

The effects of social norms in sustainable advertisements on the levels of skepticism, perceived behavioral control, sustainability beliefs and purchase intention.

The influence of different types of messaging in advertisements on the factors presented in the Theory of Planned Behavior, in addition to sustainability beliefs and skepticism levels in individuals.

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Master's Thesis

*June 2024*

Word Count: 11246

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## **ABSTRACT**

In recent times, sustainability has emerged as a critical concern, leading organizations to explore more environmentally friendly advertising strategies. Sustainable advertising seeks to encourage sustainable consumption. However, a significant gap exists between consumer purchasing intentions and preferences and actual behaviors. This has been extensively investigated in consumer behavior studies and concepts such as the Theory of Planned Behavior (TPB) have been presented to address this gap. This study investigates the interaction of factors within the TPB to determine whether there are additional relationships among these factors that might influence each other. To address this gap, this research focuses on examining the impact of incorporating social norms into sustainable advertising messages and assessing how different types of messaging influence the factors of the Theory of Planned Behavior, as well as other variables such as skepticism levels or sustainability beliefs in individuals. Thus, the research question proposed for this study is: To what extent do sustainable advertising messages that use social norms influence the skepticism, perceived behavioral control, sustainability beliefs and purchase intention of individuals. Moreover, this study also addresses the gap in literature regarding the individual impacts of descriptive and injunctive norms on behavior when presented in isolation. Thus, the main objective is to help marketing and advertising professionals to understand which factors lead to more effective sustainability advertising, promoting sustainable behaviors and attitudes among consumers and what type of messaging can be more effective to facilitate this objective.

To address this research question, A quantitative experimental method was employed, utilizing an online survey for data collection. The participants were randomly assigned to each one of four conditions presented as an advertisement for a reusable bag from the brand IKEA in a between-subject method of testing. The conditions were manipulated so that each advertisement included a descriptive norm, an injunctive norm, a sustainability claim or the original advertisement without a social norm. This

study, found no significant effects for the positive relation of advertisements using social norms and skepticism levels, perceived behavioral control or purchase intention. It did however find a significant effect in the influence of advertisements using injunctive norms and the equilibrium of the planet, part of sustainability beliefs. Thus, after addressing the limitations of this study, further research is needed to investigate the factors that lead to the consumers' attitudes-behavior gap.

KEYWORDS: *social norms, advertising, sustainability, Theory of Planned Behavior (TPB), beliefs.*

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## 1. Introduction

Current consumption trends are unsustainable in the long term and environmental sustainability is important for marketing managers, non-profit organizations, governments and consumers. Therefore, it is important to search for new ways to persuade consumers to adopt more sustainable lifestyles (Newman et al., 2012, p. 512).

Sustainability advertising, as described by Rathee & Milfeld, (2023, p. 3), consists of promoting sustainable actions, practices, products and behaviors that emphasize companies' dedication to environmental, social and economic sustainability. This is exemplified by efforts such as reducing environmental harm, emphasizing fair trade practices and community development and balancing profitability with sustainable practices.

Schlegelmilch et al. (1996, pp. 42-50) conducted a study focusing on the significance of environmental knowledge and attitudes and its effect on pro-environmental purchasing behaviors. The researchers collected data from students and the general public about their attitudes and knowledge about the environment and their habits of buying green products. They found that consumers' awareness of environmental issues can play a role in their decision-making process when it comes to purchasing environmentally friendly products. However, the researchers encountered challenges in pinpointing the exact sources or factors that contribute to the formation of these environmental attitudes and how these attitudes are developed. For instance, if those come from personal sources such as family or friends, or external ones, such as the media. Thus, further investigation into these information sources could provide valuable insights into the formation of environmental attitudes (Schlegelmilch et al., 1996, p. 51).

Despite some individuals in every society altering their own behavior and influencing others in response to unsustainability, climate change or environmental degradation, overall human activities still lead to unsustainable behaviors (Gifford et al., 2018, p.1). Environmental psychologists and researchers have investigated what is required to change behavior to better understand the factors that drive both sustainable and unsustainable behavior. This concept is known as the attitude-behavior gap, for which various theories have been proposed to explain the barriers to change environmental behavior. Gifford et al. (2018, pp 1-8) compiled a list of 30 factors that

may impede behavior change related to climate change and sustainability, including perceived behavioral control, the perception of social norms and what other people do or should do, and skepticism.

According to the theory of planned behavior developed by Azjen, (1991, p. 188) intentions are influenced by three main factors: attitudes toward the behavior, subjective norms, and perceived behavioral control. Attitudes refer to the individuals' positive or negative assessment of a behavior. Subjective norms involve the perceived social pressure from significant others to engage or not in a behavior and perceived behavioral control represents the individuals' belief in their capacity to engage in a behavior.

Social norms, defined as standards of behavior perceived as typical or proper based on observations, significantly impact individuals' decisions regarding environmentally friendly behaviors (Gifford et al., 2018, p. 7). Skepticism, on the other hand, entails a lack of trust in experts or authority and resistance to behavior change (Gifford et al., 2018, p. 8, 12).

Perceived behavioral control refers to individuals' perception of the ease or difficulty of performing a behavior, either directly or indirectly, based on beliefs about one's capability to handle specific limiting or encouraging elements (Ajzen, 2002, p. 668). Beliefs, on the other hand, are personal convictions that guide actions and behaviors, often influenced by personal experiences. These beliefs not only shape individual behavior but also influence the beliefs of others (Jeremias, 2017, p. 316).

This study seeks to explore how social norms portrayed in sustainability advertisements affect individuals' levels of skepticism, perceived behavioral control, beliefs regarding sustainability and purchase intention.

## 1.1 Academic Relevance

Recent literature has begun to explore the gap between consumers' stated intentions to engage in sustainable behaviors and their failure to follow through in their actions (Janssen & Vanhamme, 2015, p. 776), however, there is also a lack of research regarding sustainable beliefs (Jeremias, 2017, p. 315). One aspect contributing to this misalignment is the existence of barriers impeding individuals from engaging in sustainable behaviors, such as high levels of skepticism, a lack of perceived behavioral control (Janssen & Vanhamme, 2015, p. 777) and not sufficient positive beliefs regarding sustainability (Jeremias, 2017, p. 317).

Based on Gifford et al. (2018, pp. 2-10) several psychological barriers impede individuals from engaging in sustainable behaviors. One major barrier is limited cognition, where individuals fail to understand the importance of climate change, due to ignorance, uncertainty or ecological desensitization, where our surroundings are presented with more sensory information than we can process. Consequently, many people remain oblivious to significant environmental changes. This leads to a lack of perceived behavioral control where individuals feel their actions are too insignificant to make a real difference. Additionally, skepticism towards environmental authorities or experts reflect in individuals not trusting environmental information. Furthermore, social norms and comparisons to other individuals that surround us affect our own behaviors and attitudes often leading to inaction if sustainable behaviors are not perceived as the norm to follow.

Furthermore, this study seeks to address the gap in the existing literature regarding the relative impact of descriptive and injunctive norms when presented individually (Raihani & McAuliffe, 2014, p. 3) rather than combined, to assess their individual roles in shaping behavioral outcomes.



## 1.2 Societal relevance

The aim of this study is to help marketers better understand factors that lead to more effective sustainability advertising in order to promote sustainable behaviors and attitudes among consumers such as green purchase intention. As sustainability has become an important consideration for consumers (Rathee & Milfeld, 2023, p. 1), companies are incorporating sustainable messages into their advertising strategies and studying the effectiveness of different types of messages which can lead to higher purchase intentions (Rathee & Milfeld, 2023, p. 10). This research will contribute by investigating whether incorporating social norms into sustainability advertisements can lower psychological barriers, such as lack of perceived behavioral control, undeveloped or negative sustainability beliefs, and high levels of skepticism. By understanding how social norms can influence these barriers, marketers can design more impactful sustainability campaigns.

In addition, this study will explore how advertisements that use social norms can influence consumer attitudes towards sustainability. Social norms can motivate individuals to conform to what is perceived as common behavior. In the context of behavioral change, a study conducted by Göckeritz et al. (2014, pp. 514, 518, 519), found a significant positive relationship between social norms (descriptive normative beliefs) and sustainable behavior, such as energy conservation. The study recruited participants from California by using random digital dialing surveys and the data was collected over 2 years. The results showed that individuals tend to follow the herd, with descriptive normative beliefs affecting environmental behavior. In addition, when injunctive norms were also included, the effect between the descriptive norms and the behavior was even stronger. The authors showcased that mental shortcuts, triggered by subtle cues can unconsciously shape decision-making, which can in turn, impact the environment and individuals' environmental behaviors. However, participants who initially exhibited low involvement in environmental behavior showed greater responsiveness to descriptive norms compared to those who were already environmentally conscious.

