Driving responsible consumption: the impact of different incentive types on consumer behaviour in sustainable fashion

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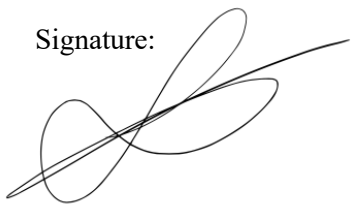

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ABSTRACT

The fashion industry is one of the biggest contributors to environmental pollution, generating excessive waste, water pollution and greenhouse gas emissions. The rise of sustainable clothing offers a possible solution to this problem. However, the high price of sustainable clothing, resulting from higher quality materials and higher labour costs, often prevents consumers from buying it. This study investigated whether two different types of incentives (moral versus remunerative) could increase consumers' switching intention and choice for sustainable clothing. In addition, it examined how appeal type and environmental concern moderated the effect of these incentives and how consumers made trade-offs between sustainability and other product attributes when choosing between garment options. This research employed a mixed-methods approach, combining a 2x2 between-subjects design with choice-based conjoint analysis. Findings suggested that incentives, regardless of type, can effectively motivate consumers to choose more sustainable options. However, the interaction between appeal type and incentives, as well as environmental concern and incentives, did not significantly influence the results. Importantly, the study highlighted that sustainable materials play a key role in consumers' clothing choices, with participants willing to pay a premium for higher quality over average quality at a standard price. Hence, this study emphasized the importance for companies to prioritize high-quality sustainable materials and to incorporate both remunerative and moral incentives in their communication strategies.

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1. INTRODUCTION

The clothing industry is one of the most polluting sectors globally and faces significant challenges in achieving sustainability. In 2020, the textile sector was the third largest source of water degradation and land use (European Environment Agency, 2020). Additionally, clothing production and dyeing are responsible for about 20% of global clean water pollution (European Parliament, 2022). Waste is also a big issue, as less than half of used garments are reused or recycled, and only 1% is repurposed into new clothing (European Parliament, 2022). Fast fashion plays a large role in environmental pollution through overproduction and unsustainable practices. Even though sustainable clothing is becoming more popular, price is still a major barrier to choosing sustainable alternatives (Bocti et al., 2021; Chang, 2011). The higher price of sustainable clothing, resulting from the use of better-quality materials and fair labour standards, often discourages many consumers (Jacobs et al., 2018).

In addition to price, Hyun et al. (2021) argue that consumers are often discouraged from choosing eco-friendly products due to the feeling that they would have to trade-off functional performance. Other barriers to choosing sustainable clothing include lack of stylishness, comfort and fit (Connell, 2010; Harris et al., 2016). Additionally, consumers are more likely to react negatively to eco-friendly products when they involve trade-offs with utilitarian attributes (e.g., quality) rather than with hedonic attributes (e.g., aesthetic design) (Hyun et al., 2021). While consumers face various barriers, such as concerns about product quality and style, incentives may provide the nudge needed to overcome these challenges. By incorporating incentives into the trade-off decision-making process, some consumers may feel more confident in choosing the sustainable option, as the benefits could outweigh the perceived drawbacks.

Subramanian (2017) identified several types of incentives that can influence behaviour, including moral and remunerative incentives. This study focuses on these two types, as they are especially relevant in the context of sustainable fashion and commonly used in marketing practice. Remunerative incentives, such as discounts or vouchers, can reduce the financial barrier mentioned earlier, making it more attractive for consumers to buy sustainable clothing. These incentives are

particularly relevant to this research, as they offer tangible and immediate benefits to consumers. On the other hand, moral incentives can encourage more sustainable purchasing decisions by appealing to consumers' ethical and environmental values. This can include promoting actions that align with the consumer's sense of responsibility or desire to contribute positively to society, such as reducing waste or supporting environmental efforts like reforestation. Performing an action that is perceived by people as morally good can give them a positive feeling about themselves (Bolderdijk et al., 2013). Both types of incentives, if offered exclusively for sustainable garments, could potentially help consumers choose more sustainable options or shift from unsustainable clothing to sustainable alternatives they perceive as more attractive, which aligns with the concept of switching intention (Bansal et al., 2005; Hsieh et al., 2012).

When promoting these incentives, it is also essential to consider how they are presented. Specifically, the effectiveness of incentives can be enhanced by pairing them with emotional or rational appeals, as suggested by Xie et al. (2004), who found that positive emotional appeals combined with incentives can significantly boost their impact on consumer decision-making. This suggests that emotional appeals may trigger stronger positive feelings, which, in turn, could make the incentive more appealing. While Xie et al. (2004) assessed that emotional appeals outperformed no appeal, they did not compare emotional appeals to rational appeals. This study builds on this by comparing emotional and rational appeals in the context of incentives. Understanding this interaction is crucial for designing more effective strategies that encourage responsible consumer behaviour.

The academic relevance of this study lies in its application of incentive theory to sustainable consumption behaviour in the fashion industry. Specifically, it is examined how different types of incentives (moral and remunerative) can drive consumer switching intentions. While previous literature has researched the influence of incentives on consumer behaviour in sustainability, such as Reddy et al. (2016), there is limited research on the comparative effectiveness of moral and remunerative incentives in the context of sustainable clothing consumption. This study addresses this gap and explores how each type of incentive can impact consumer behaviour in different ways. Moreover, this study contributes to the literature by examining the effect of incorporating incentives into the decision-making process when choosing sustainable clothing. While previous research has primarily focused on the product attributes

consumers feel they have to compromise on when choosing sustainability (Connell, 2010; Harris et al., 2016; Hyun et al., 2021), the role of incentives (whether moral or remunerative) in influencing these trade-offs remains unexplored. This study will address this gap in the literature.

The practical relevance of this research lies in its potential to provide businesses and policymakers with concrete and meaningful insights for developing initiatives that motivate customers to make more sustainable choices. For instance, if the proposed moral and remunerative incentives have the desired effect, sustainable fashion companies could incorporate these in their campaigns to attract more customers and support the transition to more sustainable consumption practices. The insights derived from this study could ultimately lead to increased adoption of sustainable clothing, less excessive waste and more responsible consumption in the fashion industry.

In conclusion, the objective of this thesis is to examine to what extent different incentive types (remunerative and moral) drive sustainable purchasing and encourage customers to choose more durable clothing options that align with environmental values, thereby promoting more responsible consumption patterns in the fashion industry. Additionally, this thesis aims to explore how appeal type and environmental concern serve as moderating factors, as well as how consumers make trade-offs between various product attributes when choosing sustainable clothing. To achieve this objective, the following research questions have been formulated:

> ***RQ 1:*** *To what extent do different incentive types (moral and remunerative) influence consumers' switching intentions for sustainable clothing? Additionally, how do appeal type and environmental concern moderate these relationships?*

> ***RQ 2:*** *How do consumers make trade-offs between sustainability and other product attributes (e.g., brand type and incentive) when choosing sustainable clothing?*

By focusing on these questions, this study seeks to provide insights into how different incentive types (moral and remunerative) influence sustainable consumer behaviour in the fashion industry, while also examining how consumers value different attributes when making purchasing decisions.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Customer intentions and choices in purchasing sustainable clothing

Understanding customer intentions and choices in purchasing sustainable clothing is complex and influenced by a wide range of factors. According to Niinimäki and Hassi (2011), sustainable fashion consumption involves complex evaluative processes. Unlike in other product categories, such as food, consumers are more hesitant to choose sustainable fashion, as its consequences do not directly impact their well-being and/or health (Joergens, 2006). Prior research has shown that factors such as environmental apparel knowledge and green self-concept positively affect the intention to purchase sustainable clothing (Abrar et al., 2021). In addition, the ability of consumers to express their identity and/or personality through clothing is also a motivation to purchase sustainable fashion (Gaston-Breton & Duque, 2015). Wang et al. (2022) argue that sustainable fashion consumption decisions are also largely influenced by attributes of the clothing item. They, for example, mention price, quality, material and labels as critical factors for sustainable fashion.

To better understand how consumers make these decisions, this study looks at two aspects of behaviour: switching intention and consumers choice. Switching intention refers to the probability of consumers moving from an existing product or service to an alternative perceived as more attractive (Bansal et al., 2005; Hsieh et al., 2012). Consumer intentions are often used as a predictor of future behaviour. Research of Ajzen (1991) has shown that when behaviours do not encounter serious problems of control, they can be predicted with a high degree of accuracy based on intentions. Even though intentions are central to various theories about factors that influence actual behaviour, they rarely, if ever, account for all the variance in behaviour (Conner & Norman, 2022). This phenomenon is also known as the intention-behaviour gap. As the focus of this research is to motivate consumers to choose for sustainable garments instead of less sustainable alternatives, it implies a behaviour change. For this reason, switching intention is considered more relevant than general purchase intention in this context.

The second dependent variable in this study is consumer choice, which reflects the actual decision-making process, including the trade-offs consumers make between different product attributes.

Eggers et al. (2018) suggest that using choices as the dependent variable in research has gained popularity because they closely resemble consumers' behaviour during purchasing decisions. Unlike switching intention, consumer choice provides a more direct measure of how product attributes influence purchase decisions, as it mimics actual behaviour. Moreover, measuring consumer choice using conjoint analysis has major advantages over traditional survey methods. Traditional survey methods ask participants to rate how important they find certain product attributes. According to Orme (2019), these self-explicated importances often not reflect true values of participants and respondents may want to give a socially desirable answer. Consequently, the outcomes offer little value on how to improve a product. More meaningful is to ask participants to respond to specific and realistic product specifications, which can be done through conjoint analysis. As respondents are forced to make difficult trade-offs between product attributes, researchers can learn the true value of product alternatives (Orme, 2019).

In terms of switching intention, one could say that it reflects the willingness to choose the sustainable alternative, while consumer choice reveals the actual decision. Although consumer choice offers a more direct behavioural measure, stronger intentions generally increase the likelihood of making that choice. Both constructs are therefore important for predicting behaviour, but they capture different yet complementary aspects of decision-making. By focusing on both switching intention and consumer choice as dependent variables, this research captures both the cognitive and behavioural aspects of decision-making and provides a comprehensive understanding of how incentives can drive consumers toward more sustainable consumption behaviour.

2.2 Incentives as a motivational force

An incentive is defined as "something that motivates an individual to perform an action" (Subramanian, 2017, p. 29). Incentives play a big role in driving behavioural change, they can encourage individuals to not only adopt but also maintain desired behaviours (Toșa et al., 2024). Previous research by Reddy et al. (2016) identified that environmental conservation behaviours can also be influenced by making use of incentives. Through external goals, such as monetary or non-monetary

rewards, incentives motivate individuals to change their behaviour (Bretschneider & Leimeister, 2017). The effect of the incentives depends however on various factors such as the size and nature of the incentive, the duration, and the characteristics of the individuals that are involved (Toșa et al., 2024). Furthermore, the effectiveness also differs per target behaviour and the perceived value and certainty of the incentive (Mantzari et al., 2015).

According to Subramanian (2017), incentives can be grouped into four categories: remunerative incentives, moral incentives, coercive incentives and natural incentives. Remunerative incentives are typically associated with economics and refer to a kind of material reward (especially money) one can receive for acting in a certain way. Moral incentives occur when a specific action or choice is perceived as the right thing to do. Not acting that way could then be regarded as indecent. A coercive incentive occurs when some sort of punishment is promised after making a wrong decision. An example of this is receiving a speeding ticket if one drives to fast. Lastly, natural incentives, like joy, fear, anger or for example a sense of control, can also shape decisions of individuals. Throughout the rest of this thesis, the focus will be on remunerative and moral incentives, as these have been identified as key drivers for sustainable consumption in previous research (Bolderdijk et al., 2013; Park et al., 2013). Due to the scope and time constraints of this research, the analysis will be limited to these two types of incentives.

As aforementioned, remunerative incentives, often referred to as financial incentives (Xu & Xu, 2011), involve material rewards such as money. Prior research has identified that financial incentives impact consumer behaviour, such as switching intentions. For example, Park et al. (2013) found that sales promotions (i.e., a financial incentive), such as price or coupons, are significant drivers of customer satisfaction, which directly impacts customer value, image and behavioural intentions. In addition, Chen et al. (1998) argue that price promotions are used frequently to boost sales and that such financial incentives can change consumers' purchase decisions. Zhao et al. (2019) further demonstrated that financial incentives play a significant role in driving switching behaviour, even in digital service contexts such as paid versus free Q&A platforms. In the fashion industry, price sensitivity has increased, especially with the introduction of fast fashion (Sun, 2024). As a result, offering remunerative incentives

may be an effective strategy to encourage consumers to switch from an unsustainable clothing brand to more sustainable brands offering such incentives.

While many studies, as described above, highlight the benefits of financial incentives, Bolderdijk et al. (2013) emphasize the importance of moral incentives. They argue that marketers could gain significant advantages by considering a basic source of human motivation: the need to maintain a favourable view of oneself. Bolderdijk et al. (2013, p. 413) state that, in general, people "may prefer to see themselves as 'green' rather than 'greedy'". Presenting a moral incentive, such as supporting reforestation by planting a tree for every sustainable clothing item purchased, can make people perceive this action as morally good. This, in turn, helps them feel better about themselves (Bolderdijk et al., 2013). As a result, they may be more likely to purchase sustainable clothing or switch to brands that offer such incentives. Beyond enhancing self-perception, the importance of shopping eco-friendly may also become more salient after exposure to a moral incentive. Such incentives can draw attention to the environmental impact of one's clothing choices and prompt consumers to align their behaviour with ethical values.

Due to the differing opinions on the effectiveness of various incentives depending on the context, it is important to explore which approach works best for sustainable fashion. Specifically, in the case of sustainable fashion, price remains one of the most significant barriers preventing consumers from choosing sustainable clothing options (Bocti et al., 2021; Chang, 2011). Financial incentives have been shown to address this price barrier by having a direct impact on consumer behaviour intentions (Park et al., 2013). Since remunerative incentives provide immediate, tangible benefits, they may be more likely to motivate consumers who are primarily concerned with overcoming the price barrier. Moreover, remunerative incentives typically offer clear and measurable rewards (e.g., cost savings or additional products), which may make them more appealing to consumers compared to moral incentives, which require a more abstract, long-term commitment. While moral incentives can appeal to ethical values, they may not have the same immediate impact on purchase decisions as remunerative incentives, especially when consumers are motivated by practical concerns like costs, as in the case with sustainable fashion. Therefore, it is expected that remunerative incentives will be more effective

in driving switching intentions compared to moral incentives, particularly in the context of sustainable fashion. This expected outcome is outlined in the hypothesis below:

> ***H1:*** *Offering remunerative incentives leads to a higher switching intention for sustainable clothing compared to offering moral incentives.*

2.3 The power of emotions vs. logic

Using advertising appeals can be a powerful tool to influence consumers' buying decisions (Rahman & Pial, 2019). In general, the literature distinguishes two types of appeals: emotional and rational appeals. Emotional appeals are used to convey adverse or beneficial feelings, such as joy, pride or fear, that motivate consumers to buy a product (Keshari & Jain, 2016). In contrast, rational appeals, including informative and logical appeals, are used to provide rational purposes for purchasing an advertised item (Sharma & Singh, 2006). Rational appeals persuade consumers by focusing on logical arguments and measurable benefits, such as price, functionality or quality.

