IBM 2020). As this study, without exception, contains one-sided hypotheses, all p-values reported from SPSS concerning our hypotheses will be divided by two in this study so that one-tailed p-values are reported only. Like Levene's test below, data that does not concern our one-sided hypotheses will be reported with a two-tailed p-value.

4.1 Manipulation Check

At the outset, we see fit to report the manipulation check to determine the extent to which the respondents understood and were affected by the different stimuli. Bear in mind that the stimuli may have very well manipulated them in the way intended without them understanding the manipulation check and hence have provided the wrong answer.

The manipulation check is illustrated below.

Question (Norwegian)	Question (English)	Answer options
Fresh Fruit Inc, eier og driver farmen selv	Fresh Fruit Inc, owns and operates the farm itself	YES/NO
Fresh Fruit Inc, markedsfører seg som bærekraftige	Fresh Fruit Inc, markets itself as sustainable	YES/NO
Fresh Fruit Inc, har et sertifiseringssamarbeid	Fresh Fruit Inc, has a certification partnership	YES/NO

Table 11: Manipulation Check

The relationship between assigned and reported manipulations were as follows:

Stimuli	Assigned	Perceived	Difference
Integrated	184	198	-14
Outsourced	174	160	14
Green marketing	183	248	-65
Traditional marketing	175	110	65
Ecolabel	183	200	-17
No third party	175	158	17

Table 12: Manipulation Check Assigned vs Reported

The column “Assigned” describes how many manipulations of the respective types were assigned by the survey program and hence how many exposures these stimuli have. The next column, “Perceived,” describes how many respondents believed to be exposed to the respective stimulus. The differences are computed (assigned - perceived) and explain how much the number of assignments deviates from the perceived number.

There will often be some misunderstandings, and most of these differences are equivalent to the misunderstandings of manipulation checks in other studies (Hjelset and Skage 2020). However, a quite noticeable difference was found in the case of marketing, implying that an

equally prominent part of the respondents may have misunderstood the stimuli and may not have been manipulated in the way intended. While not yet presented, we found the hypothesis concerning marketing (H2) not significant, which may have been caused by misunderstood stimuli. However, we also had many respondents who understood their green and traditional marketing manipulation, so we wanted to test these with a t-test. To drop respondents who fail the manipulation check is a rather common way of solving the issue of failed manipulation checks (Aronow et al. 2016). Still, it also entails a bias in that other treatment arms may be asymmetrically divided between the groups cleared of failed responses (Ibid.). However, it should be a great indicator if (H2) was rightfully rejected in our study.

The variables for this t-test were coded so that those who both were assigned and perceived green marketing got the value 1, and those who were assigned and perceived traditional marketing got the value 2. Hence, there was alignment between how they were manipulated and what they perceived. This coding created group 1 (green marketing, successfully manipulated) and group 2 (traditional marketing, successfully manipulated) as input for a t-test.

The coding isolated from those who misunderstood the stimuli. The objective was to see if there were significant differences in responsibility attribution between those who received and understood the manipulation of “green marketing” as opposed to those who received and understood the manipulation of “traditional marketing.”

The results concluded with no significant difference between the groups, supporting the findings for (H2) from the ANOVA test further down where all respondents were included. P-value for the t-test was 0,77 which makes the one-tailed p-value: 0,77/2 = 0,385. (See **Appendix 3**, Red marking).

As a final comment, it is not unlikely that the respondents who misunderstood the manipulation check have been manipulated in the way intended but failed to “know the name” of their manipulations and hence have provided the wrong answers. Also, far more have perceived their manipulation to be green marketing rather than traditional marketing; this makes sense, as there are cases of those who were assigned traditional marketing, but also got the case of ecolabel which per definition is, and gives the impression of, green marketing (Moravcikova et al. 2017). Accordingly, The bias of asymmetrical distribution of

treatment arms (Aronow et al. 2016) may have manifested itself in the form of a lower degree of ecolabel stimuli among those who successfully reported traditional marketing. Either way, the t-test concluded that there were no significant differences between those who, without question, were manipulated in the way intended. Both the t-test (without respondents who failed the manipulation check) and the ANOVA (with all respondents) provided a strong rejection of (H2), from which we do not deem it necessary to discuss further nuances.

4.2 Three-way ANOVA

One dependent variable was tested using three independent variables; hence, a three-way ANOVA was applied to determine the relationship between these variables (Hair et al. 2010). The ANOVA also reported interacting effects and allowed us to determine the interaction hypotheses.

4.2.1 Pre Requirements for ANOVA

To apply an ANOVA analysis, certain criteria must be met. According to (Hair et al. 2010), these factors include independent observations, normality and homogeneity.
First, the measurements must be based on the same scale at equal intervals. Our measurements were done at a 1-7 Likert scale, which means that all measurements should meet this criterion.

Next, each variable must be measured with a minimum of two groups (Statistics Solutions 2022), from which we measured two different owner groups, two different marketing groups and two different third-party groups. Furthermore, the observations should be independent, which our observations were because each version of the experiment was assigned to different experimental groups, and each experimental group only responded to one version. There should also be a close to equal group size and normal distribution in each group (Ibid.), which we had, following the survey program's random distribution of 358 respondents.

Lastly, there should be a homogeneous variance between the groups. This was tested with Levene's test of equality of variances. However, this test showed that the null hypothesis of equal variance across groups was rejected ($p<0,05$), and we could not conclude that there was a homogeneous variance between our experimental groups (see Levene's test in **Appendix 4**). According to (Pallant 2020, 215), analysis of variance is very robust to violations of this

assumption, provided that the sizes of our groups are reasonably similar (e.g., Largest/smallest = 1,5; Stevens 1996, 249). In our case, the groups were almost equal in size and normally distributed, which means the analysis should be robust to this violation, and we could perform a reliable three-way ANOVA (Pallant 2020, 216).

ANOVA is shown below (also see **Appendix 5**), and descriptive statistics are added both by numbers and drawn graphically to allow for easier interpretations. (See **Appendix 6**)

Tests of Between-Subjects Effects	
Source	**Sig.**
Integration/Outsourced (**A**)	**< 0,001**
Green Marketing/Traditional Marketing (**B**)	0,674
Ecolabel/No Ecolabel (**C**)	**< 0,001**
Interaction effects	
(A) * (B)	0,966
(A) * (C)	0,692
Adjusted R Squared = **0,180**	

Table 13: ANOVA Results

Adjusted R squared was 0,18, meaning 18% of the variation in the dependent variable can be explained from the independent variables in the model, also called the explanatory power of the model. (IBM 2021).

4.2.2 Findings from ANOVA

This subsection couples the ANOVA findings with the hypotheses in this paper.

Hypothesis 1a

The first hypothesis concerned the matter of organizational distance, from which we expected to see a decrease in responsibility attribution to the focal firm when the crisis happened at the production site of a supplier relative to the focal firm's production site.

H1a: *The focal firm is attributed less responsibility for a crisis in outsourced production as opposed to integrated production.*

As seen in the ANOVA, the variable on integration/outsourcing is significant (p-value < 0,001/2 = 0,0005). However, as seen in the descriptive statistics (see **Appendix 6**, Red marking**)**, the mean accountability for the state of outsourcing is higher than that of integration. This trend is significant but in the opposite direction of the hypothesis. Outsourcing does not decrease accountability (guilt) but increases it; hence, (H1a) was rejected.

As a sidenote, accountability for a crisis at the site of a supplier was measured to be 5,08 (see **Appendix 6**, Red marking) with a standard error of 1,19, entailing a 95% confidence interval that does not include zero of (2.75 , 7.41) if a normally distributed bell-curve is assumed (Bloomenthal 2022), supporting the chain liability effect.

Hypothesis 1b

The alternative hypothesis also concerned organizational distance but is based on a conflicting train of thought, from which we expected to see an increase in responsibility attribution to the focal firm when the crisis happened at the production site of the supplier relative to the site of the focal firm.

H1b: *The focal firm is attributed more responsibility for a crisis in outsourced production as opposed to integrated production.*

As mentioned, the ANOVA analysis reported the variable on integration/outsourcing with a significant p-value (p-value < 0,001/2 = 0,0005). The descriptive statistics show a higher mean for accountability in the state of outsourcing compared to integration (see **Appendix 6**, Blue marking), which is consistent with the direction of this hypothesis; thus, we accepted (H1b).

Hypothesis 2

The second hypothesis concerned the use of green marketing. We expected to see an increase in accountability when the focal firm used green marketing instead of traditional marketing.

H2: *Green marketing increases responsibility attribution for a crisis towards the focal firm, as opposed to the traditional use of marketing.*

Also seen in the ANOVA analysis is an insignificant trend on marketing (p-value: 0,674/2 = 0,337). Thus, we rejected (H2).

Hypothesis 3

The third hypothesis concerned using a third-party certification, namely the use of ecolabeling. We expected to see a decrease in accountability when the focal firm applied ecolabeling to their products.

H3 *The use of ecolabeling makes the focal firm be attributed less responsibility as opposed to not using such labels.*

From the ANOVA analysis, a significance on ecolabel was found (p-value < 0,001/2 = 0,0005). The descriptive statistics uncover lower accountability when ecolabel is applied as opposed to no ecolabel (see **Appendix 6**). Hence, ecolabel does decrease accountability; thus, we accepted (H3).

Hypothesis 4

The fourth hypothesis concerned the interaction effect between green marketing and organizational distance. We expected to see that the accountability from green marketing was further amplified when the production was integrated.

H4: *The increased responsibility attributed to a focal firm when a crisis occurs following a green marketing effort (compared to traditional marketing), is further amplified when a crisis occurs in integrated (vs. outsourced) production.*

According to the ANOVA, the interaction between green marketing/traditional marketing and integration/outsourcing was not significant (p-value: 0,966/2 = 0,483). Hence, there is no empirical support for any interaction; thus, we rejected (H4).

Hypothesis 5

The fifth hypothesis concerned the interaction between the use of ecolabels and organizational distance. We expected that the hypothesized reduction of accountability when using ecolabels was further reduced when production was outsourced.

H5: The decreased responsibility attributed to a focal firm when a crisis occurs following the use of ecolabels (compared to no ecolabel), is further reduced when a crisis occurs in outsourced (vs. integrated) production.