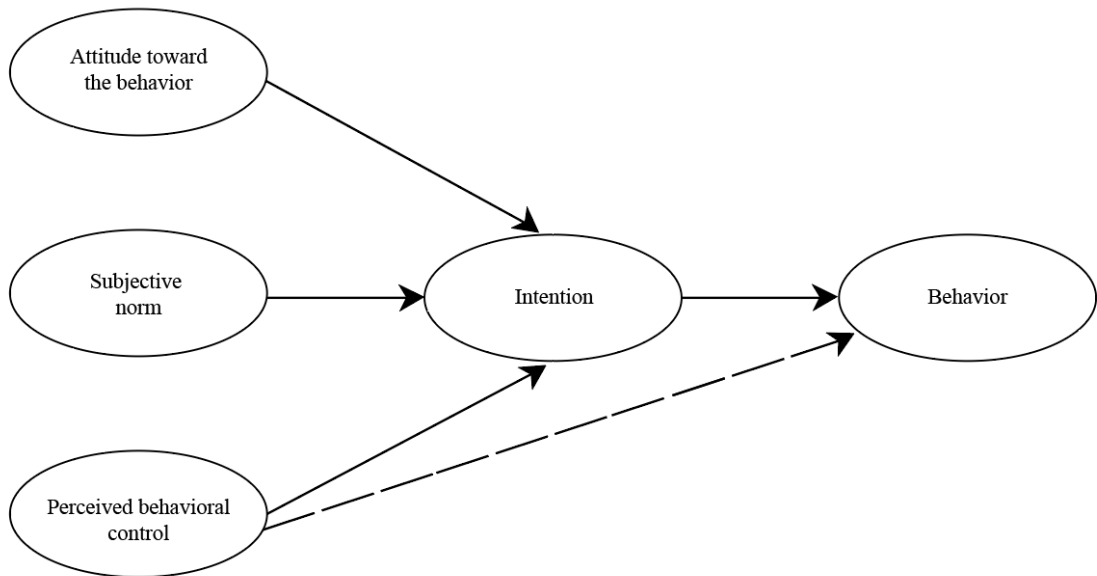
This research will also examine if including social norms in sustainable advertisements will enhance perceived behavioral control by showing that others are successfully engaging in sustainable behaviors and if other individuals adopting sustainable practices reduces the perceived difficulty of these behaviors.

When it comes to sustainable behavior, a study conducted by Ly (2024, p. 2, 6) showed that social influence positively associates with environmentally friendly behaviors. Consumers that share the same common groups communicate information and opinions between each other, leading to other people following the same behaviors. Thus, those who show environmental behaviors influence the actions of their significant others by creating social norms. The results showed a significant effect of social influence, including social norms encouraging individuals to follow pro-environmental behaviors. Similarly, Rathee & Milfeld (2023, p. 21, 22) corroborate this view by stating that normative influences drives adherence to social norms when other individuals belonging to a social group make sustainable purchases, leading to other individuals following the same practice.

Moreover, the value-belief-norm theory of environmentalism by Stern (2000, p. 413) studies the association of personal environmental beliefs with sustainable behaviors. This theory explains that individuals feel personally responsible to act in sustainable ways when environmental issues affect their beliefs regarding the possible negative consequences of said issues. Thus, this research will center on studying if social norms can change individuals' beliefs about sustainability, based on the pro-environmental behavior of other individuals with descriptive and injunctive norm messages.

Regarding purchase intention, the Theory of Planned Behavior developed by Ajzen (1991, 181-185) explains that intentions are influenced by three main factors: attitudes toward the behavior, subjective norms, and perceived behavioral control. Attitudes refer to the individuals' positive or negative assessment of a behavior. Subjective norms involve the perceived social pressures to engage or not in a behavior and perceived behavioral control represents the individuals' belief in their capacity to engage in a behavior (Ajzen, 1991, p. 188) In essence, intentions are formed based on the interaction between motivation (derived from attitudes and subjective norms) and perceived control over the behavior. The stronger the intention, combined with high perceived control, the more likely the person will follow through with the purchase.

Figure 1.1: Theory of Planned Behavior (Ajzen, 1991).



Thus, this research contributes to efforts aimed at promoting sustainability and addressing environmental challenges. Hence, the research question for this study is: *to what extent do sustainable advertising messages that use social norms influence the skepticism, perceived behavioral control, sustainability beliefs and purchase intention of individuals?*

## **2. Theoretical Framework**

### **2.1 Sustainable advertising and sustainability claims**

Sustainable advertising encompasses promotional efforts that advocate for environmental awareness and encourage behaviors aimed at mitigating environmental concerns, and it can be affiliated with either commercial companies seeking profit or non-profit initiatives (Lima et al., 2023, p. 54). Mandliya et al. (2020, p. 1648) posit that there has been a notable surge in the usage of eco-friendly products in recent times due to the rise of environmental advertising by companies by increasing awareness among individuals, leading to the sales of these type of products.

In recent years, the use of green advertising has become a popular marketing strategy to promote products or services with minimal environmental impact. These types of advertisements encourage the consumption of eco-friendly products by highlighting their environmental benefits through different means such as sustainability claims (Castro-Santa, 2023, p. 2). Based on the studies of Ku et al. (2012 p. 48), consumers tend to prefer products that are advertised with green appeals rather than those without them. Consumers who had more concerns for the environment and had preventive attitudes, considered buying green purchases to prevent harming the ecosystem.

In general, advertisements that use sustainability claims and cues favorably influence customers' attitudes towards the product, while cultivating a positive perception of characteristics such as popularity or quality and diminished environmental impact (Castro-Santa, 2023, p. 2).

A study undertaken by Castro-Santa et al. (2023, pp. 3-9) analyzed how promoting social norms that encourage low-carbon usage with environmental advertising can influence consumers attitudes towards consuming low-carbon products. In order to proceed, an experiment was designed where a Facebook advertisement was presented with environmentally friendly products on one part and non-sustainable products on the other while including a descriptive norm as a Facebook poll regarding the use of energy-saving lightbulbs. 2728 participants were recruited for this study in a 3 x 3 between-subjects experiment. The results showed that both sustainable advertising and social norms were efficient in influencing low-carbon decision-making in consumers.

Specifically, when the sustainable claim was shown separately the effect was even higher.

Furthermore, a study conducted by Kong et al. (2021, pp. 642, 646, 648) investigated the effects of sustainability claims and other variables on purchase intentions in luxury and non-luxury clothing brands. The study was conducted in Germany, a country with higher consciousness regarding sustainability. 429 participants were part of the study, and they were allocated arbitrarily to the stimuli and control groups. The objective of the study was to analyze the responses of customers to advertisements in social media that used pro-environmental framing and the results were tested through mediation and moderation analyses. The results showed that the message that used sustainability had a positive relation with purchase intention for the brand that was non-luxurious. The study thus, suggests that incorporating sustainable messages in advertisements can be advantageous for inexpensive brands in societies with higher environmental consciousness. However, for individuals with an anterior reliance on the brand, the sustainable claim increased their skepticism levels towards the brand.

## 2. 2 The use of social norms in sustainable messages

Social norms are rules or standards that guide and influence behavior within a social group (Soroa-Koury & Yang, 2010, p. 104). They are often shaped by what individuals perceive as acceptable or common behavior among their peers and have been described conceptually as guidelines for behavior. These norms serve as benchmarks against which behavior is evaluated and either endorsed or frowned upon (Soroa-Koury & Yang, 2010, p. 104).

When it comes to social norms related to sustainability or sustainability norms, this study will define the concept as the association of social norms that are created based on the notion of sustainability and sustainable development. According to the World Commission on Environment and Development (WCED, 1987, p. 41), sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Sustainable development implies demonstrating increased awareness regarding the limits of the resources and consciousness regarding human activities (WCED, 1987, p. 16). In addition, the utilization of finite resources such as fossil fuels or minerals diminishes the availability for future generations. Thus, considering how critical these resources are, using technologies that minimize waste, or recycling materials are good alternatives to avoid resource exhaustion (WCED, 1987, p. 43).

In this regard, sustainable behavior as depicted in Anđić & Vorkapić (2014, pp. 74-75), consists of a set of actions with which individuals assume responsibility for conserving and safeguarding natural and cultural resources, such as plant or animal species, as well as assuring the well-being of future generations. Equally, these are behaviors that involve individuals consciously influencing the environment in positive and protective manners with the aim of reducing ecological impact. In this study, the sustainable behavior to be employed involves the reusability of an item, specifically a reusable bag from IKEA.

Social norms classify in two types: injunctive and descriptive. Injunctive norms reflect what behaviors are seen as acceptable or unacceptable, while descriptive norms show what behaviors are common. Research indicates that both types influence behavior, as people tend to follow social approval and popularity. Combining these factors in communication has important implications for crafting pro-environmental

messages. One important implication is that in situations where socially condemned behaviors are prevalent (e.g., littering), the difference between descriptive and injunctive norms is crucial. Rather than highlighting what typically other individuals do, public service messages should emphasize what is morally sanctioned or condemned, since failure to do so, may lead individuals to conform to the descriptive norm, which could have detrimental effects on society (Cialdini, 2003, pp. 105, 106).

For instance, Cialdini et al. (1990, pp. 1015-1017) conducted an experiment regarding littering behavior. The objective was to examine how the behavior of others affects littering behavior by manipulating the perceived descriptive norm. The study involved 139 participants from a university hospital parking lot. The environment was altered to either have a littered floor or a clean one. Additionally, an actor was used in the experiment to discard a flyer to the floor, containing a driving safety message, which were initially placed onto the windshield of parked cars. This action was intended to draw attention to the state of the parking lot floor, emphasizing the existing descriptive norm. The actor's behavior had two conditions: either littering the floor or simply walking by. The results of the study revealed that participants littered more in dirty environments compared to clean ones, and this effect was amplified when they observed the actor littering. Conversely, in clean environments, participants discarded waste less frequently when the actor littered compared to when the actor refrained from doing so.

Furthermore, the study conducted by Schultz et al. (2007, pp. 430-433), evidenced that both descriptive norms and injunctive norms can affect behavior. In the study, individuals were exposed to descriptive norms and injunctive norms to reduce their energy consumption in their households. Households were categorized in two groups: those whose energy consumption exceeded the community average and those whose energy consumption fell below the community average. Half of the households were randomly allocated to receive solely the descriptive norm information and the remaining half received the descriptive norm coupled with an injunctive message indicating the endorsement or rejection of their energy consumption. In the descriptive norm condition, each message included data from their daily energy usage and their neighborhood energy consumption alongside tips on how to save energy. In the descriptive and injunctive information condition, households received the same information alongside a positive emoticon for households that consumed less than the average, and a negative one for those who consumed more than the average. The

dependent variable was measured by the actual energy consumption. The study involved 290 households and followed a 2 x 3 mixed-factorial design. The findings revealed that the households that consumed more than average reduced their energy consumption whereas the households that consumed less than average increased their energy usage when presented with descriptive norms, showing a boomerang effect. However, when adding an injunctive norm to the message, the boomerang effect was prevented, maintaining low consumption rates among households initially consuming less energy.