According to Casais and Pereira (2021), the effectiveness of the type of appeal depends on the relevance of the product for the consumer. When the product is highly relevant for the consumer, rational appeals tend to be more effective, while for products with low relevance for the consumer an emotional appeal can be the better option. Some researchers also state that using a mix of emotional and rational appeals can generate more effective attitudes than when used separately (Ruiz & Sicilia, 2004). However, there seems to be some contradictory findings in the literature regarding this strategy, as, for example, Lindauer et al. (2020) found no evidence that combining rational and emotional appeals have a stronger effect than either appeal in isolation.

When looking at the effectiveness of incentives, literature suggest that the effectiveness could be enhanced by pairing them with the right appeal. For example, Xie et al. (2004) argue that emotional appeals can increase the effectiveness of incentives. In their research, it was found that, in the case of incentives, positive emotional appeals where more effective in generating click-through than no or negative emotional appeal ads. Xie et al. (2004) argue that consumers are more likely to perceive,

appreciate, and respond positively to ads when they are in a good mood, which is triggered by the ad itself, and when they can benefit from the incentives offered. Based on this finding, this research will focus on comparing rational appeals with positive emotional appeals, as these are more effective when paired with incentives. However, limited research has explored how different incentive types (moral and remunerative) interact with these different appeal types in the context of sustainable clothing. To develop effective strategies targeting responsible consumption, gaining a deeper understanding of this relationship is necessary.

As explained in the previous section, moral incentives evoke a feeling of doing the right thing (Subramanian, 2017). Since these incentives resonate with consumers' moral values, using a positive emotional appeal might further enhance the feeling of doing something good. Emotional appeals can motivate consumers to purchase products because of the feelings it elicits (Kim et al., 2020). For example, an emotional appeal such as *"By choosing this item, you help restore nature and protect future generations"* may be perceived by the consumer as the right thing to do, making it more attractive to purchase that item or product instead of another option. Accordingly, it is hypothesised that emotional appeals can enhance the effectiveness of moral incentives:

> ***H2a:*** *The effectiveness of moral incentives on switching intention is stronger when paired with an emotional appeal compared to a rational appeal.*

In contrast to moral incentives, remunerative incentives are often associated with economics and refer to a kind of material reward (Subramanian, 2017). Previous research by Kim et al. (2020) has shown that rational appeals are strongly linked to utilitarian value, which focuses on functional benefits like monetary savings. Since remunerative incentives are designed to deliver these economic benefits, pairing them with a rational appeal might enhance their effectiveness by reinforcing the financial advantages of the incentive. By empathizing the logical benefits of the material reward, consumers may be more likely to perceive the incentive as a valuable reason to switch to a sustainable clothing option. Therefore, it is hypothesised that rational appeals will strengthen the effectiveness of remunerative incentives:

H2b: *The effectiveness of remunerative incentives on switching intention is stronger when paired with a rational appeal compared to an emotional appeal.*

2.4 Linking environmental concern to sustainable consumption behaviour

The effectiveness of incentives may depend on other factors besides appeal type. In this case, environmental concern is being proposed as another moderating factor in the relationship between the incentives and a consumer's switching intention. Environmental concern refers to the degree to which individuals are aware of environmental issues and their willingness to contribute to address these issues (Paul et al., 2015). According to Ismail et al. (2006) the familiarity with environmental and social issues can cause consumers to make more pro-social and environmentally conscious decisions. Moreover, environmental concern plays a significant role in purchase decisions (Mostafa, 2009). Balaskas et al. (2023) argue that an environmentally conscious consumer is more likely to buy eco-friendly products compared to the indifferent consumer.

Based on this, it could be argued that environmentally conscious consumers are more likely to prioritize sustainability and social responsibility when making purchase decisions. These consumers may therefore respond more strongly to the moral incentives that align with their values. For example, a moral incentive, such as supporting reforestation, offers consumers the opportunity to contribute to environmental causes, making it especially appealing to those who highly value sustainability. For these consumers, moral incentives can serve as a reinforcement of their environmental beliefs. According to Wang et al. (2021), pro-environmental behaviour stems from biospheric values, which represent the degree to which individuals care about nature and environment. Encouraging such behaviour through a moral motive or incentive may activate these biospheric values of environmentally concerned individuals, since the moral motive runs parallel to the sustainable clothing option (Bolderdijk et al., 2013). This alignment may, in turn, enhance their intention to switch to more sustainable clothing brands.

On the other hand, remunerative incentives, such as financial rewards or discounts, do not directly align with values of environmentally conscious consumers. These incentives primarily focus

on offering tangible material rewards and may not necessarily appeal to consumers' environmental beliefs. While remunerative incentives can make sustainable products more financially accessible, they do not address environmental concerns directly. Therefore, their effect on switching intention is likely to be weaker among environmentally conscious consumers compared to moral incentives. Based on these considerations, the following hypothesis is proposed:

> ***H3:*** *High environmental concern leads to a stronger relationship between moral incentives and switching intention compared to remunerative incentives.*

2.5 Making the right choice: trade-offs in sustainable fashion

As discussed in Chapter 1, there are many factors that people consider when purchasing goods. Especially now that sustainability is becoming increasingly important, consumers are often faced with choices that involve trade-offs between the sustainability of a product and its other features (Luchs & Kumar, 2017). For example, a study by Lin and Chang (2012) showed that consumers often associate eco-friendly products with lower effectiveness, leading to increased consumption of the environmentally friendly product. In their study, an eco-friendly soap priced 20%-25% higher than the regular version was used in much larger quantities because people believed they needed more of the product to achieve the same effect as the regular soap. This higher usage resulted in more consumption, ultimately undermining the environmental benefits of the product.

When it comes to sustainable clothing, consumers often feel they must compromise on various aspects, such as comfort, performance, or stylishness (Connell, 2010; Harris et al., 2016; Hyun et al., 2021). Research shows that when choosing between garments, people are in general more willing to compromise on aesthetics rather than on quality (Luchs & Kumar, 2017). Furthermore, other studies (Lindgren et al. 2009; Luchs et al. 2012) also state that people prefer superior functional performance over superior sustainable characteristics. Interestingly, it is worth mentioning that high-quality aesthetic design has a positive effect on the choice of sustainability-advantaged (versus performance-advantaged)

products (Luchs et al., 2012). According to the researchers, this may be because superior aesthetic design compensates for the potential lack of confidence in the sustainable product.

As mentioned earlier, the balance between price, quality, and sustainability remains a significant challenge for consumers when choosing sustainable clothing. Using high-quality materials, which enhance functionality, often results in a higher price (Jacobs et al., 2018). Moreover, as shown in the study by Lin and Chang (2012), sustainable products are generally more expensive, which makes price a barrier for consumers to switch to more sustainable options (Bocti et al., 2021; Chang, 2011). Given these challenges, price, quality, and sustainability continue to be key factors in consumer decision-making.

In this study, the attributes price and quality are merged into one overarching concept: brand type. Premium brands are associated with higher cost and superior quality, while regular brands represent more average price and quality levels. To capture a concrete and widely understood aspect of sustainability in fashion, sustainability is operationalized through the use of recycled versus non-recycled materials. While sustainability in the fashion industry has gained importance in recent years, Saricam et al. (2017) argue that consumer awareness about sustainability still varies. According to their research, many consumers still associate sustainability with visible, material-based features such as recycling or the use of organic materials. As such, recycled and non-recycled materials were used in this study to operationalize the concept of sustainability.

Central to this study is the role of incentives, which may influence how consumers assess and prioritize the aforementioned product attributes. Incentives have been shown to enhance product appeal by either providing financial benefits or reinforcing consumers' self-concept and ethical values (Subramanian, 2017; Bolderdijk et al., 2013). Moral incentives may increase the perceived social or environmental value of the product, encouraging consumers to prioritize sustainability. In addition, they may serve as a prompt for value-consistent behaviour, making consumers more likely to engage in environmentally responsible choices such as purchasing sustainable clothing. In contrast, remunerative incentives may increase the perceived affordability or accessibility of more expensive or premium options. However, it remains unclear how the presence and type of incentive influence the trade-offs

consumers make when simultaneously evaluating sustainability and brand characteristics. To explore this dynamic, the following proposition is proposed:

> ***P1:*** *When evaluating sustainable clothing, consumers make trade-offs between sustainability, brand type and the presence of an incentive. Incentives, whether moral or remunerative, are expected to increase the likelihood that consumers will prioritize sustainability over other product attributes such as brand type.*

2.6 Conceptual framework

The hypotheses and proposition discussed above are visualized in a conceptual framework (Figure 1) and summarized in Table 1.

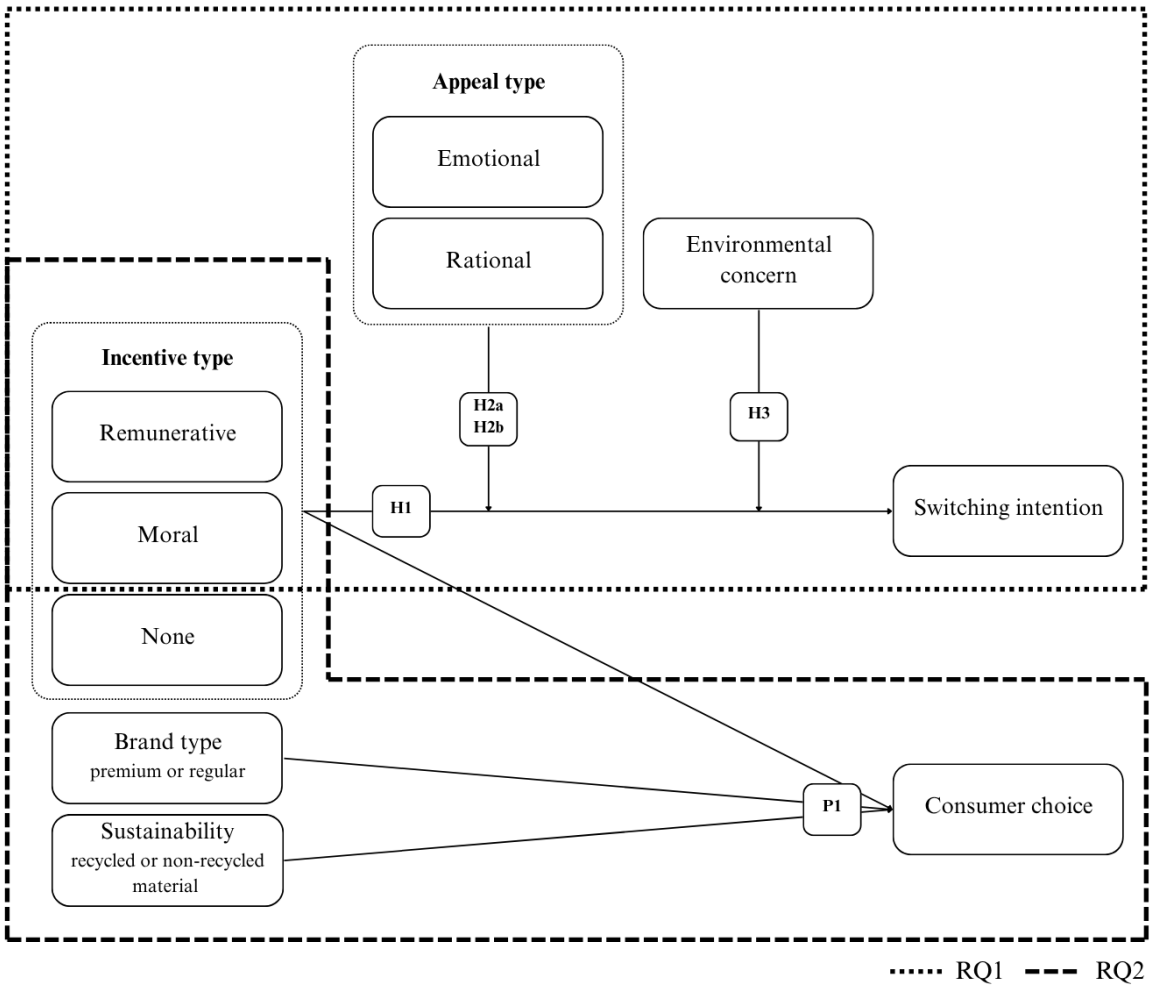

Figure 1 – Conceptual framework

Table 1 – Overview hypotheses and proposition

	Hypothesis / Proposition
H1	Offering remunerative incentives leads to a higher switching intention for sustainable clothing compared to offering moral incentives.
H2a	The effectiveness of moral incentives on switching intention is stronger when paired with an emotional appeal compared to a rational appeal.
H2b	The effectiveness of remunerative incentives on switching intention is stronger when paired with a rational appeal compared to an emotional appeal.
H3	High environmental concern leads to a stronger relationship between moral incentives and switching intention compared to remunerative incentives.
P1	When evaluating sustainable clothing, consumers make trade-offs between sustainability, brand type and the presence of an incentive. Incentives, whether moral or remunerative, are expected to increase the likelihood that consumers will prioritize sustainability over other product attributes such as brand type.

3. METHODOLOGY

3.1 Research design and method

The research was carried out using a mixed-methods approach, combining a 2 (incentive: remunerative versus moral) x 2 (appeal: emotional versus rational) between-subjects design with a choice-based conjoint analysis. The choice for these quantitative methods enabled larger sample sizes, increasing the reliability and applicability of the findings to a broader population (Rana et al., 2021). Furthermore, since data was collected by distributing online surveys, the standardized questions guaranteed that respondents interpreted the questions in the same way, enhancing the reliability of the results (Saunders et al., 2019).

For the 2x2 design, each participant was assigned to one of four treatments, with each treatment varying in incentive and appeal type (see Table 2). This design allowed for evaluating the effect of different combinations on switching intentions. This between-subjects design was chosen to avoid bias that could arise from participants comparing treatments, as could occur in a within-subjects design

(Poulton, 1973; Charness et al., 2011). Hence, a between-subjects design helped to avoid this issue and made it easier to evaluate the effects clearly and reliably.

