

# If it's broken, fix it

A quantitative study on how advertising repair in online product display affects loyalty, and the mediating role of customer satisfaction and brand perception

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16th of May 2024

# Abstract

Due to the stronger emphasis on sustainable strategies, more and more retailers are incorporating repair services in their offerings. However, minimal research has investigated the impact of offering such services on customer attitudes. Through an experimental quantitative study, this thesis finds that the presence of repair advertising in online product display yields higher customer loyalty. In addition, this study reveals that satisfaction and brand perception mediate this relationship, with satisfaction having the most influential effect. Following this, it discusses the implications of such findings, as well as avenues for further research.

# Keywords

Repair — Customer Loyalty — Customer Satisfaction — Brand Perception — Online Product Display

# Table of Content

|                                                          |           |
|----------------------------------------------------------|-----------|
| <b>1. Introduction</b>                                   | <b>3</b>  |
| 1.1. Background                                          | 3         |
| 1.2. Problem Area                                        | 4         |
| 1.3. Purpose & Research Question                         | 5         |
| 1.4. Expected Research Contribution                      | 5         |
| 1.5. Delimitations                                       | 6         |
| <b>2. Theoretical Framework</b>                          | <b>7</b>  |
| 2.1. Overview of the Framework                           | 7         |
| 2.2. Product Display & Advertising                       | 7         |
| 2.3. Loyalty                                             | 8         |
| 2.4. Moderators                                          | 11        |
| <b>3. Methodology</b>                                    | <b>13</b> |
| 3.1. Study Design                                        | 13        |
| 3.2. Survey Design                                       | 14        |
| 3.3. Measures                                            | 15        |
| 3.4. Sampling & Data Collection                          | 17        |
| 3.5. Validity                                            | 18        |
| 3.6. Reliability                                         | 19        |
| <b>4. Results</b>                                        | <b>20</b> |
| 4.1. Loyalty Effects                                     | 20        |
| 4.2. Summary of Results                                  | 24        |
| <b>5. Discussion</b>                                     | <b>24</b> |
| <b>6. Managerial implications</b>                        | <b>27</b> |
| <b>7. Limitations &amp; avenues for further research</b> | <b>28</b> |
| <b>8. References</b>                                     | <b>29</b> |
| <b>9. Appendix</b>                                       | <b>35</b> |
| 9.1. Appendix 1: Survey                                  | 35        |
| 9.2. Appendix 2: Age distribution amongst respondents    | 45        |
| 9.3. Appendix 3: Generative AI disclosure                | 45        |

# 1. Introduction

## 1.1. Background

The environmental challenges posed by the fashion industry are widely recognized. It is estimated to be responsible for 10% of carbon emissions globally, which is more than all international flights and maritime shipping (European Parliament, 2020). The negative impacts of the fashion industry lie in the extensive use of resources, generating significant pollution and waste (Cai and Choi, 2020). Yet, the volume of produced clothes is expected to continue to grow annually in future years (Statista, 2023). Other harmful impact of the clothing industry are due to consumption pattern that lead to large post-consumer waste (Dissanayake and Sinha, 2015). The increasing production and overconsumption in the apparel industry raises the urgent need for more sustainable production and consumption patterns. In recent years, the concept of circular economy (CE) has emerged as a promising solution for tackling the clothing industry's environmental challenges. The core principle of CE is nonexistent waste, as products are designed and optimized for a cycle of disassembly and reuse (Ellen MacArthur foundation, 2013). Strategies for circularity are aimed at the number of consecutive cycles (e.g., reuse, remanufacturing, repairing or recycling) to extend product longevity and in turn increasing material efficiency.

In product industries, like fashion, the field of design has been the key strategy and enabler to shift to a circular economy (Ellen MacArthur foundation, 2013; RSA Action and Research Center, 2016). The importance and role of designing for a circular economy is well-researched. This is more than understandable as it is the first step for many CE strategies. Circular strategies such as recycling, repair, or refurbishment all require the product to be recyclable or designed for maintenance and repair. However, on a stand-alone basis this is not enough for circularity to be achieved, and other strategies have to employed. Clothing should be repairable, but business models, processes, and infrastructures need to follow along (Ellen MacArthur Foundation, 2013). Potting et al. have outlined nine strategies contributing to circularity, forming the 9R framework

(2017). Each R represents a strategy for circularity, in descending order of circularity, i.e., R1 is the most circular strategy. The strategies are: R0 Refuse, R1 Rethink, R2 Reduce, R3 Reuse, R4 Repair, R5 Refurbish, R6 Remanufacture, R7 Repurpose, R8 Recycle, and R9 Recover. Moreover, strategies with higher circularity are linked to more environmental benefits as they are more effective at reducing the consumption of natural resources and materials, and minimizing waste (Potting et al., 2017). According to Ertz et al. (2019), strategies for achieving CE can take two approaches: the slowing loop that prolongs the life of the products (e.g., making use of repair), and the closing loop that focuses on the re-use of materials (e.g., developing recycling processes). However, when it comes to circular strategies, attention from researcher and practitioners is unequal, for example recycling is the most researched (Schöggel et al., 2020). While others, like repairs, although linked to high environmental benefits, are less salient in research (ibid). For this reason, this study aims to contribute and to explore a phenomenon on the topic of repairs.

## 1.2. Problem Area

Private consumers wishing to repair clothing can do so in two ways, professional repair or do-it-yourself repairs, and the repair industry is dominated by commercial independent repairs, i.e., small repair businesses with few employees (European Environment Agency, 2022). The fragmentation in the industry makes it hard to determine the current state of the repair market, however, country-specific situations can give an impression of the situation in Europe. For example, in Germany, the amount of repair and alteration tailors decreased by almost a third between 2012 and 2021 (European Environment Agency, 2022). This can be explained by the numerous barriers repair services face: repairability of products, willingness from consumers, high labor wages in Europe, or a lack of awareness of their existence from customers. On the other hand, there is an increasing interest from customers for sustainable consumption (Accenture, 2021). Yet, the transition to CE is slow, and few firms have implemented CE initiatives, furthermore, only 26% of companies have put such initiatives into practice (García-Sánchez et al., 2021). In recent years, an exciting development has been the integration of repair services with retailers' and brands' value propositions. More and more clothing brands have been integrating repairs services in their

offering. Some examples include: Barbour Repair & Re-wax, Loewe ReCraft, Levi's Tailor Shop, Asket Repair Program, Patagonia Product Repair, and Re.Uniqlo Studio. Yet, in research on the topic of repair and repair services, retailer and brands are rarely discussed. Rather, the role of other actors are investigated such as: manufacturers and designers (den Hollander et al., 2017; Wastling et al., 2018; van Dam et al., 2020), consumers (Laitala et al., 2021; Ta et al., 2022; Bigerna et al., 2021), and policymakers (Svensson et al., 2018; Hernandez et al., 2020; Svensson-Hoglund et al., 2021).

### 1.3. Purpose & Research Question

Recent implementations of repair services from fashion companies and promising opportunities arising from adopting CE strategies outline research opportunities within customer reaction to these emerging services. Additionally, loyalty and brand perception are key elements of customer attitudes that brands rely on to survive in an ever more saturated clothing market, where brands rise and fall as quickly as trends. First and foremost, this study aims to bring insights on the topic of CE strategies within retailing and their impact on customer attitudes. Due to resource and experience constraints on the author's part, this study will investigate only a small aspect of implementing repair services as a CE strategy. This study will aim to determine if advertising repair services on the product page of online retailers can impact loyalty, and if so, which factors influence this phenomenon. In addition, this study aspires to bring insights to the discussion of environmental cues on online product display. This brings forward the following research question: **“How does repair advertising affect customer loyalty in online product display?”**.