The ANOVA analysis shows that no significance was found (p-value: 0,692/2 = 0,346). Hence, there is no empirical support for any interaction; thus, we rejected (H5).

4.3 Correlation of responsibility attribution and purchase intentions.

To answer (H6), we needed to establish a relationship between the two dependent variables. (H6) was descriptive; hence a correlation test was a fit choice.

The correlation test between the variables is shown below: (also see **Appendix 7**)

Correlations			
Variables	Sig (2-tailed)	N	Pearson correlation
Responsibility Attribution Purchase Intentions	< 0,001	358	**-0,507****

Table 14: Correlation - Responsibility Attribution and Purchase Intention

Hypothesis 6

The sixth hypothesis concerned the effect of responsibility attribution on purchase intentions. We expected to see a decrease in purchase intentions when responsibility attribution increased.

H6: *The focal firm experiences reduced purchase intentions from consumers when attribution of responsibility increases, following a crisis in production.*

As seen in the correlation matrix, a significant negative correlation exists between the two dependent variables (p-value < 0,001/2 = 0,0005). A significant negative correlation means that a variable tends to go up when the other goes down and vice versa (Indeed 2021). Hence, purchase intentions will go down if responsibility attribution goes up; thus, (H6) was accepted, strongly implying a causal relation.

On top of determining the hypotheses, we tested the entire conceptual model using “process” regression path analysis.

4.4 Process Analysis

Process is a logistic regression path analysis modeling tool that estimates both direct and indirect effects in moderator and mediator models, widely applied in the science of social business (Processmacro 2020).

We used process analysis to test the whole model at once and count for possible indirect effects between variables. Many different models exist, but model 9 seemed to be the best fit for this study (Hayes 2013) concerning the conceptual model and its hypotheses. The model below was created from the process output sheet. (also, see **Appendix 8**)

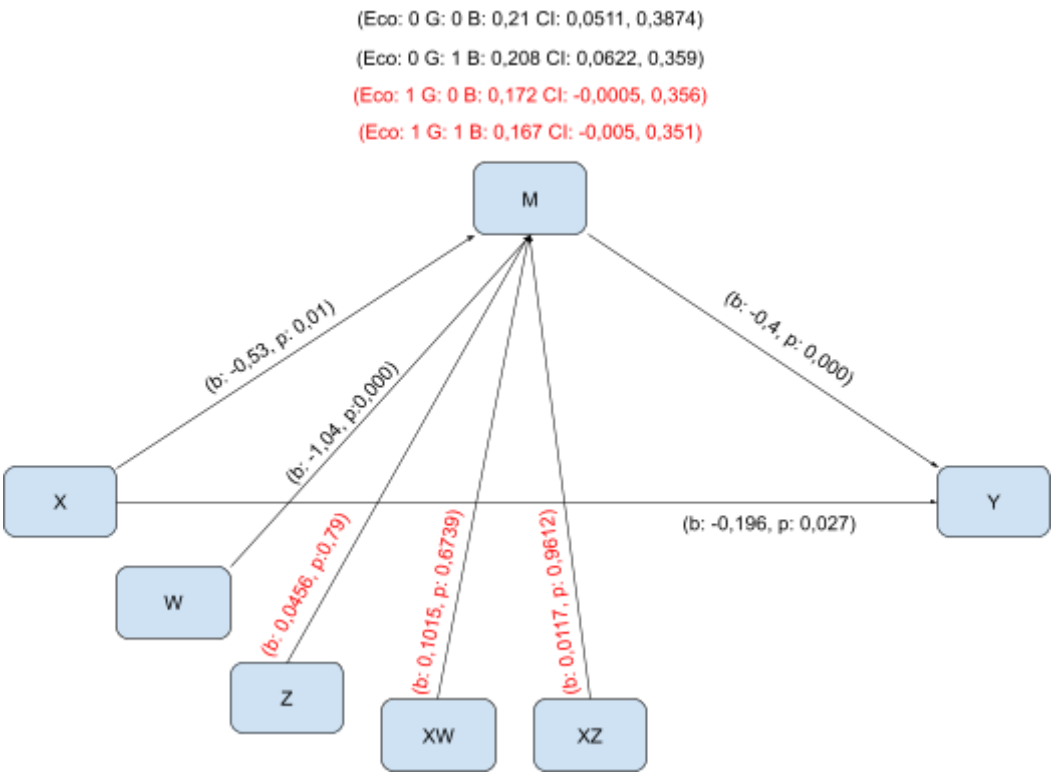


Figure 8: Process Analysis Findings

X = Integration / Outsourcing
Y = Purchase intentions
Z = Green marketing / traditional marketing
W = Ecolabel / No ecolabel
M = Responsibility attribution

The color red indicates no significance while black is significant (determined by p-value < 0,05 or CI that does not include 0). Also, all numbers above the mediating variable (M) are indirect effects of integration/outsourcing (X) on purchase intentions (Y) under different moderator values. Please note that 2-tailed tests were used here, as only some of the measurements concern our hypotheses and these are already accepted or rejected with a one-sided test.

The analysis established several significant relations:

- Integration/outsourcing had a direct effect on purchase intentions (positive, thus integration increases purchase intentions)
- Integration/outsourcing had an indirect effect on purchase intentions
    - If there was no ecolabeling and traditional marketing
    - If there was no ecolabeling and green marketing
- Integration/outsourcing had a direct effect on accountability (in accordance with H1b)
- Ecolabel/no ecolabel had a direct effect on accountability (in accordance with H3)

- Accountability had a direct effect on purchase intentions (in accordance with H6)

4.5 Summary of findings

In short, (H3) and (H1b) were accepted with empirical support, meaning we found ecolabeling and integration to decrease accountability (guilt). Furthermore, a significant correlation between responsibility attribution and purchase intentions was concluded, accepting (H6). In addition, the process analysis found a direct effect between integration/outsourcing and purchase intentions. Also, some indirect effects between integration/outsourcing and purchase intentions mediated by responsibility attribution were found, which were only the case with no use of ecolabeling.

The acceptance of (H1b) necessarily disproved (H1a), which was rejected. (H2) on green marketing was analyzed with two different tests to address the misunderstood manipulation check, from which we rejected the hypothesis. The interaction hypotheses (H4) and (H5) were rejected as well. The results are visualized in the conceptual model below; however, they remain to be discussed with all their implications and limitations. Also, some observations deserved special attention and thus are discussed from different angles in the last section.

4.5.1 Conceptual display of results

To conclude the analysis section, we visualize our findings in our conceptual model.

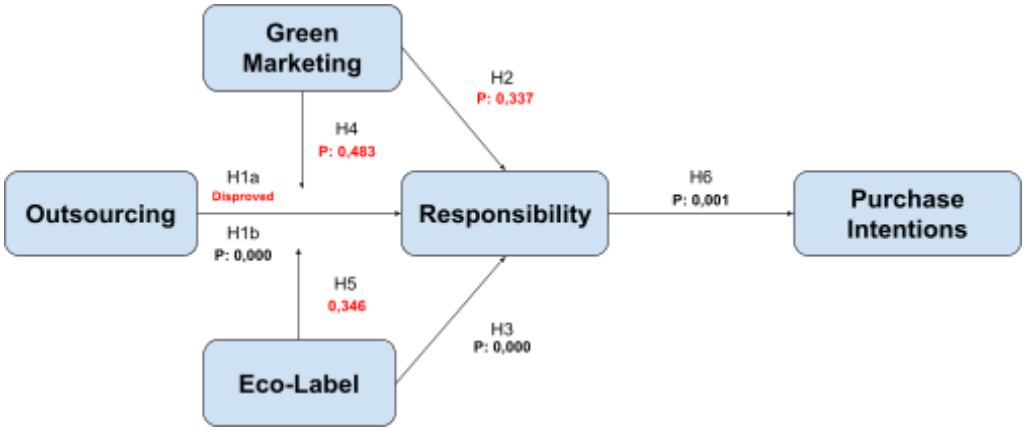


Figure 9: Conceptual Model with Measurements

5.0 Discussion

The findings in this paper support the chain-liability effect, as the focal firm was held accountable for the actions of its supplier. However, we disproved the mitigating impact of organizational distance (H1a), and (H1b) was accepted, showing an increase of accountability with organizational distance at this tier level. This increase implies that a focal firm is held less accountable for a crisis at their own production site than that of their supplier. The question is why. When control drives accountability (Hartmann and Moeller 2014, 281-294), how come the consumers reward them with lower accountability for a higher degree of control?

We found the most likely explanation when held up against the accepted hypothesis on ecolabels. There was empirical evidence that the use of ecolabels reduced accountability. When deriving this hypothesis, the effect was (among others) argued to be caused by these labels being a sustainability measure by itself. That is, the focal firm has taken steps to prevent a sustainability crisis with ecolabels. This prevention is the same argument used to derive (H1b), namely that integration may also be perceived as a preventive measure. Hence, it seems likely that the consumer's train of thought can be expressed as “what has been done to prevent the crisis?” - integration and ecolabels being measures to ensure control and prevent crises, hence mitigating responsibility attribution. This train of thought may also be perceived as the consumers punishing the focal firm for outsourcing and lack of verification, meaning they surrender control of their production to others, do not bother to verify, and are being held accountable when this goes wrong. As expressed in the language of this paper: they are being held accountable for “sticking their heads in the sand,” being “corporate ostriches.”

In addition, (Gao et al. 2012) suggest that consumers might adopt a simplified attribution in cases with far-reaching and complex causal determinations. The issue in that paper is one of “scapegoating.” Still, there might be a similar effect in our case: consumers skip the four-dimensional evaluation of responsibility attribution as suggested by (Hartmann and Moeller 2014, 281-294) and simply adopt a convenient attitude, resulting in the straightforward evaluation of preventive measures.

Several studies have tested the effect of organizational distance before, from which (Hjelset and Skage 2020) found a significant mitigating impact of increased distance. (Hartmann and Moeller 2014, 281-294) found no significance, and now this paper found the third possible measurement; an increase in accountability with increased organizational distance. So these are all contradictory.