Moreover, a study conducted by Liu et al. (2016, p. 35), show that when descriptive norms were added to the messaging of petitions for reducing energy consumption behaviors in a building of the Georgia State University, there was a 5% increase in the percentage of subjects who signed the petition, compared to the original one without social norms.

The study was a randomized field experiment aimed at understanding how social norms influence students' willingness to sign a petition about the energy conservation of the building. The study consisted of two phases; in the first phase they collected data from students and interviewers asked them to sign a petition. In the second phase, the petition was modified to include a treatment of social norms. The data was collected in a random manner by the interviewers alternating the two treatments. The first treatment included original information regarding the benefits of reducing the temperature by 2° F in winter and increasing it in the summer to save the costs of electricity. While in the second treatment the percentage of the students that signed the first petition was stated. The results showed that 85.9% of students signed the first petition, while 90.9% of students signed the second petition, which reflects a 5% increase, being statistically significant. A total of 1031 students participated in both treatments (538 for the first treatment and 493 for the second treatment). This study confirms that including social norms in sustainable messaging can increase the likelihood of other individuals following pro-environmental behaviors (Liu et al. 2016, pp. 33-35).

Similarly, a study conducted by Goldstein et al. (2018 p. 474), show that when descriptive norms were incorporated into the messaging of printed signs to encourage hotel customers to participate in a program to reuse the towels, more people decided to participate than when social norms were not used in the messaging.



In the experiment, two signs were created asking participants to take part in a towel reuse initiative. The first sign included a message of environmental conservation without social norms while the second one included a descriptive norm indicating that the majority of the hotel guests participated in the towel reusing initiative. A total of 1058 participants from 190 hotel rooms were collected in 80 days. The printed sign was allocated in each of the 190 rooms in a random way. The results reflected that the descriptive norm was significantly more effective, leading to a superior towel reuse rate (44.1%) than only the sustainability claim showed in the message.

On the other hand, based on the research of Raška et al. (2015, p. 730), participants who saw an advertisement without descriptive norms had higher intentions to engage in green behaviors compared to those who saw ads with either a strong or weak descriptive norms. This shows that the inclusion of a descriptive norm in sustainable advertising can decrease intentions to purchase the promoted product compared to green advertising.

The study consisted of a 3 x 2 between subject experiment to test the influence of pro-environmental advertisements and sustainable purchase intention. The advertisements varied in terms of descriptive norm strength: one featured a strong descriptive norm, another a weaker descriptive norm, and the third lacked a descriptive norm prompt. The advertised products were either recycled or locally produced. A total of 183 participants, recruited via an online survey, were randomly assigned to each condition. Participants comprised university students, chosen to ensure a sample familiar with the selected brand, which was relatively well-known. The researchers hypothesized that a familiar brand would more effectively influence behavior through descriptive norms. The results show that pro-environmental advertisements had higher effects on sustainable purchase intention than the messages that used strong or weak descriptive norms, despite the type of the sustainable product (Raška et al. 2015, pp. 724-730).

The underlying reasoning for this is that the more salient the descriptive message is in the advertisement, the more it can draw attention to its persuasive intent. This can increase levels of skepticism and have a negative impact on consumer attitudes and compliance with the advertisement. Since consumers may see these cues descriptive

norm cues as signs of the marketer's deceptive intentions it can reduce the intentions of buying the advertised product (Raška et al., 2015, p. 730).

The main difference observed in the study conducted by Raška et al. (2015), lies in its focus of advertising a product from a brand instead of a directly sustainable behavior. While the advertised product in question may align with a green or environmentally friendly description or a local brand, the notable distinction is the presence of a financial interest from the advertiser and the brand itself. In contrast, participants in previous research, such as towel reuse programs (Goldstein et al., 2018) or energy-saving practices in buildings (Liu et al., 2016), did not bear any costs associated with engaging in the environmental behavior nor perceived any obligation to purchase a product.

When it comes to the impact of descriptive norms or injunctive norms on behavior, while the impact of both combined has been tested, fewer less studies have investigated which type of norm carries the greatest effect on behavior. To assess the independent effects of descriptive and injunctive norms on behavior, they need to be presented in isolation and evaluated for their impact on behavior (Raihani & McAuliffe, 2014, p. 3).

Hence, this research suggests that understanding how social norms can influence individuals' reactions to advertising will be useful, given that social norms are perceived as effecting behavior and serving as societal regulation. Several studies emphasize the effectiveness of descriptive norms and injunctive norms in shaping behavior towards sustainability. For instance, Schultz et al. (2007) demonstrated that informing households about their energy consumption in comparison to their neighbors influenced their energy saving behaviors. Similarly, Liu et al. (2016) found that including descriptive norms in petitions to decrease energy usage increased participation rates in energy conservation efforts. According to Cialdini et al. (1990), combining injunctive and descriptive norms into messages are effective into discouraging non-environmental behaviors such as littering. In addition, Goldstein et al. (2018), highlight how including descriptive norms into pro-environmental messaging regarding towel reuse in hotels increases individuals' will to engage in this green behavior. Furthermore, Raihani & McAuliffe (2014) emphasize the need for further research isolating injunctive norms and descriptive norms to better understand their individual impact.

Hence, gaining insight into how descriptive and injunctive norms interact in green advertising offers valuable guidance for developing effective messaging to encourage sustainable behaviors.

### 2.3 Sustainable Purchase Intention

Rashid (2009, p. 134), describes green purchase intention as the willingness of an individual to prioritize green products over conventional ones in their purchase decision. With the global emphasis on sustainability, non-sustainable consumer behaviors contribute to environmental issues that obstruct sustainable development. In response, consumers motivation towards buying less environmentally damaging products has increased. In addition, green consumption has become a focal point to reduce waste for companies while also increasing their marketability (Hazaea et al., 2022, p. 1)

According to Ajzen's (1991, pp. 181, 184) Theory of Planned Behavior, intentions are thought to reflect the motivational factors that influence behavior, indicating how much effort someone is willing to put in to perform the behavior. Usually, the stronger the intention to engage in a behavior, the more likely it is to occur. However, intention can only lead to behavior if the person has control over the action. Purchase intention, as the behavior is primary influenced by the attitude towards the behavior, the level of social pressure they feel, and the control they have over the behavior. Together, these factors predict intention, which in turn predict actual behavior (Ajzen, 1991, p. 182).

A study conducted by Ham et al. (2015, p. 742, 746) reveal that attitudes, subjective norms and perceived behavioral control are statistically significant predictors of green purchase intention, in line with the Theory of Planned Behavior, which was used as the theoretical framework for this study.

The research was conducted through a face-to-face survey with 411 individuals in Croatia that were the main shoppers of their households, responsible for making purchase decisions and control the household's food consumption. The respondents were asked about their personal attitudes about buying environmentally friendly foods, their perceived behavioral control and subjective norms or descriptive norms perceived from the standpoint of five groups relevant for the respondents. Additionally, respondents were asked about their intentions to purchase green foods.

The findings indicated that each of the factors mentioned played a role in individuals' purchase intention of buying green foods. The first model indicated a

variance of 40.8% in purchase intentions. The second model focused solely on descriptive norms, which emphasized the influence of observed behaviors rather than opinions, explaining a lower variance (38.6%). The most significant model with a variance of 44.5% integrated both social norms (defined in this study as the opinions of important people for the respondents) and descriptive norms (the influence of their behavior).

The most comprehensive model integrated both social norms and descriptive norms, demonstrating that each dimension independently contributes to predicting purchase intentions. This model accounted for the highest variance (44.5%), underscoring the unique information provided by each type of norm in understanding consumer behavior towards green food purchases. Therefore, this study emphasizes the importance of examining both types of norms when making recommendations of green purchase intentions.

Furthermore, research performed by Elgaaied-Gambier et al. (2018, pp. 186, 187) investigated the effect of descriptive norms on the intention of buying non-overpackaged products. Participants were exposed to advertisements that either included or excluded descriptive norms about waste management practices. The results showed that positive descriptive norms associated positively with the perceived credibility of the advertisements, which had a positive effect on participants' purchase intention. However, it was found that descriptive norms alone had not a direct influence on purchase intention, indicating that simply perceiving other individuals engaging in a behavior does not translate to participants' intentions to buy the product.

Incorporating descriptive norms in sustainable advertisements can effectively affect purchase intention thanks to the influence that the behavior of others can do in consumers. Previous research indicates that messages including descriptive norms promote environmental behavior such as waste management, purchase intention of environmentally-friendly products, or reducing energy consumption (Elgaaied-Gambier et al., 2018); (Schultz et al., 2007); (Liu et al., 2016). Furthermore, according to the Theory of Planned Behavior by Ajzen (1991), purchase intention is influenced by attitudes towards the behavior, subjective norms and perceived behavioral control. Descriptive norms align closely with subjective norms; thus, this study hypothesizes

that when consumers perceive others engaging in sustainable purchasing behavior, it affects their own environmental behavior.