Table 2 – Experiment conditions

Condition	n	Appeal type	Incentive type
1	63	Emotional appeal	Moral incentive
2	54	Emotional appeal	Remunerative incentive
3	60	Rational appeal	Moral incentive
4	62	Rational appeal	Remunerative incentive

In addition to the experimental design, a choice-based conjoint analysis helped explore how product attributes such as brand type (premium or regular), sustainability (recycled or non-recycled material), and incentive (moral, remunerative or none) influenced consumer choices. Green et al. (2004, p. 118) describe conjoint analysis as "a technique for measuring trade-offs for analysing survey responses concerning preferences and intentions to buy". These preferences guide consumers' choices when making purchases. Unlike simpler measures of purchase intention or willingness to buy, conjoint analysis simulates a realistic decision-making situation in which consumers must make trade-offs between various product attributes. In doing so, it captures a closer approximation of actual behaviour by linking preferences to observed choices, rather than relying solely on stated intentions. According to McFadden (2001), such an approach for analysing choice behaviour is part of a broader shift in economics where researchers try to understand individual-level decision processes instead of relying on assumptions about average behaviour.

Conjoint analysis is conducted by showing participants varying product bundles. Participants are instructed to select one of the alternatives that best matches their preferences. Since the bundles that are presented vary in attributes, participants will have to make trade-offs as they proceed. As not all possible combinations of attributes can be showed to a respondent, the software of Qualtrics uses a randomized balance design approach to maximize the number of data points and the coverage across potential bundles, while minimizing the number of products exposed to participants. The core of conjoint analysis lies in the statistical modelling, which estimates the utility that respondents assign to

each level of an attribute. These utility coefficients represent the value or preference that respondents place on each level of the attribute. Qualtrics employs hierarchical Bayes estimation to derive individual-based utility models, using Bayesian methods to probabilistically calculate the relative value of each variable. The individual utility coefficients are then aggregated to calculate the relative utility values. The greater a level's relative utility value, the more it enhances a package by being present.

From these utility coefficients, several summary metrics are calculated as well. Feature importance measures how influential each feature is in the decision-making process. It is calculated by taking the difference between the most preferred and least preferred levels within a feature. The greater the difference, the more important that feature is to the consumer. First choice preference scores indicate the percentage of respondents who selected a specific level as their top choice. The first choice scores will be the distribution of participants that found that level to be the best option for that attribute. Lastly, preference share measures the probability that a specific level of a feature will be chosen over another, assuming all other feature components remain constant. It is calculated using a multinomial logistic regression model by exponentiating the utility of each level and dividing it by the sum of the exponentiated utilities for all levels within that feature. All these metrics provide insights about the predicted behaviour of customers and help to understand the trade-offs that people would make if they were offered the product options with different configurations.

3.2 Stimuli design

The stimuli used for this experiment can be found in Figure 2a-d below. The advertisements consisted of four combinations, each pairing a different appeal type with an explanation of the incentive participants would receive if they purchased the jacket. Each combination included either a moral or remunerative incentive, along with an emotional or rational appeal. Additionally, all four ads contained the same jacket combined with a label stating "sustainable materials" to clearly communicate that the garment was made from environmentally friendly materials. This ensured that participants were aware of the sustainability aspect of the product. The incentives and appeals used in the advertisements were based on the pre-test that was conducted. During this pre-test, various appeals and incentives were

evaluated by participants. This allowed for the selection of the most effective stimuli which were used in the main experiment. More detailed information regarding the pre-test procedure and the results can be found in Appendix B.

Figure 2a – Ad condition 1 (EA + MI)

Figure 2b – Ad condition 2 (EA + RI)

Figure 2c – Ad condition 3 (RA + MI)

Figure 2d – Ad condition 4 (RA + RI)

The choice of a jacket as the product stimulus was intentional. Jackets are a basic, unisex item in fashion, making them suitable for a broach range of participants. They can also easily be made from sustainable materials, which aligns with the focus of this study on promoting sustainable clothing. The simple and neutral design of the jacket minimized the risk of participants' preferences being influenced by strong aesthetic appeal or fashion trends, allowing the study to focus on the effects of the incentives and appeals. By selecting this basic yest sustainable item, the research aimed to isolate the impact of the incentive and appeal combinations on consumer behaviour, without confounding factors such as product aesthetics or preferences for specific brands. Based on this argumentation, the jacket was also used as the product stimulus in the conjoint analysis.

3.3 Survey procedure

The survey for this study consisted of two main sections and is based on the operationalization table below (Table 3). The first part assessed participants' familiarity with and current behaviour towards sustainable fashion, followed by a series of statements to measure participants' environmental concern. As a next step, participants were shown an advertisement for a sustainable jacket. Depending on the treatment group, the ad varied in incentive type (remunerative or moral) and appeal type (emotional or rational). After viewing the advertisement, participants indicated their level of agreement with three statements related to their switching intention. To screen if participants paid attention while completing the survey, a question on the next page asked which statement they read on the advertisement and which incentive was offered.

The second part of the survey involved a choice-based conjoint analysis, were participants viewed three different jackets with varying combinations of brand type, sustainability, and incentive (as outlined in Table 3). These variations were generated using Qualtrics' balanced design approach, which ensured that a wide range of combinations were covered while minimizing redundancy. After reviewing the options, participants had to indicate which jacket they would most likely choose. This task was repeated four times with different combinations of product attributes. As a next step and to make sure participants perceived the appeals and incentives presented in the first part of the survey as intended, they had to indicate the focus of two statements (either emotional or rational) and two incentives (either moral or remunerative) with a slider. The survey concluded with sociodemographic questions regarding the gender, age, education and monthly income. A complete overview of the survey can be found in Appendix C.

Table 3 – Operationalization table

Variable	Operationalization	Dimension
RQ1		
Dependent variable		
Switching intention (SI) (Shukla & Sanjeev, 2024)	Average score across three items:	7-point Likert scale

	1. I am considering switching from purchasing unsustainable clothing to sustainable clothing now and then. 2. I intend to switch from unsustainable clothing to sustainable clothing in my next purchase. 3. There is a high probability of my switching to purchasing sustainable clothing.	
Independent variables		
Moral incentive (MI)	An advertisement containing the sentence: *"For every jacket purchased, a tree will be planted to support reforestation efforts around the world."*	Ad condition 1 + 3
Remunerative incentive (RI)	An advertisement containing the sentence: *"Get 10% off your next purchase when you buy this jacket."*	Ad condition 2 + 4
Moderating variables		
Emotional appeal (EA)	An advertisement containing the sentence: *"Designed to make you feel good inside and out, every time you wear it."*	Ad condition 1 + 2
Rational appeal (RA)	An advertisement containing the sentence: *"With high-quality materials, this jacket is built to last, giving you reliable protection season after season."*	Ad condition 3 + 4
Environmental concern (EC) (Fachbach et al., 2022)	Average score across five items: 1. I am concerned about climate. 2. I am concerned about waste generation. 3. I have to save the environment for future generation. 4. Balance of nature is easily destroyed by human activities. 5. I help the environment even if it cost me more money or takes more time.	7-point Likert scale
Demographic variables		
Gender	The participant's gender.	Categorical: 1 = Female, 2 = Male, 3 = Other
Age	The participant's age range.	Ordinal: 1 = < 18, 2 = 18 – 24, 3 = 25 – 34, 4 = 35 – 44, 5 = 45 – 54, 6 = 55 – 65, 7 = > 65)
Education	The participant's highest attained education.	Ordinal: 1 = Primary education, 2 = High school, 3 = MBO, 4 = Bachelor's degree, 5 = Master's degree, 6 = PhD, 7 = Other
Income	The participant's monthly income range.	Ordinal: 1 = < €1.000, 2 = €1.000 – €1.500, 3 = €1.501 – €2.000, 4 = €2.001 – €2.500,

		5 = €2.501 – €3.000, 6 = > €3.000
RQ2		
Dependent variable		
Consumer choice	Participants will choose among different clothing options with varying attributes, such as, brand type, sustainability and incentive type.	Choice task
Independent variables		
Incentive type	Product attribute for conjoint analysis with three levels.	Moral, remunerative, none
Brand type	Product attribute for conjoint analysis with two levels.	Premium, regular
Sustainability	Product attribute for conjoint analysis with two levels.	Recycled material, non-recycled material

3.4 Measurement scales

The measurement scales for this study can be found in the operationalization table above (Table 3). The switching intention scale, adapted from Shukla and Sanjeev (2024), included three items, while environmental concern was measured using five items adopted from Fachbach et al. (2022). Both constructs were measured using a 7-point Likert scale, with participants indicating their level of agreement from "strongly disagree" (1) to "strongly agree" (7). Although the original scales demonstrated sufficient Cronbach's alpha values (> 0.7), indicating internal consistency in the respective studies, Cronbach's alpha was recalculated in the current study to ensure reliability of the scales (Table 4). Cronbach's alpha measures the internal consistency of the scale items and indicates if the scales are suitable for the study (Taber, 2018). According to Nunnally (1978), the items are internally consistent if they score an alpha of 0.7 or higher. Based on this benchmark, it can thus be said that the items of both environmental concern ($\alpha = 0.868$) and switching intention ($\alpha = 0.886$) are internally consistent.

To further assess the validity and reliability of the constructs, a confirmatory factor analysis (CFA) was conducted. Prior to the CFA, a Kaiser-Myer-Olkin (KMO) test was performed to test for sampling adequacy (Appendix D). Switching intention showed an overall MSA of 0.71 and environmental concern an MSA of 0.85. Both constructs exceed the recommended threshold of 0.7 (Kaiser et al., 1974), indicating that the data is suitable for factor analysis. Table 4 below displays the

results of the CFA and the information for each construct. All measurement indicators demonstrated an adequate model fit (χ^2/df = 1.98; CFI = 0.984; TLI = 0.976; RMSEA = 0.064; SRMR = 0.038). Since all standardized factor loadings were above 0.5, the results suggest that the items adequately represent their respective constructs (Hair et al., 2009). Additionally, convergent validity was evaluated by calculating the average variance extracted (AVE) and composite reliability (CR) was used to assess the internal consistency reliability of the constructs. According to the thresholds of Fornell and Larcker (1981), both AVE and CR values meet the recommended cut-off values (AVE > 0.5, CR > 0.7). Together with the values for Cronbach's alpha, these findings support the overall validity and reliability of the scales used in this study.

Table 4 – Confirmatory factor analysis

	Mean	SD	Std. factor loadings	α	AVE	CR
Environmental concern				0.868	0.576	0.870
EC1	4.91	1.47	0.850			
EC2	4.91	1.51	0.833			
EC3	4.49	1.42	0.766			
EC4	5.78	1.12	0.589			
EC5	4.23	1.41	0.726			
Switching intention				0.886	0.738	0.893
SI1	4.42	1.56	0.739			
SI2	3.77	1.46	0.932			
SI3	3.66	1.49	0.894			

3.5 Sample

Opinions regarding required participants for an appropriate sample size vary in the literature. Using Cohen's (1988) rule of thumb for achieving 80% power, which is the minimum suggested power for an ordinary study, 30 participants per variable are needed to obtain a medium to large effect size.

This implies that, for this study, a sample size of 30 times 5 variables is needed. Namely, two incentive variables (remunerative and moral), two for appeal type (emotional and rational) and one for environmental concern. Ultimately, this results in a minimum required sample size of 150 participants. For conjoint analysis, the general rule of thumb is to have a minimal sample size between 200 to 300 participants (Orme, 2010). Therefore, the target sample size of this study was 200+ participants.

As no specific characteristics were needed to participate in this research, convenience sampling was carried out to obtain a large sample in a relatively short time. Convenience sampling involves selecting participants who are easily accessible to the researcher, making it a practical method (Golzar et al., 2002). To reach a broach audience, the survey was distributed through personal networks and social media platforms. As convenience sampling inherits drawbacks, such as less generalizable results, distributing the surveys across various platforms can add diversity which will help mitigate this limitation (Golzar et al., 2002).

In total, 335 participants responded to the questionnaire. Since some participants did not complete the survey, disagreed with the terms and conditions or responded incorrectly to the control questions such as "*Which of the sentences below did you see in the advertisement?*", they were excluded from the final sample (n = 90). Moreover, people who indicated to only stick to one brand were also excluded from the final sample (n = 6), as they do not make trade-offs while shopping for clothing and are therefore not suitable for the conjoint analysis. Therefore, the final sample consists of 239 participants.

Table 5 below shows the profile of the respondents, including gender, age, education and income. Most respondents are female, almost 80% of the sample (n = 190). Male respondents accounted for 19.7% (n = 47) and 0.8% identified as other (n = 2). The age distribution shows that a large part of the sample consisted of younger individuals. Specifically, more than 50% of the respondents fall into the age category 18 – 24 years (n = 120), followed by 19.7% (n = 47) in the 25 – 34 category. A smaller portion of the sample were aged 35 and above. Looking at educational background, the majority (43.1%, n = 103) held a bachelor's degree, followed by high school (20.1%, n = 48) and MBO (19.7%, n = 47). Fewer participants reported having a master's degree, primary education, a PhD or other forms of education. Regarding income, the sample was diverse. The largest portion of the sample (28.9%, n =

69) reported earning less than €1.000 per month, while 23.8% (n = 57) earned over €3.000. The remaining participants ranged between an income of €1.000 and €3.000 per month.

Table 5 – Sociodemographic characteristics (N = 239)

	Frequency	Percentage
Gender		
Female	190	79.498
Male	47	19.665
Other	2	0.8368
Age		
Under 18	12	5.021
18 – 24	120	50.209
25 – 34	47	19.665
35 – 44	13	5.439
45 – 54	20	8.368
55 – 65	21	8.787
Over 65	6	2.510
Education		
Primary education	2	0.837
High school	48	20.084
MBO	47	19.665
Bachelor's degree	103	43.096
Master's degree	29	12.134
PhD	1	0.418
Other	9	3.766
Income		
Less than €1.000	69	28.870
€1.000 – €1.500	32	13.389
€1.501 – €2.000	20	8.368
€2.001 – €2.500	24	10.042
€2.501 – €3.000	37	15.481
Over €3.000	57	23.849

3.6 Sociodemographic and control variables

To account for possible influences from other variables on the result of this study, various demographic control variables were included. For the variables age, education and income, measurements from Dangelico et al. (2022) were used and slightly adjusted. Furthermore, participants also had to indicate their gender. In addition to these variables, participants were asked in the beginning regarding their familiarity and behaviour towards sustainable clothing. These control questions were "*Do you currently own any sustainable clothing (e.g., made from recycled materials, organic cotton, etc.)?*", "*How often do you buy sustainable clothing?*", "*How important is sustainability to you when purchasing clothing?*", "*When shopping for clothes, how often do you consider the environmental impact of the product?*" and "*When shopping for clothes, how likely are you to stick to only one brand?*". This last question was also important to identify participants who were not suitable for the conjoint analysis. If participants indicate to only stick to one brand, they do not make any other trade-offs while purchasing clothing. Since the goal of conjoint analysis is to explore the trade-off decisions that consumers make, these participants were excluded from the final sample.