### 1.4. Expected Research Contribution

After reviewing academic research, one can deduce the lack of research relating to consumers attitudes when retailers advertise repair services. Fashion retailers have been introducing repair services to their offerings, but do not necessarily include them in the product display page. The contribution of this study will be to determine if advertising repair, specifically in this aspect of online retailing and product display, positively impacts loyalty for fashion retailers. Finally, it hopes

to gain more insight to the field of shopper marketing, particularly online product display. Overall, the study ambitions to contribute to the discussion of applying CE strategies and effects on customer attitudes that could arise from doing so.

## 1.5. Delimitations

The study is delimited in a number of ways. Foremost, it investigates the advertisement for repair service in only one dimension of online shopping, i.e., the page in which the product is displayed. By doing so, it does not take into account other dimensions such as the homepage, checkout, category display, etc. Furthermore, the study is based on a fictional company called Denim Brand, and therefore respondents do not have previous experiences and attitude towards the brand. These factors are known to influence brand perception and could possibly affect the results of advertising repair services on customers' reactions in real life settings. In addition, the study only measures the effects immediately after seeing the display page and does not take into account the shopping experience as a whole. Finally, the data for the study was collected among European residents, hence, people from outlying countries may have different attitudes towards advertising repair services and sustainable practices in the fashion industry.

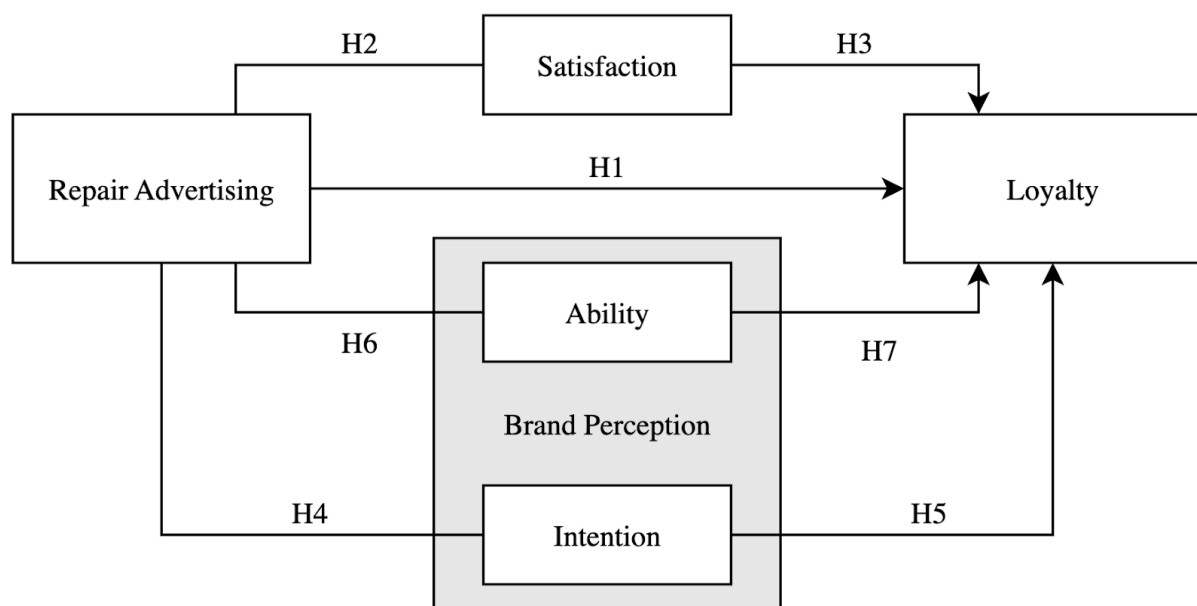
In addition, the study uses jeans as the example in the product display page, as it is a very popular item of clothing. Denim jeans are one of the most popular items of clothing and are worn by people of all ages, incomes, and genders. In many countries, this fashion staple is worn year-round, making it jeans one of the fast-selling apparel items in the developed world (Annapoorani, 2017). In this study, jeans will serve as a generic example for clothing, since using a generic, common garment ensures the online shopping experience is relevant for most respondents. This was confirmed by the results, as 99.5% (N=192) of respondents own or have owned a pair of jeans. The study focuses on the example of jeans to understand a component of the relationship between product repair services and customer reactions; therefore, the observed phenomenon could be transferred to other products with similar online display and characteristics.

## 2. Theoretical Framework

### 2.1. Overview of the Framework

As previously described, this study aims to investigate the effects of advertising repair services on the product display page, in the context of e-commerce, on customer loyalty and brand perception. The role of the following sections will be to provide the theoretical foundation, by reviewing literature, to the assumed relationship between variables in the study and develop hypotheses to be tested (see Figure 1).

**Figure 1:** Overview of the framework



### 2.2. Product Display & Advertising

Product display is a topic of interest in shopper marketing. Further, there are numerous factors affecting customer reaction have been investigated: stock and sales level (He and Oppewal, 2018), reviews (Qiu and Zhang, 2024), product photos (Li et al., 2014), product presentation (Kim, 2019), presentation mode and format (Hong et al., 2010), and website design (Ganguly et al.,

2010; Xie et al., 2012). However, there is a lack of studies discussing advertising repair or similar services within the product display page online. Nonetheless, previous research highlights how small changes to online product display may influence customers reactions; hence, advertising repair services within the online product page is accordingly a probable impact on customers attitudes. Furthermore, cues for sustainability within the product page have been shown to produce positive customer reactions. For instance, eco-labels have been proven effective to have positive customer perception and financial effects when advertised on product pages online (Feuss et al., 2022).

In the study conducted, the advertising of repair services takes an unconventional form, as it occurs directly within the retailer's website on the product display page. This is due to prevailing research describing the significant impact advertising can have on consumer perception due to its strong persuasive power, therefore, shaping consumers' attitudes and influences their decision-making process (Soti, 2022). Further, research has shown that customer attitudes, e.g., buying behavior, are greatly influenced by advertising and brand awareness, illustrating consumers become more loyal due to advertising (Zhao et al., 2021). Indeed, customers who exhibit loyalty are those who repurchase from a brand, do not consider other brands, and do not seek for brand related information (Werbel, 1973, cited in Oliver, 1999).

## 2.3. Loyalty

Loyalty holds significant importance for marketers because they tend to be more profitable compared to those with less loyalty (Reichheld and Sasser, 1990; Reichheld 1996). Therefore, many companies have strategies for customer retention, since increasing customer rates by even 5% can lead to profit increases of 25% to 95% (Reichheld and Schefter, 2000). Furthermore, in addition to spending more, loyal customers bring new clients through referrals. Loyal customers often come via referrals or advertising, whereas those who prioritize price are typically lured in by discounts (ibid). Loyalty becomes not only an objective for increasing business, but also an essential aspect of surviving in the competitive landscape of online commerce and fashion.

Customer loyalty can be hard to define. Söderlund argues that because customers can be loyal in different ways, loyalty can only be seen as “a label used for convenience purposes” (2010, p. 291). Due to the multidimensionality of loyalty, it should be made clear what aspects are referred to as loyalty. Thus, two main dimensions of loyalty can be defined: loyal behavior and loyal mentality (Söderlund, 2001). This study will focus on loyal mentality due to the difficulties of measuring loyal behavior with the chosen study design, as described later in the text. The aspect of loyal mentality are the following: attitude, preferences, intentions, involvement, and commitment. The last two aspects will not be included in this study as they both involve temporality and therefore cannot be reliability measured with the chosen data collection method. Building on section 2.2. Product Display and Advertising, that highlights how changes in product display, such as sustainability cues, can positively influence customer attitudes, this study hypothesizes the following:

**H1:** The advertisement of repair services on product pages results in higher loyalty than product pages without repair services offered.

