

# **Examining the Influence of Consumption- and Sufficiency-Promoting Websites, Social Norms, and Perceived Quality on Consumer Purchase Intentions**

Master Thesis

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### **ABSTRACT**

The detrimental impact of unsustainable consumption and production patterns on the global environment underscores the urgency for sustainable practices across industries. This study employs an experimental research design to delve deeper into sufficient consumption behaviors and offer valuable insights for organizations. Specifically, the research question investigates the influence of consumption- and sufficiency-promoting websites, combined with social norm nudges, on consumer purchase intentions and perceived quality. The findings reveal that respondents exposed to sufficiency-promoting websites perceived lower product quality, contrary to the proposed hypotheses. Interestingly, the type of content did not significantly affect purchase intentions directly. Instead, perceived quality emerged as the most influential factor, aligning with previous research. The findings have essential implications for the industry, stressing the importance of product presentation and perceived quality in shaping consumer behavior. By prioritizing longer product lifetimes and durability, businesses can foster a culture of sustainability, promoting responsible consumption practices and aligning with evolving consumer values.

**KEYWORDS:** *consumption promoting, sufficiency promoting, social norm nudges, purchase intentions and perceived quality*

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## 1. Introduction

Consumption, the use of goods and services to fulfill consumer needs and wants, plays a vital role in stimulating economic growth for companies and governments (Arnould & Thompson, 2019; Peters & Simaens, 2020; Rosário & Raimundo, 2021). The textile and clothing industry, in particular, capitalizes on high turnover and trends to drive revenue, associated with fast fashion (Zhang et al., 2021). However, the industry also acknowledges the promotion of over-consumption, driven by low prices and rapid product turnover associated with fast fashion trends. Clothing websites promoting consumption actively encourage excessive consumption through persuasive marketing techniques, promoting materialism and fulfilling excessive consumer desires (Gossen & Heinrich, 2021; Karlsson et al., 2004).

While fast fashion offers individuals the ability to keep up with trends and experiment with styles, it has raised environmental concerns due to increased waste and pollution (Binet et al., 2019; Zhang et al., 2021). Unsustainable consumption patterns have led to global environmental deterioration, including climate change, biodiversity loss, deforestation, resource depletion, and pollution (Ceglia et al., 2015). The textile industry, in particular, poses significant environmental concerns, affecting water and air quality (Zero Waste Europe, 2022). Textile production contributes to 20% of global water pollution, while the fashion industry accounts for 10% of global carbon emissions, exceeding those from international flights and maritime shipping. As a result, sustainability has become a prominent topic in policy discussions and research (Zhang et al., 2021).

Examining the relationship between fast fashion and sustainability requires considering various perspectives (Zhang et al., 2021), with this research focusing primarily on the demand side and understanding consumer decision-making processes when exposed to different content. Sufficiency-promoting websites aim to foster mindful and restrained consumption by providing information on sustainable alternatives such as buying second-hand and promoting repair and reuse (Gossen & Heinrich, 2021; Thøgersen, 2006). Their goal is to empower individuals to consume only what is necessary and avoid excessive consumption, making sufficiency a complementary approach to sustainability.

Influenced by social norms and conformity to environmental standards, consumers' perception of garment quality and their decision-making processes are affected. Consumers rely on social cues, social norm nudges, and recommendations to assess product quality (Collett et al., 2013). The presentation of products on websites, including high-quality images and descriptions, plays a crucial role in enhancing perceived quality and creating positive impressions (Aakko & Niinimäki, 2022). Understanding the influence of social norms on consumer behavior and preferences is valuable for organizations seeking insights into future consumer behavior trends (Sun et al., 2020).

Therefore, this research aims to explore how different website content, promoting either increased or decreased consumption levels, influences consumers' decision-making processes. By investigating the interplay between sufficiency-promoting and consumption-promoting websites, this

study aims to provide valuable insights into consumer behavior, preferences, and the potential benefits for organizations.

### *1.1 Research Question and Relevance*

The topic of sufficiency has gained increasing relevance for businesses, prompting marketing scholars and practitioners to explore new objectives that minimize ecological footprints and promote responsible operations (Heikkurinen et al., 2019; Sun et al., 2020). Hence, research is being conducted to encourage the purchase of durable goods, reduce environmental impact, and understand successful interventions (Heikkurinen et al., 2019).

The academic implications of this research are significant as it aims to advance the understanding of consumer decision-making processes, social influence, and the potential of sufficiency marketing strategies in promoting sustainable consumption practices. This research directly addresses the pressing societal need for more environmentally conscious behaviors, providing valuable insights for both researchers and practitioners.

Although previous studies have not established a clear relationship between social norms, consumption promotion, and sufficiency promotion, they have provided some relevant findings (Frick et al., 2021a). For example, Castro-Santa et al. (2023) found that both green advertising and low-carbon social norms effectively shifted consumer choices toward low-carbon options. Brough et al. (2016) also highlighted the role of social norms in shaping sustainable consumption behaviors, indicating the potential impact of social influence on purchase intentions. Additionally, Zhang et al. (2021) revealed a significant link between fast fashion, often considered consumption promoting, and perceived lower quality of products, which influences purchase intentions. Despite the existing research in the field, a comparison between consumption-promoting and sufficiency-promoting content and its effects on purchase intentions is lacking.

For practitioners, these insights can be utilized to develop effective sufficiency marketing strategies that influence consumers' purchasing behavior and guide them towards environmentally conscious choices among the available options provided by companies. In addition, the sufficiency approach holds immense untapped innovation potential for businesses, and thus relevant for practitioners. By embracing sufficiency principles, companies can not only foster the development of groundbreaking products, services, and business models but also actively contribute to sustainable development (Freudenreich & Schaltegger, 2020). This approach not only drives innovation but also paves the way for creative solutions that align with environmental and social objectives. Interestingly, despite its potential, the concept of sufficiency has been largely overlooked in the management literature of the clothing sector. However, it possesses the capacity to serve as a complementary approach for businesses (Gaspar et al., 2017).

To effectively implement the sufficiency approach, practitioners must consider specific strategies that facilitate reduced consumption (Gaspar et al., 2017). One key aspect is prioritizing

longer product lifetimes and encouraging multiple usage cycles through durable and high-quality production processes (Gossen & Heinrich, 2021). By focusing on durability and quality, businesses can contribute to reducing waste and fostering a culture of sustainability among consumers and within the organization. Sustainable practices not only improve reputation and foster long-term growth but also minimize environmental harm, also beneficial for societies (Gossen & Heinrich, 2021; Sun et al., 2020).

Promoting sustainable consumption practices through sufficiency principles is essential for achieving long-term socio-economic goals and positive environmental impact for companies (Saniuk et al., 2020). Incorporating sufficiency-promoting strategies into business models can contribute to the development of a more sustainable clothing sector (Gaspar et al., 2017). These efforts result in reduced resource consumption, improved brand reputation, and enhanced customer loyalty (Sun et al., 2020). By adopting such practices, businesses effectively navigate the challenges of sufficiency and benefit from innovation and sustainable development.

Therefore, further investigation is necessary to explore the specific effects consumption and sufficiency promoting content and social norms on purchase intentions and their impact on perceived quality. This study aims to do this by using an experimental research design to examine the differences between consumption and sufficiency promoting content integrated into websites. The study expects that sufficiency-promoting material will strengthen sufficiency-based incentives and hinder consumption-driven motivations, and vice versa. Moreover, the study anticipates that social norms will have a significant influence on purchase intentions, consistent with the findings of Castro-Santa et al. (2023) and Brough et al. (2016). Hence, the proposed research question is:

*“To what extent do consumption-promoting and sufficiency-promoting websites in conjunction with social norm nudges influence consumer purchase intentions and perceived quality?”*

## 2. Theoretical Framework

This chapter elaborates on the main concepts that are important to understand the impact social norms have on websites that promote consumption versus websites that promote sufficiency and how these differences affect purchase intentions and perceived product quality. Finally, the conceptual model and hypotheses are presented.

### 2.1 Consumption

Consumption is characterized by the desire to acquire more possessions (Karlsson et al., 2004). It involves the utilization of goods and services to fulfill consumer desires and requirements, playing a significant role in stimulating economic growth for businesses and governments (Arnould & Thompson, 2019; Peters & Simaens, 2020; Rosário & Raimundo, 2021). The rise of online clothing consumption has transformed the fashion industry into a customer-centered domain, driven by the convenience and accessibility offered by online stores (Chen et al., 2019; Saini & Vashisht, 2018). This shift has led to increased consumer demand and consumption (Cohen, 2020).

It is important to note that online consumption behavior differs from general online social behavior (Rosário & Raimundo, 2021). Intrinsic motivations play a crucial role in driving continuous online consumption (Chen et al., 2019).

#### 2.1.1 Promoting Consumption

Websites play a strategic role in promoting consumption, focusing on driving individual needs, wants, and material aspirations to increase sales, enhance brand awareness, and influence consumer behavior (Cheung & Thadani, 2012; Roy Dholakia & Uusitalo, 2002; Thøgersen, 2014). These objectives are often achieved through message framing, which deliberately shapes visitors' decision-making process and motivates immediate purchases (Cheung & Thadani, 2012; Chi et al., 2021; Olsen et al., 2014).

Online clothing websites have become platforms for e-commerce businesses to advertise products and exert influence over consumer buying decisions (Castro-Santa et al., 2023; Haines et al., 2005; Sun et al., 2020). While companies heavily invest in targeted marketing strategies to influence consumer behavior in the online realm (Rosário & Raimundo, 2021), it is essential to consider the implications of promoting consumption.

The promotion of consumption on websites has significant implications for consumer behavior and decision-making (Cheung & Thadani, 2012). With the increased consumer demand and consumption facilitated by online platforms (Cohen, 2020), it becomes crucial to address the environmental and societal impact of continuous consumption. Overconsumption, characterized by rapid turnover and exceeding planetary boundaries, is a critical issue associated with profit-driven marketing practices (Gossen et al., 2019; Rosário & Raimundo, 2021; Thøgersen, 2014; Zhang et al., 2021). This emphasizes the need for sustainable practices and alternatives within the fashion industry.



## 2.2 Sufficiency

Sufficiency refers to the moderation and reasonableness achieved by implementing crucial behavior changes (Gossen & Heinrich, 2021; Piboolsravut, 2004). It is an integral part of sustainable consumption as it helps reduce environmental damage by encouraging individuals to consume what is necessary for their day-to-day life and avoid excessive consumption (Gossen et al., 2019). In addition, sufficiency recognizes that relying solely on individual decisions to purchase environmentally friendly and sustainable products is insufficient to drive the necessary transformative change away from materialistic and continuously consumptive lifestyles (Gossen & Heinrich, 2021).

The sufficiency goals mentioned above may appear counterintuitive as they oppose the traditional definition of consumption, which entails the aspiration to acquire more possessions (Karlsson et al., 2004). However, the goal of sufficiency is to empower individuals to avoid excessive consumption (Frick et al., 2021b). It emphasizes the need for broader systemic changes and societal shifts in consumption patterns (Gossen & Heinrich, 2021).

### 2.2.1 Promoting Sufficiency

Gossen and Heinrich (2021) emphasize the significant role of apparel companies in advocating sufficiency by focusing on product durability, reparability, and high quality (Thøgersen, 2006). Websites promoting sufficient consumption choices aim to provide information and tools to help consumers make sustainable decisions (Frick et al., 2021a). They also offer resources on repair, reuse, and sharing, including second-hand items. These efforts effectively encourage individuals to make sufficiency-oriented consumption choices, such as opting for clothing with longer-lasting fabrics and second-hand options (Frick et al., 2021a).

However, while product characteristics and prolonging the utilization period have been a focus, recent developments involve adopting communication activities to encourage consumers to reduce their overall consumption. Bhatnagar and McKay-Nesbitt (2016) highlight the importance of tailoring persuasive messages to the target audience's underlying motivations to promote sustainable consumption effectively. By aligning communication strategies with individuals' motivations and values, it becomes more likely to encourage behaviors that support sustainability. It is worth mentioning that clothing companies, as noted by Gossen and Heinrich (2021), have played a significant role in promoting sufficiency through their emphasis in communications on durability, reparability, and high quality. Furthermore, Grazzini et al. (2021) indicate that highlighting sustainable product attributes, such as the use of recycled materials, has a positive impact on consumers' purchase intentions. In this case leading to a lower intent to purchase non-sufficient items.

### *2.2.2 Clothing Companies and Promoting Sufficiency*

Balancing the promotion of sufficiency with operating in a growth-driven economy is seen as a challenging area. However, this tension does not pose a threat to companies' survival or their commitment to ethical missions (Gossen & Heinrich, 2021). Although, the differences between consumption-promoting and sufficiency-promoting websites are not always definitive, as many websites strive to strike a balance between meeting consumer needs and promoting sustainable behaviors. Hence, according to Gossen and Heinrich (2021), companies generally have moderate expectations for turnover growth and focus more on expanding their brand range to replace less sustainable competitors. This strategy aims to reduce the overall consumption of clothing while increasing the market share of fair and sustainable clothing enterprises.