3.7 Incentive and appeal type

To verify that participants perceived the appeals and incentives as intended in the main survey, a similar test as in the pre-test was conducted. For both types of appeals used in the advertisements, participants were asked to indicate the focus of the statements using a slider, where a score of 1 represented "emotional" and a score of 7 represented "rational". Ideally, the answer for the rational appeal would score closer to 7, while the emotional appeal would score closer to 1. A similar procedure was applied to test the incentives, where participants used a slider to indicate whether they perceived it as a moral incentive (score of 1) or a remunerative incentive (score of 7).

In Table 6, an overview of the results is presented. The mean scores indicate the average perception of each appeal and incentive type across participants. For instance, the mean score of 2.481 for the emotional appeal shows that participants generally perceived the emotional appeal as such, since

this value is closer to the "emotional" end of the scale (1). Similarly, the mean score of 5.611 for the rational appeal suggests that participants mostly perceived the rational appeal as intended, leaning toward the "rational" end of the scale (7). For incentives, the mean score of 1.946 for the moral incentive shows that participants largely viewed this incentive as moral, while the remunerative incentive scored 6.159, indicating that it was perceived as predominantly financial.

Table 6 – Focus of appeals and incentives

	Mean	SD
Emotional appeal	2.481	1.480
Rational appeal	5.611	1.451
Moral incentive	1.946	1.375
Remunerative incentive	6.159	1.264

3.8 Ethical issues

To protect participants and ensure the study's integrity, this research was approved by the BMS ethics committee of the University of Twente. For this research, the primary concern was maintaining participants' anonymity. To address this, the survey was conducted anonymously, ensuring that individual responses cannot be traced back to specific participants. A message at the beginning of the survey explained the study's purpose, the approximate time to complete it and the assurance of anonymity. Before proceeding, participants were asked to indicate their consent by selecting "agree" or "disagree". Additionally, participants were informed that they could withdraw from the research at any time, and they were provided with contact information if questions arose. These measures ensured transparency and aligned with ethical standards.

3.9 Data preparation and analysis

The dataset was imported and analysed in RStudio. As a first step, the data was cleaned; incomplete responses were removed and participants who did not correctly answer the control questions

were also excluded from the dataset. After this, a Shapiro-Wilk test was performed to indicate normality for the variables switching intention and environmental concern (Table 1 in Appendix E). For both variables, the test showed a p-value < .05, meaning that it cannot be assumed that the data is normally distributed. While the Shapiro-Wilk test indicated significant deviations from normality for both switching intention and environmental concern, the sample is large enough (n = 239) to be appropriate for ANOVA and regression since these tests can handle small deviations from normality in larger samples (according to Central Limit Theorem). To visualize the distributions of the variables, Q-Q plots and histograms were created with a normal curve which can be found in Figure 1a-d in Appendix E. For environmental concern the data is slightly skewed to the left, while switching intention shows a balanced distribution. The Q-Q plots also showed that both variables followed an approximately normal distribution with only minor deviations at the tails. To test for equal variance of the dependent variable switching intention across the groups, the Levene's test was used (Table 2, Appendix E). The Levene's test showed a p-value > .05, meaning that the assumption for equal variances was met. This implied that standard ANOVA was appropriate for data analysis.

To verify if the dataset was suitable for regression analysis, various assumptions were evaluated. Firstly, the assumption of linearity was assessed by plotting switching intention against centred environmental concern, grouped by incentive. The interaction plot (Figure 1, Appendix F) showed a linear relationship between environmental concern and switching intention within each group, suggesting that the linearity assumption was met. The assumption of homoscedasticity was tested using a residuals vs. fitted plot (Figure 2, Appendix F). The plot showed no clear funnel or shape, suggesting that the variance of the residuals is approximately constant. This was confirmed by the Breusch-Pagan test (Table 1, Appendix F) which was not significant (p > .05), indicating that the assumption of homoscedasticity was met. Normality of the error term was evaluated with a histogram of standardized residuals (Figure 3, Appendix F) and a Q-Q plot (Figure 4, Appendix F). Both figures suggested a normal distribution of the residuals, which was also confirmed with a non-significant Shapiro-Wilk test (Table 2, Appendix F). Furthermore, given that the responses were collected independently from individuals, the assumption of independence of the error term is also assumed. Lastly, multicollinearity was assessed using the generalized variance inflation factor (GVIF). All adjusted GVIF values were

below the commonly accepted threshold of 5, indicating that multicollinearity was not a major concern in the model (Table 3, Appendix F).

For data analysis, different techniques were used based on the specific objectives of each research question. To address RQ1 and its corresponding hypotheses 1, 2 and 3, a 2x2 factorial ANOVA was first conducted to test the main and interaction effects of incentive type (moral versus remunerative) and appeal type (emotional versus rational) on switching intention. This analysis served as a preliminary test as it is well-suited for identifying significant differences between experimental conditions in a between-subjects design. Subsequently, a multiple regression analysis was performed to control for demographic variables and further assess the potential moderating effect of environmental concern. In this regression model, interaction terms were computed by mean-centring environmental concern and creating dummy variables for the dichotomous factors (incentive and appeal type). Both switching intention and environmental concern were calculated as average composite scores from their respective scale items. The full model specification is as follows:

$$
\begin{aligned}
SI_i \quad &= \beta_0 + \beta_1\,[\text{Incentive type}] \\
&+ \beta_2\,[\text{Environmental concern}] \\
&+ \beta_3\,[\text{Appeal type}] \\
&+ \beta_4\,[\text{Incentive * Environmental concern}] \\
&+ \beta_5\,[\text{Incentive * Appeal}] \\
&+ \beta_6\text{-}\beta_{24}\,[\text{Controls}] + \varepsilon_i
\end{aligned}
$$

Here, SI_i represents the predicted switching intention for participant *i*, while β_0-β_{24} represent the model coefficients and ε_i the error term. Moreover, controls include categorical variables for age group, gender, education level and income. These were included to account for potential influences on switching intention.

To answer RQ2 and evaluate proposition 1, a choice-based conjoint analysis was implemented using Qualtrics software. As previously mentioned, this method simulated real-world decision-making, requiring participants to make trade-offs between different product attributes. Based on participants' selection across the presented product configurations, Qualtrics automatically generated utility scores,

feature importance metrics, preference shares and first choice percentages. These outputs were then interpreted to assess how consumers prioritize sustainability, brand type and incentive type when choosing sustainable clothing.

4. RESULTS

4.1 The role of incentives and appeals in sustainable choices

Prior to conducting the multiple regression analysis, a 2x2 factorial ANOVA was performed as preliminary test for hypotheses 1 and 2. The results of this test, presented in Table 1 of Appendix G, revealed that neither the main effects of incentive type nor appeal type were significant. Additionally, the interaction effect between incentive and appeal type did not reach statistical significance.

Next, a multiple regression was conducted including all relevant variables and interactions. The regression model is shown in Table 7. The model included incentive type as the independent variable, switching intention as dependent variable, and environmental concern and appeal type as moderators. Sociodemographic control variables (age, education, income and gender) were also included to account for additional variance. The categorical variables in the regression model were all compared to a reference category. The reference categories were selected as follows: for incentive type, the reference category was “remunerative”; for appeal type, it was “rational”; for age, the reference category was “under 18”; for gender, the reference category was “female”; for education, it was “primary education”; and for income, the reference category was “less than €1.000”. This allowed for the interpretation of the regression coefficients as the effect of each category relative to the reference category.

The first hypothesis stated that offering remunerative incentives leads to a higher switching intention for sustainable clothing compared to offering moral incentives. The results of the multiple regression showed a p-value > .05 ($\beta = -0.229$) for the effect of incentive type on switching intention. Given this non-significant result, there is thus no evidence that switching intention differs between participants who received moral vs. remunerative incentives. Therefore, the first hypothesis was not supported.

Table 7 – Regression model

Variables	Coefficient	SE	p
(Intercept)	2.864	0.784	.000 ***
Incentive: moral	-0.229	0.196	.244
Environmental concern	0.701	0.095	.000 ***
Appeal: emotional	-0.258	0.206	.213
Incentive x Environmental concern	0.142	0.126	.261
Incentive x Appeal	0.282	0.289	.330
Age: 18 – 24	-0.178	0.366	.627
Age: 25 – 34	-0.497	0.429	.248
Age: 35 – 44	-0.088	0.505	.861
Age: 45 – 54	-0.454	0.484	.350
Age: 55 – 65	-0.196	0.482	.685
Age: Over 65	-0.393	0.610	.520
Gender: Male	-0.009	0.195	.963
Gender: Other	1.196	0.783	.128
Education: High school	1.481	0.782	.060 .
Education: MBO	1.869	0.817	.023 *
Education: Bachelor's degree	1.369	0.800	.088 .
Education: Master's degree	1.750	0.817	.033 *
Education: PhD	2.007	1.358	.141
Education: Other	1.552	0.883	.080 .
Income: €1.000 – €1.500	-0.021	0.240	.931
Income: €1.501 – €2.000	-0.096	0.303	.752
Income: €2.001 – €2.500	-0.349	0.299	.243
Income: €2.501 – €3.000	-0.032	0.266	.906
Income: Over €3.000	0.087	0.281	.756
Fit statistics			
Residual standard error: 1.059 on 214 degrees of freedom			
Multiple R-squared: 0.453, Adjusted R-squared: 0.392			
F-statistic: 7.40 on 24 and 214 degrees of freedom, p-value: < 2.2e-16			

****, **, *, and . coefficients are statistically significant at 0.001, 0.01, 0.05 and 0.1, respectively.*

While hypothesis 2a stated that the effectiveness of moral incentives on switching intention is stronger when paired with an emotional appeal compared to a rational appeal, hypothesis 2b suggested that the effectiveness of remunerative incentives on switching intention is stronger when paired with a rational appeal compared to an emotional appeal. According to the results in Table 7, appeal type showed no significant main effect (p-value > .05) in the multiple regression. Moreover, the interaction effect with incentive type is also non-significant as the p-value is greater than .05. The interaction effect is plotted in Figure 3, which shows relatively flat lines for both incentive types. While switching intention is slightly higher for the remunerative incentive when paired with an emotional appeal compared to a rational one, the difference is very small. For the moral incentive, switching intention remains stable across both appeal types. This pattern does not support hypotheses 2a and 2b. Since the observed trends are minimal and the regression analysis showed no significant interaction effect, it can be stated that there is no meaningful moderation effect of appeal type on the relationship between incentive type and switching intention. Therefore, H2a and H2b were not supported. The regression results thus support the ANOVA results for H1 and H2.

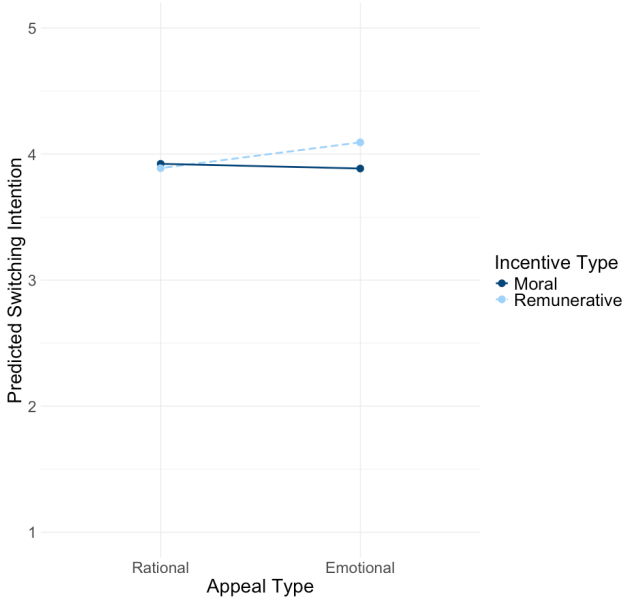

Figure 3 – Interaction plot (incentive type x appeal type)

4.2 How environmental concern influences switching intention

According to the multiple regression analysis in Table 7, the relationship between environmental concern and switching intention has a β of 0.701 and $p < .05$, indicating a positive significant relationship. This means that individuals with higher environmental concern are more likely to switch from unsustainable to sustainable clothing. Furthermore, the interaction effect between incentive type and environmental concern showed a non-significant result ($\beta = 0.142$, $p = .261$). This suggests that the relationship between environmental concern and switching intention does not significantly differ between moral and remunerative incentives. The interaction plot in Figure 4 illustrates this interaction effect. The slope for the moral incentive condition is slightly steeper than for the remunerative condition, indicating a possible stronger effect among more environmentally concerned individuals. However, the difference is not statistically significant according to the regression output. Therefore, it can be concluded that hypothesis 3 is not supported and that instead of a moderation, the results suggest a direct effect of environmental concern on switching intention. So, while environmental concern has a significant positive effect on switching intention, there is not enough evidence that high environmental concern leads to a stronger relationship between moral incentives and switching intention compared to remunerative incentives.

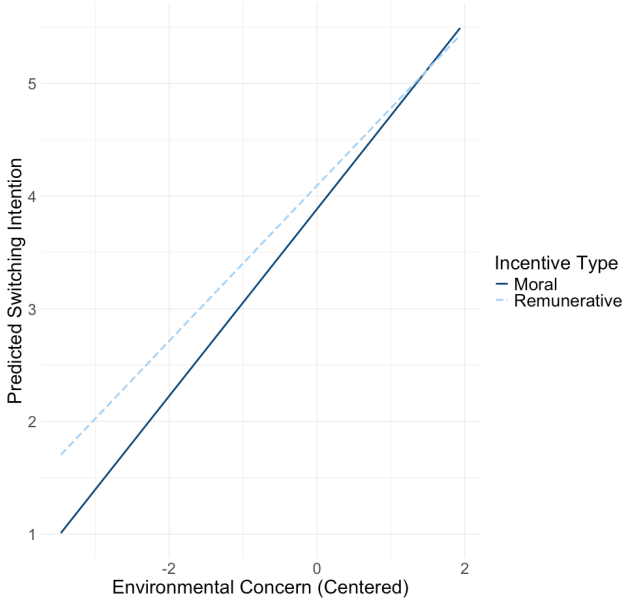

Figure 4 – Interaction plot (incentive x environmental concern)

Table 1 in Appendix H also shows a stepwise regression model, which allows for a clearer understanding of the effect of each variable on switching intention without the influence of other variables. As for the sociodemographic control variables, while education appears to have some influence, the broader set of sociodemographic characteristics do not consistently explain variation in switching intention.