However, (Hjelset and Skage 2020) tested tier levels 1 (supplier) and 2 (sub-supplier) and did not include the integrated state. Hence, the organizational distance might mitigate accountability when outsourced already (ex., less accountability for sub-supplier vs. supplier) but increase accountability when switching from integration to outsourcing, perhaps because this is when the focal firm surrenders its control and is attributed responsibility accordingly. **Figure 10** below shows the indicated relation between organizational distance and accountability for a sustainability crisis following the findings in (Hjelset and Skage 2020) and this paper.

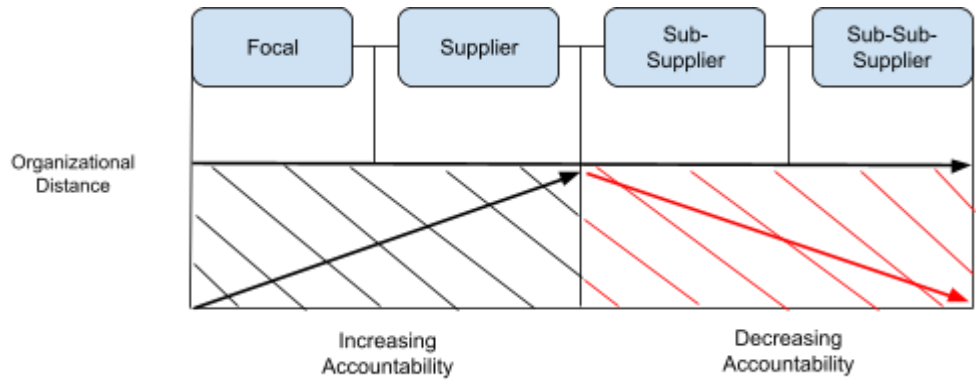


Figure 10: Organizational Distance and Accountability in accordance with (Hjelset and Skage 2020) and the findings in this paper.

Then we have the article from (Hartmann and Moeller 2014, 281-294), which did not find significance from the effect of organizational distance on accountability no matter the tier level. However, we criticize their way of testing integrated vs. outsourced production (which they did separately), as they describe the relocation of production sites in both cases, making the stimuli quite identical. The effect of switching geolocation seems to dominate the relatively negligible additional information on ownership that they provide lastly. The alternative to outsourcing in that paper appears to be a re-location of production. By contrast, this paper measures ownership-switching in the exact geographical location, avoiding to

"drown" the measurement with relocation. When it comes to the measurement of organizational distance in multi-tier supply chains in the (Hartmann and Moeller 2014, 281-294) study, however, we have no critique. They simply do not find significance, which contradicts (Hjelset and Skage 2020), and so the uncertainty remains in literature, although the former is a paper from the Journal of Operations Management, while the latter is not published in any journal and does not have peer-review.

When it comes to marketing (H2), the greening of the marketing mix did not seem to build any expectations that made sustainability crises more severe, triggering harsher market reactions. We had a somewhat misunderstood manipulation test and controlled for this with a t-test to compare means for the two groups that answered correctly on the manipulation test on green marketing and traditional marketing. The t-test rejected (H2) just as convincingly as did the ANOVA test, and as such, control validity was established (Reinhard et al. 1972, 586-593). As we see it, the missing effect of green marketing may be caused by one of four things:

- The consumers do not care about green promises when attributing responsibility for a sustainability crisis.
- They do care, but the study did not allow for the green marketing promises to manifest, meaning there was no time to establish a trustworthy B2C relationship in the experiment.
- Green marketing is now so extensively and exhaustively used that it is "the new conventional marketing" and does not build any special expectations because it no longer stands out from the rest.
- Greening of promotion (as tested) does not trigger the same influence as the greening of the other marketing mix elements.

The latter seems unlikely as green promotion is among the best-observed features by the consumers (Polonsky 1994).

However, they did care about ecolabeling (H3), as the focal firm was held less accountable when using such labels. It is hard to say what explanation is dominant. Still, as mentioned, we believe that the consumers see ecolabels as taking steps to prevent a crisis, which again is consistent with the arguments in (H1b) that were also accepted.

Concerning (H4), we found no significant trend in the interactions between integration/outsourcing and green marketing/traditional marketing, which we believe are due to either the insignificant effect of marketing or that the hypothesis is derived from too far-fetched arguments. (H4) concerned an amplified result of the green marketing effort (when paired with integration as perceived in (H1a), where we believed integration to increase accountability). Still, as the consumers did not react to the marketing effort, they likely did not respond to the context (integration) of marketing on the same basis.

(H5) also lacked significance, which may be due to far-fetched arguments when deriving the hypothesis. (H5) was developed based on diffusion of accountability among the actors involved and a random attribution of responsibility, shielding the focal firm. The argument was "better random than directed." Also, the ecolabel's expertise was thought to be more precarious with crises from which the focal firm had less control. So the ecolabel should share quite a "part of the pie" - pie being accountability. We believe that such reasoning is beyond what a busy respondent without expertise is either capable of or care to reflect on. Hence, we take critique on a rather ambitious hypothesis.

(H6) was accepted as responsibility attribution, and purchase intentions had a significant negative correlation, which (highly) likely was initiated by the attribution process (Weiner 1995), triggering blame which propagated to behavioral intent, likely in the way described in **Figure 7.** Though (H6) is descriptive, we argue for causality, which seems expected with such well-established literature; the attribution process clearly states that responsibility attribution comes before emotional response (leading up to affected purchase intentions, as shown in **Table 14**) in time, and this paper has triggered an attribution process among the consumers. However, correlation is not causation (Green 2012). Hence, we can never really be sure beyond doubt why purchase intentions drop when responsibility attribution increases.

5.1 Implications

This paper and the research questions were set out to contribute to GSCM guidance so that companies could invest in sustainability measures where they were rewarded by the market, underpinning the interdependence between the economic and environmental bottom line. Another motivation behind the study was to describe what happens when a sustainability

crisis occurs at firms that adapt to the green shift, hence, how certain green characteristics affect the accountability of firms in such incidents.

Our findings suggest that companies are rewarded for using ecolabels and integrating production when concerned with sustainability crises. Due to the suggested mitigating effect of organizational distance on accountability when outsourced already, it is unclear whether companies are most rewarded by integration or by organizing large structural holes (Phillips 2010, 533-543).

More generally, concerning green characteristics on consumer reactions, two widely applied concepts were tested. The findings suggest that: as firms adapt to the green shift, they are not punished more severely by greener marketing promises when infringements and crises occur. This is unless lasting relations between firms and the consumer affects the responsibility attribution significantly, an effect that was not captured in this study. However, a more widespread application of ecolabels following the green shift should entail less accountability for such mishappenings.

Also, the significant relation between responsibility attribution and purchase intentions suggests that companies will suffer from lower purchase intentions in crises with less mitigating contexts. It remains uncertain to what degree a negative shift in purchase intentions entails an equivalent shift in purchase behavior. This, as planned behavior only affects the probability of behavior (Spears and Singh 2004, 53-66), and it is likely to believe that social desirability bias is present, even though the survey was anonymous. There might always be a mismatch between what people say they ought to do and what they do.

Lastly, the phenomenon that people tend to simplify their attribution when faced with complex determinations (Gao et al. 2012) also seemed to be the case in this paper, resulting in a relatively straightforward judgment of accountability. The implication is that although the literature exists with all its elaborations and extensive details, this contribution is yet an example that some few elements in one theory may dominate the others, highlighting the importance of prioritizing certain features above the rest of the extensive description. Hence, scholars should continually evaluate whether such simplifications or shortcuts are likely to occur in their context when applying theory.

5.2 Limitations

The way this study was conducted and the choices made, entail several limitations.

First and foremost, we know about “the fundamental attribution error,” that is, the tendency to overestimate internal cause from a situational outcome when the observer feels threatened (Tetlock 1985). Bear in mind that the experiment was conducted using a very severe crisis; hence, it is likely that consumers will be subject to this error, attributing a disproportionate share of the responsibility to the actor rather than the situation. There might be that less severe crises would mitigate accountability substantially, not only because it is less severe but also because it may allow the respondents to make a more objective attribution of responsibility between the actor and the surroundings. This entails a limitation in that this paper may poorly predict responsibility attributions from crises with other degrees of severity.

In addition, our research question includes green marketing and hence the greening of all elements in the marketing mix, from which we chose to test for promotion. This choice entails a limitation in that green promotion may not represent the greening of the whole marketing mix, and the greening of other elements may trigger different reactions. Similarly, we derived the hypotheses from several but not all of the underlying dimensions of responsibility attribution. Perhaps these dimensions do not speak for the whole construct accurately, and we might have seen different reactions from other dimensions.

Also, both ecolabel and the brand of the focal firm are anonymous in this paper in order to avoid existing attitudes towards the brands. This anonymity helps isolate the effects from “emotional pollution” and prejudice, protecting the study's internal validity. However, these attitudes will exist to various extent in real life, making this measurement in our paper somewhat artificial in this regard.
Such artificial tendency is also present in the experiment as it was conducted using a neutral product in the sense that “all” consumers were able to consume the product. Also, it did not suffer from typical prejudice like coal, oil or firearms possibly would. This was helpful to avoid biased presets and again shield the internal validity. However, products are often

subject to either positive or negative existing attitudes in the real world. Also, products typically have certain types of users: adults with driver's licenses consume cars, model airplanes are typically consumed by those with a particular interest in planes, and water-cooled processors are mainly consumed by high-end computer power users, from which none of these consumer crowds likely represent the population. Hence, in reality, a company will suffer a reaction depending on their consumer segment and pre-existing attitudes, possibly influencing consumer reactions and responsibility attributions in real life.

Then, the experiment was conducted with convenience sampling, entailing a biased sample. Even though randomization was used to create eight almost identical experimental groups, certain characteristics are likely not represented accurately on behalf of the population (age, gender, political orientation, etc.). This misrepresentation may affect the ability to generalize and say something on behalf of the target population. As described in the sampling procedure, we applied various sampling techniques (QR-codes, online sampling and paper surveys) to obtain a sample consisting of various respondents from the whole population. This collection method also allowed us to reach a rather numerous sample of almost 400 respondents, randomized into eight almost identical groups. However, relevant characteristics cannot be thought to represent the target population fully, not even through “the law of large numbers.” Hence, the limitation remains with a weakened ability to say exactly how the target population would have reacted to the stimuli in this paper.