Hence, this research proposes the following hypothesis:

*H1: The inclusion of descriptive norms in sustainable advertisements increases sustainable purchase intention, compared to the sustainability claim, the injunctive norm and the control group.*

## 2. 4 Skepticism

Skepticism towards green advertising is defined as individuals' distrust of exaggerated or deceptive green advertising (Luo et al., 2020, p. 2). Consumers generally hold positive views toward companies that support social causes, however, recent studies indicate that many consumers perceive brands as exploiting societal issues for increased sales, leading to skepticism and reduced engagement with advertisements. Skepticism may arise from a belief that private companies prioritize self-interest, viewing cause-related efforts as manipulative promotional strategies (Bae, 2020, p. 1). Researchers concur that skepticism diminishes the effectiveness of advertising, resulting in negative attitudes towards companies promoting green products, (Cheng et al., 2018, p. 62).

When companies use green marketing, which is an approach to promote its environmentally friendly practices through advertising, consumers may perceive those messages as "greenwashing". Skepticism among consumers has increased due to the rise of deceptive advertising and the labelling of products as "environmentally-friendly". "Greenwashing" can be defined as the act of deceiving consumers about a company's environmental practices while intentionally misrepresents a firm's environmental efforts. However, there are certain misleading green advertising practices such as highlighting eco attributes while ignoring the harmful aspects of the production, making unverifiable claims or using poorly defined claims that can mislead consumers about the true nature of the product advertised (Aji & Sutikno, 2015, pp. 436, 437).

The skepticism in response to green advertising can be defined as green skepticism, which is a significant issue for consumers, corporations and stakeholders. Skepticism refers to individuals' tendency to doubt or disbelieve what is presented, encompassing feelings of cynicism or distrust. Due to the recent rapid growth of environmentally friendly products, greenwashing incidents have also increased. As a result, consumers recognize greenwashing practices, which heightens their skepticism levels towards companies' green initiatives (Nguyen et al., 2019, p. 4)

When it comes to effective advertising, a discourse arises regarding the most ideal approach to reach skeptical consumers. Obermiller et al. (2005, pp. 15, 16) found that there is a contrasting efficacy between informational and emotional appeals, mostly among individuals with high levels of skepticism towards advertising. While it is argued

that informational appeals may encounter challenges when trying to persuade these types of consumers due to a lack of credibility, it is also argued that these consumers may not inherently favor emotional appeals either, despite being more responsive to them.

In a study conducted by Stok et al. (2013, p. 56), researchers explored how different types of social norms can affect teenagers' fruit consumption habits. They found that when adolescents were informed about the amount of fruit their peers consumed (descriptive norms), their own fruit consumption increased. While when presented with an injunctive norm stating that most high school students believe that their peers should consume an adequate amount of fruit, students reported lower intentions to consume fruits than the control group. This phenomenon can stem from the fact that injunctive norms can make individuals feel coerced by the norm's source, increasing their skepticism, especially if it contradicts their personal norms which might trigger resistance towards adopting the behavior (Stok et al. 2013, p. 60).

While some organizations have made genuine efforts to reduce the environmental footprint of their products, others have overstated or falsely invented their eco-friendly attributes. This has led to a rise in consumer skepticism regarding the claims in sustainable advertisements, further influenced by the exposure of numerous fraudulent environmental claims (Carlson et al., 1993, p. 28). This research argues that implementing social norms in the advertisements, will also affect the persuasion knowledge of individuals. The persuasion knowledge model is defined as individuals' accumulated understanding of how persuasion agents, such as advertisers, operate when it comes to selling tactics and strategies. This knowledge also aids them to respond to these persuasion attempts based on their previous experience, media exposure, observation of marketing practices, etc. (Friestad & Wright, 1994, p. 1, 2). This goes in line with the research of Stok et al. (2013), which argues that social norms can make individuals feel coerced, increasing their skepticism levels. Similarly, sustainable advertising messages that use social norms may trigger psychological reactance among consumers. Reactance theory suggests that individuals value their free will regarding environmentally responsible behaviors. When individuals' freedoms are perceived as constrained using social norms in persuasive messages, consumers may experience reactance and increase their skepticism levels (Melnyk et al., 2022, pp. 99, 100).



Thus, this research argues proposes the following hypothesis:

*H2: Descriptive norms and injunctive norms used in the advertisement increase skepticism levels compared to the sustainability claim or the control group*

## 2. 5 Perceived behavioral control

The concept of perceived behavioral control has been introduced by Ajzen (1991), as a pivotal element of the theory of planned behavior. This concept denotes individuals' confidence in their capacity to carry out certain actions which affects their motivation and dedication to execute the behavior. Individuals tend to believe that they can engage in a behavior when they perceive that they possess the required resources, opportunities and the autonomy to decide upon their actions (Yzer, 2012, p. 102)

A study conducted by Sawang et al. (2014, p. 184-186) explored the relationship between social norms and perceived behavioral control in new technology use, regarding media or IT. It was hypothesized that social norms could interact with the impact of attitude or perceived behavioral control over the intention to use new technology and media. The study showed that when social norms were strong, individuals exhibited higher intentions of using new technologies, even if their perceived behavioral control levels were low. However, the study also revealed that the interaction between attitudes and social norms were not as significant, meaning that social norms did not impact the attitude towards the intention of using new technologies, but it did mitigate low perceived behavioral control (Sawang et al., 2014, pp. 184-186).

The Theory of Planned Behavior (TPB), outlines how individual decisions regarding specific behaviors are influenced. Behavior determinants include intentions to perform the behavior, which reflects a person's motivation and decision to exert effort for a particular behavior, and perceived behavior control, which reflects an individual's expectation that they can control the behavior. According to this theory, individuals are inclined to engage in behaviors that lead to valued outcomes, or if influential individuals endorse the behavior and if they perceive having the necessary resources and opportunities for behavior execution (Conner, 2001, p. 22).

Similarly, the TPB incorporates the concept of self-efficacy belief or perceived behavioral control into a broader framework that examines the connections between beliefs, attitudes, intentions, and behavior (Ajzen, 1991, p. 184).

According to the TPB, the more positive someone's attitude and a subjective norm towards a behavior, and the higher their perceived control over that behavior, the more

determined their intention should be to carry out that behavior. (Ajzen, 1991, p.188). Thus, when individuals perceive strong social approval (enhanced subjective norm) and feel confident in their ability to perform the behavior (enhanced perceived behavioral control), their intention to engage in the behavior is likely to increase.

Therefore, by reducing social barriers, such as lack of perceived behavioral control, and making the behavior seem easier to align with social norms (Gifford et al., 2018, pp. 6, 7) this research proposes that advertisements that use social norms can enhance perceived behavioral control and encourage the use of reusable recycled bags.

Based on this literature the following hypothesis was proposed:

*H3: The sustainable advertisements incorporating descriptive and injunctive norms positively influence perceived behavioral control in comparison with sustainability claims and the control group.*

## 2. 6 Sustainability beliefs

Beliefs are defined as personal truths stemming from experiences and observations that can also influence other people. They are marked by deep conviction and faith and encompass opinions, convictions and knowledge, which in an environmental context, impact sustainable behaviors (Jeremias, 2017). Sustainability aligns environmental well-being, social fairness, and economic prosperity to create resilient communities for present and future generations. Rooted in the belief of limited resources, sustainable practices, which align with sustainability beliefs, prioritize sensible use of resources for long-term well-being, fostering ecosystems, human welfare, and economic prosperity (What Is Sustainability? | UCLA Sustainability, n.d.). These practices encompass waste reduction, purchasing biodegradable or recycled products, investing in durable items, installing solar panels, opting for public transportation to cut carbon emissions, and supporting local goods (Sustainable Consumer 2023 - Sustainable Lifestyle, n.d.).

Social norms are usually understood as beliefs about what other people do (descriptive norms) and what they ought to do or not. The choices we make can be shaped by the psychological benefits of conformity, where matching our behaviors to those of others can foster feelings of belonging and acceptance into a group. Thus, individuals tend to follow behaviors that are expected by groups, even if they clash with our personal beliefs. Therefore, social norms evolve with the changes in our beliefs about what other people do or what we perceive as right or wrong based on other people's opinions (Gavrilets et al., 2024, pp. 1-2).

A meta-analysis of 110 articles by Rhodes et al. (2020, p. 170) show that changes to descriptive norms and injunctive norms are generally effective in altering participants' normative beliefs, which in turn can influence their opinions and behaviors even if the effect was small but statistically significant.

In addition, messages that use descriptive norms can be more persuasive if the information conveyed mirrors individuals' own normative beliefs but have the opposite effect when those normative statements challenge the recipient's own normative beliefs (Wang & Brown-Devlin, 2022, p. 183).

The TPB suggests that behaviors are influenced by relevant information or beliefs that individuals find important. While people can have numerous beliefs regarding a

behavior, only a few are considered. These beliefs are considered as the determinants of peoples' intentions and actions. Thus, the theory distinguishes three types of beliefs: behaviors beliefs, which affect attitudes towards the behavior, normative beliefs, which affect the perceived subjective norms and control beliefs, which reflect the perceptions we have towards the ability to control a behavior (Ajzen, 1991, pp. 189, 190).

This study argues that social norms or perceived subjective norms influence intentions and behaviors, deriving from the belief that others engage in sustainable behaviors. Therefore, individuals exhibiting sustainable behavior do so because of their sustainability beliefs, which, in turn, can influence others who follow the social norm of environmental sustainability.