Furthermore, a lot of research has been dedicated to understand what drives customers to be loyal. Variables such as customer satisfaction have been shown to be a powerful antecedent to customer loyalty (Sördelund, 2010). Although it cannot be said that increased satisfaction unequivocally leads to higher loyalty, it sets the stage for fostering a sense of loyalty among consumers. Customer satisfaction is frequently conceptualized as an emotional response to the experience of a consumer, and its influence on loyalty has been widely supported in both theoretical and empirical research (Oliver, 1999). When evaluating a relationship such as customer satisfaction and loyalty, one approach is to assess the share of loyalty effects that result from customer satisfaction (Oliver, 1999). For instance, customer satisfaction is one of the main predictors for retention (Gustafsson et al., 2005), one of the key aspects defining loyalty in this study. Additionally, advertising repair services may hold an influence on customer satisfaction. Offering such services through advertising can increase the perceived value of the product. This perceived value influences customer

satisfaction as they feel they are getting more from their purchase. Indeed, McDougall and Levesque (2000) found that perceived value was a critical driver of customer satisfaction, which is in turn directly linked to future intentions. Research from Kuo et al. (2009), have lead to similar findings that indicate the perception of the value by customers positively impacts customer satisfaction and post-purchase intention such as intent to purchase and referral. Overall, the link between of customer satisfaction and loyalty is a valuable construct to investigate when investigating loyalty effects. Hence, leading to the following hypotheses:

**H2:** The advertisement of repair services on product pages results in higher customer satisfaction than product pages without repair services offered.

**H3:** The relationship between advertising of repair services and loyalty will be mediated by customer satisfaction.

Another variable discussed by researchers as an antecedent to loyalty is brand perception. All marketers realize the power brands can hold, and the importance of customers' perception of them is consequential. Brand perception is formed by the brand associations in customers memories (Keller, 1993), this brand-level information is then used to process new information affecting their purchasing decisions (Low and Lamb, 2000). Thus, investigating purchasing decisions is worthwhile for brands, since purchasing decisions can translate to the intent of repurchasing. Strategically, it is essential to understand what consumers know and expect from the brand (Blanchard et al., 2012). This is of particular importance for brands in an era where social responsibility is a key point of discussion for political and corporate actors, and society as a whole. Therefore, companies are now concerned about how their brands are perceived by customers from a sustainable point of view (Brunk and de Boer, 2020). When making purchase decisions, sustainability has become a brand selection criteria for customers in the largest segment, i.e., Gen Y and Z, (Accenture, 2020). However, consciousness in consumption isn't only driven by this segment, as according to the consulting firm Accenture (2020), 71% of consumers across all ages expect brands to facilitate sustainable consumption practices.

There are many views on determining how customers perceive brands, such as the interesting approach in research discussing that people relate to brands in similar ways to people (Fournier, 2012). For instance, it has been said that brands have their own personalities that shape how customers view and describe them (Halkias, 2015). This has allowed for a very exciting meeting point in brand perception and social perception theories as it makes use of social psychology frameworks that present as useful in predicting consumer response and perception toward brands. Kervyn et al. (2012) have applied the Stereotype Content Model, introducing the idea that brands act as intentional agents. The authors have adapted the well established psychological model and creating the Brands as Intentional Agents Framework (BIAF). The BIAF replaced the dimensions of warmth and competence to intention and ability, putting the emphasizes on the brands' perceived intentions and their capacity to act on them. Just as people-to-people relationship are, people-to-brand relationship tend to be complex, and measuring on two dimensions forms a better understanding of brand perception. This is in line with previous research claiming customers' perception towards brands occur on several dimensions (Fournier, 2012; Keller, 1993; Aaker, 1997). On the topic of brand personality, the aspect of social responsibility plays a key role (Madrigal and Boush, 2008). Expanding on the work of Kervyn et al. (2012), incorporating an aspect of sustainability can be of interest for marketers advertising repair services. Furthermore, results of testing the BIAF have shown that brands scoring high in ability and intent received higher loyalty (Kervyn, et al., 2012). This leads to the following hypotheses questions:

**H4:** The advertisement of repair services on product pages results in higher intention than product pages without repair services offered.

**H5:** The relationship between advertising of repair services and loyalty will be mediated by intention.

**H6:** The advertisement of repair services on product pages results in higher ability than product pages without repair services offered.

**H7:** The relationship between advertising of repair services and loyalty will be mediated by ability.

## 3. Methodology

### 3.1. Study Design

The study aims to arrive at definitive conclusions on the relationship between repair advertising, loyalty and brand perception. Hence, an experimental research design was employed. In addition, a quantitative method was employed in order to draw a general conclusion on the topic from the results of a sample. In addition, the study uses a completely randomized design, meaning each respondent is assigned to one of the two conditions randomly. This ensures that the groups are comparable, and any differences observed can be attributed to the experimental manipulation rather than pre-existing differences between participants. The experimental treatment came from assigning respondents to an online product display image that contained the presence of repair services advertising. In this study, the advertising of repair was the description of a repair service displayed on the product display page. Manipulating and having only one independent variable allows to make the results and interpretation clearer and establish conclusions, as when more than one variable are tested simultaneously, it is harder to determine causality.

### 3.2. Survey Design

The survey was created with Qualtrics, a survey builder software, and contains several blocks, i.e., the pages the respondents see when answering. The survey was distributed in English. The response to each question was required, and respondents were not allowed to go back to previous questions. The full length survey can be found in Appendix 1. To ensure respondents were only subject to one of the two conditions, they had the possibility to return to the questionnaire and their answers were saved. The survey did not display a progress bar as it helps improve the completion rate (Liu and Wronski, 2018).

First, the respondents saw a first page with an introduction to the survey that explained the topic of the study (but not the particular relationship investigated), the estimated time of completion, and the contact information of the author. In addition, it included some instructions asking respondents to take a moment to carefully read the instructions for each question and provide a thoughtful and honest answer. A disclaimer of confidentiality and purpose for the data were included. By continuing to the following page, respondents consented to the processing of their data for academic purposes.

The second page includes the manipulated condition, taking the form of a product display page from a fictitious online retailer. Participants in the repair condition were presented with a website including a pair of jeans, a short description of the product, and a description of a repair service. The respondents in the control group were presented to an identical website, with the difference that it did not include a description for repair service. In the context of this study, including this description in the online listing represents the advertising of repair services. In addition, the image mimicked commonly found elements in product display webpages. These two images were randomly and evenly presented through an option in Qualtrics. This was done to ensure both conditions had similar numbers of respondents, reducing the need to over sample. After seeing one of the two images, the respondents were asked to answer questions distributed in the remaining pages.

The following page contained questions relating to brand perception and repairability. Then respondents were presented with questions measuring loyalty and another page with questions pertaining to demographics. The final page contained a control question to check the attention of the respondents. It did not test for anything else than attention and had a clear correct answer.

### 3.3. Measures

When possible, established measures from literature were used. This was done to ensure the measures are reliable. For other variables where it was not possible, some measures were adapted,

and all assumptions made are included in this section. Nonetheless, a reliability analysis was performed (see section 3.6 Reliability). The questionnaire included additional variables that are not used in the report of this study. This section only presents variables used, and discarded variables can be seen in the full survey (see Appendix 1).