As often occurs in quantitative studies, we also had some missing data, and it may be that those who dropped out and declined to answer are different from those who decided to proceed. Hence, our findings are subject to a non-response bias (Turk and Nunan. 2019). We applied the relatively simple remedy of deleting these responses, entailing a complete case approach. The argument was that the extent of missing data was not significant enough to influence the results considerably, and other remedy techniques also come with their own set of complications and biases (Hair et al. 2010). The study introduced another potential bias in the way we chose to code the dependent variables. As the factor analysis identified, there were some differences in the importance between measurement items, as the respondents weighted them somewhat differently. However, we decided to weigh them all as equally important, not to introduce bias from the choice of extraction and rotation methods.

Lastly, the relation between responsibility attribution and purchase intentions was established with a correlation test; hence spuriousness and other underlying explanations, along with the argument of reversed causality, can never be removed entirely (Nathan et al. 2012, 206). However, we believe the relation and its potential cause-effect relationship to be clear from both contextual statements and the well-established literature underpinning the measurement.

Consequently, the following conclusion must be interpreted as confined within these limitations.

5.3 Conclusion

In determining the judgment of accountability (guilt) for a sustainability crisis of a focal firm, using an artificial consumer jury, we applied attribution theory to derive the hypotheses. From the main research question, we hypothesized outsourcing to cause a mitigating and, alternatively, an amplifying effect of organizational distance on accountability towards the focal firm in the direct supplier tier level. In addition, this paper tested the influence of responsibility attribution on purchase intentions.

The hypotheses from the underlying research questions concerned green characteristics, being green marketing and ecolabels. We found that ecolabels and integration significantly reduced accountability and that accountability is significantly negatively correlated with purchase intentions, the latter entailing a solid implication of causality. Hence, the paper found outsourcing to increase rather than decrease accountability at this tier-level, accepting our alternative hypothesis on organizational distance. The consumers seemed to have simplified their attributional reasoning throughout, laying weight on what the focal firm did in terms of preventive measures, interpreted in this study as punishing the act of “putting the head in the sand” being “corporate ostriches".

Consumers do not recognize the use of green marketing when sustainability crises occur. Lastly, there were no significant interactions between organizational distance and green marketing or organizational distance and the use of ecolabels.

5.4 Further Research

To gain even deeper insights into this field, researchers are advised to explore the full picture of green marketing. Perhaps how the greening of different elements in the marketing mix are fit to influence consumers, and in turn, how their reactions to mishappenings are affected. We

believe this research to be most clarifying when performed on established consumer relations, rather than artificial ones, as the recognition of green characteristics on firms, resting upon a solid B2C relation, is believed to be the very essence.

Furthermore, the full exploration of the relationship between responsibility attribution and organizational distance remains interesting. There are contradictory findings in the literature, and we made a suggestion on the behavior of accountability with organizational distance in this paper, based on our findings and previous research. This behavior is something that needs to be confirmed or disproved. The topic is relevant as outsourcing is widespread. This paper shows that we have long-stretched supply chains with the well-documented chain liability accruing to the focal firm. Clarification of accountability should then provide great guidance to the focal firm as "channel captain," hence influencing the design of global supply chains and allocation of worldwide production.

Also, it should be interesting to see if crises of non-sustainable nature have the same effect as sustainability crises. In this regard, the element of sustainability may be distinguished from that of commercial matters in crisis theory.

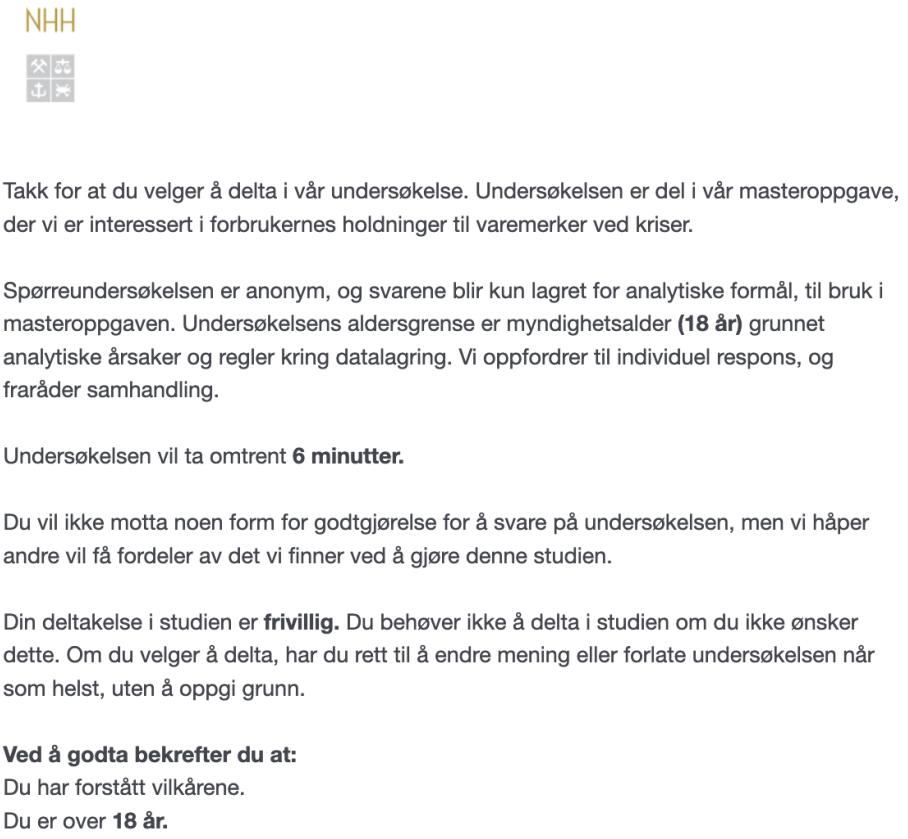
While this study concerns consumers in Norway, focal firms have consumer bases all around the world. To better estimate how multinational focal firms with a global market will be held accountable for sustainability crises, scholars may investigate how consumers differ in their reactions between markets in different countries. This way, a focal firm may draw conclusions on their chain-liability depending on the nationalities or location of their consumer base(es).

Finally, this paper strongly implied a rather convenient and simplified attribution of responsibility, namely the assessment of preventive measures to determine accountability, or flip side, to what degree steps are taken to shield themselves from accountability or willingly ignore matters with "the corporate ostrich effect." Researchers are advised to test whether this assessment is the fundamental underlying determinant of accountability in similar contexts, perhaps by performing an experiment, the independent variable(s) being preventive measures or steps to ignore matters, testing the extent to which "corporate ostriches" are held accountable.

Appendices

Appendix 1: Case Introduction

This is a screenshot of the first page presented to the respondents. It contains information about age-limit, estimated time for conducting the survey and that the survey is voluntary.


NHH

Takk for at du velger å delta i vår undersøkelse. Undersøkelsen er del i vår masteroppgave, der vi er interessert i forbrukernes holdninger til varemerker ved kriser.

Spørreundersøkelsen er anonym, og svarene blir kun lagret for analytiske formål, til bruk i masteroppgaven. Undersøkelsens aldersgrense er myndighetsalder **(18 år)** grunnet analytiske årsaker og regler kring datalagring. Vi oppfordrer til individuel respons, og fraråder samhandling.

Undersøkelsen vil ta omtrent **6 minutter.**

Du vil ikke motta noen form for godtgjørelse for å svare på undersøkelsen, men vi håper andre vil få fordeler av det vi finner ved å gjøre denne studien.

Din deltakelse i studien er **frivillig.** Du behøver ikke å delta i studien om du ikke ønsker dette. Om du velger å delta, har du rett til å endre mening eller forlate undersøkelsen når som helst, uten å oppgi grunn.

Ved å godta bekrefter du at:
Du har forstått vilkårene.
Du er over **18 år.**

Appendix 2: Factor Analysis and Cronbachs' Alpha of both Batteries

The appendix consists of three tables. First is the "total variance explained," which is the output from SPSS, showing different components of the factor analysis. Only those with an eigenvalue above one were selected as factors. The following two tables concern the two question batteries: responsibility attribution and purchase intentions respectively. It shows loadings for each item in the battery on the extracted factor, followed by the Chronbach's Alpha score and what score we would have obtained if the respective item was deleted.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3,548	50,689	50,689	3,548	50,689	50,689	3,087
2	1,151	16,443	67,131	1,151	16,443	67,131	2,775
3	,803	11,478	78,610				
4	,493	7,038	85,648				
5	,438	6,261	91,909				
6	,305	4,361	96,270				
7	,261	3,730	100,000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Questions	**Factor Loading**
Fresh Fruit Inc Handlet likegyldig	0,817
Fresh Fruit Inc handlet korttenkt	0,877
Fresh fruit Inc har tatt overdreven risiko	0,839
Cronbach's Alpha Score	
0,797	
Cronbach's Alpha If Item Deleted	
Fresh Fruit Inc Handlet likegyldig	0,766
Fresh Fruit Inc handlet korttenkt	0,666
Fresh fruit Inc har tatt overdreven risiko	0,736

(continued from previous page)

Questions	**Factor Loading**
Det er veldig sannsynlig at jeg vil kjøpe frukt og grønt fra Fresh Fruit Inc	0,866
Jeg vil kjøpe frukt og grønt neste gang jeg trenger det fra Fresh Fruit Inc	0,870
Jeg vil definitivt prøve Fresh Fruit Inc sine frukt og grønnsaker	0,851
Jeg vil betale mer penger for frukt og grønt fra Fresh Fruit Inc	0,564
Cronbach's Alpha Score	
0,810	
Cronbach's Alpha If Item Deleted	
Det er veldig sannsynlig at jeg vil kjøpe frukt og grønt fra Fresh Fruit Inc	0,714
Jeg vil kjøpe frukt og grønt neste gang jeg trenger det fra Fresh Fruit Inc	0,710
Jeg vil definitivt prøve Fresh Fruit Inc sine frukt og grønnsaker	0,724
Jeg vil betale mer penger for frukt og grønt fra Fresh Fruit Inc	**0,855**

Appendix 3: T-test Green Marketing by Correct Manipulation

This appendix is the output from SPSS concerning our t-test on green marketing vs. traditional marketing, containing only respondents that answered the manipulation check correctly. The test is two-tailed and the red marking shows the two-sided p-value, which must be divided by two to conclude the appropriate p-value for (H2), which was a one-sided hypothesis. The test is not significant, using a 95% confidence interval.