4.3 Insights on sustainability trade-offs

To explore proposition 1, a conjoint analysis was performed. The aim was to examine how consumers make trade-offs between sustainability, brand type and the presence of an incentive when choosing between product options. A summary of the data that was obtained from the conjoint analysis can be found in Appendix I and in Figure 5 and Table 8 below. According to the analysed feature importance (Appendix I, Figure 1), the incentive feature weighs most in the decision-making process (39.9), followed by sustainability (34.4) and brand (25.8). This means that the incentive that was offered has the most influence on the preferred product bundle of participants.

Figure 5 below shows the relative utility values. The relative utility value is a measure of preference for each level of a feature. The higher the value, the more it enhances a product bundle by being present. For the sustainability attribute, recycled material showed the highest utility with a score of 17.2. Since sustainability only had two levels, the non-recycled material showed a relative utility value of -17.2. This indicates that consumers have a strong preference for sustainability. Looking at brand type, premium brands were favoured (12.9) over regular brand (-12.9), suggesting that consumers perceive quality as an important factor despite the assumed higher cost. For incentives, both moral incentives (13.6) and remunerative incentives (12.7) scored a positive relative utility value. No incentive was strongly unfavoured with a value of -26.3. Interestingly, the slightly higher utility for moral incentives suggests that consumers may derive satisfaction from contributing to a cause, such as supporting reforestation, even if it does not directly benefit them.

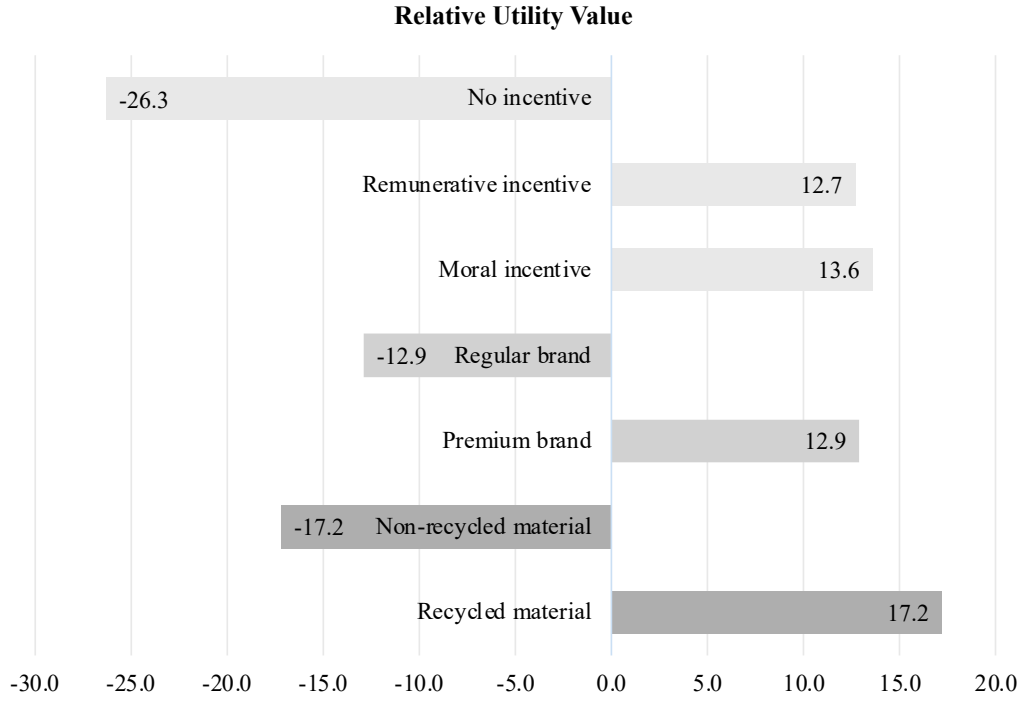

Figure 5 – Utility scores

Based on the relative utility values, all twelve possible product bundles were created, which can be found in Table 8. To compute the preference for each bundle, the total utility was calculated by summing the part-worth utilities of the attribute levels. The bundle combining recycled material, a moral incentive and a premium brand received the highest total utility score (43.7) and was indicated to be the optimal package, followed closely by the same bundle with a remunerative incentive (42.8). In contrast, the non-sustainable bundle (non-recycled material) with no incentive and a regular brand has the lowest utility score (-56.4). The same bundle with a premium brand scored better, but still low (-30.6).

The utility scores reflect the overall preference for a given bundle based on the relative importance of its attributes. A higher utility score indicates a stronger preference for that particular combination of product features, and thus, the higher the likelihood that consumers would choose it when presented with similar options. This can be interpreted as an approximation of consumer choice, where higher utility values correlate with more frequent selections of that bundle in a choice-based context.

Table 8 – Optimal product composition

Product bundle			Total utility
Sustainability	**Incentive**	**Brand type**	
Recycled	Moral	Premium	43.7
Recycled	Remunerative	Premium	42.8
Recycled	Moral	Regular	17.9
Recycled	Remunerative	Regular	17.0
Non-recycled	Moral	Premium	9.3
Non-recycled	Remunerative	Premium	8.4
Recycled	None	Premium	3.8
Non-recycled	Moral	Regular	-16.5
Non-recycled	Remunerative	Regular	-17.4
Recycled	None	Regular	-22.0
Non-recycled	None	Premium	-30.6
Non-recycled	None	Regular	-56.4

To get a deeper understanding of consumer preferences, both preference shares and first choice percentages were extracted from the conjoint analysis (Appendix I, Figure 2 and 3). The sustainability attribute showed a very clear result. With an 83% preference share and 92% first choice rate, recycled material was strongly preferred over non-recycled material (17% preference share; 8% first choice). This again shows that sustainability proved to be an important factor among consumers when choosing their garment. Furthermore, premium brand scored a higher preference share (57%) and first choice (60%) compared to regular brand (43% preference share; 40% first choice). As mentioned earlier, this is interesting because it contrasts with conventional economic logic, as consumers still prefer the expensive brand, probably because of the higher quality. Lastly, both incentive types showed similar results on preference share and first choice. While moral incentives receive a 48% preference share and 52% first choice, remunerative incentives scored a 46% preference share and 47% first choice. The no incentive option was almost completely rejected with only a 6% preference share and 1% first choice. This clearly indicates that incentives are important drivers while choosing between products.

In conclusion, these findings provide support for the proposition that incentives can influence how consumers navigate trade-offs between sustainability and other product features. While consumers

already show a strong preference for recycled material and premium brands, the addition of an incentive (moral or remunerative) increases the overall utility of these product bundles. This shows that incentives increase the attractiveness of sustainable options and encourage consumers to choose the environmentally friendlier alternative. Although no formal statistical test was conducted, the results indicate that both moral and remunerative incentives appear to be effective. This suggests that emotional or ethical motives can be just as persuasive as direct personal gain in the context of sustainable fashion.

4.4 Summary of the results

The results from the preliminary 2x2 factorial ANOVA showed no significant effect of incentive type, appeal type, or their interaction on switching intention. These findings were confirmed by the multiple regression analysis, which also showed no support for hypotheses 1 and 2. Additionally, the multiple regression results revealed that while environmental concern was positively associated with switching intention, the proposed interaction between incentive type and environmental concern was not significant. Consequently, hypothesis 3 was not supported, suggesting instead a direct effect of environmental concern on switching intention.

Regarding the conjoint analysis, the findings provide indicative support for the proposition that incentives increase the likelihood that consumers prioritize sustainability over other product attributes such as brand type. Although no formal statistical test was conducted, the conjoint results show that sustainability was generally preferred over brand and that the presence of incentives, whether moral or remunerative, further increased the overall utility of sustainable product bundles. Since both incentive types had a similar impact on the total utility, this suggests that moral incentives can be just as effective as monetary ones in encouraging sustainable fashion choices.

5. DISCUSSION

5.1 Main findings

The aim of this study was to investigate the extent to which different types of incentives (moral and remunerative) can motivate consumers to choose more sustainable clothing options, and to examine the trade-offs they make when considering other product attributes. In addition, the study explored the role of appeal type and environmental concern, investigating whether these factors could strengthen the relationship between incentives and switching intention.

In response to RQ1, the study found no significant difference in switching intention between participants exposed to a moral incentive or those exposed to a remunerative incentive. As the 2x2 between-subjects design did not include a no-incentive control condition, it is not possible to determine whether either incentive type was effective on its own in increasing switching intention. However, the conjoint analysis, which did incorporate a no-incentive level, revealed that both moral and remunerative incentives added substantial value to the product bundles. Specifically, the relative utility values for moral and remunerative incentives were 13.6 and 12.7 respectively, while the no-incentive condition was strongly disfavoured (-26.3). These findings indicate that the presence of an incentive, regardless of its type, can motivate consumers to purchase sustainable clothing options. Despite previous studies indicating that high prices were often the primary reason for consumers not to choose the more sustainable alternative (Bocti et al., 2021; Chang, 2011), the results of this study imply that directly addressing price concerns though financial incentives does not necessarily outperform more indirect approaches, such as moral incentives. This non-significant difference supports the idea, as emphasized by Bolderdijk et al. (2013), that maintaining a positive self-image may be just as important as tangible rewards in influencing consumer behaviour.

Although emotional and rational appeals are generally considered influential in shaping consumer behaviour (Rahman & Pial, 2019), their impact in the context of incentives for sustainable fashion appears to be limited in this research. Since Xie et al. (2004) already established that emotional appeals tend to be more effective for incentives compared to no or negative appeals, this study compared the effectiveness of emotional and rational appeals for both types of incentives. The results, however,

indicated no significant interaction, meaning that participants' responses to moral versus remunerative incentives remained consistent, whether the advertisement used an emotional or a rational appeal. This suggests that consumers primarily based their purchase choices on the incentive itself, regardless of the emotional or rational appeal of the message. One possible explanation for the non-significant interaction is that the effectiveness of emotional versus rational appeals may depend on individual-level factors, such as personal traits or perceived product relevance. According to Hirsh et al. (2012), advertising appeals are more effective when aligned with personality traits, such as extraversion. Since this study did not tailor the appeals to participants' traits, the effectiveness of specific appeal types may have been weakened across the sample. In addition, Casais and Pereira (2012) suggest that appeal effectiveness depends on how relevant the product is to the consumer. They argue that rational appeals tend to work better for highly relevant products, while emotional appeals are more persuasive for less relevant products. As the perceived relevance of the sustainable jacket used in this study likely varied among participants, this may have further reduced the overall impact of appeal type.

When examining the role of environmental concern, results showed a direct and positive effect on switching intention. This finding aligns with the research of Balaskas et al. (2023), which suggests that the more environmentally concerned a consumer is, the more likely they are to choose eco-friendly products. More central to the research aim, however, was whether environmental concern would moderate the effectiveness of different incentives. The findings showed no significant interaction effect between environmental concern and incentive type, meaning that the effectiveness of moral versus remunerative incentives did not differ based on participants' level of environmental concern. One possible explanation for this result is that both types of incentives can appeal to consumers with a high degree of environmental concern, but in different ways. While moral incentives align directly with environmental values, remunerative incentives may serve as a way to make the sustainable alternative more financially accessible. As a result, individuals with high environmental concern may respond positively to either incentive type, even if the underlying motivations differ. Consequently, it remains difficult to determine the extent to which incentives themselves influenced switching intention among these consumers, as environmental concern alone may have been a sufficient driver for choosing sustainable options.

Regarding RQ2, this study aimed to explore how consumers make trade-offs between sustainability and other product attributes when choosing sustainable clothing. Previous research by Luchs and Kumar (2017) has shown that consumers face difficult trade-offs when choosing between sustainability and other product features. The findings of this study indicate that the presence of incentives can play a key role in making sustainable alternatives more appealing. The feature importance analysis revealed that the incentive was the most influential factor for consumers' choices (39.9%), followed by sustainability (34.4%) and brand type (25.8%). This is in line with the theoretical perspective of Subramanian (2017), who emphasized that incentives could make a meaningful differentiation, as product quality has become the minimum expectation in today's market. Incentives, whether financial or non-fiscal, can offer additional value that extends beyond the product's inherent qualities.

Interestingly, the relative utility values show that recycled material was strongly preferred. Moreover, consumers favoured premium brands over regular brands. This finding supports the idea that consumers value both sustainability and quality when making choices, even if these are associated with a higher price. This aligns with prior findings that consumers prioritize performance and quality (Luchs & Kumar, 2017; Lindgren et al. 2009; Luchs et al. 2012), but contradicts the research of Jacobs et al. (2018), who argued that the higher price of sustainable clothing, resulting from the use of better-quality materials and fair labour standards, often discourages many consumers. A potential explanation for this discrepancy may lie in the sample composition of this study. With over half of participants aged between 18 and 24, the results may reflect a generational difference. According to research (Firstinsight, 2020), Gen Z shoppers prefer to buy sustainable brands and are also willing to spend more. Moreover, Gen Z and Millenials experience higher degrees of environmental concern, including greater levels of guilt, fear and outrage about the impacts of climate change compared to older generations (Poortinga et al., 2023). This is in line with the findings of this study, in which younger participants (Gen Z and Millenials up to 44 years old, n = 192) reported moderately high environmental concern, with a mean of 4.73 on a 7-point scale (SD = 1.16). Although the difference in environmental concern between these younger and older participants in this sample was not substantial (likely due to the smaller number of older respondents), existing literature suggests that among younger consumers, this concern positively

influences the willingness to pay more for green products (Gomes et al., 2023). This generational effect could explain why premium and sustainable options were not perceived as conflicting, but rather preferred.

In conclusion, the findings suggest that consumers make trade-offs by weighing incentives most heavily, followed by sustainability and brand. While both moral and remunerative incentives were positively valued by participants, the no-incentive option was strongly unfavoured. This indicates that the inclusion of incentives can meaningfully shift preferences toward more sustainable choices, even when higher quality or price are also factors. It is of particular interest that the utility for moral incentives was approximately the same as that of remunerative ones. This highlights that ethical motivations, such as supporting reforestation, can be a strong driver of consumer choices in sustainable fashion, even if the personal gain is not immediate.