Promoting sustainable consumption practices through sufficiency principles is essential for achieving long-term socio-economic goals and positive environmental impact for companies (Saniuk et al., 2020). Incorporating sufficiency-promoting strategies into business models can contribute to developing a more sustainable clothing sector (Gaspar et al., 2017). These efforts result in reduced resource consumption, a minimized environmental footprint, improved brand reputation, and enhanced customer loyalty (Sun et al., 2020).

### *2.3 Purchase Intentions*

Consumer purchase intentions and consumer buying behavior are closely related concepts. Purchase intention refers to the consumer's willingness or likelihood to buy a particular product or service shortly (Grewal et al., 1998), while consumer buying behavior refers to the actual process of purchasing goods or services. In other words, purchase intention predicts consumer buying behavior; hence, this research uses purchase intentions to predict consumers' possible consumption behavior.

Additionally, according to Ajzen's Theory of Planned Behavior (1991), attitude, subjective norm, and perceived behavioral control are critical factors that shape purchase intentions. These factors collectively serve as predictors of intention, which, in turn, forecasts consumer behavior. Attitude refers to the individual's evaluation of the product or service based on their beliefs and perceptions. The subjective norm factor represents the social influence on purchase intentions, taking into account the individual's perception of what others think about the purchase. It incorporates factors such as social pressure and social norms. Consumers are more likely to have higher purchase intentions when they perceive social approval or expectations regarding the purchase. Perceived behavioral control reflects the consumer's perception of their ability to perform the desired behavior of making the purchase. Higher levels of perceived control contribute to stronger purchase intentions, as consumers feel more confident in their ability to execute the purchase decision.

### *2.3.1 Online Consumer Behavior and Purchase Intentions*

Due to the broad reach of online clothing websites, consumers' purchase intentions and, consequently, buying behavior have experienced growth (Chen et al., 2019). With the increasing use of the Internet for clothing consumption (Eger et al., 2021), the fashion industry has transitioned to a customer-centered approach, with online stores allowing consumers to make purchases anytime and anywhere (Chen et al., 2019; Saini & Vashisht, 2018). The presence of online clothing websites has led to a surge in consumer demand and intent to purchase (Cohen, 2020).

This intention is further influenced by various persuasive techniques advertisers employ to shape consumers' online consumption behavior. These techniques encompass elements such as strategic color usage (Murphy, 2021) and product presentation that enhance perceived quality among consumers (Aakko & Niinimäki, 2022). Additionally, websites incorporate social norm nudges, wherein users are led to believe that most other website users are making a specific decision (Brough et al., 2016; Haines et al., 2005). This phenomenon exploits individuals' tendency to mimic a larger group's actions (Schultz et al., 2007), resulting in similar behavioral patterns among consumers. However, Chen et al. (2019) note that online consumption behavior differs from general online social behavior. This implies that online social behavior does not always accurately predict consumers' actual online purchases. Nonetheless, it can be argued that the type of online websites consumers encounter has an impact on their intentions to make a purchase.

### *2.3.2 Influencing Consumer Behavior: Sustainable Consumption and Sufficiency Approaches*

Academic research has established a significant link between influencing consumer behavior towards more sustainable consumption choices. Several studies have explored this relationship and shed light on the specific effects of such incentives on consumer behavior. For instance, Bocken et al. (2014) comprehensively analyzed consumer responses to sustainability incentives in the fashion industry, revealing a notable shift towards more sustainable purchasing decisions. Similarly, Frick et al. (2021a) examined the effectiveness of financial incentives in promoting eco-friendly product choices, finding that consumers were more inclined to select sustainable options when offered discounts or rewards. Additionally, Castro-Santa et al. (2023) investigated the influence of promotional campaigns on consumers' intentions to adopt green products, demonstrating a positive impact on consumer behavior. Furthermore, Bhatnagar and McKay-Nesbitt (2016) examined the role of incentives in encouraging consumers to engage in environmentally friendly behaviors, highlighting the significant influence of rewards and recognition on consumer choices.

While financial incentives have been used to encourage sustainable consumption, as can be seen in the examples above, sufficiency approaches aim to promote mindful and restrained consumption by providing information on sustainable alternatives and emphasizing repair and reuse (Thøgersen, 2006). This suggests that alternative approaches to promoting sufficiency should be considered, as financial incentives may not lead to mindful and restrained consumption. Gossen and

Heinrich (2021) highlight the role of clothing companies in promoting sufficiency through the emphasis on product durability, reparability, and high quality. Grazzini et al. (2021) also note that specific sustainable product attributes, such as the use of recycled materials, positively influence consumers' purchase intentions to be lower.

*H1: Purchase intentions will be higher on websites promoting consumption than on websites promoting sufficiency.*

It is worth noting that existing research lacks a clear distinction between the effects of consumption-promoting content and sufficiency-promoting content on consumer behavior in a comparable manner. Although these two types of promotional content differ in their approaches (Bocken et al., 2014), studies frequently focus on examining the effects of either approach independently, without directly comparing their impacts.

## 2.4 Social Norms

Social norms have been well-documented in literature for their effectiveness in influencing consumer behavior (Haines et al., 2005). Social norms can be sorted into injunctive norms and descriptive norms (Cialdini, 2003; Costenbader et al., 2019). Descriptive norms pertain to how an individual perceives the behavior of others, whereas injunctive norms relate to an individual's perception of others' approval or disapproval of specific behavior (Wang & Chu, 2021). Castro-Santa et al. (2023) add that social norms refer to the perceived minority vs majority of the actions and behaviors of others. Additionally, research by Brough et al. (2016) suggests that social norms play a significant role in shaping sustainable consumption behaviors.

The findings by Bhatnagar and McKay-Nesbitt (2016) underscore the significance of tailoring persuasive messages in accordance with the underlying motivational orientation of the target audience to effectively promote sustainable consumption. It highlights the importance of adapting communication strategies to align with the specific motivations and values of individuals, thereby enhancing the likelihood of encouraging them to adopt behaviors that support sustainability. This is demonstrated by the influential role of social norms in shaping behavior (Castro-Santa et al., 2023; Cialdini, 2003). Hence, Frick et al. (2021a) define social norms in the context of sufficiency related studies as constraint. By highlighting the growing popularity and acceptance of sufficiency practices, such as constraint and conscious consumption, companies can leverage social influence to encourage sustainable choices online (Brough et al., 2016).

### 2.4.1 Social Norm Nudges

The current study opts for using social norm nudges in the research. As mentioned above, the Theory of Planned Behavior factors, subjective norms, and perceived behavioral control are connected to shaping purchase intentions (Ajzen, 1991). Social norm nudges play a critical role in the consumer decision-making process (Ajzen & Sheikh, 2013; Castro-Santa et al., 2023).

The concept of "nudging" has gained attention in promoting sustainable behaviors (Thøgersen & Crompton, 2009). The concept of nudges, also known as choice architecture, involves structuring choices in a way that encourages individuals to make decisions that are in their best interest or promote the welfare of society (Bovens, 2009). Social norm nudges, a specific type of nudge, rely on descriptive social norms to influence behavior. These norms refer to the behaviors of similar individuals, and research has shown that they can effectively encourage desirable actions (Bucher et al., 2016; Cialdini & Trost, 1998). People tend to conform to the perceived norms of their social groups, and by communicating information about what other consumers are doing, companies can promote desired behaviors (Schultz et al., 2007). Hence, research by, for example, Castro-Santa et al. (2023), demonstrates that social norm nudges can influence purchasing decisions. This is supported by Frick et al. (2021a) who state that, depending on the content of the advertisement, social norms can potentially foster either increased consumption or sufficiency. However, Castro-Santa et al. (2023) did note that green advertising was more effective in influencing consumption behavior than social norm nudges were. Nonetheless, the proposed study aims to examine the impact of social norms on online purchase intentions.

The strategic use of nudging techniques can gently guide consumers towards desired consumption practices, either promoting more consumption or encouraging sufficiency. By drawing attention to the acceptance and popularity (Thøgersen, 2014) of sufficiency practices through online content, social norms can be capitalized upon (Brough et al., 2016), facilitating the adoption of sustainable choices. In addition, incorporating subtle prompts and reminders of sufficiency-oriented behaviors in online content can effectively nudge consumers towards sustainable consumption practices (Thøgersen & Crompton, 2009). This demonstrates how social norm nudges can be utilized to shape behavior and facilitate positive choices in various contexts.

Hence, the current study utilizes social norm nudges that align with the aim of the website, whether it is promoting consumption or sufficiency. This ensures that the social norm nudges effectively shape behavior as intended. Therefore, websites promoting consumption and featuring social norm nudges will include nudges that encourage increased consumption, such as "Others also bought." On the other hand, websites that aim to promote sufficiency include social norm nudges that emphasize sustainability and encourage readers to change their behavior, for example, "Join thousands of others in making the switch to sustainable shopping." By tailoring the social norm nudges to the respective aims of the websites, the study aims to evoke the desired behavior in consumers.

Additionally, Frick et al. (2021a) observed that the social norm for sufficiency exerts a stronger influence than respondents' personal norms. This suggests that individuals often feel social pressure due to the expectations of others to demonstrate moderation (sufficiency). Furthermore, Frick et al. (2021a) revealed that social norms surrounding consumption, alongside exposure and attention to online content that promotes consumption, directly influenced individuals' aspirations for higher levels of consumption. Considering the significance of social norm nudges, the current study hypothesizes

that the presence of social norm nudges on both consumption-promoting and sufficiency-promoting websites reinforces their respective effects.

*H2: The inclusion of social norm nudges strengthens the impact of websites promoting consumption and websites promoting sufficiency on purchase intentions.*

## 2.5 Perceived Quality

Perceived product quality, as defined in prior literature (Zeithaml, 1988), involves customers' overall evaluation of a product's excellence, taking into account both objective and subjective criteria. Objective quality refers to specific technical attributes, while subjective quality is based on individual responses in a particular context.

In the context of textile and apparel industries, perceived quality holds significant importance for consumers. De Klerk and Lubbe (2008) found that consumers consider both the material level and the behavioral dimension of garments when assessing apparel quality. This behavioral dimension includes aspects such as durability, comfort, and beauty. Moreover, Birtwistle and Moore (2007) highlight that consumers evaluate apparel based on emotional experiences and the messages it conveys when worn. These findings indicate a close relationship between the physical properties of the garment and its behavioral qualities, encompassing the sensory, emotional, and cognitive dimensions of the aesthetic experience. Therefore, perceived quality encompasses not only the physical attributes of the garment but also its emotional impact.

Websites play a crucial role in shaping consumer perceptions of product quality (Castro-Santa et al., 2023). The presentation of products on websites, including the use of high-quality images and detailed descriptions, can enhance perceived quality by providing more information about the product and creating a positive impression (Aakko & Niinimäki, 2022). Moreover, Gossen and Heinrich (2021) emphasize the role of apparel companies in advocating sufficiency and promoting durable and high-quality products. This suggests that businesses can effectively influence consumers' perceived quality and material aspiration levels by promoting sufficient consumption through online media content (Gossen & Heinrich, 2021; Frick et al., 2021b).

In contrast, recent academic literature has focused on fast fashion products and their potential influence on consumer perceptions of quality (Zhang et al., 2021). The fast fashion business model is frequently linked to the production of low-quality products. Consequently, websites that aim to promote extensive consumption often carry the perception of lower quality, regardless of the actual quality assessment of the product itself. The latter is similar to the findings of Birtwistle and Moore (2007), as emotional impact is often considered to be more influential than the physical attributes of the product.

*H3: Perceived quality will be higher for consumers who have seen websites promoting sufficiency than websites promoting consumption.*

In contrast, few research found that the complexity of expected consumer behavior in sufficiency-promoting websites may decrease the perceived quality of the advertised products (Castro-Santa et al., 2023). This decrease is due to sufficiency promoting appearing counterintuitive when presented on clothing websites (Karlsson et al., 2004), as most websites often aim to increase consumption rather than decrease consumer consumption. However, Chi et al. (2021) suggest that excellent product concepts, accompanied by high-quality attributes, contribute to superior consumer perceptions even when the websites promote sufficiency. Additionally, highlighting the benefits of owning eco-friendly items and encouraging others to do the same through social norm nudges can also influence perceived quality. For instance, social influences, such as observing others wearing and praising a particular garment, can contribute to the perception of higher quality (Collett et al., 2013).