Group Statistics

	Correct_Marketing_Manip	N	Mean	Std. Deviation	Std. Error Mean
Resp_at	1,00	180	4,8370	1,23093	,09175
	2,00	108	4,8827	1,37045	,13187

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance		Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Difference	Difference	Lower	Upper
Resp_at	Equal variances assumed	1,662	,198	-,292	286	,385	,770	-,04568	,15639	-,35351	,26215
	Equal variances not assumed			-,284	206,707	,388	,776	-,04568	,16065	-,36240	,27104

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
Resp_at	Cohen's d	1,28490	-,036	-,274	,203
	Hedges' correction	1,28828	-,035	-,273	,203
	Glass's delta	1,37045	-,033	-,272	,205

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control group.

Appendix 4: Levene's Test Responsibility attribution

This appendix shows Levene's test. It tests for equal variances across our experimental groups, with the null hypothesis being that variance is equal across groups. As we can see, the test is significant, meaning we rejected this hypothesis and equal variances could not be assumed.

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
Resp_at	Based on Mean	2,474	7	350	,017
	Based on Median	2,217	7	350	,032
	Based on Median and with adjusted df	2,217	7	291,859	,033
	Based on trimmed mean	2,416	7	350	,020

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: Resp_at

b. Design: Intercept + Integr_Outs + Green_Reg + EcoIbl_No + Integr_Outs * Green_Reg + Integr_Outs * EcoIbl_No + Green_Reg * EcoIbl_No + Integr_Outs * Green_Reg * EcoIbl_No

Appendix 5: Three-way ANOVA

The appendix shows the SPSS output for our three-way ANOVA analysis. The dependent variable is responsibility attribution and the three independent variables are: integration/outsourcing, green marketing/traditional marketing and ecolabel/no ecolabel. The analysis uses two-tailed p-values in the "Sig." column, which must be divided by two to conclude the p-value for our one-sided hypotheses.

Tests of Between-Subjects Effects

Dependent Variable: Resp_at

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	110,912[a]	7	15,845	12,205	<,001	,196
Intercept	8372,858	1	8372,858	6449,684	<,001	,949
Integr_Outs	20,285	1	20,285	15,625	<,001	,043
Green_Reg	,230	1	,230	,177	,674	,001
EcoIbl_No	87,278	1	87,278	67,231	<,001	,161
Integr_Outs * Green_Reg	,002	1	,002	,002	,966	,000
Integr_Outs * EcoIbl_No	,205	1	,205	,158	,692	,000
Green_Reg * EcoIbl_No	,918	1	,918	,707	,401	,002
Integr_Outs * Green_Reg * EcoIbl_No	,414	1	,414	,319	,573	,001
Error	454,363	350	1,298			
Total	8918,889	358				
Corrected Total	565,275	357				

a. R Squared = ,196 (Adjusted R Squared = ,180)

Appendix 6: Descriptive statistics Three-way ANOVA

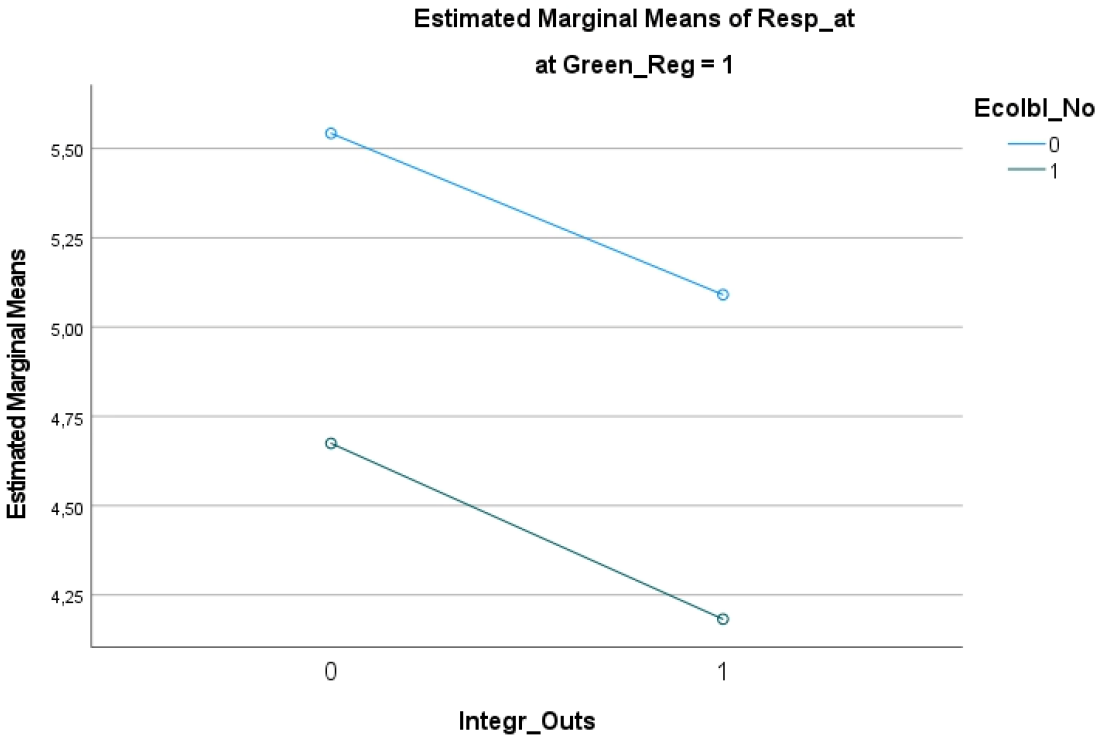
The appendix consists of a table with descriptive statistics for our Three-way ANOVA together with diagrams meant to visualize the data. The dependent variable is responsibility attribution and the three independent variables are: integration/outsourcing, green marketing/traditional marketing and ecolabel/no ecolabel. The red marking is the average responsibility attributed across groups for the state of outsourcing, while the blue marking is the average responsibility attributed across groups for the state of integration.

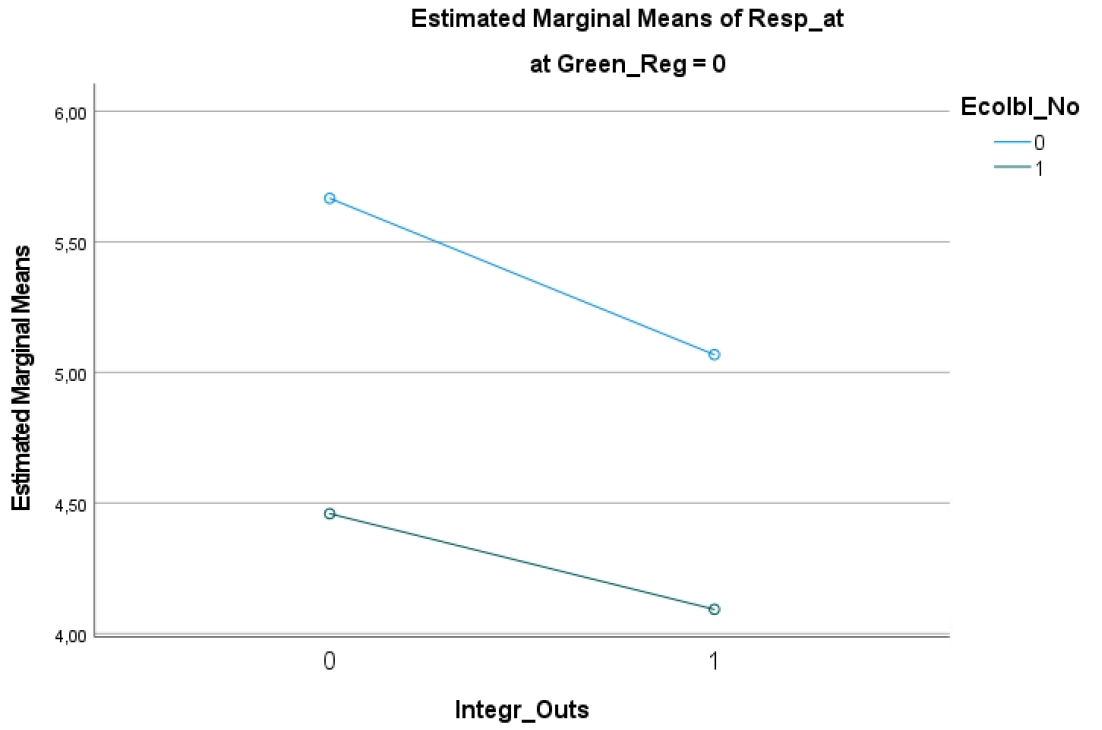
Descriptive Statistics

Dependent Variable: Resp_at

Integr_Outs	Green_Reg	EcoIbl_No	Mean	Std. Deviation	N
0	0	0	5,6667	1,07833	44
		1	4,4593	1,03301	45
		Total	5,0562	1,21256	89
	1	0	5,5426	,98406	43
		1	4,6746	1,21973	42
		Total	5,1137	1,18361	85
	Total	0	5,6054	1,02870	87
		1	4,5632	1,12559	87
		Total	5,0843	1,19539	174
1	0	0	5,0682	1,08925	44
		1	4,0930	1,40356	43
		Total	4,5862	1,34007	87
	1	0	5,0909	,78869	44
		1	4,1824	1,35332	53
		Total	4,5945	1,21547	97
	Total	0	5,0795	,94551	88
		1	4,1424	1,36946	96
		Total	4,5906	1,27238	184
Total	0	0	5,3674	1,11879	88
		1	4,2803	1,23475	88
		Total	4,8239	1,29513	176
	1	0	5,3142	,91408	87
		1	4,4000	1,31242	95
		Total	4,8370	1,22524	182
	Total	0	5,3410	1,01957	175
		1	4,3424	1,27358	183
		Total	4,8305	1,25833	358

(Continued from previous page)





Appendix 7: Correlation Between Responsibility Attribution and Purchase Intentions

The appendix shows an output from SPSS on the correlation test between responsibility attribution and purchase intentions. The p-value is two-tailed and needs to be divided by two to answer the one-sided hypothesis that it concerns (H6).