Thus, the hypothesis presented is:

*H4: Sustainable advertisements incorporating descriptive norms and injunctive norms will positively influence sustainability beliefs, compared to the sustainability claim or control group.*

*Figure 2.1: Conceptual map for H1 and H2.*

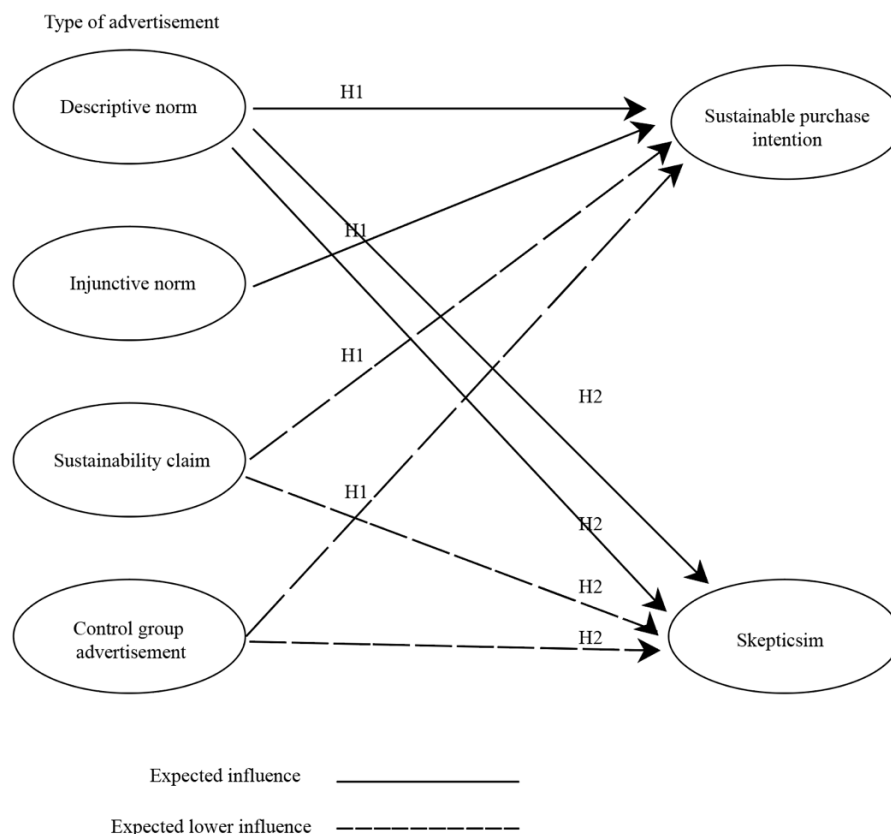
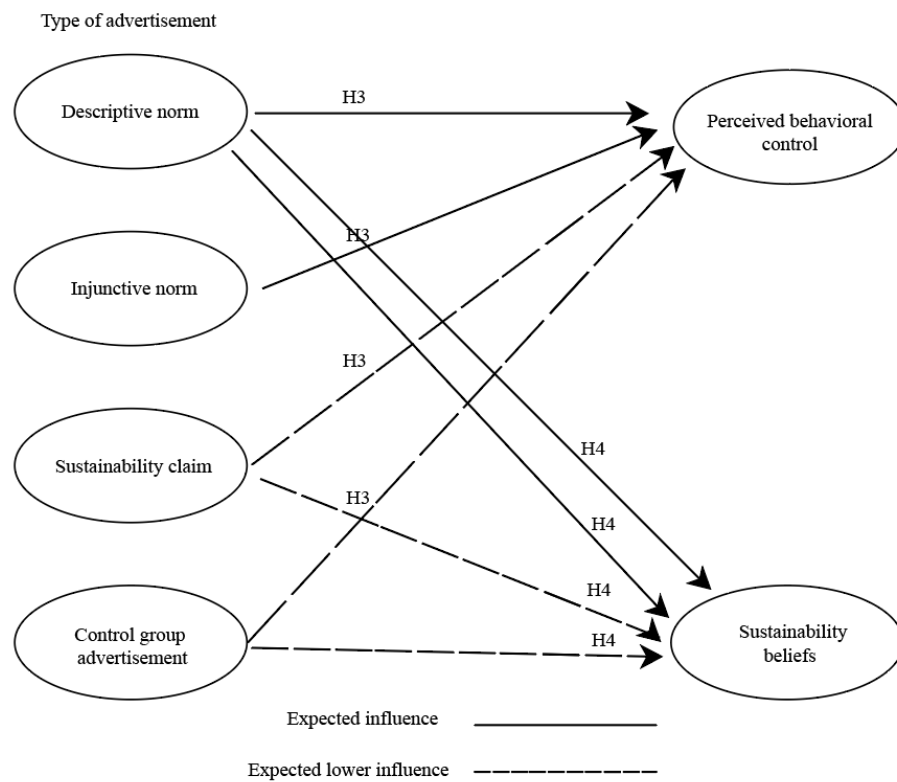


Figure 2.2: Conceptual map for H3 and H4.



### 3. Method

#### 3.1 Research method

To answer the research question and test the hypotheses, this study will employ a quantitative research methodology. The reason for this is that the data collection is structured, which is essential to measure variables such as skepticism, perceived behavioral control, and sustainability beliefs. This structured approach allows for systematic data collection that facilitates comparisons between different groups and conditions. Quantitative methods allow for statistical analysis to examine the relationships between variables and determine their influence. The measurement can be objective, which is important to assess the impact of social norms in sustainability advertisements in an unbiased and rigorous manner, ensuring reliability. Also, quantitative research can be generalized, seeking to draw conclusions. In addition, it encourages replicability, allowing other researchers to verify and build upon existing findings (Matthews & Ross, 2010, p. 116)

#### 3.2 Research design

Individuals were exposed to four conditions or types of advertisements, which was the independent variable. These were manipulated in order to include social norms, a sustainability claim or the unaltered original advertisement of a reusable bag of IKEA. The message used for the injunctive norm was *“700 plastic bags per year or 1 reusable bag”* with the inclusion of another slogan in order to influence the perceived behavioral control *“you make the choice, you make the difference”*. The perceived behavioral control slogan was kept for the rest of the conditions, except for the control group. The descriptive norm used was *“9 out of 10 modern consumers use a reusable bag to help the environment”*. The injunctive norm message said, *“Use a reusable bag, save the environment”* and the original advertisement consisted of the following message: *“One little bag can change the world”*, with an added slogan of *“The Beautiful Possibilities”*. The original advertisement is interpreted in this study as a sustainability claim, since it promotes the reutilization of a bag, however, as lower intensity compared to the injunctive norm message. In addition, it can also influence perceived behavior control, since it reflects the capacity of individuals to make little changes that unified, make a big difference regarding the conservation of the environment.

### 3.3 Procedure

Before the start of the survey participants were informed about the nature of the research, which focused on the effectiveness of advertising. Participants were informed about their participation being entirely voluntary and that they could withdraw at any time without any consequences.

Additionally, data collection and privacy concerns were explained to the participants, assuring that all data would be collected anonymously and used solely for academic purposes and this research.

Participants were required to confirm that they were over 18 years of age and to give their consent to proceed with the survey by responding affirmatively to the statement, "Yes, I do consent." Those who did not agree to the terms were immediately directed to the end of the survey. Participants who consented were initially shown an advertisement at random featuring a stimulus aimed at promoting a reusable bag from IKEA. After viewing the advertisement, participants answered several questions regarding perceived behavioral control, ad skepticism, sustainability beliefs, and their purchase intention.

Following these questions, a manipulation check was included to ensure that participants interpreted the advertisements as intended by this research, in order to evaluate if the manipulation was successful. Furthermore, demographic information such as age, gender, and level of education was collected. The entire survey took approximately six minutes to complete. Finally, at the end of the research participants were reminded of their voluntary decision of participating in the survey, the study was explained, and they were shown the stimuli.



### 3.3 Sample

#### 3.3.1 Sampling method

The participants for this study were selected by convenience sampling and snowball sampling. The responses were collected in a period of two weeks from the social media networks of the researcher, such as LinkedIn, WhatsApp and Instagram. In addition, other measures were also used such as the websites SurveyCircle and Survey Swap. Approximately 38 respondents were sourced from the social circle of the researcher, while the remaining respondents were obtained through the survey websites and the participants' responses were gathered over a period of approximately two weeks. The mentioned webpages for sampling include respondents that are anonymous and randomized, although mostly from the region of the Netherlands.

#### 3.3.2 Demographics

The total number of respondents were 179, however, only the valid responses were used after the data cleaning, which ended up being a total of 165 respondents ( $N=165$ ). The sample consisted of 59 (35.8%) males, 105 (63.6%) females and 1 who answered *preferred not to say* (0.6%). The minimum age was 18 and the maximum age was 62 ( $M = 26.8$ ,  $SD = 8.10$ ). 54.2% of the respondents completed a bachelor's degree, 26.5% a master's degree and 12.7% secondary education. Regarding the distribution to the conditions, each condition was assigned to 42 participants, except the control group, which was assigned to 40.

### 3.4 Operationalization and measurements

The following section provides an overview of measurements used in the study. Confirmatory factor analyses were conducted, and they are discussed below.

*Skepticism.* The SKEP scale, developed by Obermiller and Spangenberg (1998) will be used for this study. This scale measures ad skepticism, which is defined as a tendency toward disbelief in advertising claims. It consists of nine Likert-type items rated on a 5-point scale, (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, 5 = *Strongly Agree*).

An exploratory confirmatory factor analysis was conducted since the scale had one dimension. The expected factor loading was one single factor. The factor analysis

was done with a Principal Component extraction with Direct Oblimin rotation,  $KMO = .92$ ,  $\chi^2 (N=166, 36) = 870.58$ ,  $p < .001$ . The resultant model of the single component explained 59.77% of the variance. A reliability analysis was conducted, and the scale had high Cronbach's alpha levels (Cronbach's  $\alpha = 0.91$ ).