### **Loyalty**

The survey questions measuring loyal mentality are based on Söderlund's research and classification of loyalty into mentality and behavior (Söderlund, 2010). Loyalty was measured with a four-item scale. These exact formulations were not found from Söderlund's research yet aimed to measure intention, preference, and attitude. The respondents were presented with the following questions: "How likely are you to recommend Denim Brand to a friend/family member?", "How likely are you to purchase from Denim Brand the next time you are looking to buy new jeans?", "What is your overall impression of Denim Brand?", and "How strong and loyal preference you feel for Denim Brand?". These survey questions respectively represent word-of-mouth intentions, purchase intention, attitude towards the brand, and brand preference. In previous research, Sordelund calls for caution when measuring loyalty with multi-item scales, as it may create a cocktail effect (2006). According to Soderlund, such an approach can lead to certain risks such as aggregating loyalty aspects that can in fact be seen as different constructs, hence obscuring the richness of loyalty (ibid). Therefore, the statistical analysis will include testing on both loyalty as a four-item scale aggregate and each loyalty variable. While this study does measure loyalty with a multi-item scale it additionally acknowledges that several facets of customer loyalty exists. The customer loyalty items were measured with a 7-point likert-type scale.

### **Customer satisfaction**

Satisfaction was measured with a three-item scale according to the customer satisfaction index by Fornell (1992). The questions were "Overall, how satisfied or dissatisfied are you with Denim Brand?", "To what extent does Denim Brand meet your expectations?", and "Imagine a brand that is perfect in every respect. How near or far from this ideal do you find Denim Brand?". The respondents' answers were measured on a 7-point likert-type scale.

### **Brand perception**

Brand perception measures are based on the BIAF (Kervyn et al., 2012) article. Intention and ability variables were each measured with a two-item scale. The survey questions were taken from the BIAF article. As discussed in section 2.2. Loyalty these measures were adapted to capture social responsibility. The questions from the BIAF “BRAND Has good intentions toward ordinary people.” and “BRAND Consistently acts with the public's best interests in mind.” were adapted to “BRAND Has good intentions towards the environment.” and “BRAND Consistently acts with the environment's best interests in mind.”. And the questions “BRAND Has the ability to implement its intentions.” and “BRAND Is skilled and effective at achieving its goals.” became “BRAND Has the ability to implement its intentions towards the environment.” and “BRAND Is skilled and effective at achieving its sustainable goals.”. All response were evaluated on a 7-point likert-type scale.

### **Demographics**

Two questions were included to measure the age and gender of the respondent. For gender, respondent were asked “Please specify your gender” and could select one of the following options: “Male”, “Female”, “Other”, and “Prefer not to say”. For age, respondents read “Please specify your age” and the choice between the following answers: “under 18”, “19-24”, “25-34”, “35-44”, “45-54”, “55-64”, “65-74”, “75-84”, and “85 or older”. In hindsight, this method is not regarded as the most efficient way to measure age, and a more suitable alternative would have been to include an open-ended question with numerical answers.

### **Relevance**

A question was included to confirm the relevance of the product choice in the manipulative study. Respondents read “Do you own, or have owned in the past, a pair of jeans?” and could choose between one of the following answers: “Yes”, “No”, and “Not sure”.

### **Attention check**

The survey ended with a question to check the attention of the respondents. The question asked respondents to indicate what the topic of the survey was: “What was this survey about?”. They could pick between three answers: “Fruits”, “Hockey”, and “An online display for Blue Jeans”. It did not test for anything else than attention and had a clear correct answer.

### 3.4. Sampling & Data Collection

Online fashion shoppers are the considered population for this sample. In order to generalize findings, a sample was gathered. A total of 194 respondents answered the survey. The data was collected in two ways: a convenience sample from the author’s network (N=94) and a sample acquired with the help of Prolific (N=100). Prolific is a platform that provides reliable human data for researchers. For the convenience sample, the survey was distributed through social media and word of mouth. The data collected through social circle was performed first, and most respondents were European based. The additional respondents acquired through Prolific were presented with a copy of the survey in order to track answers. Respondents on Prolific were targeted according to two factors: country of residence and language spoken. To keep a consistent sample, only respondents of European countries were targeted through Prolific. This choice is supported by the fact that people have different views on sustainability and therefore might have different reaction based on the countries they live in (Pampel, 2014). In addition, to ensure the respondents could understand what was asked of them, the survey was distributed only to people that stated to be fluent in English. Other than consistency factors, i.e., country of residence and language spoken, no segment of the population was targeted in both methods of data collection. The two surveys were identical.

Out of those 194 only 1 participant answered the control question incorrectly, leaving the final sample to 193 respondents. Of the total valid respondents, 45.6% were male (N=88), 53.4% were female (N=103), and the remaining 1% identified as another gender (N=2). The age segments the most represented were 18 to 24 and 25 to 34, together they constitute 71.5% (N = 138) of the total sample. Hence, the sample may not be fully representative of the population. This poses a

limitation and generalizing the findings for extreme ends of the age spectrum, i.e., younger and older people, should be done with caution and investigated in future research. See Appendix 2 for the detailed distribution of respondents per age segment.

### 3.5. Validity

Ensuring the internal validity is essential to accurately identify causal relationships. Without such validity, the credibility of the study's findings can not be ensured (Shadish et al., 2002). To confirm the internal validity, several precautions were taken. Firstly, respondents were randomly assigned to the two treatment groups. This helps ensure that any differences between the groups are due to the independent variable and not other pre-existing differences. This was further confirmed by testing for systematic differences, as for example, variations in demographic factors such as age, gender, or socioeconomic status among participants across different treatment groups could introduce bias into the results (Shadish et al., 2002). For gender, a Pearson chi-square test shows that there is no significant difference between the two treatment groups ( $\chi^2 = 0.05$ ,  $df = 2$ ,  $p = 0.975$ ). A Mann-Whitney U test indicates that there is no significant difference in age across treatment groups ( $U = 4906.500$ ,  $p = 0.495$ ). For SES, an independent t-tests confirmed there is no significant difference between the Group 1 ( $M = 4.312$ ,  $SD = 1.376$ ) and Group 2 ( $M = 4.500$ ,  $SD = 1.366$ ) with a mean difference of  $t(190.998) = -0.914$ , and significance level of  $p = 0.362$ . As a conclusion, there were no systematic differences in between the two treatment groups. Finally, the respondents were not informed of which group they were assigned to and repair were not mentioned anywhere to the control group. This was done as being aware of what is being tested could affect the observed results (Söderlund, 2018). In conclusion, internal validity is not considered to be threatened.

External validity has to be ensured in order to generalize the findings of this study beyond the circumstances under which it was conducted. A key consideration in achieving external validity is the use of representative sampling techniques, such as random sampling, as they reduce the sampling bias (Shadish et al., 2002). This study looked the population of online shopper, hence

due to its size and resource constraint each individual of the population did not have the same of being selected. However, to mitigate the sampling bias, data was collected through two different sources, i.e., a convenience sample and an online acquired sample. As previously mentioned, the collected sample had few respondents in higher age groups. Hence, generalization of the results to these age groups should be done with caution and verified with a replication of the study. Overall, the external validity is on an acceptable level, however, as mentioned one should be cautious when generalizing the effects of the study to higher age groups. Another concern when generalizing the findings of the study come from ecological validity, that represents the extent to which the study conditions and results mimic a real world context (Hartson and Pyla, 2012). To ensure ecological validity, the images in the survey that create a manipulation, i.e., being subject to repair advertising in the product display page, mimicked existing online product display pages. The images were inspired by the product display page from Swedish outdoor brand Haglöfs. The replication is nuanced by the wish to be realistic and not including elements that could influence the cause-effect relationship.