Descriptive Statistics

	Mean	Std. Deviation	N
Resp_at	4,8305	1,25833	358
PurchaseIntentions	2,5209	,95555	358

Correlations

		Resp_at	PurchaseIntentions
Resp_at	Pearson Correlation	1	-,507**
	Sig. (2-tailed)		<,001
	N	358	358
PurchaseIntentions	Pearson Correlation	-,507**	1
	Sig. (2-tailed)	<,001	
	N	358	358

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 8: Process Analysis Model 9

The appendix consists of three tables. The first is the model summary of the process analysis (model 9) which also shows the effect of responsibility attribution (M) on purchase intentions (Y). Then comes the table showing direct and indirect effects of integration/outsourcing (X) on purchase intentions (Y). The last table shows the effect of integration/outsourcing (X), green marketing/traditional marketing (Z) and ecolabel/no ecolabel (W) on responsibility attribution (M). Also, it includes the interactions between the variables.

OUTCOME VARIABLE:
Pur_Int

Model Summary

R	R-sq	MSE	F	df1	df2	p
,5169	,2672	,6729	64,7264	2,0000	355,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4,5555	,1894	24,0530	,0000	4,1831	4,9280
Int_Out	-,1960	,0885	-2,2159	,0273	-,3700	-,0221
Resp_at	-,4003	,0352	-11,3777	,0000	-,4695	-,3311

(Continued from previous page)

```
Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
     -,1960      ,0885    -2,2159      ,0273     -,3700     -,0221

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
 Int_Out     ->    Resp_at     ->    Pur_Int

   Eco_NoEc    Gre_Reg     Effect     BootSE   BootLLCI   BootULCI
      ,0000      ,0000      ,2130      ,0838      ,0543      ,3827
      ,0000     1,0000      ,2083      ,0741      ,0624      ,3529
     1,0000      ,0000      ,1723      ,0926     -,0013      ,3606
     1,0000     1,0000      ,1676      ,0916     -,0091      ,3496

      Indices of partial moderated mediation:
              Index     BootSE   BootLLCI   BootULCI
Eco_NoEc     -,0406      ,0967     -,2267      ,1578
Gre_Reg      -,0047      ,0970     -,1983      ,1850
---
```

(Continued from previous page)

```
OUTCOME VARIABLE:
 Resp_at

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,4403      ,1939     1,2945    16,9345     5,0000   352,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     5,5828      ,1488    37,5086      ,0000     5,2901     5,8756
Int_Out      -,5320      ,2096    -2,5377      ,0116     -,9442     -,1197
Eco_NoEc    -1,0416      ,1725    -6,0377      ,0000    -1,3809     -,7023
Int_1         ,1015      ,2409      ,4211      ,6739     -,3723      ,5752
Gre_Reg       ,0456      ,1726      ,2641      ,7919     -,2938      ,3850
Int_2         ,0117      ,2410      ,0487      ,9612     -,4622      ,4857

Product terms key:
 Int_1    :        Int_Out  x        Eco_NoEc
 Int_2    :        Int_Out  x        Gre_Reg

Test(s) of highest order unconditional interaction(s):
           R2-chng          F        df1        df2          p
X*W          ,0004      ,1774     1,0000   352,0000      ,6739
X*Z          ,0000      ,0024     1,0000   352,0000      ,9612
BOTH(X)      ,0004      ,0903     2,0000   352,0000      ,9137
```

References

Affleck, Glenn, and Howard Tennen. 1990. *Blaming others for threatening events*. 1st ed. Conneticut, CT: Psychological Bulletin. Link

Aguilera, R., D., Williams, C. and Ganapathi, J. 2007. *Putting the S back in corporate social responsibility: A multi-level theory of social change in organizations*, Academy of Management Review, Vol. 32 No. 3, pp. 836-863

Albano, Tony. 2020. *Introduction to Educational and Psychological Measurement Using R.* Chapter 8 Factor Analysis, February 23, 2020. Link

Allen, Chris T., Karen A. Macheit, Susan Schultz Kleine, and Arti Sahni Notani, 2005. *A place for emotion in attitude models*. 1st ed. Ohio, OH: Elsevier. Link

Amacher, Gregory S., Erikki Koskela, and Markku Ollikainen. 2002. *Environmental quality competition and eco-labeling*. 1st ed. Virginia, VA: Academic Press. Link

Ansar, Novera. 2013. *Impact on green marketing on purchase intention*. 1st ed. Pakistan, Karachi: Richtmann Publishing. Link

Aronow, Peter M., Jonathon Baron, and Lauren Pinson. 2019. *A note on dropping experimental subjects who fail a manipulation check.* Political Analysis 27, no. 4 (2019): 572-589. Link

Aswini, Yadlapalli, Shams Rahman, and Angappa Gunasekaran. 2020. *Corporate social responsibility Definitions in Supply Chain research: An Ontological Analysis.* 1st ed. Journal of cleaner production. Link

Baqir, Muhammad, and Gu Biao. 2020. *Sustainable Corporate Social responsibility in the new era and the principal- agent problem*. 1st ed. Shanghai, China. Link

Bauerle, Stacey Y., Aamir Khan, James H., and Ralph B. Hupka. 2003. *An attribution theory analysis of romantic jealousy.* 1st ed. Plenum Publishing Corporation. Link

Bergkamp, Penelope A. 2019. *Models of Corporate Supply Chain Liability*. Link

Bhardwaj, Broto Rauth. 2016. *Role of green policy on sustainable supply chain management.* 1st ed. New Dehli India: Emerald Insight. Link

Bjørn, Anders, Miriam Diamond, Mikołaj Owsianiak, Benoît Verzat, and Michael Zwicky Hauschild. 2015. *Strengthening the link between life cycle assessment and indicators for absolute sustainability to support development within planetary boundaries.* (2015): 6370-6371 Link

Bloomenthal, Andrew. 2022. *Understanding a Bell Curve.* Investopedia, March 7, 2022. Link

Bozowsky, Evan and Hiroko Mizuno. 2004. *Introduction to Ecolabelling.* Global Ecolabelling Network. Link

Budiu, Raluca and Kate Moran. 2021. *How Many Participants for Quantitative Usability Studies: A summary of Sample-Size Recommendations*. Nielsen Norman Group. Link

Bundy, Jonathan, Michael D. Pfarrer, Cole E. Short, and W. Timothy Coombs. 2017. *Crises and Crisis Management: Integration, Interpretation, and Research Development.* Journal of Management 43, no. 6 (July 2017): 1661–92. Link

Braeken, Johan, and Marcel A L M van Assen. 2017. *An empirical Kaiser criterion.* Psychological methods vol. 22,3 (2017): 450-466. Link

Brown, James Dean. 2009. *Choosing the Right Type of Rotation in PCA and EFA.* University of Hawai‘i at Manoa. Corner statistics. JALT testing & evaluation SIG newsletter 13, no.3: 20-25. Link

Brundtland commission. 1987. *Our common future*. 1st ed. United Nations, Oxford University. Link

Commission of European Union Communities. 2001. *Implementing the partnership for growth and jobs : making Europe a pole of excellence on corporate social responsibility.* COM(2006) 136 final. Brussels. Link

Coombs, W. Timothy. 2006. *The protective powers of crisis response strategies: Managing reputational assets during a crisis*. Journal of promotion management 12, no. 3-4 (2006): 241-260. Link

Cottee, P., Byrd-Bredbenner, C. and Wong, A. 2000. *Consumer understanding of US and EU nutrition labels.* British Food Journal. Vol. 102 No.8, pp. 615-629. Link

Coyle, James R., and Esther Thorson. 2001. *The effects of progressive Levels of interactivity and Vividness in Web Marketing Sites.* Journal of Advertising, 30:3, 65-77. Link

CSB. 2014. *Investigation Report Overview - CSB*. US Chemical Safety and Hazard Investigation Board. REPORT NO. 2010-10-I-OS. Link

Dahlsrud, Alexander. 2006. *How corporate social responsibility is defined: an analysis of 37 definitions.* Corporate social responsibility and environmental management 15, no. 1 (2006): 1-13. Link

Dangelico, Rosa Maria, and Daniele Vocalelli. 2017. *Green Marketing: an analysis of definitions, strategy steps, and tools through systematic review of the literature.* Journal of cleaner production. Link

Darhamsyah, Darhamsyah. 2019. *Environmental Governance Urban: Public Participation and Sustainable Development*. International Journal of Environment, Engineering and Education 1, no. 1 (2019): 17-24. Link

Dawar, Niraj and Jill Klein. 2003. *Corporate Social Responsibility and consumers' attributions and brand evaluations in product-harm crisis.* 1st ed. Elsevier, international journal of Research Marketing. Link.