*Table 3.1: Factor loadings explained variance and reliability of the single factor found in SKEP scale items*

Item	Factor 1
Advertising is truth well told	.84
I feel I've been accurately informed after viewing most advertisements.	.84
Advertising is generally truthful.	.83
Advertising is a reliable source of information about the quality and performance of products.	.83
In general, advertising presents a true picture of the product being advertised.	.82
Advertising's aim is to inform the consumer.	.75
I believe advertising is informative.	.73
We can depend on getting the truth in most advertising.	.70
Most advertising provides consumers with essential information.	.56
$R^2$	.60
Cronbach's $\alpha$	.91

*Perceived behavioral control.* The scale used to measure this dependent variable was developed by Swaim et al. (2013), with a 7-point Likert scale (1 = *Strongly disagree*, 4 = *Neither agree nor disagree (median)*, 7 = *Strongly Agree*) and 5 items. With this scale respondents rate their agreement with statements regarding their perceived control over engaging in environmentally sustainable activities. The confirmatory factor analysis was performed with an anticipated single factor loading. Principal Components extraction was used with Direct Oblimin rotation based on Eigenvalues ( $>1.00$ ),  $KMO = .84$   $\chi^2 (N=166, 10) = 325.70, p < .001$ . The resultant model of the single component explained 61.08% of the variance. In addition, a reliability test for the scale was conducted and showed a high reliability (Cronbach's  $\alpha = 0.83$ ).

*Table 3.2: Factor loadings explained variance and reliability of the single factor found in Perceived behavioral control scale items*

Item	Factor 1
I have the ability to carry out environmentally sustainable activities.	.86
I have control over performing environmentally sustainable activities.	.85
I have control over my actions to support.	.83
It is my decision whether or not to perform environmentally sustainable activities	.74
It is easy for me to perform environmentally sustainable activities (e.g., energy conservation, recycling)	.60
$R^2$	.61
Cronbach's $\alpha$	.83

*Sustainability beliefs.* The scale used to measure this dependent variable is the Scale of Sustainability Beliefs, developed by Catapan et al. (2014). This scale aims to measure individuals' beliefs related to sustainability across various dimensions such as Human Beings and the Planet, Equilibrium of the Planet, Resources Degradation, Environmental Strategies, and Environmental Impacts. The scale consisted of 17 items with a 10-point Likert scale and was adapted to this research with a 7-point Likert scale (1 = *Strongly disagree*, 4 = *Neither agree nor disagree (median)*, 7 = *Strongly Agree*). Participants' sustainability beliefs were assessed using 17 Likert-scale distinct items which entered a confirmatory factor analysis, where the expected factor loadings were divided in 5 dimensions. Principal Component extraction with Varimax rotation based on Eigenvalues ( $>1.00$ ) was used.  $KMO = .77$ ,  $\chi^2 (N=166, 136) = 851.00$ ,  $p < .001$ . The resultant model of the 5 components explained 62.33 % of the variance. Factor loadings of individual items onto the five factors are presented in Table 1. The factor loadings were fixed into a factor loading of 5 dimensions as in the original study, leading to 5 factors:

*Equilibrium of the planet:* The first factor included four items about the balance between the resources of the planet and its limits (Cronbach's  $\alpha = 0.75$ ).

*Human beings and the planet:* The second factor included three items about the relationship of human beings and nature (Cronbach's  $\alpha = 0.83$ ).

*Resources degradation:* The third factor included four items about the concern for environmental preservation and the recognition of the consequences of human actions on the natural world (Cronbach's  $\alpha = 0.74$ ).

*Environmental impacts:* The fourth factor included three items about the awareness of environmental regulations, certifications, and organizational strategies aimed at mitigating human impact on the environment (Cronbach's  $\alpha = 0.64$ ).

*Environmental strategies:* The fifth factor included three items that focus on environmental responsibility and the associated costs and regulations faced by organizations (Cronbach's  $\alpha = 0.56$ ).

Based on the reliability tests, the subscales “*Equilibrium of the planet* and *Resources degradation*” fall into the range of an acceptable reliability, while the subscales

*“Environmental impacts”* falls into a questionable reliability and the subscale *“Environmental strategies”* indicate a poor reliability result. The scale *“Human beings and the planet”* results in a good reliability score.

*Table 3.3: Factor loadings explained variance and reliability of the five factors found in Sustainability beliefs.*

Item	<i>Equilibrium of the Planet</i>	<i>Human Beings and the Planet</i>	<i>Resources Degradation</i>	<i>Environmental Impacts</i>	<i>Environmental Strategies</i>
We are approaching the limit number of people that Earth can support.	.80				
There are growth limits beyond which our industrialized society cannot expand.	.80				
To maintain a healthy economy, we will have to develop it so that industrial growth is controlled.	.65				
The equilibrium of nature is very delicate and easily upset.	.61				
Plants and animals exist, basically, to be used by humans.		.88			
Mankind was created to dominate nature.		.86			
Human beings have the right to modify the environment to make it fit their needs.		.80			
The adoption of sustainable marketing can be used to camouflage reproachable processes.			.77		
Planet Earth has limited space and resources.	(.42)		.64		
Human beings should live in harmony with nature in order to survive better.	(.41)		.62		

When human beings interfere with nature, it often produces disastrous consequences.	(.49)		.55		
I know the laws aimed at minimizing environmental impacts that are imposed on companies.				.82	
I can list at least three certifications aimed at minimizing environmental impacts.				.78	
The environmental aspect is considered by organizations in the definition of their strategies.				.65	
Strategies aimed at minimizing environmental impacts generate costs to organizations.					.83
The maintenance of resources is the most important aspect of sustainability.					.68
I know there are laws aimed at minimizing environmental impacts that are imposed on companies.			(.40)		.54
<i>R</i> <sup>2</sup>	.16	.14	.12	.11	.10
<i>Cronbach's a</i>	.75	.83	.74	.64	.56

*Purchase intention.* To measure this dependent variable the scale of Willingness to buy was used, developed by Dodds et al. (1991). It consists of five items, three measured with a multi-item Likert scale of 7 points. The three items measure the likelihood and willingness to buy the product, (1 = *Very Low*, 4 = *Neutral*, 7 = *Very High*). In addition, two items with a multi-item 7-point Likert scale (1= *Strongly Disagree*, 4 = *Neither agree nor disagree*, 7 = *Strongly Agree*) measure the willingness to buy the product at the price shown in the advertisement. A confirmatory factor analysis and reliability tests were conducted for this scale for this research. There was one expected factor loading as in the original study.

The factor analysis was done with a Principal Component extraction with Varimax rotation, as used in the original study.  $KMO = .78$ ,  $\chi^2 (N=165, 10) = 627.96$ ,  $p < .001$ . The resultant model of the two components explained 88,20% of the variance. In addition, a reliability analysis was conducted for each factor.

*Likelihood of buying the product:* The reliability analysis showed a high reliability score (Cronbach's  $\alpha = 0.95$ ).

*Likelihood of buying the product at the price shown:* The reliability analysis showed a high reliability score (Cronbach's  $\alpha = 0.81$ ).



Table 3.4: Factor loading explained variance and reliability of the two factors found in Willingness to buy scale.

Item	<i>Likelihood of buying the product</i>	<i>Likelihood of buying the product at the price shown</i>
The likelihood of purchasing this product is:	.94	
The probability that I would consider buying the product is:	.92	
My willingness to buy the product is:	.90	
If I were going to buy this product, I would consider buying this model at the price shown.		.93
At the price shown, I would consider buying the product.	(.34)	.84
<i>R</i> <sup>2</sup>	.54	.35
<i>Cronbach's a</i>	.95	.81

## 4. Results

### 4.1 Manipulation check

A one-way ANOVA was conducted to examine the effectiveness of the manipulation across the four groups that were shown an advertisement with a different type of message per group (Descriptive norm, Sustainability Claim group, Injunctive norm and Control group). The independent variable was each condition, and the dependent variable was their perception of said conditions.

For the sustainability claim manipulation check, there was no significant effect on the level of perception of the advertisement.  $F(3, 162) = 1.64, p = .182, \eta^2 = 0.29$ . The injunctive norm also showed no significant effect of advertisement type perception  $F(3, 162) = 0.80, p = .497, \eta^2 = .015$ . This indicates that the type of advertisement did not significantly influence participants' perceptions of social norms.

For the descriptive norm, this type of message had a significant effect on the perceived descriptive norms included in the advertisement,  $F(3, 162) = 11.50, p < .001, \eta^2 = .176$ . Post hoc comparisons test indicated that participants in the descriptive norm condition ( $M = 4.76, SD = 1.76$ ) report significantly higher agreement levels compared to those in the sustainability claim ( $M = 3.02, SD = 1.59$ ), the injunctive norm group ( $M = 3.50, SD = 1.22$ ), and the control condition ( $M = 3.10, SD = 1.52$ ).

Finally, the ANOVA for the independent variable, control group or original advertisement and the perception of the manipulation, had also a significant effect,  $F(3, 162) = 7.27, p < .001, \eta^2 = .119$ . Post hoc comparisons test indicated that participants in the control condition ( $M = 5.55, SD = 1.34$ ) reported significantly higher agreement levels compared to those in the descriptive Norm ( $M = 4.12, SD = 1.58$ ), sustainability Claim ( $M = 4.93, SD = 1.44$ ), and the injunctive norm group ( $M = 4.67, SD = 1.26$ ).

These results show that the manipulation check was effective for certain types of messages, specifically the descriptive norm advertisement which influenced participants' perceptions of social behaviors as reflected in the higher mean score for the descriptive norm item, and the control group advertisement which effectively communicated the message about the impact of small actions, also resulting in a higher mean score for that item. However, the sustainability claim and injunctive norm

advertisements did not significantly influence participants' perceptions of environmental effects and social norms.