### 3.6. Reliability

As previously mentioned in the section 3.6. Measures, each key variable had multiple measurements, i.e., questions in the survey. This is common practice to establish reliable measurement of variables. However, it is important to test that the questions used do measure the same thing. Cronbach's alpha determines the reliability of a measure that uses multi-item scales (Collins, 2007). If the covariance among the items, i.e., survey questions, is high compared to the overall variance, the measure is deemed reliable. For variables with only two item scales, using Cronbach's alpha is not possible, therefore a correlation analysis was performed instead. The correlation analysis used is Pearson. With levels of 0.7 or higher of the Cronbach' alpha and correlation coefficient, the survey questions are considered to measure the same thing and can be therefore consolidated as a single measure. The consolidated measure consists of the average answers of a participant. All variables were found to be reliable: satisfaction ( $\alpha = 0.869$ ), loyalty ( $\alpha = 0.912$ ), intention (0.808,  $p < 0.001$ ), ability ( $\alpha = 0.743$ ,  $p < 0.001$ ), and SES ( $\alpha = 0.779$ ). As

expected, all multi-item scales yielded a reliability result above 0.7 as questions used in the survey were based on previous established research.

## 4. Results

The statistical analysis necessary to test the hypothesis were performed in SPSS version 26. Mean differences between the two treatment groups were measured with independent t-tests. In addition, the PROCESS macro for SPSS version 4.2 developed by Hayes was used (2022). More specifically Model 4 and Model 7 were used and all generated 5000 bootstrap samples. Model 4 for mediation analysis, and Model 7 for moderated mediation analysis. In this study, significance levels of 5% or lower are deemed acceptable, as it represents a commonly accepted restriction (Aidley, 2019). For the Model 4 and 7 analysis, indirect effects are significant when 0 is not part of the bootstrap confidence interval. Results will be reported with three decimal points. In the analysis, the independent variable is the two treatment groups, recoded in a binary variable of 1 (Group 1) and 0 (Group 2). Group 1 is the “Repair” condition and Group 2 is the “Control” condition.

### 4.1. Loyalty Effects

To analyze the direct effects of advertising repair on satisfaction, loyalty, ability, and intention, an independent t-test was performed (see table 1). The results of the analysis showed that advertising repair had a significant effect on all selected variables. Hypothesis H1 predicted that when repair services are present in the product checkout page, it positively impacts loyalty. This was confirmed with a significant difference between Group 1 ( $M = 5.116$ ,  $SD = 1.170$ ) and Group 2 ( $M = 4.266$ ,  $SD = 1.207$ ), with  $t(191) = 4.969$ , and  $p < 0.001$ . Therefore, H1 is supported. In addition, the independent t-test revealed a significant difference in customer satisfaction between Group 1 ( $M = 5.244$ ,  $SD = 1.021$ ) and Group 2 ( $M = 4.410$ ,  $SD = 1.058$ ), with a mean difference of  $t(191) = 5.574$ , and significance level of  $p < 0.001$ . With an average satisfaction higher in the treatment group subject to repair advertising, H2 is supported. Consistent with H4, when repair services are present in the product checkout page, it positively impacts perceived intention (Group 1:  $M =$

5.149 , SD = 1.268, and Group 2: M = 4.000, SD = 1.183;  $t(191) = 6.524$ ,  $p < 0.001$ ). Furthermore, the presence of repair advertising had a positive and significant impact on perceived ability (Group 1: M = 5.093 , SD = 1.253, and Group 2: M = 4.083, SD = 1.146;  $t(191) = 5.838$ ,  $p < 0.001$ ), supporting H6.

**Table 1:** Independent t-test on investigated variables

|              | Group 1: Repair M (SD) | Group 2: Control M (SD) | Mean difference (SE) | p-value |
|--------------|------------------------|-------------------------|----------------------|---------|
| Satisfaction | 5.244 (1.021)          | 4.410 (1.058)           | 0.834 (0.150)        | < 0.001 |
| Ability      | 5.093 (1.253)          | 4.083 (1.146)           | 1.009 (0.173)        | < 0.001 |
| Intention    | 5.149 (1.268)          | 4.000 (1.183)           | 1.149 (0.176)        | < 0.001 |
| Loyalty      | 5.116 (1.170)          | 4.266 (1.207)           | 0.850 (0.171)        | < 0.001 |

As previously mentioned (see section 3.3 Measures), in addition to investigating loyalty as an index, each variable of loyalty is tested individually. An independent sample t-test revealed significant differences for all variables between Group 1 and Group 2 ( $p < 0.001$ ). For word of mouth intention, Group 1 (M = 5.15, SD = 1.394) had a higher mean than Group 2 (M = 4.19, SD = 1.409). Similarly, intent to purchase was greater in Group 1 (M = 5.01, SD = 1.517) compared to Group 2 (M = 4.00, SD = 1.648). In terms of attitude towards the brand, Group 1 (M = 5.55, SD = 0.979) results were higher than Group 2 (M = 4.82, SD = 1.095). Finally, brand preference showed a notable difference, with Group 1 (M = 4.75, SD = 1.347) scoring higher than Group 2 (M = 4.05, SD = 1.309). While all variables had significant effects, some aspects of loyalty showed greater results, with intent to purchase having the largest mean difference. This suggests that purchasing behavior and word-of-mouth intent may be more strongly influenced by the conditions tested compared to other loyalty dimensions, such as brand attitude and brand preference, confirming the need for a careful approach to measuring loyalty as a multi-item scale.

To determine the indirect effect of advertising repair with loyalty with the added hypothesized mediators, three bootstrap analysis using Model 4 (5000 bootstrap samples) were performed. The independent variable is the manipulation, i.e., Group 1 and Group 2, the dependent variable is loyalty and the mediators are satisfaction, ability, and intention. Hypothesis H3 indicates that customer satisfaction plays a mediation role in the relationship between advertising repair and

loyalty. The dependent variable is loyalty and the mediator satisfaction. The Model 4 analysis yielded a significant indirect effect of 0.781 (95% CI {0.491, 1.094}). Direct effects results were insignificant ( $B = 0.069$ ,  $SE = 0.106$ ,  $p = 0.515$ ). Therefore, satisfaction mediates the relationship between advertising repairs and loyalty in a way that higher satisfaction results in higher loyalty. Furthermore, the insignificance of the direct effect suggests full mediation. To address H5, the mediation role of intention was analyzed, with the dependent variable being loyalty and the mediator intention. The mediation analysis yielded a significant indirect effect of 0.587 (95% CI {0.387, 0.827}). Direct effects results were insignificant ( $B = 0.263$ ,  $SE = 0.161$ ,  $p = 0.105$ ). Therefore, intent mediates the relationship between advertising repairs and loyalty, and higher intent results in higher loyalty. H7 proposes that similarly to intention, ability has mediation effect. In the Model 4 analysis, the dependent variable is loyalty and the mediator ability. The mediation analysis yielded a significant indirect effect of 0.488 (95% CI {0.295, 0.718}). Direct effects results were insignificant (effect = 0.362,  $SE = 0.162$ ,  $p = 0.027$ ). It is concluded that ability mediates the relationship between advertising repairs and loyalty, in a way that higher ability results in higher loyalty.