5.2 Implications

This study has both practical and theoretical implications for promoting sustainable fashion. On a practical level, the findings suggest that monetary incentives, such as discounts or subsidies, are not the only effective means of encouraging sustainable consumption behaviour. Moral incentives, such as a reforestation program, can be equally persuasive in shifting consumer preferences toward sustainable clothing. These types of incentives not only add value to the product but can also contribute positively to brand image and reputation. For policymakers, this suggests that cost-effective and value-based incentives may offer viable alternatives to financial subsidies when aiming to promote sustainable behaviour. In addition, the findings also show that consumers place high importance on quality and sustainability, even when these are associated with higher costs. Premium brands using recycled materials were preferred, indicating that sustainability and quality are not perceived as mutually exclusive. However, this result may partly reflect the demographic profile of the sample, which consisted largely of Gen Z participants. Future research should therefore examine whether these findings generalize to older or more price-sensitive consumers.

From an academic perspective, this research contributed to the literature by applying incentive theory to sustainable consumption behaviour in the fashion industry. Building on the work of Bolderdijk et al. (2013) and Subramanian (2017), the study provides empirical support for the idea that both moral and remunerative incentives can enhance the appeal of sustainable clothing. By using a conjoint analysis to explore how consumers make trade-offs between sustainability, brand type and incentives, this study adds depth to the understanding of multi-attribute decision-making in a sustainability context. Finally, the interdisciplinary nature of this study, integrating perspectives from both communication science and business administration, demonstrates the value of combining marketing communication theories with behavioural economic insights to develop more effective sustainability strategies.

5.3 Limitations and recommendations for future research

Besides the practical and academic implications, several limitations of this study should be acknowledged. First, the sample was not demographically diverse. A significant proportion of the participants (80%) were female and more than 50% of the sample was aged between 18 and 24. This demographic distribution limits the generalizability of the findings to other gender and age groups.

Another limitation lies in the design of the switching intention experiment, which did not include a no-incentive control condition. While a no-incentive level was included in the conjoint analysis, its absence in the experimental design makes it difficult to isolate the effect of having any incentive versus none on switching intention. This choice was made to maintain a manageable number of conditions, but feature research could benefit from including a no-incentive control to clarify the effect of incentives in general.

Furthermore, both the advertisements and the conjoint tasks featured a jacket. Even though the choice for this clothing item was intentional (as described in chapter 3.2), this study did not measure perceived aesthetics or personal relevance of the product. Therefore, it is possible that this had an influence on how participants responded to the offered incentive for this garment. It may have been beneficial to include several product options (e.g., jacket, jeans, shirt) in the pre-test to assess which

garment would be most suitable for this study. On the other hand, participants had already indicated the pre-test to be too lengthy and complex, so this could have affected the quality of the responses as well.

Finally, the attribute "brand type" was used to capture both price and quality, distinguishing between "premium" and "regular" brands. Although definitions were provided, these terms may have been interpreted differently by participants. Dividing these terms into a separate quality and price attribute could have provided a more nuanced understanding. Future research could examine these factors separately and assess in more detail how quality influences consumers' choice for a garment and how price sensitive they are.

In addition to these limitations, there are also several directions that future research could take. First, while this research focused on moral and remunerative incentives, Subramanian (2017) identified two other categories: natural and coercive incentives. Exploring how these alternative incentives affect sustainable consumption choices would offer additional insights into consumer motivation. Since moral and remunerative incentives were found to have similar effects in the context of sustainable fashion, future research could also explore if this finding differs in other product categories or industries.

The timing of incentives is another aspect worth examining in future research. The remunerative incentive used in this study offered a discount on the next purchase, introducing a delay in personal benefit. Future studies could compare immediate versus delayed incentives to assess how time sensitivity influences consumer responsiveness. This could also be extended to include how consumers evaluate the long-term value of sustainable products, such as how long an item must last to justify its higher cost or claim of superior quality.

This study also focused on a specific set of trade-offs: between sustainability, brand type and incentives. Future research could explore other relevant trade-offs, such as between sustainability and aesthetics, comfort or durability. Similarly, the communication elements used in this study were limited to emotional and rational appeals. Future research could examine which other factors in communication might enhance the effectiveness of incentives. Examples for this could include message framing or examining the degree of emotional intensity, as Xie et al. (2004) did find that emotional appeals enhance incentive effectiveness. Gaining a deeper understanding of the influence of communication tactics could help refine strategies for encouraging sustainable behaviour.

Lastly, this study distinguished only between “premium” and “regular” brands as abstract concepts. Future research could incorporate actual brand names to assess how brand perception influences sustainable choices. Testing with well-known brands may offer insights into how reputation, trust or familiarity interact with incentives and sustainability to shape consumer decisions.

5.4 Conclusion

This study aimed to examine how different types of incentives (moral and remunerative) influence consumer behaviour in the context of sustainable fashion and how consumers make trade-offs between sustainability and other product attributes such as brand type and incentives. By combining a 2x2 between-subjects experiment with a conjoint analysis, the study provided insights into behavioural intentions and a broader understanding of decision-making patterns.

In response to the first research question, the findings revealed no significant difference in switching intention between participants exposed to a moral versus a remunerative incentive. Moreover, neither appeal type (rational or emotional) nor environmental concern was found to significantly moderate this effect. While environmental concern did show a direct positive effect on switching intention, its interaction with incentive type was not significant. Similarly, no interaction effect was found between incentive type and appeal type. As the conjoint analysis indicated that incentives increased the overall utility of the product bundles, the findings suggest that consumers’ likelihood to choose sustainable clothing is primarily influenced by the presence of an incentive itself, rather than by the appeal of the advertisement or by individual differences in environmental concern.

The second research question explored how consumers weigh sustainability against other product attributes. Results from the conjoint analysis indicated that incentives were the most influential attribute in shaping consumer preferences, followed by sustainability and brand type. Recycled material was strongly preferred over non-recycled material, and premium brands were favoured over regular ones. Notably, both moral and remunerative incentives significantly increased the total utility of the product bundles, while the no-incentive option was strongly disfavoured. These findings highlight that incentives, whether moral or remunerative, can meaningfully shift consumer preference toward

sustainable choices. In addition, participants in this study demonstrated a willingness to pay a premium for higher quality rather than settling for average quality at a standard price.

Together, these findings contribute to the literature on sustainable consumption by demonstrating that both moral and remunerative incentives can promote environmentally responsible choices. They also show that while individual characteristics like environmental concern matter, incentives play a direct role in consumer decision-making. By integrating theories from multiple research fields, this study offers practical and theoretical guidance for organisations and policymakers aiming to encourage sustainable consumption behaviour in the fashion industry.

In conclusion, this research shows that incentives play a central role in guiding sustainable purchase choices. While appeal type and environmental concern did not strengthen the effect of incentives, their potential relevance in other contexts remains a subject for future research. Overall, the findings underscore the practical potential of using incentives, both moral and remunerative, to make sustainable fashion choices more appealing to consumers.

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7. APPENDICES

7.1 Appendix A – AI statement

During the preparation of this work the author used Microsoft Word and ChatGPT in order to assist with refining language and improving grammar. After using this tool, the author reviewed and edited the content as needed and takes full responsibility for the content of the work.

7.2 Appendix B – Pre-test

Prior to the distribution of the questionnaire, a pre-test was conducted to design the stimuli. For this study, survey-based pre-testing was carried out with a minimum recommended sample size of 30 participants (Perneger et al., 2014). In total 52 participants took part in the pre-test. Since 19 participants did not complete the survey, the ultimate sample size ended up being 33. The pre-test was conducted to validate whether examples of remunerative and moral incentives and emotional and rational appeals were interpreted as intended by the target audience. Consequently, the two best incentives (moral and remunerative) and appeals (emotional and rational) were used in the main survey.

In the pre-test, participants were shown three examples of both emotional and rational appeals (see Table 1). For each appeal, they were asked to rate their agreement on a 7-point scale. Specifically, three scales measured how each appeal aligned with rationality, while the other three assessed its emotional impact. The scales were developed based on definitions and characteristics outlined by Leonidu and Leonidu (2009). After reviewing the appeals, participants were also asked to select the emotional and rational appeals they felt best matched the provided definitions. The same procedure was applied to test moral and remunerative incentives. Participants were presented with three examples of each type of incentive (see Table 2) and rated them using scales developed based on Subramanian's (2017) definitions. Finally, participants were asked to choose the incentive that they felt best matched each of the two incentive definitions (moral and remunerative).

Table 1 – Overview of appeals

Emotional appeals (EA)	Rational appeals (RA)
EA1: The jacket that keeps you cozy through the cold, every wear feels like a little bit of comfort.	**RA1**: Engineered for all-weather protection, this jacket keeps you comfortable and dry in any condition.
EA2: Designed to make you feel good inside and out, every time you wear it.	**RA2**: With high-quality materials, this jacket is built to last, giving you reliable protection season after season.

EA3: Embrace every adventure with a jacket that keeps you cozy, no matter the journey.	**RA3**: Water-resistant and windproof, this jacket is your perfect companion for unpredictable weather.

Table 2 – Overview of incentives

Moral incentives (MI)	Remunerative incentives (RI)
MI1: A portion of the purchase price goes directly to funding renewable energy projects.	**RI1**: Get 10% off your next purchase when you buy this jacket.
MI2: With each purchase, a donation will be made to organizations fighting climate change.	**RI2**: Buy this jacket and receive a free water bottle.
MI3: For every jacket purchased, a tree will be planted to support reforestation efforts around the world.	**RI3**: When you buy this jacket, receive a free repair service to extend the life of your product.

For each appeal, participants were asked to rate the statements using three scales for emotionality and three scales for rationality, with each scale ranging from 1 to 7. The findings in the second and third column of Table 3 (average rationality/emotionality scores) suggest that all rational appeals were perceived as rational and all emotional appeal as emotional. However, the mean scores suggest that RA3 was perceived as the most rational appeal and EA2 as the most emotional appeal. As a second task, participants had to indicate what they perceived as the best emotional and rational appeal, these results can be found in the last two columns of Table 3. For example, EA2 was indicated most frequently as the best emotional appeal, chosen 15 times by participants. This result is in line with its highest average emotionality score. Interestingly, despite RA3 having the highest average rationality score, it was not selected as the best rational appeal most frequently, with only 9 selections. RA2, on the other hand, was chosen 13 times as the best rational appeal. Since the mean difference between RA2 and RA3 is only 0.1 and RA2 was also perceived as the least emotional of the two, RA2 was used in the main survey advertisements. For the emotional appeal EA2 was selected.

Table 3 – Overview of emotional and rational appeals

Appeal	Rational*	Emotional*	"Best" RA**	"Best" EA**
RA1	4.74	2.60	10	1
RA2	5.13	2.85	13	1
RA3	5.25	3.28	9	1
EA1	2.79	5.13	0	7
EA2	1.86	5.89	1	15
EA3	2.22	5.46	0	8

** Average score (rationality, emotionality)*

*** Counts of participants who selected the statement as the "best" appeal (rational, emotional)*

Looking at the mean scores for the incentives in Table 4, the results clearly indicate that MI3 scored highest on the scales related to moral incentives and was also most frequently (21 times) chosen as best moral incentive. For the rational incentive, RI1 was perceived as most remunerative incentive with an average score of 5.72. Additionally, 19 participants selected it as the best remunerative incentive according to the provided definition in the survey. Consequently, RI1 and MI3 were used in the advertisements and conjoint analysis for the main survey. A complete version of the preliminary survey is presented in Figure 1-8.

Table 4 – Overview of moral and remunerative incentives

Incentive	Moral*	Remunerative*	"Best" MI**	"Best" RI**
MI1	5.25	2.43	2	1
MI2	5.53	2.27	6	0
MI3	5.77	2.55	21	0
RI1	1.74	5.72	1	19
RI2	1.95	5.12	0	3
RI3	3.65	4.84	3	10

** Average score (morality, remunerativeness)*

*** Counts of participants who selected the statement as the "best" incentive (moral, remunerative)*

Thank you for participating in this study.

This survey serves as a preliminary test for my master thesis. The purpose of this survey is to find out how participants perceive certain statements and types of incentives. The survey will take approximately 10-15 minutes and the results will remain anonymous.

By continuing the survey, you agree to participate in this study. If you wish, you may withdraw from this research at any time. Your data will be used for scientific and educational purposes only.

If you have any questions, please reach out to:

Lauren van Leussen
l.vanleussen@student.utwente.nl

- ○ Agree
- ○ Disagree

Figure 1 – Preliminary test introduction

What is your age?

Figure 2 – Control question (age)

Advertisements can use different types of messages to influence consumer decisions. In the first part of the survey, you will read six statements regarding the jacket above. Please answer the related questions to indicate how you perceive each statement on a scale from 1 to 7 (1 = not at all, 7 = extremely).

Figure 3 – Introduction part 1 (appeals)

Table 1 – Overview of emotional and rational appeals

Emotional appeal	Rational appeal
"The jacket that keeps you cozy through the cold, every wear feels like a little bit of comfort."	"Engineered for all-weather protection, this jacket keeps you comfortable and dry in any condition."
"Designed to make you feel good inside and out, every time you wear it.”	"With high-quality materials, this jacket is built to last, giving you reliable protection season after season."
"Embrace every adventure with a jacket that keeps you cozy, no matter the journey.”	"Water-resistant and windproof, this jacket is your perfect companion for unpredictable weather."

"Engineered for all-weather protection, this jacket keeps you comfortable and dry in any condition."

	1: Not at all	2: Barely	3: A little	4: Neutral	5: Quite a bit	6: Very much	7: Extremely
Does this statement focus on product features, quality, or measurable benefits?	○	○	○	○	○	○	○
Does this statement provide objective, verifiable information rather than personal interpretation?	○	○	○	○	○	○	○
Does this statement appeal to logic and reasoning rather than emotions?	○	○	○	○	○	○	○
Does this statement aim to evoke emotions such as joy or pride?	○	○	○	○	○	○	○
Does this statement focus on personal, psychological, or social values rather than practical benefits?	○	○	○	○	○	○	○
Does this statement rely on feelings and subjective interpretation rather than facts?	○	○	○	○	○	○	○

Figure 4 – Scale questions for appeals

Sentences with an **emotional** appeal are designed to persuade people by **evoking positive feelings and emotions**. Which one do you think does this best?

- ○ "Engineered for all-weather protection, this jacket keeps you comfortable and dry in any condition."
- ○ "With high-quality materials, this jacket is built to last, giving you reliable protection season after season."
- ○ "Water-resistant and windproof, this jacket is your perfect companion for unpredictable weather."
- ○ "The jacket that keeps you cozy through the cold, every wear feels like a little bit of comfort."
- ○ "Designed to make you feel good inside and out, every time you wear it."
- ○ "Embrace every adventure with a jacket that keeps you cozy, no matter the journey."