#### 4.2 Main results

To test the first hypothesis, a one-way ANOVA was conducted with the condition as the independent variable. The one-way ANOVA did not reveal a significant main effect between groups and the likelihood of buying the product (a reusable bag). This means that H1 is rejected. Therefore, to test the first hypothesis, a one-way ANOVA was conducted with the condition as the independent variable, which is the type of message used in the advertisement. The one-way ANOVA did not reveal a significant main effect between the groups that were shown an advertisement with a descriptive norm, a sustainability claim, an injunctive norm or the control group with the original message and the likelihood of buying the product (a reusable bag). The ANOVA revealed a non-significant main effect of condition on likelihood of buying,  $F(3, 162) = 1.878, p = .135$ .

An analysis of variance (ANOVA) was conducted to examine the influence of different conditions on skepticism levels. The dependent variable was the skepticism levels, and the independent variable was each condition. Results revealed that the condition did not have a significant effect on skepticism levels,  $F(3, 162) = 2.238, p = .086, \eta^2 = .040$ . The findings suggest that the condition did not have a significant impact on participants' skepticism levels, thus the H2 is rejected.

To test the influence of the four conditions (independent variable) and perceived behavioral control (dependent variable), an ANOVA was carried out, which revealed no statistically significant differences in perceived behavioral control across the conditions,  $F(3, 162) = 2.62, p = 0.053, \eta^2 = 0.046$ . Hence, H3 is also rejected.

A one-way ANOVA was conducted with the Equilibrium of the Planet as part of sustainability beliefs as the dependent variable and the four conditions as the independent variable. Which revealed a significant main effect for groups that were shown a different condition.  $F(3, 162) = 3.722, p = .013$ . The model explains approximately 6.4% of the variance in the equilibrium of the planet, partial ( $\eta^2 = .064$ ). To see the differences between the groups, Tukey post-hoc comparisons were analyzed, and it revealed that there was a significant difference between the condition of the

Descriptive norm advertisement resulting in lower levels of sustainability beliefs regarding the equilibrium of the planet, compared to the Injunctive norm condition (Mean Difference = - 0.7976,  $p = 0.007$ ). Other comparisons did not show significant differences.

The second factor resulting from the factor analysis was Human beings and the Planet, which was used to measure the beliefs about the relationship of the humans with the planet. A one-way ANOVA revealed that the main effect of the condition (independent variable) was not statistically significant on the dependent variable, Human beings and the planet,  $F(3, 162) = 0.991$ ,  $p = .399$ , which indicates that there were not significant differences found in the second factor, across the different conditions. Although the intercept value is highly significant,  $F(1, 162) = 2200.321$ ,  $p < .001$ , with a partial eta squared of  $\eta^2 = .931$  suggesting a previous initial effect on the variable, implying that any differences shown in the means of the conditions are not caused by the condition manipulation.

The third factor resulted from the factor analysis is the Resource Degradation. A one-way ANOVA was conducted and revealed that the effect of the condition on the dependent variable was not significant,  $F(3, 162) = 0.643$ ,  $p = .588$ ,  $\eta^2 = .012$ , the condition thus explains 1.2% of the variance in the dependent variable. Following the ANOVA a Tukey HSD post-hoc test was conducted to compare the conditions for the dependent variable, resulting in a non-significant differences between any pair of conditions.

For Environmental Impacts, the fourth factor for sustainability beliefs, another ANOVA was conducted, which resulted in a not statistically significant effect,  $F(3, 162) = 0.237$ ,  $p = .871$ ,  $\eta^2 = .004$ , indicating that the condition (independent variable) explained approximately 0.4% of the variance in the dependent variable (Environmental Impacts).

For the fifth factor Environmental strategies an ANOVA was conducted and resulted in a not significant effect,  $F(3, 162) = 1.348$ .  $p = .261$ ,  $\eta^2 = .024$ . Tukey HSD tests were conducted which confirm the lack of statistical significance between the conditions for the dependent variable, Environmental strategies, which rejects the hypothesis.

## 5. Discussion

### 5.1 Main findings

The first finding in this research indicated that the inclusion of descriptive norms in sustainable advertisements did not influence purchase intentions compared to the sustainability claim, the injunctive norm message or the control group. Contrary to the initial hypothesis and the findings of previous studies that found that descriptive norms could encourage individuals into participating in environmentally friendly behaviors (Goldstein et al. 2018), descriptive norms failed to show an effect on the purchase intention in this study. In this study there was no statistical significance found in any of the conditions. In addition, the manipulation was only effective for two types of messages which may be due to the items not being literal enough.

The second finding of this study aimed to investigate the effects of incorporating social norms within advertising messages on individuals' levels of skepticism. This study argued that social norms used in advertisements would increase the skepticism levels of individuals, compared to the messages containing a sustainability claim or the original message from the control group. Previous studies find that social norms can trigger higher levels of skepticism in individuals exposed to messages that make use of them, since it can create some resistance towards conducting the behavior (Stok et al. 2013, p. 60). In addition, a similar result was found in the study conducted by (Raska et al., 2015, p. 729, 730) where participants that were presented to green ads without the use of descriptive norms were less skeptical than participants that were exposed to them since they were considered more deceptive.

The present study revealed that there were no significant effects between the four conditions showed in the advertisements and the skepticism levels of advertising. Interestingly, the descriptive statistics revealed high baseline skepticism levels on the participants across all conditions from all positively framed items such as “*Advertising is generally truthful*”, with mean values ranging from  $M = 2.25$  to  $M = 2.68$  on a 7-point scale. These high levels of skepticism can suggest a general observed distrust on the advertisements shown to the participants, before seeing the advertisements.

The second finding of this study shows that the social norms included in the advertisements did not have any effect on the beliefs on the individuals, which diverge

from prior research that shows the effectiveness of descriptive norms and injunctive norms when influencing consumer behavior that are influenced by beliefs. For instance, in the study by Cialdini (2003, p. 108), both descriptive and injunctive norms had an effect on the intention of recycling: the more participants believed that recycling was both approved and common, the more they intended to recycle in the future. This does not align with this study, which found no significant effects.

As for the third finding, this study aimed to investigate the potential relationship between social norms and perceived behavioral control. Specifically, it was explored whether observing others demonstrating the capability to perform a behavior could influence individuals' perceptions of their own abilities. According to Ajzen's theory, behavioral intentions are influenced by subjective norms, perceived behavioral control, and attitudes toward the behavior (Ajzen, 1991, pp.182-183). By examining the connection between social norms and perceived behavioral control, an enhanced understanding of how these factors interact with each other was sought. However, no significant differences were found.

Findings from Sawang et al. (2014) contrast the results in this study, since no relation was found between the variables. The absence of a relationship between the variables in this study may be attributed to the possibility that the social norms shown in the advertisements were not sufficiently impactful or relevant to alter participants' perceptions of their own capabilities.

The last hypothesis positively associated the use of social norms in sustainable advertising and the first factor of sustainability beliefs. Since the factor analysis resulted in five different components, new hypotheses were created with the new components. Previous studies conducted by Rhodes et al. (2020, p. 170) showed that changing the descriptive norms and injunctive norms can be effective when altering individuals' beliefs, which in turn can influence their opinions and behaviors. This research, however, has shown that there were no significant effects regarding the condition and the different factors analyzed, except for the component Equilibrium of the planet, which indicated that the Injunctive norm message had a positive effect on the beliefs on sustainability regarding the relationship between humans and the planet when it comes to conserve a balance between nature and its resources used by human beings. This result can align with the study of Rhodes et al. (2020 p. 184), which revealed that

manipulating norms can be effective in influencing attitudes or actions even if the effects are not substantial. Specifically, the study showed that injunctive norms could have a greater impact in behaviors than descriptive norms, which was an unexpected result, since it contradicted some previous assumptions.

However, the rest of the hypothesis regarding sustainability beliefs showed no influence from the advertisements using social norms, thus, this study's findings do not consistently support the notion that advertisements with social norms affect sustainability beliefs. Overall, the study did not find significant effects which suggests that other factors or variables not considered for this study could have influenced individuals' sustainability beliefs, weakening the impact of social norm messages.

### 5.3 Research limitations

While this research has showed insightful findings, several limitations have emerged during the process of this research. Firstly, there may have been limitations in the manipulation check procedure. The control group and the descriptive norm condition contained more literal items compared to the other conditions, potentially biasing participants' responses and leading to a misinterpretation of the intended meaning of the questions. This discrepancy in the literalness of items across conditions could have influenced participants to respond in a more literal manner, rather than accurately reflecting their perceptions of the advertisements. The manipulation check item failed to measure the actual influence of the social norms, except for the descriptive norm and the control group.

This study mostly showed that the respondents answered with their pre-existing beliefs rather than their reactions to the advertisements, due to high baseline answers to each item. Similarly, the slogans of the advertisements were modified to instill a sense of perceived behavioral control among participants. However, the findings revealed no significant effect, indicating that the altered slogans did not have the intended impact. This limitation suggests that despite the efforts to manipulate the slogans to induce a perception of perceived behavioral control, the lack of significance implies that not only most social norms did not effectively influence the dependent variables, but the slogan also did not influence participants' perceptions on behaviors as intended. Which means that the stimuli failed to produce the intended response.

One factor of these findings not being significant may be due to following the interrelations of the variables of the TPB for the development of the hypotheses and the will to research variables in a different way than followed by theory, with the aim of researching these new relationships. For instance, the relationship between subjective norms, or perceived pressures from social norms from the TPB, is linear, considering the behavior as the main objective. In this case if the behavior is purchasing the reusable bag of IKEA, the method following the TPB in a strictly theoretical way, would mean studying the influence of each of the factors, perceived behavioral control, attitudes and subjective norms on purchase intention. This may be reflected in a sustainable purchase behavior as the main objective. In this case, the research focused on the interrelationship of some of these factors. The TPB postulates that these variables are independent and have an independent effect on the intention even though there are underlying relations between them. This research did not follow this order of variable influence in order to study the effect of social norms or perceived subjective norms, as defined by Ajzen, (1991) except for this variable affecting purchase intention.