Delmas, Magali A., and Vanessa Cuerel Burbano. *The Drivers of Greenwashing*. California Management Review 54, no. 1 (October 2011): 64–87. Link

DiStefano, Christine; Zhu, Min; and Mîndrilã, Diana (2009) "Understanding and Using Factor Scores: Considerations for the Applied Researcher," *Practical Assessment, Research, and Evaluation*: Vol. 14, Article 20. Link

Dolgui, Alexandre, and Jean-Marie Proth. 2013. *Outsourcing and analysis.* Vol. 51. International Journal of Production research. Link

Dou, Yijie. Qinghua Zhu, and Joseph Sarkis. 2018. *Green multi-tier supply chain management: An enabler investigation.* Vol 24, Issue 2, Journal of Purchasing and Supply Management. Pages 95-107. Link

European Commission. 2022. *Ecolabel Facts and Figures.* European Commission, Environment. Link

Ecolabelindex. 2022. *Ecolabel index*. Vancouver, BC Canada. Link

Eidelwein, Fabrício, Dalila Cisco Collatto, Luis Henrique Rodrigues, Daniel Pacheco Lacerda, Fabio Sartori Piran. 2018. *Internalization of environmental externalities: Development of a method for elaborating the statement of economic and environmental results*. Journal of Cleaner Production, Volume 170,Pages 1316-1327. Link

Elkington, John. 2007. *Partnerships from cannibals with forks: The triple bottom line of 21st-century business.* 2nd ed. Wiley, Environmental Quality Management. Link

Fincham, Frank D. and Joseph M. Jaspars. 1980. *Attribution of responsibility from man the scientist to man as lawyer.* 1st ed. Department of experimental psychology. Oxford, England. Link

Fliess, B. Hyung-Jong Lee. Olivia L. Dubreuil. Osvaldo R. Agateiello. 2007. *CSR and Trade: Informing Consumers about Social and Environmental Conditions of Globalised production Part 1.* OECD Trade Policy Papers, no. 47. OECD publishing, Paris. Link

Foerstl, Kai. Carsten Reuter, Evi Hartmann, Constantin Blome. 2010. *Managing supplier sustainability risks in a dynamically changing environment—Sustainable supplier management in the chemical industry*. Journal of Purchasing and Supply Management, Volume 16, Issue 2, Pages 118-130. Link

Fu, Qiang and Jie Gong, I.P.L. png. 2018. *Law, Social responsibility, and outsourcing.* Vol. 57. International Journal of Industrial Organization. Pages 114-146. Link

Friedman, Milton. 2007. *The social responsibility of business is to increase its profits.* In Corporate ethics and corporate governance, pp. 173-178. Springer, Berlin, Heidelberg. Link

Frostenson, Magnus, and Frans Prenkert. 2015. *Sustainable supply chain management when focal firms are complex: a network perspective*. Journal of Cleaner Production 107 (2015): 85-94. Link

Gao, Hongzhi, John G. Knight, Hongxia Zhang, Damien Mather, and Lay Peng Tan. 2012. *Consumer scapegoating during a systemic product-harm crisis.* Journal of Marketing Management 28, no. 11-12 (2012): 1270-1290. Link

Godwin, Marshall, Lucia Ruhland, Ian Casson, Susan MacDonald, Dianne Delva, Richard Birtwhistle, Miu Lam, and Rachelle Seguin. 2003. *Pragmatic controlled clinical trials in primary care: the struggle between external and internal validity.* BMC medical research methodology 3, no. 1 (2003): 1-7. Link

Goodland, Robert. 1995. *The Concept of Environmental Sustainability*. Annual Review of Ecology and Systematics 26 (1995): 1–24. Link

Grace-Martin, Karen, Esteban Romero, Lisa Waqas, Ronald Cheng, Savvaskef, Balram Bhattarai, Joelle Opondo, Roshini Brizmohun, and Geeeta Reddy Anant. *How to Calculate an Index Score from a Factor Analysis.* The Analysis Factor, January 27, 2020. Link

Green, Nathan. 2012. *Correlation Is Not Causation*. The Guardian. Guardian News and Media, January 6, 2012. Link

Gripsrud, Geir, Ulf Henning Olsson, and Ragnhild Silkoset. 2016. *Metode og dataanalyse: beslutningsstøtte for bedrifter ved bruk av JMP, Excel og SPSS*. Cappelen Damm akademisk.

Ha, Hong-Youl and Perks, Helen. 2005. *Effects of consumer perceptions of brand experience on the web: Brand familiarity, satisfaction and brand trust*. Journal of Consumer Behaviour. 4. 438 - 452. Link

Hair, Joseph F., William C. Black, Barry J. Babin, and Rolph E. Anderson. 2010, *Multivariate Data Analysis*, Englewood Cliffs, NJ: Prentice Hall. Link

Hamilton, V. Lee. 1978. *Who is responsible? Toward a social psychology of responsibility attribution.* Social Psychology (1978): 316-328. Link

Hamish van der Ven. 2019. *Beyond Greenwash: Explaining Credibility in Transnational Eco-Labeling.* 1st ed. Oxford University Press. New York, US. Link

Hauschild, Michael Z., Sami Kara, Inge Røpke. 2020. *Absolute sustainability: Challenges to life cycle engineering*. CIRP Annals, Volume 69, Issue 2, Pages 533-553. Link

Hartmann, Julia, and Sabine Moeller. 2014. *Chain liability in multitier supply chains? Responsibility attributions for unsustainable supplier behavior.* Journal of operations management 32, no. 5 (2014): 281-294. Link

Hayashida, Kazuki, Miyawaki Yu, Nishi Yuki, Morioka Shu. 2021. *Changes of Causal Attribution by a Co-actor in Situations of Obvious Causality.* Vol 11. Frontiers in Psychology. Link

Hayes, Andrew F. 2013. *Introduction to Mediation, Moderation, and Conditional ... - Darden Media.* Accessed May 6, 2022. Link

Henion, Karl E., and Thomas C. Kinnear. 1976. *Ecological Marketing*. Columbus, Ohio: American Marketing Association. Link

Herring, David. 2020. *Doesn't carbon dioxide in the atmosphere come from natural sources?* Climate Gov. Link

Hjelset, Terje E. R. and Skage, Arvid. 2020. *Å kaste lys ned forsyningskjeden - En studie av forbrukernes holdning til merkevarenes sosialbærekraftige kjedeansvar*. Høyskolen Kristiania, Bachelor Thesis. Link

Huang, Yi-Chun. And Minli Yang. 2012. *Effects of green brand and green purchase intention*. 1st ed. Emerald Insights. Kaohsiung, Taiwan. Link

IBM. 2020. *In SPSS are significances or p-values for hypothesis tests one or two-tailed?* Cognos Analytics. Document number: 421475. Link

IBM. 2021 *Adjusted R Squared*. IBM. Cognos Analytics. Link

ILO. 2022. *The Rana plaza Accident and its aftermath.* Internal Labor Organization. Link

Indeed , Editorial Team. 2021 *Negative Correlation: Definition and Examples.* Indeed Career Guide. Accessed May 6, 2022. Link

Izard, Carroll E. 1991. *The psychology of emotions.* Springer Science & Business Media, 1991. Link

Johnson, Nenty H. 2009. *Writing a quantitative research thesis*. International Journal of Educational Sciences 1, no. 1: 19-32. Link

Kaufmann, Patrick J., and Louis W. Stern. 1988. *Relational exchange norms, perceptions of unfairness, and retained hostility in commercial litigation*. Journal of conflict resolution 32, no. 3 (1988): 534-552. Link

Kara, Sami., Michael Z. Hauschild, Christoph Herrmann. 2018. T*arget-driven Life Cycle Engineering: Staying within the Planetary Boundaries*. Procedia CIRP, Volume 69, Pages 3-10. Link

Kavaliauske, Monika. Ulyana Vaskiv, and Eleonora Seimiene. 2013. *Consumers perception of Lithuanian Eco-Label.* Vol 18. Vilnius University, Lithuania. Link

Kouabenan, Dongo Remi. Daniel Gilibert. Muriel Medina, and Frederick Bouzon. 2001. *Hierarchical Position, Gender, accident severity, and causal attribution.* 1st ed. Journal of applied Social Psychology. pp. 553-575. Link

Lau, Richard R. 1984. *Dynamics of the attribution process*. Journal of Personality and social psychology 46, no. 5 (1984): 1017. Link

Lee, Su-Yol. 2008. *Drivers for the participation of small and medium sized suppliers in green supply chain initiatives.* Supplychain management: An international Journal. Link

Leonhardt, James M., Robin Keller L., and Cornelia Pechmann. 2011. *Avoiding the risk of responsibility by seeking uncertainty: Responsibility averison and preference for indirect agency when choosing for others.* Journal of Consumer Psychology 21 (2011) 405–413 Link

Leonidou, Constantinos N., Constantine S. Katsikeas, and Neil A. Morgan. 2013. *Greening the Marketing Mix: Do Firms do it and does it Pay Off?* Journal of the Academy of Marketing Science 41 (2): 151-170. Link

Lewandowska, Anna. Witczak, Joanna and Kurczewski, Przemyslaw. 2017. *Green marketing today – a mix of trust, consumer participation and life cycle thinking.* Vol. 21. Management. Link

Li, Gen and Xixiang Sun. 2022. *The impact of green brand crisis on green brand trust: an empirical study.* School of Management, Wuhan University of Technology, Wuhan, China Link

Lihhavtshuk, Roman. 2020. *Eco-labels as sustainability brands: The role of visual design and co-branding in credibility of eco-labels*. Link

Lim, Kai H., Izak Benbasat, and Lawrence M. Ward. 2000. *The role of multimedia in changing first impression bias.* Information Systems Research 11, no. 2 (2000): 115-136. Link

Maas, Karen, Impact Centre Erasmus, Jilde Garst, Erasmus School of Economics, and Jeroen Suijs. 2021. *Materiality Assessment Is an Art, Not a Science.* Academy of Management Proceedings, July 26, 2021. Link

McSweeny, Robert. 2018. *Mangrove deforestation emits as much C02 as Myanmar each year.* CarbonBrief: Clear on Climate. Link

Mena, Carlos., Andrew Humphries, and Thomas Y. Choi. 2013. *Toward a Theory of Multi-Tier Supply chain management.* Vol. 49, 2. Journal of Supply Chain Management. Link

Mincic, Maria Cristina and Junru Li. 2020. *Factors influencing consumers' purchase intention of Co-branded products with Eco-Labels.* Gothenburg, Sweeden. Link

Mirjam. 2014. *Take action: Make sure Benetton pays what they owe.* Clean Clothes Campaign. Link

Mitra, Subrata and Partha Priya Datta. 2013. *Adoption of green supply chain management practices and their impact on performance: an exploratory study of Indian Manufacturing firms.* Vol. 52,7. International Journal of Production Research. Link

Mochon, Daniel, and Janet Schwartz. 2020. *The importance of construct validity in consumer research.* Journal of Consumer Psychology 30, no. 1 (2020): 208-214. Link

Morali, Oguz, and Cory Searcy. 2012 *A review of sustainable supply chain management practices in Canada*. Journal of business ethics 117, no. 3: 635-658. Link

Moravcikova, Dominika, Anna Krizanova. Jana Kliestikova, and Martina Rypakova. 2017. *Green marketing as the source of the competitive advantage of the business.* Sustainability 9, no. 12: 2218. Link

Morelli, John. 2011. *Environmental sustainability: A definition for environmental professionals.* Journal of environmental sustainability 1, no. 1. Link

MyEducator. 2022. *Supply chain management: The anatomy of Supply Chains.* Introduction to supply chain management. Link

Nathan, Peter, Steve Kozlowski, and Connie Wanberg. 2012. *The Oxford Handbook of Organizational Socialization.* Google Books. Google, 2012. Link

Nielsen. 2015. *The sustainability imparative: New insights in consumer expectations.* Global sustainability report Nielsen. Link

Nygaard, Arne. 2019. *Grønn markedsføringsledelse - om bærekraftig entreprenørskap, strategi og markedsføring.* Press: Magma 0419. Link

OER. 2022. *Research Measures for the Social Science: Chapter 6 Measurement of Constructs*. OER Services. Link

Osborne, Jason W. 2015. *What is Rotating in Exploratory Factor Analysis?* Practical Assessment, Research, and Evaluation: Vol. 20 , Article 2. Link

Pallant, Julie. *SPSS survival manual: A step by step guide to data analysis using IBM SPSS.* Routledge, 2020.