Sentences with a **rational** appeal are designed to persuade people by **providing logical reasons or practical benefits**. Which one do you think does this best?

- ○ "Engineered for all-weather protection, this jacket keeps you comfortable and dry in any condition."
- ○ "With high-quality materials, this jacket is built to last, giving you reliable protection season after season."
- ○ "Water-resistant and windproof, this jacket is your perfect companion for unpredictable weather."
- ○ "The jacket that keeps you cozy through the cold, every wear feels like a little bit of comfort."
- ○ "Designed to make you feel good inside and out, every time you wear it."
- ○ "Embrace every adventure with a jacket that keeps you cozy, no matter the journey."

Figure 5 – Selection of best appeals

Companies use different types of incentives to encourage consumer choices. In the second part of the survey, you will read six incentives that could be offered for purchasing the sustainable jacket above. Please answer the related questions to indicate how you perceive each incentive on a scale from 1 to 7 (1 = not at all, 7 = extremely).

Figure 6 – Introduction part 2 (incentives)

Table 2 – Overview of moral and remunerative incentives

Moral incentive	Remunerative incentive
A portion of the purchase price goes directly to funding renewable energy projects.	Get 10% off your next purchase when you buy this jacket.
With each purchase, a donation will be made to organizations fighting climate change.	Buy this jacket and receive a free water bottle.
For every jacket purchased, a tree will be planted to support reforestation efforts around the world.	When you buy this jacket, receive a free repair service to extend the life of your product.

A portion of the purchase price goes directly to funding renewable energy projects.

	1: Not at all	2: Barely	3: A little	4: Neutral	5: Quite a bit	6: Very much	7: Extremely
Does this incentive offer a material reward, such as financial benefits or cost savings?	○	○	○	○	○	○	○
Does this incentive focus on economic benefits rather than ethical or social responsibility?	○	○	○	○	○	○	○
Does this incentive encourage action by providing a tangible benefit in return?	○	○	○	○	○	○	○
Does this incentive appeal to a sense of doing the right thing or acting responsibly?	○	○	○	○	○	○	○
Does this incentive emphasize social or cultural values rather than personal gain?	○	○	○	○	○	○	○
Does this incentive encourage action by highlighting what is considered admirable or responsible behavior?	○	○	○	○	○	○	○

Figure 7 – Scale questions for incentives

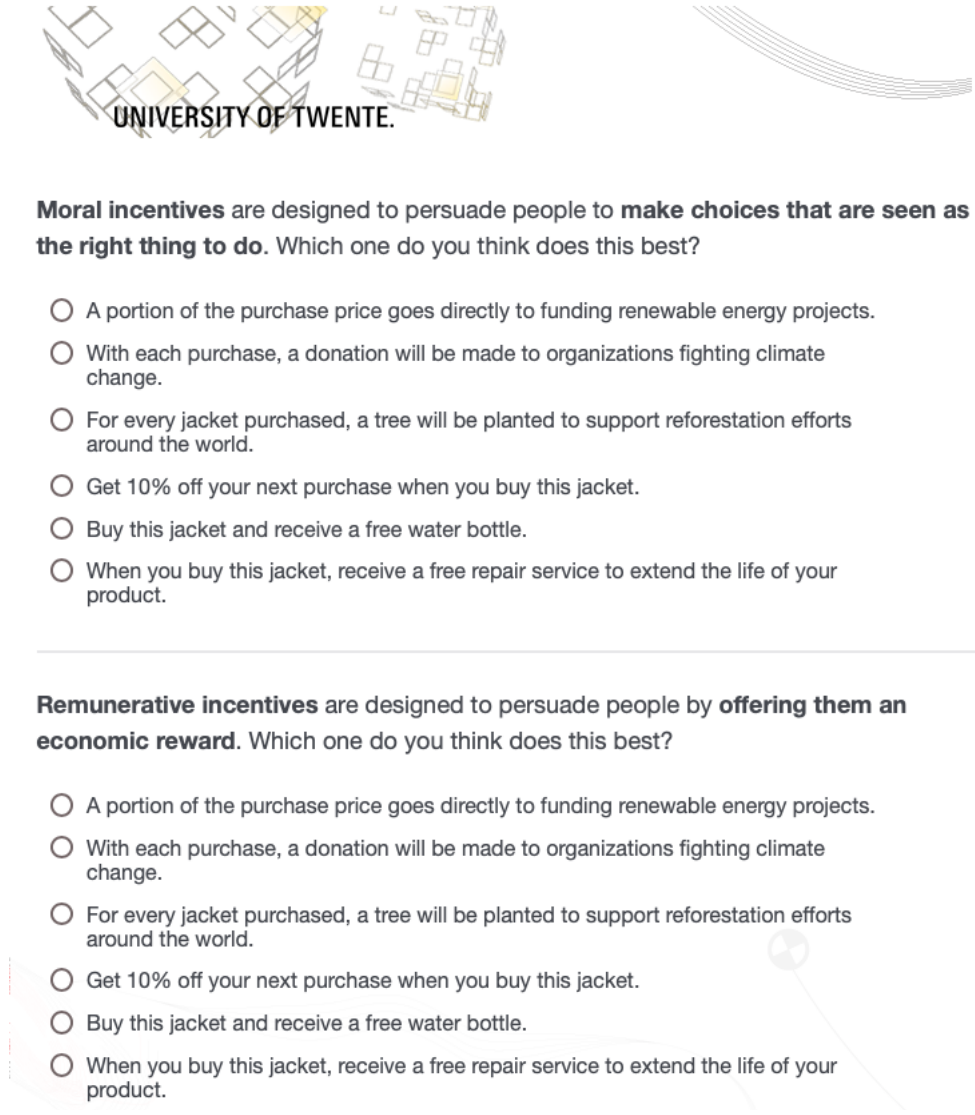

Figure 8 – Selection of best incentives

7.3 Appendix C – Main survey

Thank you for participating in this study on consumer behaviour in the context of sustainable clothing. The survey will take approximately 5-10 minutes.

By continuing the survey, you agree to participate in this study. If you wish, you may withdraw from this research at any time. No private information will be collected, and the results will remain anonymous. Your data will be used for scientific and educational purposes only. Please note that to take part in this study, you have to be 16 years or older.

If you have any questions, please reach out to:
Lauren van Leussen
l.vanleussen@student.utwente.nl

- Agree
- Disagree

Do you currently own any sustainable clothing (e.g., made from recycled materials, organic cotton, etc.)?

- Yes
- No
- Not sure

How often do you buy sustainable clothing?

- Never
- Rarely (once or twice a year)
- Occasionally (a few times a year)
- Frequently (once every few months)
- Very frequently (once a month or more)

How important is sustainability to you when purchasing clothing?

- Not important
- Slightly important
- Moderately important
- Very important
- Extremely important

When shopping for clothes, how often do you consider the environmental impact of the product?

- Never
- Rarely
- Sometimes
- Often
- Always

When shopping for clothes, how likely are you to stick to only one brand?

- Very unlikely
- Somewhat unlikely
- Neutral
- Somewhat likely
- Very likely

Please indicate your level of agreement with the following statements on environmental concern (from 1 = “strongly disagree” to 7 = “strongly agree”)

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
I am concerned about climate.	○	○	○	○	○	○	○
I am concerned about waste generation.	○	○	○	○	○	○	○
I have to save the environment for future generation.	○	○	○	○	○	○	○
Balance of nature is easily destroyed by human activities.	○	○	○	○	○	○	○
I help the environment even if it cost me more money or takes more time.	○	○	○	○	○	○	○

On the next page, you will read an advertisement for a sustainable jacket. Please read the ad carefully and then scroll down to answer the corresponding questions.

Based on the advertisement and the incentive that was offered, please indicate your level of agreement with the following statements on switching intention (from 1 = “strongly disagree” to 7 = “strongly agree”)

	Strongly disagree	Disagree	Somewhat disagree	Neutral	Somewhat agree	Agree	Strongly agree
I am considering switching from purchasing unsustainable clothing to sustainable clothing now and then.	○	○	○	○	○	○	○
I intend to switch from unsustainable clothing to sustainable clothing in my next purchase.	○	○	○	○	○	○	○
There is a high probability of my switching to purchasing sustainable clothing.	○	○	○	○	○	○	○

Which incentive was offered in the advertisement on the previous page?

Get 10% off your next purchase when you buy this jacket.

With each purchase, a donation will be made to organizations fighting climate change.

For every jacket purchased, a tree will be planted to support reforestation efforts around the world.

Buy this jacket and receive a free water bottle.

Which of the sentences below did you see in the advertisement?

With high-quality materials, this jacket is built to last, giving you reliable protection season after season.

Designed to make you feel good inside and out, every time you wear it.

Engineered for all-weather protection, this jacket keeps you comfortable and dry in any condition.

Embrace every adventure with a jacket that keeps you cozy, no matter the journey.

In this section, you will be shown four sets of hypothetical jackets. Each set will include three jackets with different combinations of attributes. For each set, please choose the jacket you prefer. You will need to make your selection four times, with each set showing different combinations of attributes. There are no right or wrong answers, just select the option that best matches your preferences. Please read below the meaning of the attributes:

Brand type:
Premium: Higher quality, but usually more expensive.
Regular: Standard quality, at an average price.

Material:
Recycled: Made from recycled materials, more sustainable.
Non-recycled: Made from non-recycled, conventional materials.

Incentive:
Plant a tree: A tree is planted for every jacket purchased, supporting reforestation.
10% discount: You receive 10% off your next purchase when you buy this jacket.
None: No special offer or discount associated with this jacket.

Tip: If you are taking this survey on your phone, please rotate your screen to landscape mode for the best viewing experience.

(1/4) If you were in the market for your next jacket and these were the only alternatives, which one would you choose?

Jacket 1	Jacket 2	Jacket 3
		
Material Recycled	Material Non-recycled	Material Recycled
Brand Premium	Brand Regular	Brand Regular
Incentive 10% discount on your next purchase	Incentive 10% discount on your next purchase	Incentive Plant a tree

Please indicate the focus of the statements below:
1 = emotional (i.e., it evokes positive feelings and emotions)
7 = rational (i.e., it provides logical reasons and/or practical benefits)

Emotional 1 2 3 4 5 6 Rational 7

"With high-quality materials, this jacket is built to last, giving you reliable protection season after season."

"Designed to make you feel good inside and out, every time you wear it."

Please indicate the focus of the statements below:
1 = moral (i.e., indicating the right thing to do)
7 = remunerative (i.e., indicating an economic reward)

Moral 1 2 3 4 5 6 Remunerative 7

For every jacket purchased, a tree will be planted to support reforestation efforts around the world.

Get 10% off your next purchase when you buy this jacket.

To conclude, we ask you to answer four sociodemographic questions.

Please select your gender:

- Female
- Male
- Other

Please select your age range:

- Under 18
- 18 - 24
- 25 -34
- 35 - 44
- 45 - 54
- 55 - 65
- Over 65

Please select your highest education:

- Primary education
- High school
- MBO
- Bachelor's degree
- Master's degree
- PhD
- Other, please explain:

Please select your monthly income range:

- Less than €1.000
- €1.000 – €1.500
- €1.501 – €2.000
- €2.001 – €2.500
- €2.501 – €3.000
- Over €3.000

7.4 Appendix D – Scale validation

Table 1 – KMO test environmental concern

Environmental concern	
Overall MSA	0.85
MSA for each item	
EC1	0.81
EC2	0.83
EC3	0.85
EC4	0.91
EC5	0.89

Table 2 – KMO test switching intention

Switching intention	
Overall MSA	0.71
MSA for each item	
SI1	0.85
SI2	0.66
SI3	0.68

7.5 Appendix E – Assumptions ANOVA

Table 1 – Shapiro-Wilk test

	Statistic	Significance
Environmental concern	0.97283	< .001
Switching intention	0.96895	< .001