The results of the model 4 analysis testing hypotheses H3, H5, and H7 have showed that satisfaction, intention, and ability have a mediating role in the relationship between repair advertising and loyalty. The analysis that aims to assess these hypotheses were performed individually. However, it is unlikely that only one mediator can explain a causal relationship. Here, a Model 4 (5000 bootstrap samples) analysis is performed in order to gather insights on how these relationships occur when including all the mediators. For this analysis, the dependent variable is loyalty and the mediators are satisfaction, intention, and ability. As in the previous model 4 analysis the direct effect was found to be insignificant ( $B = -0.013$ ,  $SE = 0.109$ ,  $p = 0.906$ ). The indirect effect of satisfaction was significant (effect = 0.712, 95% CI = {0.449, 1.012}). There were no significant direct effects of ability (effect = 0.062, 95% CI = {-0.083, 0.211}) and intention (effect = 0.089, 95% CI = {-0.085, 0.275}). Therefore, when the mediations effects are measured with the three selected variables satisfaction is the significant driver of loyalty. This is further confirmed when comparing the indirect effects. The comparison was done by looking at the raw difference

between the indirect effects. Satisfaction indirect effects remained significant when contrasted with intention (effect = 0.622, 95% CI = {0.304, 0.982}) and ability (effect = 0.649, 95% CI = {0.304, 0.982}). Hence, the analysis confirms previous individual Model 4 results indicating that the connection between advertising repairs and loyalty is mediated by satisfaction meaning that when satisfaction is higher, loyalty is also higher. H3 is supported. On the other hand, the analysis contradicts previous Model 4 results when it comes to the mediation role of ability and intention. When all mediators are included in the analysis ability and intention do not have significant indirect effects. Ultimately, H5 and H7 are not supported.

The insignificant effect of brand perception when measured with satisfaction but significant when measured individually suggests that brand perception could instead influence satisfaction. In order to determine if this is true, a Model 4 analysis was performed. This time, the dependent variable was satisfaction. The mediators were intention and ability. The analysis yielded an insignificant direct effect (effect = 0.296, SE = 0.140,  $p = 0.036$ ). For indirect effects, the two dimensions of brand perception had different results. Intention has a significant indirect effect (effect = 0.3820, 95% CI = {0.199, 0.603}) and ability did not have a significant effect (effect = 0.156, 5000 bootstrap samples, 95% CI = {-0.025, 0.345}).

## 4.2. Summary of Results

The following table provides a summary of the conclusions of the hypotheses testing. Overall, 5 out of 7 hypotheses were supported.

**Table 2:** Summary of results

| <b>Hypothesis</b>                                                                                                                                   | <b>Result</b> | <b>Significance level</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------|
| <b>H1:</b> The advertisement of repair services on product pages results in higher loyalty than product pages without repair services offered.      | Supported     | $p < 0.001$               |
| <b>H2:</b> The advertisement of repair services on product pages results in higher satisfaction than product pages without repair services offered. | Supported     | $p < 0.001$               |
| <b>H3:</b> The relationship between advertising of repair services and loyalty will be mediated by satisfaction.                                    | Supported     | {0.491, 1.094}            |
| <b>H4:</b> The advertisement of repair services on product pages results in higher intention than product pages without repair services offered.    | Supported     | $p < 0.001$               |
| <b>H5:</b> The relationship between advertising of repair services and loyalty will be mediated by intention.                                       | Not supported | {0.387, 0.827}            |
| <b>H6:</b> The advertisement of repair services on product pages results in higher ability than product pages without repair services offered.      | Supported     | $p < 0.001$               |
| <b>H7:</b> The relationship between advertising of repair services and loyalty will be mediated by ability.                                         | Not supported | {0.295, 0.718}            |

## 5. Discussion

Many features of product display online have been investigated and have been shown to have effects on consumers reactions. This study had the goal to determine if advertising repair services in clothing product display page had positive impacts on loyalty among customers. Through a quantitative experimental design, this study shows that advertising repair service in product display pages leads to positive loyalty outcomes. Investigating the mediation roles of satisfaction and brand perception contribute to a better phenomenon of the observed relationship. This led to a number of findings.

First, results show that customers exhibit higher loyalty when exposed to repair advertising. But knowing that a relationship exists constitutes only part of the story. It is just as important to understand how a relationship exists. This is especially true as with further analysis it was shown that this effect was not direct, indicating that there are other variables in play in this relationship. As discussed in the theoretical framework, loyalty is multifaceted and even when looking at only one aspect, here loyal mentality, it is hard to pinpoint what influences it. The study identified from established research and investigated the role of satisfaction (Söderlund, 2010) and brand perception (Kervyn et al., 2012) as mediators. The first step was to establish that advertising repair did influence the selected factors. This was confirmed by finding significant effects of

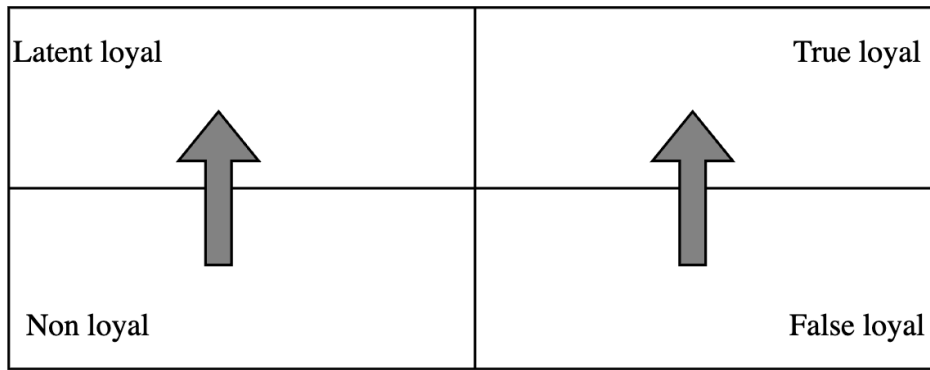
advertising repair on all selected variables (H2, H4, and H6). This validation of our hypotheses underscores the impact of repair services presence on customer perceptions and intentions. Bringing the advertisement of repair services as yet another factor influencing customers attitudes in product display page. However, the findings that respondents were more satisfied when repair service advertised is not surprising, as they were provided with an additional service. There is therefore a possibility that positive outcomes from the study could be in part due to simply offering an additional service to the customer, thus creating a more extensive customer experience (Mascarenhas et al., 2006). The product page incorporated all elements typically found in clothing websites to recreate an online shopping experience, yet to minimize the possibility that respondents would be influenced by other factors they were kept to a minimum. However, some online retailers already advertise other services, e.g., size guides, online reviews, UGC content, etc. Therefore, without further research, it is not possible to determine these cause-effect relationships would hold for retailers that already offer other services. In addition, an interesting finding is that the measure levels of brand perception were almost neutral, i.e. around 4 on a 7-point scale, in the group that was not subject to repair advertising. In the BIAF, brands scoring low in both perceived intention and ability are considered unable and ill intentioned, leading to a sense of contempt towards the brand (Kervyn et al., 2012). Therefore, it is suggested that customers value the repair of advertising but do not think that brand not offering them are socially ill-intentioned or unable. Similar findings are noticed for satisfaction as the mean satisfaction in the group not subject to repair advertising was above 4 on a 7-point scale. This indicates that customers do not expect this to be done, an understandable finding as not many retailers do so.

The next step, looked into the indirect effects of repair advertising on loyalty through hypothesized mediators, and revealed compelling results. Satisfaction emerged as a significant mediator in the relationship between repair advertising and loyalty (H3), indicating that higher levels of satisfaction contribute to increased loyalty. This is in line with Sördelund's research (2010) that brings satisfaction forward as a powerful antecedent to loyalty and further strengthens the argument that satisfaction is likely to be responsible to some extent for loyalty. In this case, it could be argued that satisfaction plays a significant role in fostering increased loyalty resulting from advertising repair

services, as the direct effect coefficient between advertising repair and loyalty is insignificant, suggesting a complete mediation. Similarly to satisfaction, brand perception and particularly the perception of social responsibility, play a role in understanding the link between repair advertising and loyalty. Perceived intention (H5) and perceived ability (H7) also demonstrated significant mediation effects, in a way that higher perceived intention and ability lead to higher levels of loyalty. Further confirming that brand perception and that investigating brands as intentional agents can affect customer behavior such as loyalty (Kervyn et al., 2012). However, these findings were nuanced when the three now confirmed mediators were contrasted. Given that a causal impact can operate through various mechanisms, the goal was to determine if a specific mediator is more influential in the cause-effect relationship. This can be done by comparing the indirect effects. The analysis considering all mediators together reaffirmed the significant role of satisfaction in driving loyalty. While satisfaction emerged as the primary driver of loyalty, intention and ability did not exert significant direct effects when considered simultaneously.