Another reason could be the advertisements not being impactful enough nor memorable or the lack of attention from the respondents. To make these advertisements more memorable, there could be used a more impactful message regarding sustainability. However, since the use of social norms in unsustainable behaviors, as stated by Cialdini et al. (2003), mostly descriptive norms, can promote behaviors that are non-sustainable, if there is not an injunctive norm that can balance the descriptive norm.

#### 5.4 Further research

In further research, it could be advisable to address the limitations encountered throughout this study. For instance, refining the manipulation check process by ensuring uniformity in the presentation of the items across all the conditions can be helpful in mitigating potential biases in participant responses. In addition, considering additional factors and mediator variables that could influence the effectiveness of social norms in sustainable advertising, such as individual characteristics or contextual variables could enhance the understanding of their impact. For instance, studying how social norms can influence an intention and how this intention can translate into a behavior would be important. Moreover, adapting the questionnaire items to align with the specific context



of the study and incorporating a more diverse sample to improve generalizability are important steps to take. Furthermore, exploring different types of stimuli or messages in sustainable advertising campaigns may offer various results that would open new investigations and show more robust results.

In addition, further research could explore strategies to bridge the gap between the influence of social norms on intentions and the translation of these intentions into actual behavior. Investigating interventions or techniques aimed at strengthening the link between individuals' intentions to engage in sustainable behaviors and their subsequent actions could be valuable. By addressing this gap, future studies could provide insights into more effective approaches for promoting sustainable actions with social norms.

## **5.5 Conclusion**

In conclusion this study investigated the impact of incorporating social norms into sustainable advertising messages on individuals' skepticism, perceived behavioral control, sustainability beliefs and purchase intention in order to narrow the gap existing in previous research. However, the results indicated non-significant differences across most of the conditions that were tested in this study.

The findings of this study suggest that it may not have effectively addressed the gap in previous research concerning the inconsistency between stated intentions and actual behavior, as well as the potential influence of social norms in bridging this gap. Similarly, the attempt to investigate the individual effects of injunctive and descriptive norms did not lead to significant differences. Consequently, it is plausible to suggest that this study may have fallen short in providing substantive contributions to the academic discourse or advancing research in this area.

Despite the study's insightful findings, several limitations were identified, including potential biases in the manipulation check procedure and the lack of customization of questionnaire items to the study context. Additionally, the relatively small and homogenous sample size may have limited the generalizability of the findings. These limitations highlight the need for further research to address these methodological shortcomings and explore additional factors that may influence the effectiveness of social norms in sustainable advertising.

Future research could focus on refining manipulation check procedures, incorporating diverse samples, and exploring mediator variables to enhance the understanding of social norms' impact on sustainable behavior. Moreover, investigating strategies to bridge the gap between intentions and actual behavior could provide important information to promote sustainable behaviors or sustainable purchase intention. Overall, addressing these research gaps could contribute to the development of more impactful sustainable advertising campaigns and interventions.



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## 7. Appendices

### 7.1 Appendix A

The stimuli for the survey:

Sustainability claim:



FRAKTA  
Reusable bag  
**\$0.79**  
100%  
reusable

**700 plastic bags per year  
or  
1 Reusable bag**

**IKEA**

You make the choice, you make the difference.

Injunctive norm:



FRAKTA  
Reusable bag  
**\$0.79**  
100%  
reusable

**Use a reusable bag,  
save the environment.**

**IKEA**

You make the choice, you make the difference.

Descriptive norm:

**FRAKTA**  
 Reusable bag  
**\$079**  
 ● 100% reusable



**9 out of 10 modern consumers use a reusable bag to help the environment**



You make the choice, you make the difference.

Original advertisement:

**FRAKTA**  
 Reusable bag  
**\$079**  
 ● 100% reusable



**One little bag can change the world.**



The Beautiful Possibilities.

## 7.2 Appendix B

Survey:

Dear participant,

I am a student at the Erasmus University of Rotterdam and I am conducting a survey for my master's thesis. Thank you for agreeing to take part in this study. Before you proceed, please take a moment to read the following information carefully.

**Purpose of the Study:** The purpose of this study is to understand the appeal of advertising and its impact. By participating in this study, you agree to be part of a survey experiment in which you will be asked to look at an advertisement of a brand.

**Participation:** Your participation is entirely voluntary. You are free to withdraw at any time without providing a reason. If you choose to withdraw, any data you have provided up to that point will be excluded from the study.

**Confidentiality, Anonymity and Data Protection:** All the information you provide will be treated with the strictest confidentiality. Your responses will be anonymized, meaning that your identity will not be linked to your individual responses in any way. The data collected from this questionnaire will be stored securely and will only be accessible by me, until the end of the master's thesis.

**Ethical Considerations:** This study is committed to conducting this research in accordance with ethical principles, ensuring your rights as a participant are respected at all times.

**Informed Consent:** By proceeding to complete this questionnaire, you are indicating your voluntary consent to participate in this study. If you have any questions or concerns, please do not hesitate to contact me, Lika Kotetishvili, (679047lk@eur.nl).

**Proceeding:** By signing this form you: Consent to participate in this research, consent the use of your personal data, understand that the participation is completely voluntary and that you can stop at any time, confirm that you are at least 18 years old and confirm your understanding regarding the data being anonymous and used only for educational purposes. By clicking on "Yes, I consent" below, you are indicating your voluntary participation in this study. Thank you again

for your participation.

P.S: This survey contains credits to get free survey responses at SurveySwap.io

Q1 \*

Are you 18 years old or older?

Yes

No

Q19 \*

Do you consent to participate in this study?

Yes, I consent

No I do not

Below you see an advertisement of IKEA. After viewing the advertisement, we kindly ask you to complete some questions about it. Please take a moment to look at this advertisement:

Please select how much you agree or disagree with the following statements:

	Strongly Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
It is easy for me to perform environmentally sustainable activities (e.g., energy conservation, recycling)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have control over my actions to support the environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is my decision whether or not to perform environmentally sustainable activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have the ability to carry out environmentally sustainable activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have control over performing environmentally sustainable activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Considering what you saw in the presented advertisement, please select how much you agree or disagree with the following statements:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither agree or disagree	Somewhat Agree	Agree	Strongly Agree
Plants and animals exist, basically, to be used by humans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mankind was created to dominate nature.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human beings have the right to modify the environment to make it fit their needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human beings should live in harmony with nature in order to survive better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When human beings interfere with nature, it often produces disastrous consequences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planet Earth has limited space and resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Considering what you saw in the presented advertisement, please select how much you agree or disagree with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The equilibrium of nature is very delicate and easily upset.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To maintain a healthy economy we will have to develop it so that industrial growth is controlled.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are approaching the limit number of people that Earth can support.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are growth limits beyond which our industrialized society cannot expand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The adoption of sustainable marketing can be used to camouflage reproachable processes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Considering what you saw in the presented advertisement, please select how much you agree or disagree with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Strategies aimed at minimizing environmental impacts generate costs to organizations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The maintenance of resources is the most important aspect of sustainability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know there are laws aimed at minimizing environmental impacts that are imposed on companies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know the laws aimed at minimizing environmental impacts that are imposed on companies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can list at least three certifications aimed at minimizing environmental impacts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The environmental aspect is considered by organizations in the definition of their strategies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

After having seen this advertisement, please select how much you agree or disagree with the following statements:

	Strongy Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
We can depend on getting the truth in most advertising.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advertising's aim is to inform the consumer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe advertising is informative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advertising is generally truthful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advertising is a reliable source of information about the quality and performance of products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advertising is truth well told.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In general, advertising presents a true picture of the product being advertised.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I've been accurately informed after viewing most advertisements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most advertising provides consumers with essential information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the following questions about your willingness to buy the reusable bag:

	Very low	Low	Moderately low	Neutral	Moderately High	High	Very high
The likelihood of purchasing this product is:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The probability that I would consider buying the product is:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My willingness to buy the product is:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate your level of agreement with the following statements about the advertised reusable bag:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree
If I were going to buy this product, I would consider buying this model at the price shown.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At the price shown, I would consider buying the product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To what extent do you agree with the following statements about the advertisement you saw?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly Agree
The advertisement mentioned the effects on our environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The advertisement mentioned what other people do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The advertisement mentioned what is the right thing to do in our society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The advertisement mentions how little things can change a lot.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What is your age?

What is your gender?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

What is the highest level of education that you have completed?

- Primary education
- Secondary education
- Bachelor's or equivalent level
- Master's or equivalent level
- Doctoral or equivalent level
- Other

Thank you for participating in this study. This research aims to explore the influence of advertisements that use social norms as the framing message for sustainable consumption. Specifically, we are investigating if different ways of using social norms or the lack of those in the message, associate with the levels of skepticism towards sustainable advertising, levels of perceived behavioral control or sustainable beliefs, which may translate into the effectiveness of these advertisements regarding purchase intention.

All participants in this study answered the same set of questions regarding their perception of the advertisement. However, each participant was randomly shown one of the four images displayed below. These images were generated by the author of this survey, except one (One little bag can change the world), which is the original advertisement from IKEA.

We assure you that your participation in this study is completely anonymous and confidential. If you have any additional doubts or concerns, please do not hesitate to contact us at [679047lk@eur.nl](mailto:679047lk@eur.nl).

Please do not forget to click on the arrow on the right corner to record your answer.

Thank you for your time.