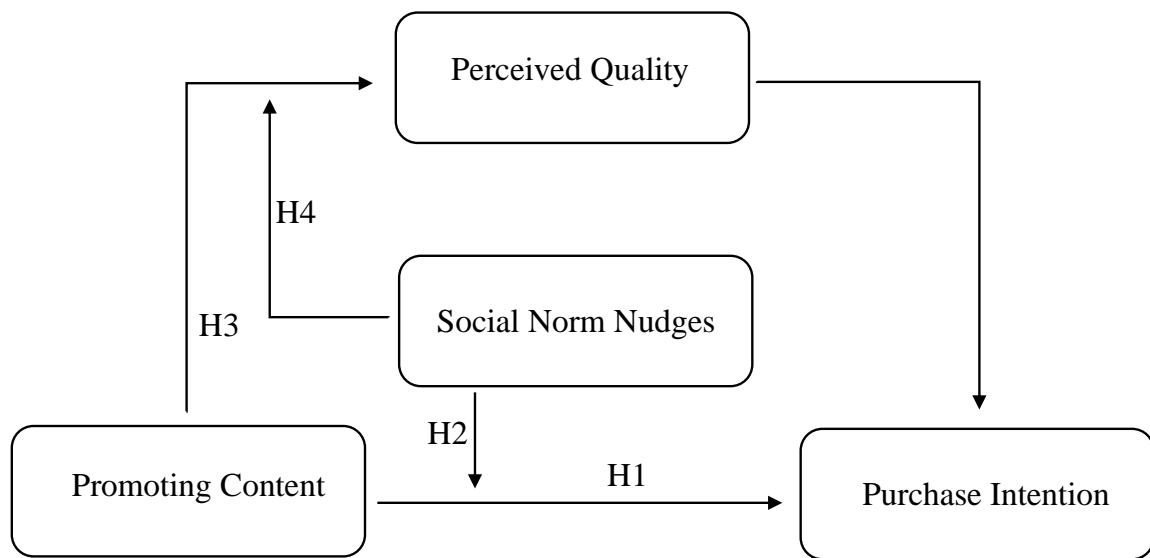
Consumers driven by materialistic values and a desire for validation through fast-fashion purchases frequently perceive lower-quality products (Binet et al., 2019). However, an influential factor in consumption levels is the impact of social norms, particularly through peer influence. Individuals who exhibit their purchases as a means to gain approval and a sense of belonging contribute to the enhancement of consumers' perceived quality when social norms are present (Binet et al., 2019). As a result, it can be deduced that the presence of social norms is positively correlated with consumers' perception of quality.

*H4: Perceived quality will be higher for consumers who have seen websites with an inclusion of social norm nudges than websites with excluded social norm nudges.*

## 2.6 Conceptual Model

A conceptual model has been proposed to explain the relationship between type of content and purchase intentions, with the distinction between consumption-promoting or sufficiency-promoting websites. Moreover, the effect of perceived quality on purchase intentions is expected to differ according to the different types of content. Additionally, websites featuring social norm nudges are expected to affect perceived quality, as can be seen in Figure 1.

**Figure 1**  
Conceptual Model





### **3. Methods**

#### *3.1 Research Design*

This study aims to investigate the relationship between social norms, purchase intentions, perceived quality and promoting content types in the e-commerce industry in the Netherlands by using an experimental survey method. The digital experimental survey was a 2x2 in-between subjects design. The study examined two between-subject variables: Inclusion/Exclusion of social norm nudges and Consumption/Sufficiency promoting content. The type of content (consumption/sufficiency) is the independent variable, perceived quality and purchase intentions are the dependent variables, and social norm nudges is the mediator.

Computer-based experiments are often utilized in research because they closely mimic real purchase shopping behavior, similarly to the study by Castro-Santa et al. (2023). Therefore a digital survey was chosen for the experiment design. The online survey consists of questions about participants' likelihood of purchasing the product, their perceived quality and their perceived level of sufficiency promoting or consumption promoting and their perception of social norms related to the statements on the website. Additionally, demographic questions (gender, age, country of residence, & education) are included to ensure a representative sample.

#### *3.2 Subjects*

To ensure a diverse participant pool for the survey, multiple channels were utilized. Initially, the survey link was distributed across social media platforms such as LinkedIn, Facebook and Instagram. Additionally, Amazon Mechanical Turk was employed to recruit participants. Amazon Mechanical Turk operates as a platform where researchers can upload surveys for individuals to complete. Participants who fulfilled specific quality criteria were compensated with a limited amount of money upon survey completion. While social media participation was voluntary, participation through Amazon Mechanical Turk was rewarded with monetary compensation. The respondents who took part in the survey via Amazon Mechanical Turk were asked an additional question regarding their Amazon worker ID. This was done to distinguish the responses received through the monetary platform from the other non-monetary responses.

The study investigates the relationship between respondents of different genders and ages. Therefore, participants over the age of 18 are included in the sample. The survey is distributed in English as the primary language but with a translation into Dutch.

#### *3.3 Stimuli*

The stimuli in this research are based on the stimuli created by Castro-Santa et al. (2023). In their experiment, two websites are created featuring green and non-green advertising, and four

experimental conditions are established with varying levels of social norm nudging. To mirror this approach, the current research divides the stimuli into two categories that result in a total of four categories. The first differences between the stimuli are that the website features either consumption promoting content or features sufficiency promoting content. The second category is the inclusion or exclusion of social norm nudges stated on the website. These categories are all based on the exact same screenshot of a website featuring a white background with primarily black text.

Hence, the stimuli of this study consists of screenshots of a website with digital written product descriptions and an image of a black long-sleeve top, which is shown in Appendix D. A product description was chosen because customers usually read the product description on a web shop page when buying new clothes. The image of the long-sleeve top is from Arket and is a black cotton long-sleeve top and was the same for all experimental groups. However, to avoid any potential bias or influence based on pre-existing opinions or experiences with a particular brand or store, the websites will be photoshopped to feature imaginary clothing without a brand, and the brand Arket is left out. This ensures that the participants are not influenced by their pre-existing attitudes towards any specific brand, and instead, can focus solely on the content being presented to them. To ensure the websites are inclusive, unisex clothing is used on the website. This decision is made to cater to both men and women, as well as to avoid any potential gender bias that may be present when using clothing items that are exclusively marketed to one gender.

The differences in the stimuli is achieved through small adaptations in the text (focus on trends/focus on sustainability) and color usage, red for consumption promoting and green for sufficiency promoting. Comparable to Castro-Santa et al. (2023) their experimental stimuli featured statements that show what the majority of the people regard of the product. Similarly, the conditions in the research that regard sufficiency include green elements in text (Murphy, 2021), as the color is often connected to sustainability and calm. Additionally, a green leaf is added above the additional statement about the textile being organic cotton. In contrast, the consumption content features red elements in text (Psychologist world, n.d.), a color often said to be essential in retail setting as red influences customers to make a purchase and evokes a sense of urgency (Beks, 2020).

Different product descriptions were developed which corresponded with the different aims of communicating either consumption or a sense of sufficiency, combined with a presence of social norms. These social norms are communicated through elements on the website with examples of “choose sustainability like the others” and in contrast for consumption promoting social norm nudges “at our brand, we offer the newest styles”. Additionally, buttons that refer to a “community” are added for the conditions regarding sufficiency. The variable social norm nudges has two levels: and exclusion of social norm nudges (control group) and an inclusion of social norm nudges (treatment group). This results in four conditions, which are shown in table 1.

**Table 1**  
Condition groups

Promoting Content	Social Norm Nudges	Group
Consumption	Inclusion	Condition 4
Consumption	Exclusion	Condition 3
Sufficiency	Inclusion	Condition 2
Sufficiency	Exclusion	Condition 1

### 3.3.1 Consumption and Social Norm Nudges

The message and content is constructed in a way that evokes consumption. This is created by the usage of the color red (Beks, 2020). The website included statements such as “trending now”, “sale”, “at our brand, we offer the newest styles”, “Free shipping on orders over 100 EUR” and “Buy 2, get 1 free. Only today”. Moreover, the product description includes sentences such as “Discover our amazing long-sleeve top, the ultimate wardrobe essential for the upcoming season”. The conditions of the control groups of consumption promoting messages and content includes all these elements but included no additional social norm elements, hence the term “exclusion of social norms” is applied.

The conditions of the treatment groups were constructed so that the website included additional features to the control group. The treatment groups saw screenshots of a website that included statements such as “37 of our shoppers bought this product in the last 24 hours” to create a sense of urgency, “Join the others and sign up for newsletters and receive 10% off when you make your first purchase”, “Others also bought”, “Last items” and “Community”. The inclusion of these additional elements resulted in the adoption of the term “inclusion of social norms”.

### 3.3.2 Sufficiency and Social Norm Nudges

The message and content is constructed in a way that evokes a sense of sufficiency. This is created by the usage of the color green (Murphy, 2021). The website included statements such as “At our brand, we take sustainability seriously”, “Organic Cotton”, “Repair” and “90% sustainably sourced and 18% recycled materials”. Additionally, the product description includes sentence elements such as “Introducing our sustainable long-sleeve top” and “Organic cotton is cultivated and harvested from non-genetically modified plants”. The conditions of the control groups of sufficiency promoting messages and content includes all these elements but included no additional social norm elements, hence the term “exclusion of social norms” is applied.

The conditions of the treatment groups were constructed so that the website included additional features to the control group. The treatment groups saw screenshots of a website that included statements such as “Choose sustainability like the others”, “Community”, “Make a difference

and join the club!”, “903.529 of our shoppers chose sustainability in 2022” and “Join thousands of others in making the switch to sustainable shopping. Start today and help protect our planet!”. The term “inclusion of social norms” was adopted as a consequence of incorporating these supplementary elements.

### *3.4 Pre-test*

Prior to conducting the experimental survey, two pre-tests were conducted to ensure the quality and clarity of the materials used. The first pre-test aimed to establish participants' understanding and discernment of the distinctiveness of the stimuli. It ensured that there was no confusion between the four conditions that would be utilized in the subsequent experiment. The second pre-test involved an online survey to evaluate the differentiation between the conditions with social norm nudges and the conditions without such nudges. This step was crucial in confirming that the two sets of social norm conditions were sufficiently distinguishable from each other. These pre-tests played a vital role in validating the materials and ensuring the effectiveness of the experimental design.

#### *3.4.1 Pre-test Stimuli*

Prior to the main experiment, a preliminary test was carried out to ascertain whether the four websites had the capability to effectively communicate the intended message regarding consumption versus sufficiency and strong versus weak social norms.

The pre-test was an experiment with printed versions of the stimuli, in which five participants were individually asked to link the four screenshots of websites to four definitions: 1. Consumption stimulating with social norms, 2. Consumption stimulating without social norms, 3. Sufficiency stimulating with social norms, and 4. Sufficiency stimulating without social norms. These four conditions are created based on the conditions created by Castro-Santa et al. (2023) and are given similar distinguished names that correlate to the type of content featuring either consumption/sufficiency and exclusion/inclusion of social norms. All participants correctly matched these 4 to the 4 correlating websites that can be seen in the Survey Pre-test document in Appendix A. Hence, the conclusion was made that the four websites are suitable and usable for the main survey experiment and capable of correctly measuring consumption/sufficiency promoting content and exclusion/inclusion of social norm nudges.

#### *3.4.2 Pre-test Survey*

The pre-test was a digital survey created with Qualtrics in which questions were asked of the participants regarding the perceived level of included social norms on the websites. For the pre-test, the questions to measure social norms were taken from Frick et al. (2021). These measures can be

found in Appendix B. The social norm items were evaluated using the seven-point Likert scale. Seventeen participants had responded to the pre-test survey.

The means of the different items were calculated for the four conditions. A distinction was made between two websites that featured consumption promoting content (condition 1 and 2) and two websites that featured sufficiency promoting content (condition 2 and 3). Table 2 shows the mean scores for the different groups. Participants who saw websites featuring social norm nudges (condition 2 and 4) scored higher on the questions of perceived social norms than participants who saw websites without social norm nudges (condition 1 and 3). This is in line with the findings of Schultz et al. (2007), who found that conveying information about the behaviors of fellow consumers, influences individuals to align their own actions with the perceived norms of their social groups.

Moreover, Thøgersen and Crompton (2009) discovered that subtle environmental nudges have a positive impact on consumer decisions, leading them to choose more sustainable alternatives. Similarly, sufficiency promoting websites excluding social norms nudges scored lowest on the sum of means ( $M=4.40$ ,  $SD=.707$ ), while sufficiency promoting websites including social norms scored higher on the sum of means ( $M=5.40$ ,  $SD=1.251$ ). In contrast, consumption promoting websites including social norm nudges scored highest on the sum of means ( $M=6.03$ ,  $SD=1.221$ ). These findings conclude that the four different websites are effective in serving as experimental conditions for the study.

**Table 2**  
Results pre-test

	Condition 1 (N=2)	Condition 2 (N=4)	Condition 3 (N=5)	Condition 4 (N=6)
Sum of Means	4.40	5.40	5.80	6.03
Std.Deviation	.71	1.25	1.43	1.22

### 3.5 Measures

The dependent variable in this study is purchase intentions, which is influenced by the independent variables of type of content, social norm nudging and perceived quality as mediator.