Payne, A., Frow, P. and Eggert, A. 2017. *The customer value proposition: evolution, development, and application in marketing*. J. of the Acad. Mark. Sci. 45, 467–489 (2017). Link

Pelz, Professor Bill. 2022. *Research Methods for the Social Sciences.* Chapter 6 Measurement of Constructs | Research Methods for the Social Sciences. Accessed May 6, 2022. Link

Phillips, Robert A. 2010. *Ethics and network organizations*. Business Ethics Quarterly 20, no. 3 (2010): 533-543. Link

Pickard-Whitehead. Gabrielle. 2020. *71% of consumers prefer buying from companies aligned with their values*. Small Business Trends. Link

Pohlmann, Christopher Rosa , Annibal José Scavarda, Murilo Barros Alves, André Luis Korzenowski. 2020. *The role of the focal company in sustainable development goals: A Brazilian food poultry supply chain case study*. Journal of Cleaner Production, Volume 245 Link

Polonsky, Michael Jay. 1994. *An introduction to green marketing*. Electronic Green Journal. Link

Porat, Ruth. 2021 *CDP Africa Report Transparency To Transformation.* CDP Africa Report Benchmarking Progress Towards Climate Safe Cities, States and Region. CDP Disclosure Insight Action, February 2021. Link

Prendergast, Gerard. David Ko and V. Yuen Siu Yin. 2010. *Online word of mouth and consumer purchase intentions.* Vol. 29, 5. International Journal of Advertising. Link

Putrevu, Sanjay and Kenneth Lord. 2013. *Comparative and Noncomparative Advertising: Attitudinal Effects under Cognitive and Affective Involvement Conditions.* Journal of Advertising. 23. 77-91. Link

Process Macro. 2020. *Process Macro for SPSS and Sas*. The PROCESS macro for SPSS, SAS, and R. Accessed May 6, 2022. Link

Reinhard Angelmar, Gerald Zaltman, and Christian Pinson 1972 ,"*An Examination of Concept Validity*. In SV - Proceedings of the Third Annual Conference of the Association for Consumer Research, eds. M. Venkatesan, Chicago, IL : Association for Consumer Research, Pages: 586-593. Link

Rhee, Mooweon, and Pamela R. Haunschild. 2006. T*he liability of good reputation: A study of product recalls in the US automobile industry.* Organization Science 17, no. 1 (2006): 101-117. Link

Rickard, Laura N. 2014. *Perception of risk and the attribution of responsibility for accidents. Risk analysis* 34, no. 3 (2014): 514-528. Link

Ross, Lee. 1987. *The problem of construal in social inference and social psychology: A distinctive approach to psychological research: The influence of stanley Schachter.* 118-150. Link

Rudolph, Thomas J. 2016. *The Meaning and Measurement of Responsibility Attributions. 2016* American Politics Research 44, no. 1 (January 2016): 106–130. Link

Rusko, Miroslav and Anton Koraus. 2013. *Types 1, 2 and 3 of Ecolabels.* Journal of Environmental Protection, Safety, Education and Management. no. 2 (2013): vol 1. Link

Santillo, David. 2007. *Reclaiming the definition of sustainability* (7 pp). Env Sci Poll Res Int 14, 60-66. Link

Scholtz, Salome. 2021. *Sacrifice is a step beyond convenience: A review of convenience sampling in psychological research in Africa*. SA Journal of Industrial Psychology. Link

Schmidt, Christoph G., Kai Foerstl, and Birte Schaltenbrand. 2017. *The supply chain position paradox: green practices and firm performance.* Journal of supply chain management 53, no. 1 (2017): 3-25. Link

Shafiee, Mohammad, Majid and Shahin, Arash. 2021. *How can green marketing lead to customer trust and green intention? Evidences from automobile industry.* International Journal of Business Excellence. 25. 97-109. Link

Shelman, Mary, Damien McLoughlin, and Mark Pagell. 2016. *Origin green: When your brand is your supply chain*. In Organizing Supply Chain Processes for Sustainable Innovation in the Agri-Food Industry. Emerald Group Publishing Limited. Link

Skarmeas, Dionysis and Constantinos N. Leonidou. 2013. *When consumers doubt, Watch out! The role of CSR skepticism.* Vol. 66, 10. Journal of Business Research. Link

Spence, Laura, and Michael Bourlakis. 2009. *The evolution from corporate social responsibility to supply chain responsibility: the case of Waitrose*. Supply Chain Management: An International Journal. Link

Spears, Nancy Ph.D. and Surendra N. Singh Ph.D. 2004. *Measuring Attitude toward the Brand and Purchase Intentions*. Journal of Current Issues & Research in Advertising, Vol 26:2, P 53-66, Link

Song, Yao, Zhenzhen Qin, and Qi Yuan. 2019. *The impact of eco-label on the young Chinese generation: The mediation role of environmental awareness and product attributes in green purchase.* Sustainability 11, no. 4 (2019): 973. Link

Sorsa, Kaisa and Manodip Ray Chaudhuri. 2018. *Sustainable engagement in the Indian and Finnish business*. Turku University of Applied Sciences. Link

Suhr D. Diana. 2022. *Exploratory or Confirmatory Factor Analysis? - SAS*. Accessed May 6, 2022. Link

Srivastava, Samir K. 2007. *Green supply‐chain management: a state‐of‐the‐art literature review.* International journal of management reviews 9, no. 1: 53-80. Link

Statistics Solutions. 2022. *ANOVA (Analysis of Variance).* Complete Dissertation. Link

Svensson, Göran, and Hans Bååth. 2008. *Supply chain management ethics: conceptual framework and illustration*. Supply Chain Management: An International Journal. Link

Tang, Esther, Gerald E. Fryxell, and Clement SF Chow. 2004. *Visual and verbal communication in the design of eco-label for green consumer products.* Journal of International Consumer Marketing 16, no. 4 (2004): 85-105. Link

Tang, Christopher S. and Sean Zhou. 2012. *Research advances in environmentally and socially sustainable operations*. Vol 223, 3. European Journal of Operational Research. Link

Tavakol, M., and Dennick, R. 2011. *Making sense of Cronbach's alpha*. International journal of medical education, *2*, 53–55. Link

Teisl, Mario, Brian Roe and Alan Levy. 1999. *Ecocertification: Why It May Not Be a "Field of Dreams"*. American Journal of Agricultural Economics. Link

Tess, Riley. 2017. *Just 100 companies responsible for 71% of global emissions.* The Guardian. Link

Tetlock, Philip E. 1985. *Accountability: A Social Check on the Fundamental Attribution Error*. Social Psychology Quarterly Vol. 48, 3. Link

Thompson, Ashley E., and Lucia F. O'Sullivan. 2017. *Understanding variations in judgments of infidelity: An application of attribution theory. Basic and Applied Social Psychology* 39, no. 5 (2017): 262-276. Link

Turk, A. Heneghan and C. Nunan, D. 2019. *Non-response Bias*. Catalogue of Bias collaboration. Link

Trochim, Prof William M.K. 2022. *Convergent & Discriminant*. Convergent & Discriminant - Research Methods Knowledge Base. Conjointly. Accessed May 6, 2022. Link

Valdez-Juárez, Luis Enrique, Dolores Gallardo-Vázquez, and Elva Alicia Ramos-Escobar. 2018. *CSR and the Supply Chain: Effects on the Results of Smes.* MDPI. Multidisciplinary Digital Publishing Institute, July 6, 2018. Link

Walker, Helen, and Neil Jones. 2012. *Sustainable supply chain management across the UK private sector.* Supply Chain Management: An International Journal. Link

Wang, Ya-Hui, and Cing-Fen Tsai. 2014. *The relationship between brand image and purchase intention: Evidence from award winning mutual funds.* The international journal of business and finance research 8, no. 2. Link

Weiner, Bernard. 1986. *An attributional theory of achievement motivation and emotion*. Psychological review 92, no. 4: 548. Link

Weiner, Bernard. 1995. *Judgments of responsibility: A foundation for a theory of social conduct*. Guilford Press. Link

Wixcey, Nigel. 2016. *The Deloitte Consumer Review - The growing power of consumers.* A Deloitte Insight Review. Link

Wong, Christina WY, Kee-hung Lai, Kuo-Chung Shang, Chin-Shan Lu, and T. K. P. Leung. 2012. *Green operations and the moderating role of environmental management capability of suppliers on manufacturing firm performance.* International journal of production economics 140, no. 1 (2012): 283-294. Link

Wu, Shwu-Ing, and Yen-Jou Chen. *The impact of green marketing and perceived innovation on purchase intention for green products*. International Journal of Marketing Studies 6, no. 5 (2014): 81. Link

Yue, Heng, Cuiyun Li, Min Liu, Ruyi Jin, and Hugejiletu Bao. 2020. *Validity Test of the Theory of Planned Behavior in College Students' Withdrawal from Smartphone Dependence - Current Psychology.* SpringerLink. Springer US, September 16, 2020. Link

Yusiana, Rennyta, Arry Widodo, and Agus Maolana Hidayat. 2020. *Green Marketing: Perspective of 4P's*. In First ASEAN Business, Environment, and Technology Symposium (ABEATS 2019), pp. 105-109. Atlantis Press, 2020. Link