As discussed in the theoretical framework, loyalty is multi-faceted and due to the manipulative nature of the study only aspects of loyal mentality could be investigated. Not being able to measure aspects of loyal behavior only gives a partial view of loyalty. Yet, this partial view does not lower the relevance of the positive outcome on loyal mentality when advertising repair. Söderlund explains that marketing strategies can enhance loyalty and shift customers to more favorable segments on the Loyalty Matrix (2010). When thinking on the results of this study in said matrix, it does not allow to determine if advertising repair can lead customers to move on the x-axis, from the boxes of latent-loyal or non-loyal to true-loyal or false-loyal. However, it suggests positive outcomes on loyal mentality that could lead to a shift on the y-axis, as described in the following image. Shifts from non-loyal to latent-loyal and from false-loyal to true-loyal can only be considered positive outcomes.

**Figure 2:** Effects of repair advertising on the loyalty matrix by Magnus Sördelund



It is important to reflect on the methodological approach employed in this study to examine the effects of offering repair services within the context of online retailing. While the inclusion of repair services clearly aligns with service management principles, the primary focus of this research was on the effects of advertising. Traditionally, research on service management concepts emphasizes customer interaction with the actual service to assess value and customer outcomes (Verhoef et al., 2009). Although this study successfully demonstrated the impact of advertising, an alternative methodological approach could have been the application of service management evaluation techniques, specifically through the use of scenario methods. Scenario-based research is particularly effective in exploring potential customer responses to hypothetical service interactions (Söderlund, 2018). Söderlund's work, for instance, highlights the use of scenarios to simulate and evaluate customer reactions within various service management environments (Söderlund, 2018). Applied to this study, a scenario-based approach could have involved presenting respondents with a detailed scenario describing the repair services being offered, allowing for a more in-depth evaluation of customer reactions and the perceived value of these services.

## 6. Managerial implications

Overall, the results of this study offer valuable contributions to the understanding of how repair advertising influences customer perceptions and behaviors. In managerial terms, this can be translated into several practical insights. Given its central role in driving loyalty, it is essential to prioritize customer satisfaction in product display and repair advertising. This particularly could be

applied to targeting content and messaging of repair advertisement that foster satisfaction by resonating with customer needs and preferences. This would contribute to make choices in how to approach the advertising in terms of promoting utilitarian benefits or expressing values to appeal to your target customers (Johar and Sirgy, 1991). This study investigated advertising repair for the clothing industry yet within fashion retailing brands hold different positioning and customers value different aspects. Identifying what the customers of a specific company value would allow this brand to effectively reach positive customer attitude effects. As previously mentioned, some retailers already offer repair services, however, they don't necessarily advertise them in the product display page. This study has provided evidence that advertising these services in the product display page leads to positive shopper attitudes. Finally, this could encourage practitioners to experiment with other product display mechanisms, as the effects were proven to exist in online product display, similar benefits in physical product displays could potentially be found (e.g., in-store advertising, product tags, etc.).

## 7. Limitations & avenues for further research

All studies have limitations, and this study is not an exception. This section will outline the identified limitations and propose avenues for further research on the subject. Firstly, the sample was skewed towards younger demographics, thus potentially limiting the generalizability of the results to broader age groups. Secondly, the lack of significant moderator effects raises a reflection on the appropriateness of selected moderating variables. Moreover, this highlights the need for more nuanced considerations, for instance, the skewed sample concerning age and the fact that it was improperly measured appear as potential limits for generalization. In addition, the study made the choice to not include indications of price for the repair service, which could have an influence on the moderating role of SES. As economic constraints are known barriers for customers to not make use of repair services, this particular aspect holds potential for future studies on the topic of repair advertising. Also, the absence of temporally related items in measuring loyal mentality poses a challenge in assessing the longevity of observed effects, as it results in unanswered questions regarding the continuous increased loyalty over time. It is plausible that the effects observed may be

applicable primarily to initial interactions, in turn, it can potentially be diminishing in significance if competing brands adopt similar strategies. On the account of the difficulty of replicating realistic online circumstances, this underscores the need for cautious interpretation. Since participants were instructed to closely examine product pages, the replica-website may not be a realistic case to an actual browsing context and where they are subject to more information. Additionally, the utilization of a fictional brand, while enhancing generalizability, may overlook the influence of pre-existing brand perceptions in real-world scenarios, warranting caution in generalizing the findings. While the quantitative nature of the study investigated the *how*, complementary qualitative research could provide valuable insights into the *why* behind the observed phenomenon.

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# 9. Appendix

## 9.1. Appendix 1: Survey

Welcome to the survey for my thesis project as part of the bachelor in Retail Management at the Stockholm School of Economics!

Your help will play a crucial role in my research on repair services and circular economy. Please take a moment to carefully read the instructions for each question and provide your responses thoughtfully and honestly. Your input is entirely confidential and will be used solely for academic purposes. Participation in this survey implies your consent in the processing of the data for academic purposes.

There are no right or wrong answers. If you are unsure about a question, simply answer what you think is best/appropriate.

The survey should take approximately 3 to 5 minutes to complete. Thank you for your time and contribution to this study!

Contact: Matthias Holtz, 50799@student.hhs.se

Please observe the following image carefully. Read all text as you will not be able to go back later.

Blue Jeans



Introducing our timeless and versatile classic jeans, a staple for every wardrobe. Crafted with premium denim, these jeans effortlessly blend style and comfort for any occasion. Whether you're dressing up for a night out or keeping it casual for a weekend adventure, these jeans offer unmatched versatility. With their timeless design and enduring quality, they'll remain a go-to favorite in your closet for years to come. Elevate your style with these essential classics.

Size

Unisex

Select size

▼

Colours

Please observe the following image carefully. Read all text as you will not be able to go back later.

### Blue Jeans



Introducing our timeless and versatile classic jeans, a staple for every wardrobe. Crafted with premium denim, these jeans effortlessly blend style and comfort for any occasion. Whether you're dressing up for a night out or keeping it casual for a weekend adventure, these jeans offer unmatched versatility. With their timeless design and enduring quality, they'll remain a go-to favorite in your closet for years to come. Elevate your style with these essential classics.

Size

Unisex

Select size

Colours

**Repair service available**

All jeans from Denim Brand, including this timeless pair, are eligible for our repair service program. This initiative is designed to prolong the lifespan of your jeans, ensuring they remain a cherished wardrobe staple. From patching up tears to replacing worn-out seams, our skilled technicians specialize in restoring functionality and durability to your favorite denim essentials.

Visit any of our brand's stores nearby to access our repair service and keep your jeans looking and feeling great for years to come.

37

Based on the image you have observed, please answer the following questions.