#### 3.5.1 Purchase Intentions

The experimental survey for measuring purchase intentions in online clothing stores draws on the work of Grewal et al. (1998) and Steiner et al. (2016), with adaptations made to fit the research context. The survey makes use of a Likert scale ranging from 1-7, with anchors at "very low" and "very high". Participants are asked to rate their likelihood of buying a long-sleeve top using three

different items: 1) the probability of buying the product, 2) the probability of considering the product, and 3) the likelihood of purchasing the product.

### *3.5.2 Perceived Social Norms*

Strong social norm nudging is generally more effective in creating a stronger sense of peer pressure among consumers than weak social norm nudging (Haines et al., 2005). To assess the perceived social norms on the clothing website, participants were asked to rate their agreement with a series of statements taken from the research by Frick et al. (2021b), using a Likert scale ranging from 1-7.

The survey instrument employed in this study consisted of a total of eight statements that assessed both consumption social norms and social norms for sufficiency. In order to create a more balanced scale, two statements were deleted as they deemed to be similar to the other statements. These total of six statements focused on either consumption social norms, such as the frequency of purchasing new clothes or following the latest fashion trends or sufficiency social norms, such as repairing clothes. By including both consumption and sufficiency-related statements, the survey aimed to capture a comprehensive view of social norms around clothing consumption.

### *3.5.3 Perceived Quality*

The relationship between social norm nudging and purchase intentions is also influenced by perceived quality as an independent variable. The perceived quality of the long-sleeve top on the website was measured using a scale based on previous research by Steiner et al. (2016) and Bearden et al. (2003).

The scale consisted of three statements that assessed the quality of the product on the website. The first statement asked participants to rate the average quality of the long-sleeve top compared to others of a similar style on the website using a 7-point Likert scale ranging from 1 (very low quality) to 7 (very high quality). The second statement evaluated the general quality of the long-sleeve top and the third statement assessed the overall quality of the long-sleeve top.

## *3.6 Procedure*

The selection of respondents involved a combination of purposive and snowball sampling methods. To ensure the inclusion of internet users, the questionnaire was distributed through various online channels that feature clothing advertisements and hyperlinks to clothing websites. Additionally, the researcher directly contacted individuals engaged in online clothing consumption activities and encouraged them to share the survey with others, utilizing the snowballing technique to expand the respondent pool.

A manipulation check is installed into the study by comparing the results using a feedback method of a small sample group before sending out the survey to the actual sample. Before commencing the

experiment, the subjects will need to sign a consent form that includes the survey's goals and information about their data being collected anonymously and be made aware that participation is voluntary. Then, all participants were randomly assigned to one out of four groups using the randomizer tool in Qualtrics. Subsequently, the participants were sent two a list of questions concerning a manipulation check, their intent to purchase, their perceived quality, and the perceived level of consumption and sufficiency, as seen in Appendix C. At the end of the survey, the participants were thanked, and an open-answer question was added where participants could leave comments and feedback.

The data analysis process involved several sequential steps carried out using the SPSS software. Initially, the data underwent thorough cleaning and preparation, encompassing various procedures such as outlier detection, handling missing values, identifying and resolving repeating responses, recoding reversed items, assessing normality, ensuring reliability through Cronbach's Alpha, and consolidating items from one scale into a single variable.

Once the data cleaning was completed, the results were obtained. First, descriptive statistics were computed to provide an overview of the sample characteristics. Additionally, a principal components analysis (PCA) was performed to explore the unidimensionality and underlying structure of the items. Following the PCA, a descriptive statistics table was generated to identify striking patterns or findings. Subsequently, hypothesis testing was conducted. Hayes process macro model 8 was employed to test the hypotheses and to discover differences between the experimental condition groups. By sequentially following these analytical steps, the research aimed to investigate and draw conclusions regarding the hypotheses under examination.

## 4. Results

This chapter provides a comprehensive analysis of the experiment's findings. Demographic information about the participants is presented, followed by an evaluation of the scales' unidimensionality. Then the psychometric properties of the scales are revealed, as well as the results of the manipulation test. A Hayes process macro and multiple linear regression analysis are statistical methods employed to test the hypotheses. Finally, several additional findings will be discussed.

### 4.1 Participants

A total of 299 respondents participated in the survey. To ensure only serious responses, respondents who finished the survey in less than two minutes were filtered out (124 participants were filtered out). The exclusion of participants who completed the survey in less than two minutes is justified for the following reasons. Respondents who rush through the survey without devoting sufficient time and attention may introduce inaccuracies, thereby compromising the reliability of the collected data. By implementing this filtering criterion, the risk of including inattentive or unserious participants, whose responses may not align with the research objectives, is mitigated. Hence, a second filter was applied to clean the data even further. Respondents who did not answer more than two questions are deleted (3 participants were filtered out).

Furthermore, respondents who viewed sufficiency-promoting content and answered the corresponding perceived level of sufficiency check questions incorrectly were excluded if they scored below 4 (neutral) on the average of the three questions. This score indicates disagreement with the content's intention to promote sufficiency, despite it being the case. A total of six respondents met this criterion. Additionally, respondents who viewed consumption-promoting content and provided incorrect answers to the corresponding perceived level of sufficiency check questions were excluded if they scored above 4 (neutral) on the average of the three questions. Scoring above 4 would suggest agreement with the content's aim to promote sufficiency, even though it does not. In total, 60 respondents were deleted based on this criterion. As a result, the final sample consisted of 96 respondents.

The frequencies and percentages of the different demographics are reported in Table 3. Education had one missing value. 47 respondents reported to have studied a bachelor's degree followed by high school diploma or equivalent with 25 respondents. The results indicate that there participated more females than males in the survey with 46 respondents answering male and 50 respondents answering female. Most respondent (75) were living in the Netherlands, with 21 answering not living in the Netherlands. A majority of respondents (37) is between the ages of 24 and 34 years old.



**Table 3**  
Sample characteristics

Characteristics	Frequency in Sample	Percentage of Sample
<b>Gender</b>		
Female	50	52.1
Male	46	47.9
Non-binary/third gender	0	0.0
Prefer not to say	0	0.0
<b>Age</b>		
Under 18 years old	2	2.1
18-24 years old	26	27.1
25-34 years old	37	38.5
35-44 years old	14	14.6
45-54 years old	8	8.3
55-64 years old	3	3.1
65 years or older	6	6.3
<b>Living in the Netherlands</b>		
Yes	75	78.1
No	21	21.9
<b>Level of education</b>		
Less than high school diploma	3	3.1
High school diploma or equivalent	25	26.0
Some college, but no degree	9	9.4
Associate degree	1	1.0
Bachelor's degree	47	49.0
Master's degree	1	1.0
Doctorate or professional degree	9	9.4
<b>Experimental condition</b>		
Condition 1: Sufficiency content without social norms	30	31.3
Condition 2: Sufficiency content with social norms	40	41.7
Condition 3: Consumption content without social norms	15	15.6
Condition 4: Consumption content with social norms	11	11.5

#### 4.1.2 Psychometric Properties of the Scales

To evaluate the unidimensionality of the scales, a principal component analysis (PCA) was performed using Varimax rotation and Kaiser normalization based on Eigenvalues.

To ensure the reliability of the scales, a purification process was performed with a cutoff of 1.0 for eigenvalues and 0.40 for factor loadings. The multi-item measures' Cronbach's alpha values all exceeded the threshold of 0.70, indicating adequate internal consistency. That means that the internal validity for all the scales was of good enough quality that it can be concluded that all the scales measured what they intended to measure. Appendix E provides detailed information on the measures, the items' factor loadings, and the Cronbach's alpha for all scales.

To test the reliability of the scales and get a first impression of the experimental results, a Cronbach's alpha test was conducted. The corresponding alphas ( $\alpha$ ) are reported in Table 4.

**Table 4**  
Cronbach's Alpha

Scale	Alpha
Purchase Intentions	.86
Perceived Quality	.75
Perceived level of Sufficiency Promoting Content	.87
Perceived level of Consumption Promoting Content	.79
Perceived Social Norms	.79

Purchase Intentions, Perceived Quality, Perceived level of Sufficiency Promoting Content, Perceived level of Consumption Promoting Content and Perceived Social Norms scored high on internal reliability ( $\alpha > 0.7$ ).

#### 4.1.3 Descriptive Statistics

The Pearson correlations and corresponding significances of the variables are reported in Table 5. The correlation coefficients revealed significant associations between several variables. Firstly, Purchase Intentions demonstrated a positive and significant correlation with Perceived Quality ( $r = 0.70$ ,  $p < 0.001$ ), indicating that higher perceived quality was linked to stronger purchase intentions. Similarly, Perceived level of Sufficiency Promoting Content exhibited a positive and significant correlation with Perceived Quality ( $r = 0.50$ ,  $p < 0.001$ ), suggesting that a higher perception of sufficiency in the content was associated with higher perceived quality.

Furthermore, Perceived level of Consumption Promoting Content displayed a positive and significant correlation with Purchase Intentions ( $r = 0.35$ ,  $p < 0.001$ ), indicating that a higher perceived level of consumption in the content was associated with stronger purchase intentions. Additionally,

**Table 5**  
Descriptive statistics and correlations ( $n = 96$ )

	1.	2.	3.	4.	5.	6.	7.	Mean	SD
1. Purchase Intentions	(-)							4.80	1.43
2. Perceived Quality	.70*	(-)						5.23	1.07
3. Perceived level of Sufficiency Promoting Content	.46*	.50*	(-)					4.65	1.49
4. Perceived level of Consumption Promoting Content	.35*	.28*	.16	(-)				4.97	1.27
5. Social Norms Manipulation Check	.26*	.26*	.29*	.60*	(-)			5.02	1.40
6. Promoting Content Condition (0=Sufficiency, 1=Consumption)	-.37*	-.47*	-.73*	-.03	-.18	(-)		.27	.45
7. Social Norms Condition (0=Without, 1=With)	-.04	-.06	.24*	.04	.08	-.13	(-)	.53	.50

*Note.* Promoting Content Condition was coded as sufficiency = 0 and consumption = 1.

Social Norms Condition was coded as without = 0 and with = 1.

\* $p \leq .05$ , (2-tailed).

Perceived level of Sufficiency Promoting Content showed a positive and significant correlation with Social Norms Manipulation Check ( $r = 0.29, p < 0.001$ ).

In contrast, the Promoting Content Condition demonstrated a negative and significant correlation with Purchase Intentions ( $r = -0.37, p < 0.001$ ), implying that the type of content (consumption/sufficiency) was associated with lower purchase intentions. Similarly, the Promoting Content Condition showed a negative and significant correlation with Perceived Quality ( $r = -0.47, p < 0.001$ ). However, no significant correlations were found between the Social Norm Conditions and any of the other variables.

## 4.2 Manipulation Check

### 4.2.1 Social Norms

An independent samples T-test was chosen to perform a manipulation check. This decision stems from the need to examine the relationship between a given condition and its corresponding measurement. By employing the independent samples T-test in this context, it allows for an assessment of whether the manipulation was successful or had an effect on the measured variable Perceived Social Norms, thus serving as a means of verifying the manipulation.

Regarding conditions including social norm nudges and the Perceived Social Norms scale questions, no significant effect was found,  $t$ -value (94) =  $-0.77, p = 0.445$ , although the group with social norm nudges ( $M = 5.12, SD = 1.25$ ) had higher scores than the group without social norm nudges ( $M = 4.90, SD = 1.56$ ). Thus, on average, the participants did not experience the two manipulated conditions including social norm nudges in this study and did not score significantly different on the Perceived Social Norms scale.

### 4.2.2 Type of Content

The aim of this multivariate analysis of variance (MANOVA) analysis was to assess respondents' awareness of the elements present in the stimuli by inquiring about their perceived level of sufficiency and perceived level of consumption nudging elements within the content of the stimuli. The variables in this MANOVA analysis are separated from the earlier presented independent samples T-test analysis to measure the social norm nudge conditions because the type of content conditions require a more complex analysis. The MANOVA is used to assess whether the respondents were aware of the type of content conditions (Sufficiency/Consumption) and whether their responses on the Perceived level of Sufficiency Promoting Content and Perceived Level of Consumption Promoting Content scales were significant. A general linear model in SPSS was employed to analyze the data.

The main effect of promoting content on the dependent variables' Perceived level of Sufficiency Promoting Content and Perceived level of Consumption Promoting Content was found to be significant (Pillai's Trace = 0.54,  $F = 55.47, df = 2, 000, 93, p < 0.001$ ). The main effect of social norms on both perceived levels of sufficiency and consumption was not significant ( $p > 0.05$ ).

Based on the estimated marginal means for the independent variable Promoting Content Condition, there was a significant mean difference between sufficiency content ( $M = 5.31$ ,  $SD = 0.92$ ) and consumption content ( $M = 2.87$ ,  $SD = 1.26$ ) for perceived level of sufficiency promoting content (mean difference = 2.44,  $SE = 0.23$ ,  $p < 0.001$ ). Therefore, it appears that the participants did perceive the manipulations in the stimuli concerning the type of content they saw (sufficiency/consumption) in this study.

#### *4.3 Hypotheses Testing*

To analyze the main components of this study and test the hypotheses, we conducted a multivariate analysis of variance (MANOVA). A two-way MANOVA was performed to examine the impact of the promoting content conditions and social norm conditions on purchase intention and perceived quality.

##### *4.3.1 Purchase Intention and Perceived Quality*

The multivariate tests for the main effect of Content Type yields significant results on Purchase Intentions ( $p < 0.001$ ) and Perceived Quality ( $p < 0.001$ ). This indicates a significant difference on both variables between the groups exposed to content promoting sufficiency ( $M = 5.11$ ,  $SE = 0.16$ ) and consumption ( $M = 3.86$ ,  $SE = 0.26$ ). This contradicts H1, which proposed that websites promoting sufficiency would lead to lower purchase intentions. However, further analysis is needed to determine the underlying variables and potential moderating factors influencing these results.

However, the main effect of social norms was not significant for Purchase Intentions ( $p = 0.101$ ) as sufficiency promoting content excluding social norm nudges ( $M = 5.10$ ,  $SE = 0.24$ ) did not significantly differ from sufficiency promoting content including social norm nudges ( $M = 5.13$ ,  $SE = 0.21$ ). Additionally, consumption promoting content excluding social norm nudges ( $M = 4.38$ ,  $SE = 0.34$ ) also did not significantly differ from consumption promoting content including social norm nudges ( $M = 3.33$ ,  $SE = 0.40$ ). This indicates that sufficiency promoting content with or without social norm nudges did not significantly differ, and the same applies to consumption promoting content. This leads to the rejection of H2, suggesting that social norm nudges do not strengthen the impact of either consumption or sufficiency-promoting websites on purchase intentions.

Moreover, the social norms condition was only marginally significant for Perceived Quality ( $p = 0.060$ ). Consequently, consumption promoting content excluding social norm nudges ( $M = 4.73$ ,  $SE = 0.24$ ) differs from consumption promoting content including social norm nudges ( $M = 4.00$ ,  $SE = 0.28$ ) and their effect on perceived quality. In addition, sufficiency promoting content excluding social norm nudges ( $M = 5.59$ ,  $SE = 0.17$ ) did not significantly differ from consumption promoting content including social norm nudges for perceived quality ( $M = 5.50$ ,  $SE = 0.17$ ). Based on the multivariate tests, it can be concluded that respondents who were exposed to websites promoting sufficiency ( $M = 5.59$ ,  $SE = 0.17$ ) perceived a higher product quality compared to those who saw websites promoting consumption ( $M = 4.73$ ,  $SE = 0.24$ ). Therefore, H3 can be accepted, indicating that there is a

significant difference in perceived quality between sufficiency-promoting and consumption-promoting websites.

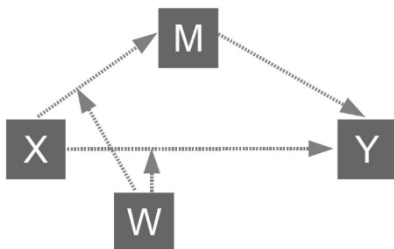
Furthermore, the social norms condition showed only marginal significance for perceived quality ( $p = 0.060$ ), indicating that there was no statistically significant difference in perceived quality between websites with and without social norm nudges. As a result, H4 must be rejected.

The results presented here offer supporting evidence for certain hypotheses that were proposed. Notably, there were notable distinctions observed in purchase intentions and perceived quality between the different groups exposed to promotional content. However, to truly determine whether the type of content or perceived quality was the primary factor responsible for these significant differences observed in the MANOVA testing, it is imperative to conduct further tests using the complete model.

#### 4.4 Testing the Full Model

The primary focus of the hypotheses was on examining the effects of the type of content (Sufficiency/Consumption) on purchase intentions. To explore potential indirect effects on perceived quality within the overall model, a Hayes process macro analysis was conducted. The Hayes (2013) Process serves as an add-on tool for SPSS, simplifying mediation and moderation analyses. By utilizing this macro, the relationships between the independent variables, Promoting Content Condition and Social Norm Nudges Condition, and their influence on Purchase Intentions through Perceived quality, can be effectively depicted. The study employed the moderated mediation with a direct effect analysis (Model 8) once, with Social Norms Condition as the mediator. Figure 2 provides a visual representation of the model.

**Figure 2**  
Moderated Mediation Model



The results of the moderated mediation with a direct effect analysis and any observed indirect and direct effects are presented in table 6.

**Table 6**  
Moderated Mediation Analysis

Model	Purchase Intentions (PI)			Perceived Quality (PQ)		
	Coeff	SE	<i>p</i>	Coeff.	SE	<i>p</i>
Constant	.18	.83	.830	5.59	.17	.000
PCC (X)	.03	.34	.927	-.86	.28	.003
PQ (M)	.88	.15	.000			
SNC (W)	.11	.26	.667	-.10	.23	.669
PCC x SNC	-.51	.65	.409	-.64	.47	.176

<i>Summary of Overall Models</i>						
Outcome Variable	<i>R</i> <sup>2</sup>	<i>MSE</i>	<i>F</i>	<i>df1</i>	<i>df2</i>	<i>p</i>
Purchase Intentions	.50	1.08	18.94	4.00	91.00	.000
Perceived Quality	.25	.88	8.44	3.00	92.00	.000

<i>Index of Moderated Mediation</i>				
Model	<i>Index</i>	<i>BootSE</i>	<i>BootLLCI</i>	<i>BootULCI</i>
SNC	-.56	.42	-1.43	.25

<i>Social Norms Content as a Mediator between Promoting Content and Purchase Intentions</i>			
Model	<i>R</i> <sup>2</sup> -Change	<i>F</i> (1, 92)	<i>p</i>
PCC x SNC x PI	.017	1.86	.176

<i>Social Norms Content as a Mediator between Promoting Content and Perceived Quality</i>			
Model	<i>R</i> <sup>2</sup> -Change	<i>F</i> (1, 91)	<i>p</i>
PCC x SNC x PQ	.006	.69	.409

<i>Conditional direct effect of Social Norms Condition on Purchase Intentions</i>				
Model	<i>Effect</i>	<i>SE</i>	<i>t-value</i>	<i>p</i>
Exclusion of Social Norm Nudges	.03	.34	.09	.927
Inclusion of Social Norm Nudges	-.48	.56	-.85	.398

*Note.* PCC = Promoting Content Condition. SNC = Social Norms Condition

A multiple regression analysis using the Process Macro by Hayes (2013) was performed to investigate the relationship between the predictor variable promoting content condition and purchase intentions, while considering the moderating variable social norms condition. The overall model predicting Purchase Intentions demonstrated statistical significance,  $F(4, 91) = 18.938$ ,  $p < 0.001$ ,  $R^2 = 0.50$ , explaining 49.4% of the variance. Based on the analysis, the relationship between promoting content condition and purchase intentions was not found to be significant ( $\beta = 0.03$ ,  $p = 0.927$ ). Therefore, H1 is not supported, and we do not have evidence to suggest that purchase intentions are higher on websites promoting consumption compared to websites promoting sufficiency.

Moreover, the Social Norms Condition ( $\beta = 0.11$ ,  $p = 0.667$ ) did not significantly predict purchase intentions. In addition, the interaction between Promoting Content Condition and Social

Norms Condition was also non-significant ( $\beta = -0.51, p = 0.409$ ). Hence, H2 is not supported, suggesting that the presence of social norm nudges does not strengthen the impact of websites promoting consumption or sufficiency on purchase intentions. However, Perceived quality had a significant positive effect on Purchase Intentions ( $\beta = 0.88, p < 0.001$ ).

The overall model yielded also showed a significant result,  $F(3, 92) = 8.44, p < 0.001, R^2 = 0.25$ , accounting for 24.9% of the variance in perceived quality. Specifically, the analysis provided evidence of a significant difference in perceived quality based on promoting content condition ( $\beta = -0.86, p = 0.003$ ). However, the negative coefficient of  $-0.86$  suggests that the promoting content condition has a significant negative effect on perceived quality. Therefore, H3, stating that perceived quality will be higher for consumers who have seen websites promoting sufficiency than websites promoting consumption, cannot be accepted. The social norms condition did not significantly predict perceived quality ( $\beta = -0.10, p = 0.669$ ).

This suggests that the inclusion or exclusion of social norm nudges on websites does not have a significant direct effect on perceived quality. Therefore, based on these results, there is no sufficient evidence to support H4 that perceived quality will be higher for consumers who have seen websites with social norm nudges compared to websites without social norm nudges. The interaction between Promoting Content Condition and Social Norm Condition ( $\beta = -0.64, p = 0.176$ ) was also non-significant.

#### 4.5 Additional Analyses

A regression analysis contributes to understanding purchase intentions by assessing the relationships between independent variables (perceived levels of sufficiency promoting content, perceived levels of consumption promoting content, and perceived quality) and the dependent variable. It allows for controlling potential confounding variables, enhancing the validity of findings.

The regression analysis results for the dependent variable Purchase Intentions indicated significant findings ( $F(6, 89) = 16.62, p < 0.001$ ), as seen in Table 7. Among the predictor variables, both the Perceived level of Sufficiency for Promoting Content ( $B = 0.17, p = 0.133$ ) and the Perceived level of Consumption for Promoting Content ( $B = 0.22, p = 0.041$ ) showed significant positive relationships with purchase intentions. Additionally, the Perceived Quality of the content emerged as a significant predictor ( $B = 0.77, p < 0.001$ ) with a large positive standardized coefficient ( $Beta = 0.57$ ), indicating a strong association between higher perceived quality and increased purchase intentions. Also, the perceived social norms ( $B = -0.14, p = 0.520$ ) did not exhibit a significant relationship with purchase intentions.

Overall, the regression analysis highlighted that perceived levels of consumption, and perceived quality significantly influence purchase intentions. Conversely, manipulations including social norms did not significantly contribute to the prediction of purchase intentions in this study.



**Table 7**  
Regression Analysis Results for Dependent Variable (Purchase Intentions)

	B	SE B	Beta	p
(Constant)	-.77	.78	(-)	.321
Perceived level of Sufficiency Promoting Content	.17	.11	.18	.133
Perceived level of Consumption Promoting Content	.22	.11	.19	.041
Perceived Social Norms	-.06	.10	-.06	.555
Perceived Quality	.77	.12	.57	.000*

*Note.* N = 96. \*p < 0.001

## 5. Discussion

This chapter presents the findings of the research and discusses their implications. The aim is to provide a concise summary of the main outcomes, explore the theoretical and practical implications, and address the limitations inherent in this study while proposing recommendations for future research.

The research question guiding this study is: *"To what extent do consumption-promoting and sufficiency-promoting websites, in conjunction with social norm nudges, influence consumer purchase intentions and perceived quality?"*

The study revealed several that, firstly, there was a significant difference in perceived quality between the two experimental conditions of sufficiency-promoting and consumption-promoting content. Specifically, participants who viewed sufficiency-promoting websites perceived lower quality compared to those who viewed consumption-promoting websites. Although, this finding was not in line with the proposed hypotheses that stated that perceived quality would be higher for consumers who saw websites promoting sufficiency than websites promoting consumption.

Besides, the study found that the type of promoting content did not significantly affect participants' purchase intentions. This suggests that while the type of content on a website may influence consumers' perceived quality, it does not directly impact purchase intentions. Instead, the study identified that higher perceived quality had the most significant influence on increasing purchase intentions, aligning with previous research by Zhang et al. (2021) and Castro-Santa et al. (2023), who also observed a strong correlation between product presentation, consumer perceptions of quality, and purchase intentions. Additionally, the inclusion of social norms on the websites did not result in significant differences in purchase intentions or perceived quality among the respondents.

In short, the study's findings highlight the impact of promoting content on perceived quality and its subsequent influence on purchase intentions. While the type of content affected participants' perceptions of quality, it did not directly impact their purchase intentions. These results emphasize the importance of perceived quality in shaping consumer behavior. Consequently, this study allows a comparison of the effects of consumption-promoting and sufficiency-promoting websites on purchase intentions and perceived quality concurrently.

### 5.1 Theoretical Implications

The findings of this study make significant contributions to the existing literature on sustainable consumption and consumer behavior by providing insights into the intricate interplay between consumption and sufficiency-promoting online content, social norms, perceived quality, and consumer decision-making. The research found differences between the type of content participants

viewed and their perception of product quality, supporting earlier research indicating that consumers with higher perceived product quality are more likely to intend to purchase it (Chi et al., 2021)

Contrary to expectations and previous studies (Castro-Santa et al., 2023; Zhang et al., 2021), this research revealed that when exposed to content promoting sufficiency, respondents' perception of product quality was lower compared to those who viewed consumption-promoting content. Nevertheless, the perception of quality emerges as the most influential factor in shaping consumer behavior. As a result, this finding highlights the importance of creating visually appealing and informative online product displays to enhance consumer perceptions and increase purchase intentions, as suggested by Aakko and Niinimäki (2022).