Please indicate how well the following statements describe Denim Brand.

|                                                                      | Strongly disagree     | Disagree              | Somewhat disagree     | Neither agree nor disagree | Somewhat agree        | Agree                 | Strongly agree        |
|----------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| Has good intentions towards the environment.                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Consistently acts with the environment's best interests in mind.     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Has the ability to implement its intentions towards the environment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Is skilled and effective at achieving its sustainable goals.         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

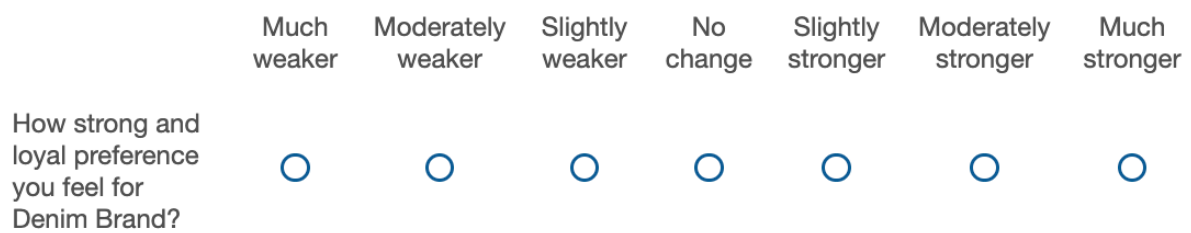
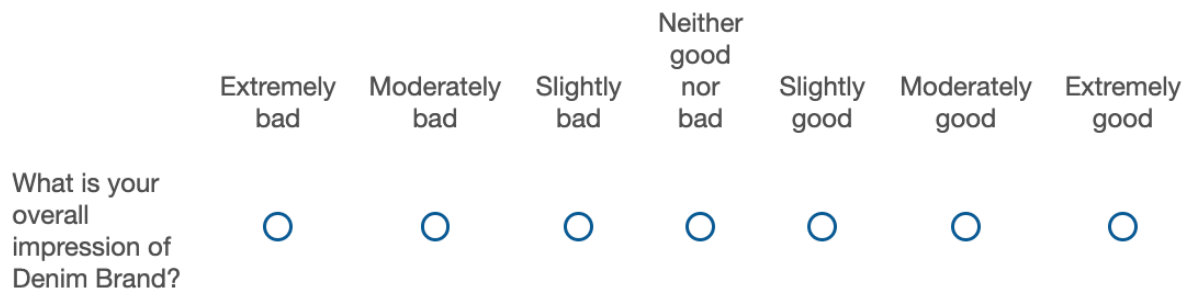
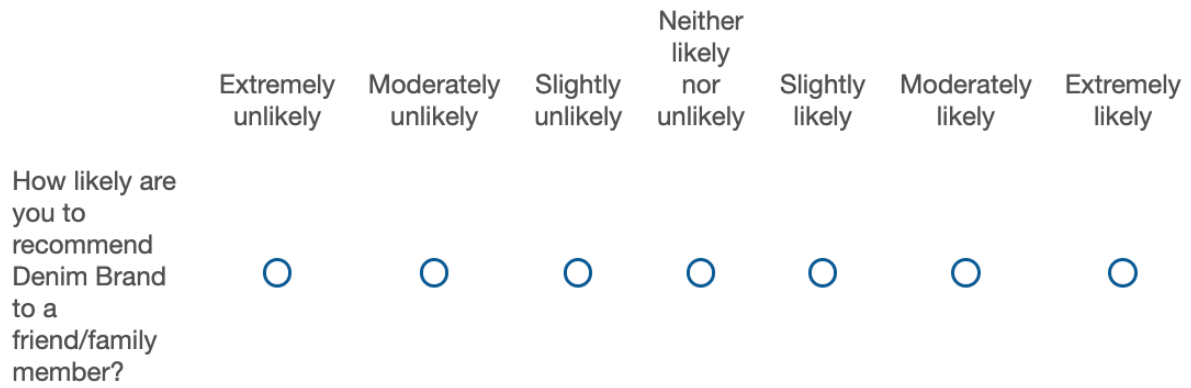
Please indicate how much you agree with the following statements.

|                                                                        | Strongly disagree     | Disagree              | Somewhat disagree     | Neither agree nor disagree | Somewhat agree        | Agree                 | Strongly agree        |
|------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| The product displayed is repairable.                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I buy this product it would be easy to get it repaired when needed. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|                                                                                    | Extremely<br>dissatisfied | Moderately<br>dissatisfied | Slightly<br>dissatisfied | Neither<br>satisfied<br>nor<br>dissatisfied | Slightly<br>satisfied | Moderately<br>satisfied | Extreme<br>satisfie   |
|------------------------------------------------------------------------------------|---------------------------|----------------------------|--------------------------|---------------------------------------------|-----------------------|-------------------------|-----------------------|
| Overall,<br>how<br>satisfied or<br>dissatisfied<br>are you<br>with Denim<br>Brand? | <input type="radio"/>     | <input type="radio"/>      | <input type="radio"/>    | <input type="radio"/>                       | <input type="radio"/> | <input type="radio"/>   | <input type="radio"/> |

|                                                                  | Not at<br>all         | Slightly              | Somewhat              | Moderatly             | Mostly                | Very                  | Completely            |
|------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| To what extent<br>does Denim Brand<br>meet your<br>expectations? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|                                                                                                                           | Very<br>far           | Far                   | Moderately<br>far     | Neither<br>near<br>nor far | Moderately<br>near    | Near                  | Very<br>near          |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| Imagine a brand<br>that is perfect in<br>every respect. How<br>near or far from this<br>ideal do you find<br>Denim Brand? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



Please indicate how much you agree with the following statements.

|                                                                      | Strongly<br>disagree  | Disagree              | Somewhat<br>disagree  | Neither<br>agree<br>nor<br>disagree | Somewhat<br>agree     | Agree                 | Strongly<br>agree     |
|----------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-------------------------------------|-----------------------|-----------------------|-----------------------|
| I have enough money to buy things I want.                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't worry too much about paying my bills.                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't think I'll have to worry about money too much in the future. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When shopping, sustainability is important to me.                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please indicate how much you agree with the following statements.

|                                                                     | Strongly disagree     | Disagree              | Somewhat disagree     | Neither agree nor disagree | Somewhat agree        | Agree                 | Strongly agree        |
|---------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|-----------------------|
| To me, shopping is an adventure.                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| For the most part, I go shopping when there are sales.              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like shopping for others because when they feel good I feel good. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I go shopping to keep up with the trends.                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I go shopping with my friends or family to socialize.               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I'm in a down mood, I go shopping to make me feel better.      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Do you own, or have owned in the past, a pair of jeans?

Yes

No

Not sure

Please specify your gender.

Male

Female

Other

Prefer not to say

Please specify your age.

Under 18

18 - 24

25 - 34

35 - 44

45 - 54

55 - 64

65 - 74

75 - 84

85 or older

What was this survey about?

Fruits

Hockey

An online display for Blue Jeans

## 9.2. Appendix 2: Age distribution amongst respondents

**Table 2:** Age distribution amongst respondents

|             | Frequency | Percent | Cumulative percent |
|-------------|-----------|---------|--------------------|
| under 18    | 0         | 0       | 0                  |
| 18 - 24     | 82        | 42.5    | 42.5               |
| 25 - 34     | 56        | 29      | 71.5               |
| 35 - 44     | 23        | 11.9    | 83.4               |
| 45 - 54     | 16        | 8.3     | 91.7               |
| 55 - 64     | 12        | 6.2     | 97.9               |
| 65 - 74     | 3         | 1.6     | 99.5               |
| 75 - 84     | 0         | 0       | 99.5               |
| 85 or older | 1         | 0.5     | 100                |

## 9.3. Appendix 3: Generative AI disclosure

The AI software LanguageTool was used for language correction in the text. ChatGPT 4.0 was used as a search engine for identifying articles and to summarize some articles. None of the article summaries were used in the report, and sources were double-checked. In addition, ChatGPT 4.0 was used to provide some explanations on topics encountered in the literature search for the author's own understanding.