However, the findings do not support the notion that sustainability and sufficiency are key driving factors in consumers' decision-making processes, as perceived quality emerged as the most significant predictor of purchase intentions. These results contrast with previous research that found a positive significance for sufficiency and sustainability promotion in influencing consumers' purchase intentions (Grazzini et al., 2021; Kapferer & Michaut, 2015).

Furthermore, despite the significant role that social norms typically play in shaping sustainable consumption behaviors (Bhatnagar & McKay-Nesbitt, 2016; Brough et al., 2016), their inclusion or exclusion as nudges in this study did not result in significant differences in purchase intentions and perceived quality. Consequently, the findings support and contrast existing beliefs, highlighting the complexity of consumer decision-making.

Therefore, it becomes crucial to explore alternative strategies beyond social norm appeals to effectively promote sufficient choices. Previous research by Frick et al. (2021a), Castro-Santa et al. (2023), and Bhatnagar and McKay-Nesbitt (2016) has demonstrated the effectiveness of rewarding consumers in influencing their purchase choices. Implementing rewards could be a viable approach to promote sufficiency behaviors. Researchers can investigate how rewards, in combination with sufficiency principles, manifest themselves and assess their effectiveness in encouraging consumers to adopt conscious and restrained consumption habits.

## *5.2 Industry Implications*

Contrary to Frick et al.'s (2021b) findings, this study does not offer sufficient evidence to draw firm conclusions regarding the effects of social norms on consumer behavior. However, based on the lack of support for the impact of social norms in this study, it recommends that companies explore alternative strategies to promote sufficiency behaviors among consumers. Building on previous research by Frick et al. (2021a), Castro-Santa et al. (2023), and Bhatnagar and McKay-Nesbitt (2016), which have demonstrated the effectiveness of using consumer rewards to influence purchase decisions, implementing rewards can be seen as a viable strategy for promoting sufficiency behaviors. For example, a company could reward consumers who choose to sell their used clothing from the brand by

offering them a small discount on future purchases of sustainable and long-lasting products. Embracing sufficiency principles enables businesses to align with sustainability goals, foster collaboration, and meet evolving consumer demands. This not only unlocks untapped innovation potential but also allows for the redefinition of traditional business models (Freudenreich & Schaltegger, 2020).

Thus, this study emphasizes the importance of product presentation as a starting point for companies to invest more in developing targeted and effective marketing strategies. The perception of quality appears to be the most significant factor in influencing consumer behavior, providing valuable insights for companies. Companies aiming to increase sufficiency behaviors should, therefore, focus less on connecting sustainability and quality but instead prioritize shaping overall brand and product quality perception. This supports earlier research indicating that consumers who perceive a product's quality as higher tend to have a higher intent to purchase it (Chi et al., 2021).

Additionally, companies should explore different approaches beyond relying solely on social norm nudges to shape consumer behavior. This may involve creating a balanced approach between sufficiency and consumption-promoting content, exploring alternative strategies such as a reward system, and optimizing product displays to enhance consumer perceptions of quality. By embracing these implications for the industry, companies can contribute to promoting sustainable consumption practices, meeting consumer expectations, and achieving business success. These actions not only foster a positive environmental impact but also align with evolving consumer values.

### *5.3 Limitations and Recommendations for Future Research*

The outcomes of this study provide valuable insights for marketers in developing content strategies to promote sustainable consumption in the clothing industry. However, it is important to acknowledge the limitations of this research and propose recommendations for future studies to enhance our understanding in the retail field.

One limitation of the study is that the perceived social norms manipulation check and content, including social norm nudges, did not yield significant results. As a consequence, participants in this study did not perceive the social norm nudges as intended by the researcher, leading to no significant differences in consumer behavior. This suggests that the stimuli used in the research might need to be more distinct in terms of product presentation and the inclusion of social norm nudges. Future studies should explore more impactful stimuli to effectively examine the role of social norms in shaping consumer behavior. Additionally, for future research, it may be beneficial to explore alternative perceived social norm measuring scales instead of using the one adopted from Frick et al. (2021b) in this study.

Another limitation pertains to the study's lack of control over external factors that could have influenced participants' behavior and responses. Factors such as the appeal of the presented product

(Chi et al., 2021), pricing, and color (Psychologist world, n.d.) could have impacted participants' purchase intentions and perceived quality. Future research should consider incorporating control measures to minimize the influence of these confounding variables and increase the internal validity of the findings.

Additionally, the sample composition presents another limitation to consider. The respondents were obtained through convenience sampling, with a significant portion recruited from the online paid platform Amazon Mechanical Turk. This method of respondent gathering may have introduced biases and limitations in the quality of the sample group. As a result, the final sample size consisted of fewer than one hundred respondents, limiting the generalizability of the findings to larger populations. Future studies should strive for more representative samples to enhance the generalizability of the findings, ensuring that the results can be applied to broader populations and contexts.

To address the aforementioned limitations and guide future research, several recommendations can be proposed. Researchers should explore different incentives and messages that differentiate sufficiency-promoting and consumption-promoting content. This can involve leveraging sufficiency nudges on websites and combining explicit statements of expected consumer behaviors to guide individuals toward sustainable options. It is essential to effectively convey the intended message to all respondents, which was not achieved in this study as a substantial number of respondents were excluded due to a lack of perceiving the content as intended. Additionally, exploring alternative approaches beyond social norms, such as rewards and personalized pricing, identified in previous literature, is crucial to effectively promote sufficient behaviors (Bhatnagar & McKay-Nesbitt, 2016; Castro-Santa et al., 2023; Frick et al., 2021a).

Moreover, future research should consider the implications of sufficiency principles on business models, taking a holistic approach to sufficient consumption that considers all dimensions and factors related to sufficiency behaviors. This includes focusing on individual consumer choices while considering the broader social, economic, and environmental aspects. Furthermore, conducting qualitative research to investigate the correlation between sufficiency and purchase intentions can offer a more profound understanding of consumers' perspectives and their evaluation of sufficiency-promoting content online.

#### *5.4 Conclusion*

In conclusion, this chapter presented the main findings of the research, challenging existing beliefs about the influence of social norms and different types of online content on consumer behavior in the context of sufficient consumption. Both sufficiency-promoting and consumption-promoting websites did not significantly affect purchase intentions, but they did impact respondents' perceived quality. Perceived quality emerged as the most influential factor affecting purchase intentions, underscoring the significance of product presentation in shaping consumer perceptions and purchase

intent. Based on these findings, perceived quality appears to be the primary driver of consumer buying behavior. Companies should, therefore, adopt a balanced approach between these content types and explore alternative strategies, such as rewards, to encourage sufficient choices among consumers.

The chapter also discussed theoretical and practical implications, as well as limitations and recommendations for future research. These insights can contribute to a deeper understanding of sufficient consumption and aid in the development of effective strategies for promoting sustainable consumer behavior.

## List of References

- Aakko, M., & Niinimäki, K. (2022). Quality matters: reviewing the connections between perceived quality and clothing use time. *Journal of Fashion Marketing and Management: An International Journal*, 26(1), 107-125. <https://doi.org/10.1108/JFMM-09-2020-0192>
- Arnould, E. J., & Thompson, C. J. (2019). Consumer Culture Theory (CCT): Twenty years of research. *Journal of Consumer Research*, 31(4), 868–882. <https://doi.org/10.1086/591204>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I., & Sheikh, S. (2013). Action versus inaction: Anticipated affect in the theory of planned behavior. *Journal of Applied Social Psychology*, 43(1), 155–162. <https://doi.org/10.1111/j.1559-1816.2012.00989.x>
- Bearden, W. O., Carlson, J. P., & Hardesty, D. M. (2003). Using invoice price information to frame advertised offers. *Journal of Business Research*, 56(5), 355-366. [https://doi.org/10.1016/S0148-2963\(01\)00225-9](https://doi.org/10.1016/S0148-2963(01)00225-9)
- Beks, P. (2020, July 11). *The psychology of color at retail*. Retailcustomerexperience.com. Retrieved from <https://www.retailcustomerexperience.com/articles/the-psychology-of-color-at-retail/>
- Bhatnagar, N., & McKay-Nesbitt, J. (2016). Pro-environment advertising messages: The role of regulatory focus. *International Journal of Advertising*, 35(1), 4-22. <https://doi.org/10.1080/02650487.2015.1101225>
- Binet, F., Coste-Manière, I., Decombes, C., Grasselli, Y., Ouedermi, D., & Ramchandani, M. (2019). Fast Fashion and sustainable consumption. *Textile Science and Clothing Technology* (pp. 19-35). Retrieved from [https://link.springer.com/chapter/10.1007/978-981-13-1268-7\\_2](https://link.springer.com/chapter/10.1007/978-981-13-1268-7_2)
- Birtwistle, G., & Moore, C. M. (2007). Fashion clothing—where does it all end up?. *International Journal of Retail & Distribution Management*, 35(3), 210-216. <https://doi.org/10.1108/09590550710735068>
- Bocken, N. M., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, 65, 42-56. <https://doi.org/10.1016/j.jclepro.2013.11.039>
- Bovens, L. (2009). The ethics of nudge. *Preference change: Approaches from philosophy, economics and psychology*, 207-219. Springer. Retrieved from <https://link.springer.com/content/pdf/10.1007/978-90-481-2593-7.pdf#page=216>

- Brough, A. R., Wilkie, J. E., Ma, J., Isaac, M. S., & Gal, D. (2016). Is eco-friendly unmanly? The green-feminine stereotype and its effect on sustainable consumption. *Journal of Consumer Research*, 43(4), 567-582. <https://doi.org/10.1093/jcr/ucw044>
- Bucher, T., Collins, C., Rollo, M. E., McCaffrey, T. A., De Vlieger, N., Van der Bend, D., ... & Perez-Cueto, F. J. (2016). Nudging consumers towards healthier choices: a systematic review of positional influences on food choice. *British Journal of Nutrition*, 115(12), 2252-2263. <https://doi.org/10.1017/S0007114516001653>
- Castro-Santa, J., Drews, S., & van den Bergh, J. (2023). Nudging low-carbon consumption through advertising and social norms. *Journal of Behavioral and Experimental Economics*, 102, 101956. <https://doi.org/10.1016/j.socec.2022.101956>
- Ceglia, D., de Oliveira Lima, S. H., & Leocádio, Á. L. (2015). An alternative theoretical discussion on cross-cultural sustainable consumption. *Sustainable Development*, 23(6), 414-424. <https://doi.org/10.1002/sd.1600>
- Chen, J. V., Ruangsri, S., Ha, Q. A., & Widjaja, A. E. (2022). An experimental study of consumers' impulse buying behaviour in augmented reality mobile shopping apps. *Behaviour & Information Technology*, 41(15), 3360-3381. <https://doi.org/10.1080/0144929X.2021.1987523>
- Chen, X., Fang, S., Li, Y., & Wang, H. (2019). Does identification influence continuous E-commerce consumption? The mediating role of intrinsic motivations. *Sustainability*, 11(7), 1944. <https://doi.org/10.3390/su11071944>
- Cheung, C. M., & Thadani, D. R. (2012). The impact of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems*, 54(1), 461-470. <https://doi.org/10.1016/j.dss.2012.06.008>
- Chi, T., Ganak, J., Summers, L., Adesanya, O., McCoy, L., Liu, H., & Tai, Y. (2021). Understanding perceived value and purchase intention toward eco-friendly athleisure apparel: Insights from US millennials. *Sustainability*, 13(14), 7946. <https://doi.org/10.3390/su13147946>
- Cialdini, R. B. (2003). Crafting normative messages to protect the environment. *Current Directions in Psychological Science*, 12(4), 105-109. <https://doi.org/10.1111/1467-8721.01242>
- Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity and compliance. *Annual Review of Psychology*, 55(1), 591-621. <https://doi.org/10.1146/annurev.psych.55.090902.142015>
- Cohen, M. J. (2020). Does the COVID-19 outbreak mark the onset of a sustainable consumption transition?. *Sustainability: Science, Practice and Policy*, 16(1), 1-3. <https://doi.org/10.1080/15487733.2020.1740472>



- Collett, M., Cluver, B., & Chen, H. L. (2013). Consumer perceptions the limited lifespan of fast fashion apparel. *Research Journal of Textile and Apparel*, 17(2), 61-68.  
<https://doi.org/10.1108/RJTA-17-02-2013-B009>
- Costenbader, E., Cislighi, B., Clark, C. J., Hinson, L., Lenzi, R., McCarraher, D. R., & Stefanik, L. (2019). Social norms measurement: Catching up with programs and moving the field forward. *Journal of Adolescent Health*, 64(4), S4-S6.  
<https://doi.org/10.1016/j.jadohealth.2019.01.001>
- De Klerk, H. M., & Lubbe, S. (2008). Female consumers' evaluation of apparel quality: exploring the importance of aesthetics. *Journal of Fashion Marketing and Management: An International Journal*, 12(1), 36-50. <https://doi.org/10.1007/s10603-009-9101-1>
- Eger, L., Komárková, L., Egerová, D., & Mičík, M. (2021). The effect of COVID-19 on consumer shopping behaviour: Generational cohort perspective. *Journal of Retailing and Consumer Services*, 61, 102542. <https://doi.org/10.1016/j.jretconser.2021.102542>
- Freudenreich, B., & Schaltegger, S. (2020). Developing sufficiency-oriented offerings for clothing users: Business approaches to support consumption reduction. *Journal of Cleaner Production*, 247, 119589. <https://doi.org/10.1016/j.jclepro.2019.119589>
- Frick, V., Gossen, M., Santarius, T., & Geiger, S. (2021a). When your shop says# lessismore. Online communication interventions for clothing sufficiency. *Journal of Environmental Psychology*, 75, 101595. <https://doi.org/10.1016/j.jenvp.2021.101595>
- Frick, V., Matthies, E., Thøgersen, J., & Santarius, T. (2021b). Do online environments promote sufficiency or overconsumption? Online advertisement and social media effects on clothing, digital devices, and air travel consumption. *Journal of Consumer Behaviour*, 20(2), 288-308.  
<https://doi.org/10.1002/cb.1855>
- Gaspar, R., Antunes, D., Faria, A., & Meiszner, A. (2017). Sufficiency before efficiency: Consumers' profiling and barriers/facilitators of energy efficient behaviours. *Journal of Cleaner Production*, 165, 134-142. <https://doi.org/10.1016/j.jclepro.2017.07.075>
- Gossen, M., & Heinrich, A. (2021). Encouraging consumption reduction: findings of a qualitative study with clothing companies on sufficiency-promoting communication. *Cleaner and Responsible Consumption*, 3, 100028. <https://doi.org/10.1016/j.clrc.2021.100028>
- Gossen, M., Ziesemer, F., & Schrader, U. (2019). Why and how commercial marketing should promote sufficient consumption: A systematic literature review. *Journal of Macromarketing*, 39(3), 252-269. <https://doi.org/10.1177/0276146719866238>

- Grazzini, L., Acuti, D., & Aiello, G. (2021). Solving the puzzle of sustainable fashion consumption: The role of consumers' implicit attitudes and perceived warmth. *Journal of Cleaner Production*, 287, 125579. <https://doi.org/10.1016/j.jclepro.2020.125579>.
- Grewal, D., Krishnan, R., Baker, J., & Borin, N. (1998). The effect of store name, brand name and price discounts on consumers' evaluations and purchase intentions. *Journal of Retailing*, 74(3), 331-352. [https://doi.org/10.1016/S0022-4359\(99\)80099-2](https://doi.org/10.1016/S0022-4359(99)80099-2)
- Haines, M. P., Perkins, H. W., Rice, R. M., & Barker, G. (2005). Introduction. *A guide to marketing social norms for health promotion in schools and communities* (pp. 2–22). East Lansing, MI: National Social Norms Resource Center. Retrieved from <http://www.socialnormsresources.org/pdf/guidebook.pdf>
- Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach* (3rd ed.). Guilford Press
- Heikkurinen, P., Young, C. W., & Morgan, E. (2019). Business for sustainable change: Extending eco-efficiency and eco-sufficiency strategies to consumers. *Journal of Cleaner Production*, 218, 656-664. <https://doi.org/10.1016/j.jclepro.2019.02.053>
- Kapferer, J. N., & Michaut, A. (2015). Luxury and sustainability: a common future? The match depends on how consumers define luxury. *Luxury Research Journal*, 1(1), 3-17. <https://doi.org/10.1504/LRJ.2015.069828>
- Karlsson, N., Dellgran, P., Klingander, B., & Gärling, T. (2004). Household consumption: Influences of aspiration level, social comparison, and money management. *Journal of Economic Psychology*, 25(6), 753-769. <https://doi.org/10.1016/j.joep.2003.07.003>
- Murphy, S. (2021, June 9). *The Psychology of Colour in Retail Store Design*. StoreBest Shopfitting Co. Retrieved from <https://storebest.ie/retail-store-design/>
- Olsen, M. C., Slotegraaf, R. J., & Chandukala, S. R. (2014). Green claims and message frames: How green new products change brand attitude. *Journal of Marketing*, 78(5), 119-137. <https://doi.org/10.1509/jm.13.0387>
- Peters, J., & Simaens, A. (2020). Integrating sustainability into corporate strategy: A case study of the textile and clothing industry. *Sustainability*, 12(15), 6125. <https://doi.org/10.3390/su12156125>
- Piboolsravut, P. (2004). Sufficiency economy. *ASEAN Economic Bulletin*, 21(1), 127-134. <https://doi.org/10.1355/AE21-1H>
- Psychologist World. (n.d.). *Color And How Its Cultural Associations Affect Our Mood*. Retrieved from <https://www.psychologistworld.com/perception/color>

- Rosário, A., & Raimundo, R. (2021). Consumer Marketing Strategy and E-Commerce in the Last Decade: A Literature Review. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(7), 3003-3024. <https://doi.org/10.3390/jtaer16070164>
- Roy Dholakia, R., & Uusitalo, O. (2002). Switching to electronic stores: consumer characteristics and the perception of shopping benefits. *International Journal of Retail & Distribution Management*, 30(10), 459-469. <https://doi.org/10.1108/09590550210445335>
- Saini, N., & Vashisht, A. (2018). Trends in E-Commerce and Consumer Behaviour in Contemporary Era. In *Proceedings of 10th International Conference on Digital Strategies for Organizational Success*. <http://dx.doi.org/10.2139/ssrn.3306491>
- Saniuk, S., Grabowska, S., & Gajdzik, B. (2020). Personalization of products in the Industry 4.0 concept and its impact on achieving a higher level of sustainable consumption. *Energies*, 13(22), 5895. <https://doi.org/10.3390/en13225895>
- Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18(5), 429-434. <https://doi.org/10.1177/002224379102800305>
- Steiner, M., Wiegand, N., Eggert, A., & Backhaus, K. (2016). Platform adoption in system markets: The roles of preference heterogeneity and consumer expectations. *International Journal of Research in Marketing*, 33(2), 276-296. <https://doi.org/10.1016/j.ijresmar.2015.05.011>
- Sun, Y., Garrett, T. C., Phau, I., & Zheng, B. (2020). Case-based models of customer-perceived sustainable marketing and its effect on perceived customer equity. *Journal of Business Research*, 117, 615-622. <https://doi.org/10.1016/j.jbusres.2018.09.007>
- Thøgersen, J. (2006). Norms for environmentally responsible behaviour: An extended taxonomy. *Journal of Environmental Psychology*, 26(4), 247-261. <https://doi.org/10.1016/j.jenvp.2006.09.004>
- Thøgersen, J. (2014). Unsustainable Consumption. *European Psychologist*, 19(2), 84-95. <https://doi.org/10.1027/1016-9040/a000176>
- Thøgersen, J., & Crompton, T. (2009). Simple and painless? The limitations of spillover in environmental campaigning. *Journal of Consumer Policy*, 32(2), 141-163. <https://doi.org/10.1007/s10603-009-9101-1>
- Wang, E. S. T., & Chu, Y. H. (2021). How social norms affect consumer intention to purchase certified functional foods: The mediating role of perceived effectiveness and attitude. *Foods*, 10(6), 1151. <https://doi.org/10.3390/foods10061151>

Zero Waste Europe. (2022, March 11). *EU gets tough on fast fashion - new laws 30 March charge brands to boost sustainable clothing (report) - Zero Waste Europe*. Retrieved April 29, 2023, from <https://zerowasteurope.eu/press-release/eu-gets-tough-on-fast-fashion-new-laws-30-march-charge-brands-to-boost-sustainable-clothing-report/>

Zhang, B., Zhang, Y., & Zhou, P. (2021). Consumer attitude towards sustainability of fast fashion products in the UK. *Sustainability*, *13*(4), 1646. <https://doi.org/10.3390/su13041646>

## Appendices

### Appendix A: Pre-test Stimuli

First read these three descriptions:

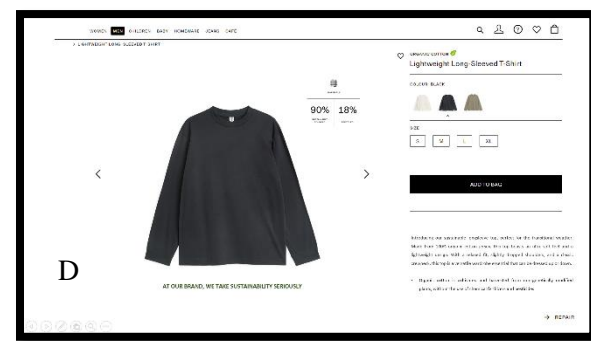
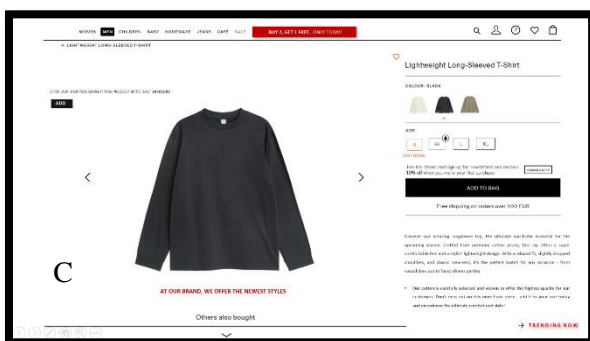
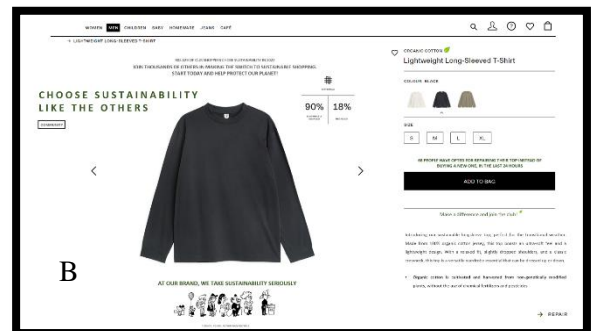
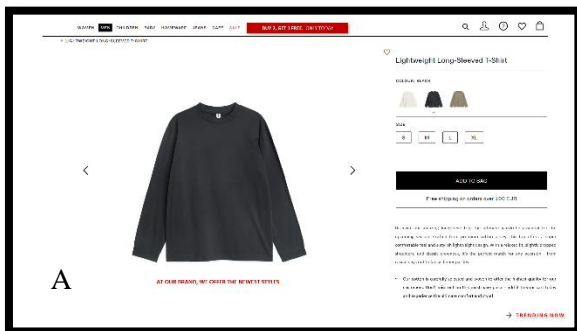
**Consumption:** Refers to the act of consuming goods to satisfy one's wants and needs.

**Sufficiency:** Refers to having enough to meet one's basic needs without being excessive or wasteful.

**Social norms:** Unwritten rules or expectations that dictate how individuals should behave in certain situations.

Please now match the numbers 1, 2, 3, 4 to the pictures given below:

1. Consumption stimulating with strong social norms
2. Consumption stimulating with weak social norms
3. Sufficiency stimulating with strong social norms
4. Sufficiency stimulating with weak social norms



## Appendix B: Pre-test Social Norms

Dear respondent,

Thank you for your interest in this research.

I am conducting a research study on the effects social norms have on customers when presented on clothing websites. I want to ask you to evaluate each element in the survey.

The survey will take approximately 5 minutes to fill in. Please answer each question carefully and honestly, I am sincerely interested in your perspective. There are no right or wrong answers. All research data remains completely confidential and is collected in anonymous form. I will not be able to identify you. There are no foreseeable risks or discomforts associated with participating in this research.

If you now decide not to participate in this research, this will not affect you. If you decide to cease your cooperation while filling in the survey, this will in no way affect you either. You can cease your cooperation without giving reasons. If you have questions about this research, in advance or afterwards, you can contact the responsible researcher Anne van der Stelt, email: 529529as@student.eur.nl.

This study has been approved by the Ethics Committee of Erasmus University Rotterdam. If you want to invoke your rights or if you have a question concerning privacy about this study, you can contact Erasmus University's DPO (Data Protection Officer) at fg@eur.nl.

If you understand the information above and freely consent to participate in this study, click on the "Yes" button below to start the survey. Do you agree to participate in this study?

Yes

No

First read these three descriptions:

Consumption: Refers to the act of consuming goods to satisfy one's wants and needs.

Sufficiency: Refers to having enough to meet one's basic needs without being excessive or wasteful.

Social norms: Unwritten rules or expectations that dictate how individuals should behave in certain situations.

Please click "Yes" if you have read the descriptions.

Yes

No

## Appendix B: Pre-test Social Norms (continued)

1. In the photo, you can see a clothing website. Please take a minute to carefully look over all the elements presented, read the description and answer the questions.

Indicate which type of content you believe you have just seen.

Content that promotes consumption

Content that promotes sufficiency

I believe that the website promotes customers to only buy clothes if they really need them.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

I believe that the website promotes customers to treat their clothes with care, so they will be longlasting.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

I believe that the website promotes customers to repair their clothes or have them repaired when they are torn.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

## Appendix B: Pre-test Social Norms (continued)

I believe that the website promotes customers to pay attention to longevity when buying clothes.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to buy clothes second-hand instead of new.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

2. In the photo, you can see a clothing website. Please take a minute to carefully look over all the elements presented, read the description and answer the questions.

Indicate which type of content you believe you have just seen.

- Content that promotes consumption
- Content that promotes sufficiency
- 

I believe that the website promotes customers to only buy clothes if they really need them.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---



## Appendix B: Pre-test Social Norms (continued)

I believe that the website promotes customers to treat their clothes with care, so they will be longlasting.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to repair their clothes or have them repaired when they are torn.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to pay attention to longevity when buying clothes.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to buy clothes second-hand instead of new.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

In the photo, you can see a clothing website. Please take a minute to carefully look over all the elements presented, read the description and answer the questions.

## Appendix B: Pre-test Social Norms (continued)

Indicate which type of content you believe you have just seen.

- Content that promotes consumption
- Content that promotes sufficiency

For each of the statements below choose the response that best expresses your idea about the absence or presence of social norms on the website.

I believe that the website promotes customers to buy new clothes regularly.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

I believe that the website promotes customers to wear clothes of the newest fashion.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

I believe that the website promotes customers to buy new clothes when they are torn.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

## Appendix B: Pre-test Social Norms (continued)

I believe that the website promotes customers to search for clothing online or in stores for fun.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to buy clothes on sale.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

4. In the photo, you can see a clothing website. Please take a minute to carefully look over all the elements presented, read the description and answer the questions.

Indicate which type of content you believe you have just seen.

- Content that promotes consumption
- Content that promotes sufficiency
- 

For each of the statements below choose the response that best expresses your idea about the absence or presence of social norms on the website.

I believe that the website promotes customers to buy new clothes regularly.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

### Appendix B: Pre-test Social Norms (continued)

I believe that the website promotes customers to wear clothes of the newest fashion.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to buy new clothes when they are torn.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to search for clothing online or in stores for fun.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to buy clothes on sale.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

## Appendix C: Survey Questions

This survey is available in both English and Dutch.

Deze enquête is beschikbaar in zowel het Engels als het Nederlands.

Dear respondent,

Thank you for your interest in this research.

I am conducting a study to investigate the impact of different types of websites on consumer behavior and attitudes toward clothing consumption.

The survey will take approximately 5 minutes to fill in. Please answer each question carefully and honestly, I am sincerely interested in your perspective. There are no right or wrong answers. All research data remains completely confidential and is collected in anonymous form. I will not be able to identify you. There are no foreseeable risks or discomforts associated with participating in this research.

If you now decide not to participate in this research, this will not affect you. If you decide to cease your cooperation while filling in the survey, this will in no way affect you either. You can cease your cooperation without giving reasons.

If you have questions about this research, in advance or afterwards, you can contact the responsible researcher Anne van der Stelt, email: 529529as@student.eur.nl.

This study has been approved by the Ethics Committee of Erasmus University Rotterdam. If you want to invoke your rights or if you have a question concerning privacy about this study, you can contact Erasmus University's DPO (Data Protection Officer) at fg@eur.nl.

If you understand the information above and freely consent to participate in this study, click on the "Yes" button below to start the survey.

Do you agree to participate in this study?

Yes

No

1. In the photo, you can see a clothing website. Please take a minute to carefully read the description and look at all the elements presented on the website. When you have read all the presented information, please click continue and answer the questions.

For each of the statements below, choose the response that best expresses your intent to purchase this long-sleeve top based on how it is presented on the website.

If I were going to buy a long-sleeve top, the probability of buying this product is...

	1	2	3	4	5	6	7	
Very low	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very high

---

### Appendix C: Survey Questions (continued)

The probability that I would consider buying this long-sleeve top is...

	1	2	3	4	5	6	7	
Very low	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very high

---

The likelihood that I would purchase this long-sleeve top is...

	1	2	3	4	5	6	7	
Very low	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very high

2. To what extent do you agree with the statements about the product as seen on the website above?

Compared to other long-sleeve tops of a similar style, how would you rate the average quality of this long-sleeve top on the website...

	1	2	3	4	5	6	7	
Very low quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very high quality

---

The long-sleeve top is generally of...

	1	2	3	4	5	6	7	
Very low quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very high quality

---

### Appendix C: Survey Questions (continued)

Overall, how would you rate the quality of the longsleeve top...

	1	2	3	4	5	6	7	
Very low quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very high quality

3. For each of the statements below, choose the response that best expresses your idea about what choices other people on the website are likely to make regarding their behavior.

I believe that the website promotes customers to repair their clothes or have them repaired when they are torn.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

I believe that the website promotes customers to pay attention to longevity when buying clothes.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

I believe that the website promotes customers to only buy clothes if they really need them.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

4. For each of the statements below, choose the response that best expresses your idea about what choices other people on the website are likely to make regarding their behavior.

I believe that the website promotes customers to buy new clothes regularly.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

### Appendix C: Survey Questions (continued)

I believe that the website promotes customers to buy clothes on sale.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

I believe that the website promotes customers to wear clothes of the newest fashion.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

5. For each of the statements below, choose the response that best expresses your idea about the inclusion of the opinions and behaviors of others on the website.

The website is trying to make me follow the behavior of others.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

The website showed how many customers decided to purchase or repair the long-sleeve top.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree

---

The website relies on popular opinion to convince me to take a specific action.

	1	2	3	4	5	6	7	
Completely disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Completely agree



**Appendix C: Survey Questions (continued)**

## 6. Demographic questions

What is your age?

- Under 18 years old
- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65 years old or older

Do you identify as?

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

What is the highest level of education you have completed?

- Less than high school diploma
- High school diploma or equivalent
- Some college, but no degree
- Associate degree
- Bachelor's degree
- Master's degree
- Doctorate or professional degree

**Appendix C: Survey Questions (continued)**

Are you currently living in the Netherlands?

Yes

No

Thank you for completing the survey. If you have any additional comments or feedback you would like to provide, please feel free to do so in the space provided below. Please note that this is optional. Amazon MTurk users, please click continue.

---

If you completed this survey through Amazon MTurk, could you please provide your Worker ID? You can locate this information on your Dashboard or in the upper left corner of the Worker website.


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## Appendix D: Stimuli


WOMEN **MEN** CHILDREN BABY HOMEWARE JEANS CAFÉ

→ LIGHTWEIGHT LONG-SLEEVED T-SHIRT

90% SUSTAINABLY SOURCED 18% RECYCLED



AT OUR BRAND, WE TAKE SUSTAINABILITY SERIOUSLY

ORGANIC COTTON  Lightweight Long-Sleeved T-Shirt

COLOUR: BLACK

SIZE: S M L XL

ADD TO BAG

Introducing our sustainable long-sleeve top, perfect for the transitional weather. Made from 100% organic cotton jersey, this top boasts an ultra-soft feel and a lightweight design. With a relaxed fit, slightly dropped shoulders, and a classic crewneck, this top is a versatile wardrobe essential that can be dressed up or down.

- Organic cotton is cultivated and harvested from non-genetically modified plants, without the use of chemical fertilizers and pesticides

WOMEN **MEN** CHILDREN BABY HOMEWARE JEANS CAFÉ


903.529 OF OUR SHOPPERS CHOSE SUSTAINABILITY IN 2022

→ LIGHTWEIGHT LONG-SLEEVED T-SHIRT


**FOLLOW OTHERS AND BUY LESS**  
JOIN THOUSANDS OF OTHERS IN MAKING THE SWITCH TO SUSTAINABLE SHOPPING.

START TODAY AND HELP PROTECT OUR PLANET!  
**COMMUNITY**

90% SUSTAINABLY SOURCED 18% RECYCLED




AT OUR BRAND, WE TAKE SUSTAINABILITY SERIOUSLY



68 PEOPLE HAVE OPTED FOR REPAIRING THEIR TOP INSTEAD OF BUYING A NEW ONE, IN THE LAST 24 HOURS

ADD TO BAG






Make a difference and join the club! 

Introducing our sustainable long-sleeve top, perfect for the transitional weather. Made from 100% organic cotton jersey, this top boasts an ultra-soft feel and a lightweight design. With a relaxed fit, slightly dropped shoulders, and a classic crewneck, this top is a versatile wardrobe essential that can be dressed up or down.


→ HAVE CLOTHES TO REPAIR?

- Organic cotton is cultivated and harvested from non-genetically modified plants, without the use of chemical fertilizers and pesticides

## Appendix D: Stimuli (continued)

WOMEN **MEN** CHILDREN BABY HOMEWARE JEANS CAFÉ SALE **BUY 2, GET 1 FREE. ONLY TODAY**     




→ LIGHTWEIGHT LONG-SLEEVED T-SHIRT



AT OUR BRAND, WE OFFER THE NEWEST STYLES

Lightweight Long-Sleeved T-Shirt

COLOUR: BLACK






SIZE

ADD TO BAG

Free shipping on orders over 100 EUR

Discover our amazing long-sleeve top, the ultimate wardrobe essential for the upcoming season. Crafted from premium cotton jersey, this top offers a super comfortable feel and a stylish lightweight design. With a relaxed fit, slightly dropped shoulders, and classic crewneck, it's the perfect match for any occasion - from casual days out to fancy dinner parties.


- Our cotton is carefully selected and woven to offer the highest quality for our customers. Don't miss out on this must-have piece - add it to your cart today and experience the ultimate comfort and style!

WOMEN **MEN** CHILDREN BABY HOMEWARE JEANS CAFÉ SALE **BUY 2, GET 1 FREE. ONLY TODAY**     

→ LIGHTWEIGHT LONG-SLEEVED T-SHIRT

37 OF OUR SHOPPERS BOUGHT THIS PRODCUT IN THE LAST 24 HOURS

ADD






AT OUR BRAND, WE OFFER THE NEWEST STYLES

Others also bought

Lightweight Long-Sleeved T-Shirt

COLOUR: BLACK

SIZE

LAST ITEMS COMMUNITY

Join the others and sign up for newsletters and receive 10% off when you make your first purchase.

ADD TO BAG

Free shipping on orders over 100 EUR

Discover our amazing long-sleeve top, the ultimate wardrobe essential for the upcoming season. Crafted from premium cotton jersey, this top offers a super comfortable feel and a stylish lightweight design. With a relaxed fit, slightly dropped shoulders, and classic crewneck, it's the perfect match for any occasion - from casual days out to fancy dinner parties.

- Our cotton is carefully selected and woven to offer the highest quality for our customers. Don't miss out on this must-have piece - add it to your cart today and experience the ultimate comfort and style! → **TRENDING NOW**

## Appendix E: Measures, Factor Loadings, and Cronbach Alphas

Measures, factor loadings, and Cronbach alphas		
Construct	Items	Factor Loadings
Purchase Intentions	( $\alpha = .86$ ) (1=completely disagree, 7=completely agree)	
	1. If I were going to buy a long-sleeve top, the probability of buying this product is...	.86
	2. The probability that I would consider buying this long-sleeve top is...	.90
	3. The likelihood that I would purchase this long-sleeve top is...	.90
Perceived Quality	( $\alpha = .75$ ) (1=very low quality, 7=very high quality)	
	1. Compared to other long-sleeve tops of a similar style, how would you rate the average quality of this long-sleeve top on the website...	.85
	2. The long-sleeve top is generally of...	.72
	3. Overall, how would you rate the quality of the long-sleeve top...	.88
Perceived level of Sufficiency Promoting Content	( $\alpha = .87$ ) (1=completely disagree, 7=completely agree)	
	1. I believe that the website promotes customers to repair their clothes or have them repaired when they are torn.	.86
	2. I believe that the website promotes customers to pay attention to longevity when buying clothes.	.77
	3. I believe that the website promotes customers to only buy clothes if they really need them.	.81
Perceived level of Consumption Promoting Content	( $\alpha = .79$ ) (1=completely disagree, 7=completely agree)	
	1. I believe that the website promotes customers to buy new clothes regularly.	.85
	2. I believe that the website promotes customers to buy clothes on sale.	.79
	3. I believe that the website promotes customers to wear clothes of the newest fashion.	.85
Perceived Social Norms	( $\alpha = .79$ ) (1=completely disagree, 7=completely agree)	
	1. Compared to other long-sleeve tops of a similar style, how would you rate the average quality of this long-sleeve top on the website...	.83
	2. The long-sleeve top is generally of...	.78
	3. Overall, how would you rate the quality of the long-sleeve top...	.90