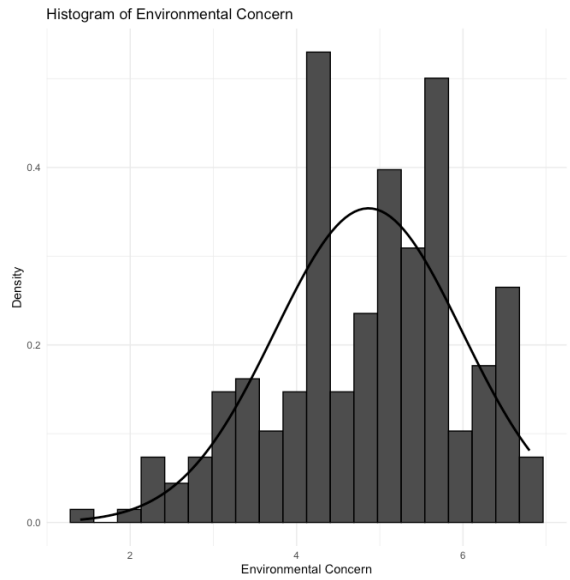

Figure 1a – Histogram EC

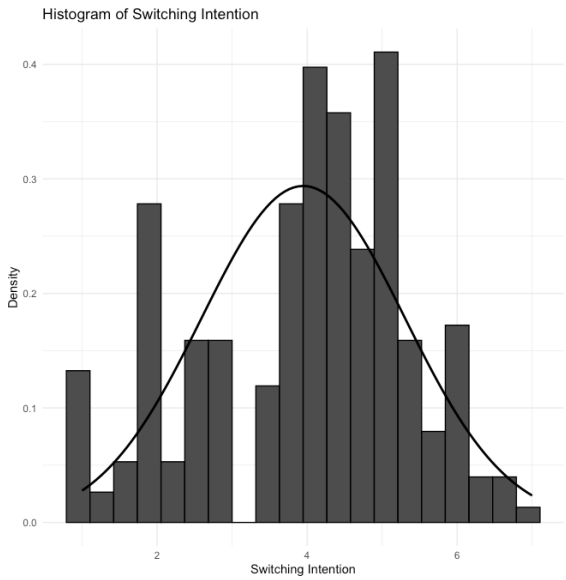

Figure 1b – Histogram SI

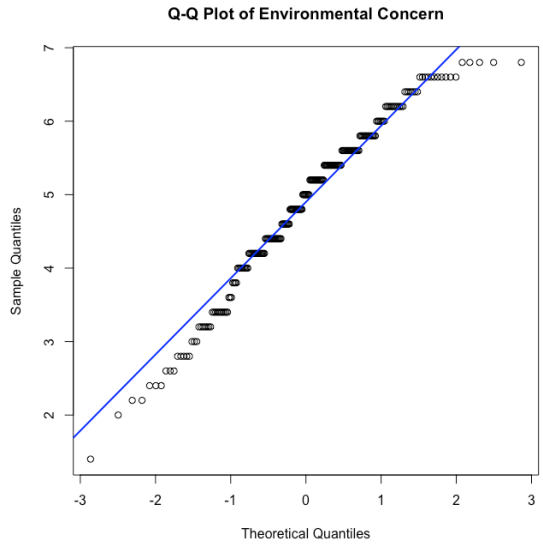

Figure 1c – Q-Q plot EC

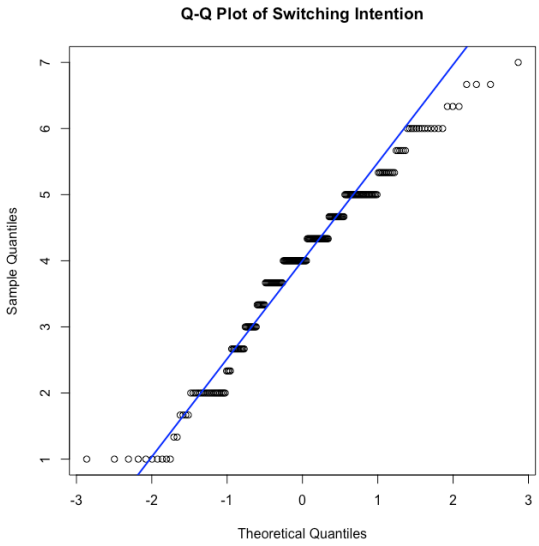

Figure 1d – Q-Q plot SI

Table 2 – Levene's Test

	df	F value	Significance
Group	3	2.03	.110
	235		

7.6 Appendix F – Assumptions regression

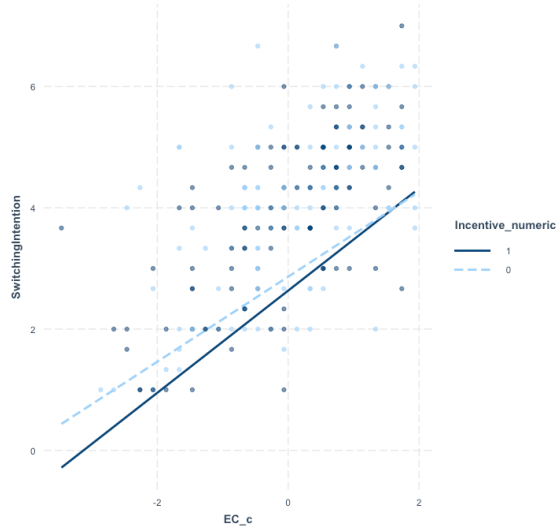

Figure 1 – Interaction plot

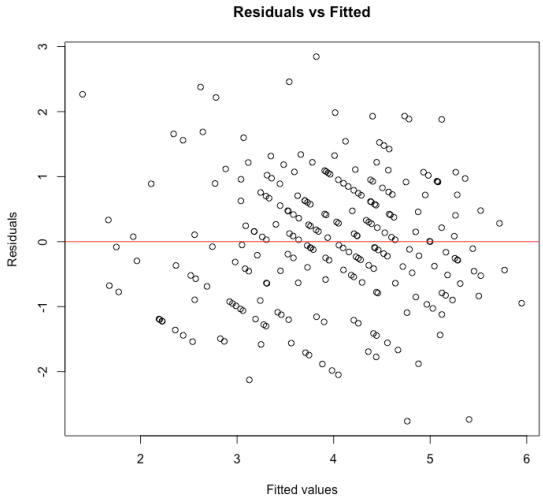

Figure 2 – Residuals vs. fitted

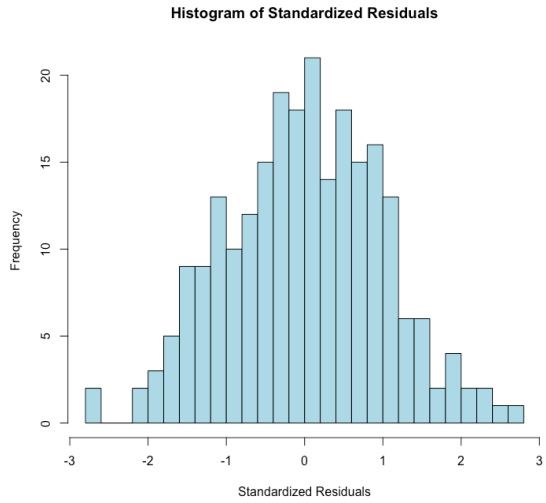

Figure 3 – Histogram of standardised residuals

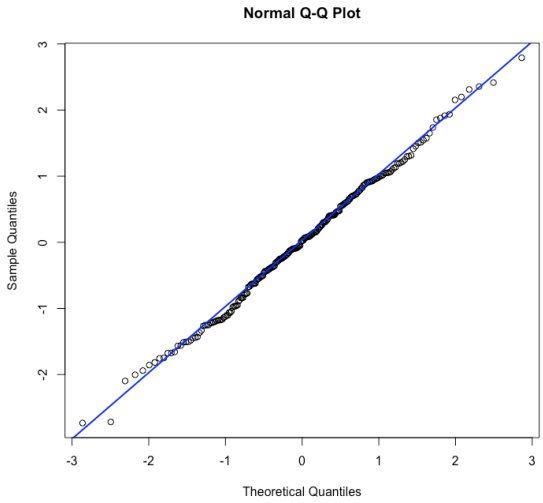

Figure 4 – Q-Q plot of standardised residuals

Table 1 – Breusch-Pagan test

	Statistic	Significance
Homoscedasticity (BP)	31.55	.139

Table 2 – Shapiro-Wilk test

	Statistic	Significance
Residuals	0.996	.866

Table 3 – Multicollinearity

	GVIF	df	Adjusted GVIF
Incentive	2.052	1	1.433
Environmental concern	2.439	1	1.562
Appeal	2.267	1	1.506
Gender	1.394	2	1.087
Age	4.164	6	1.126
Education	3.121	6	1.099
Income	3.953	5	1.147
Incentive x EC	2.205	1	1.485
Incentive x Appeal	3.449	1	1.857

7.7 Appendix G – ANOVA

Table 1 – ANOVA

	df	Sum Sq	Mean Sq	F	p	η^2_p
Incentive type	1	0.8	0.8175	0.44	.507	1.87e-03
Appeal type	1	1.2	1.1568	0.62	.430	2.65e-03
Incentive x Appeal	1	1.1	1.1355	0.61	.435	2.60e-03
Residuals	235	435.7	1.8540			

7.8 Appendix H – Regression models

Table 1 – Stepwise regression models

Variables	β (SE)	β (SE)	β (SE)	β (SE)	β (SE)
(Intercept)	4.009 (0.126) ***	3.998 (0.098) ***	4.140 (0.173) ***	2.278 (0.982) **	2.864 (0.784) ***
Incentive: moral	-0.117 (0.176)	-0.095 (0.137)	-0.245 (0.247)		-0.229 (0.196)
Environmental concern		0.689 (0.087) ***			0.701 (0.095) ***
Appeal: emotional			-0.282 (0.254)		-0.258 (0.206)
Incentive x EC		0.139 (0.121)			0.142 (0.126)
Incentive x Appeal			0.276 (0.353)		0.282 (0.289)
Age: 18 – 24				0.254 (0.458)	-0.178 (0.366)
Age: 25 – 34				0.346 (0.531)	-0.497 (0.429)
Age: 35 – 44				0.942 (0.626)	-0.088 (0.505)
Age: 45 – 54				0.836 (0.593)	-0.454 (0.484)
Age: 55 – 65				1.119 (0.592) .	-0.196 (0.482)
Age: Over 65				1.120 (0.742)	-0.393 (0.610)
Gender: Male				-0.377 (0.243)	-0.009 (0.195)
Gender: Other				1.714 (0.983) .	1.196 (0.783)
Education: High school				0.935 (0.983)	1.481 (0.782) .
Education: MBO				0.948 (1.024)	1.869 (0.817) *
Education: Bachelor's degree				0.921 (1.003)	1.369 (0.800) .
Education: Master's degree				1.561 (1.027)	1.750 (0.817) *
Education: PhD				1.796 (1.702)	2.007 (1.358)
Education: Other				1.006 (1.110)	1.552 (0.883) .
Income: €1.000 – €1.500				-0.027 (0.302)	-0.021 (0.240)
Income: €1.501 – €2.000				-0.278 (0.380)	-0.096 (0.303)
Income: €2.001 – €2.500				-0.650 (0.374) .	-0.349 (0.299)
Income: €2.501 – €3.000				-0.086 (0.329)	-0.032 (0.266)
Income: Over €3.000				-0.266 (0.351)	0.087 (0.281)
Fit statistics					
Residual standard error	1.359 on 237 df	1.055 on 235 df	1.362 on 235 df	1.341 on 219 df	1.059 on 214 df
Multiple R-squared	0.002	0.404	0.007	0.103	0.453
Adjusted R-squared	-0.002	0.396	-0.006	0.025	0.392
F-statistic	0.44 on 1 and 237 df, p = .507	52.99 on 3 and 235 df, p < 2.2e-16	0.56 on 3 and 235 df, p = .642	1.32 on 19 and 219 df, p = .173	7.40 on 24 and 214 df, p < 2.2e-16

****, **, *, and . coefficients are statistically significant at 0.001, 0.01, 0.05 and 0.1, respectively.*

7.9 Appendix I – Conjoint analysis

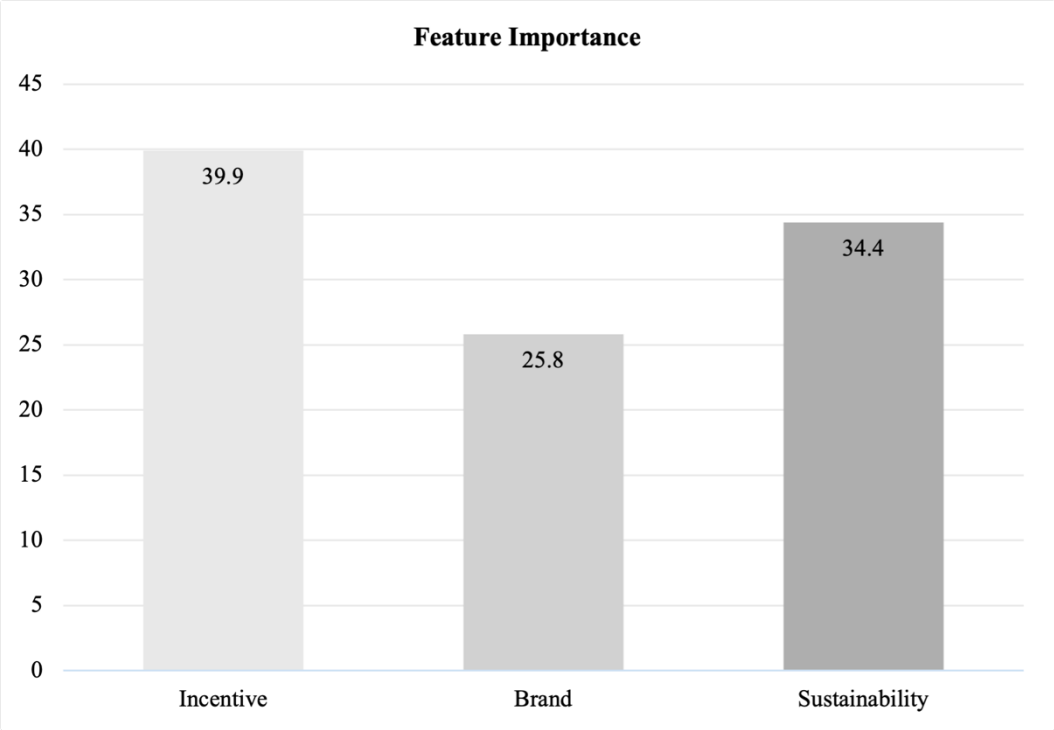

Figure 1 – Feature importance

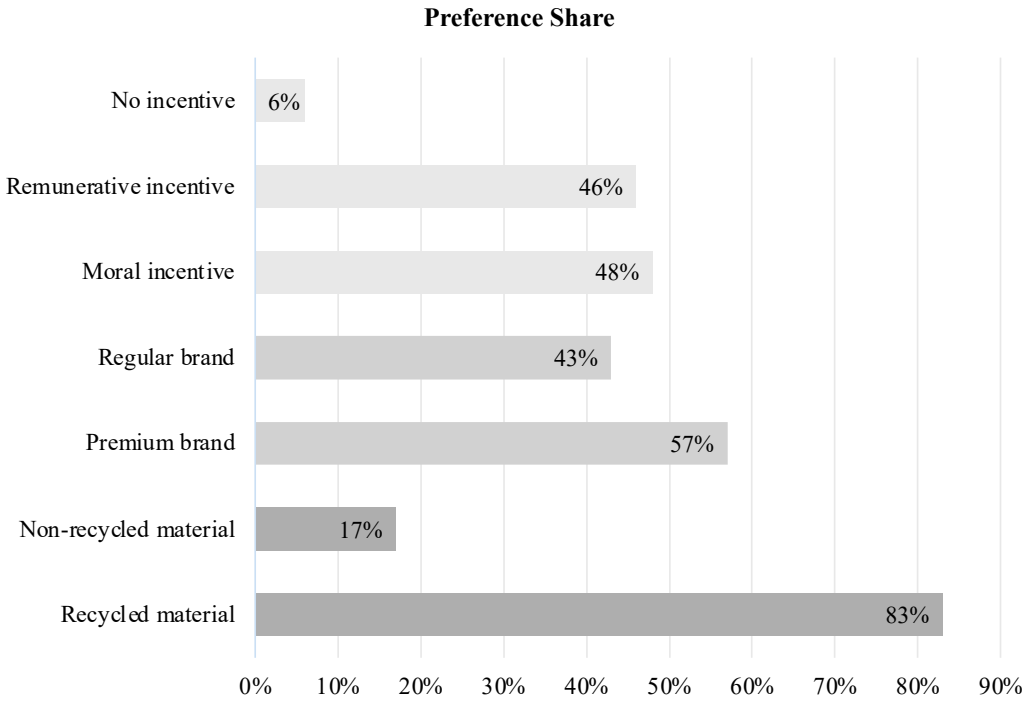

Figure 2 – Preference share

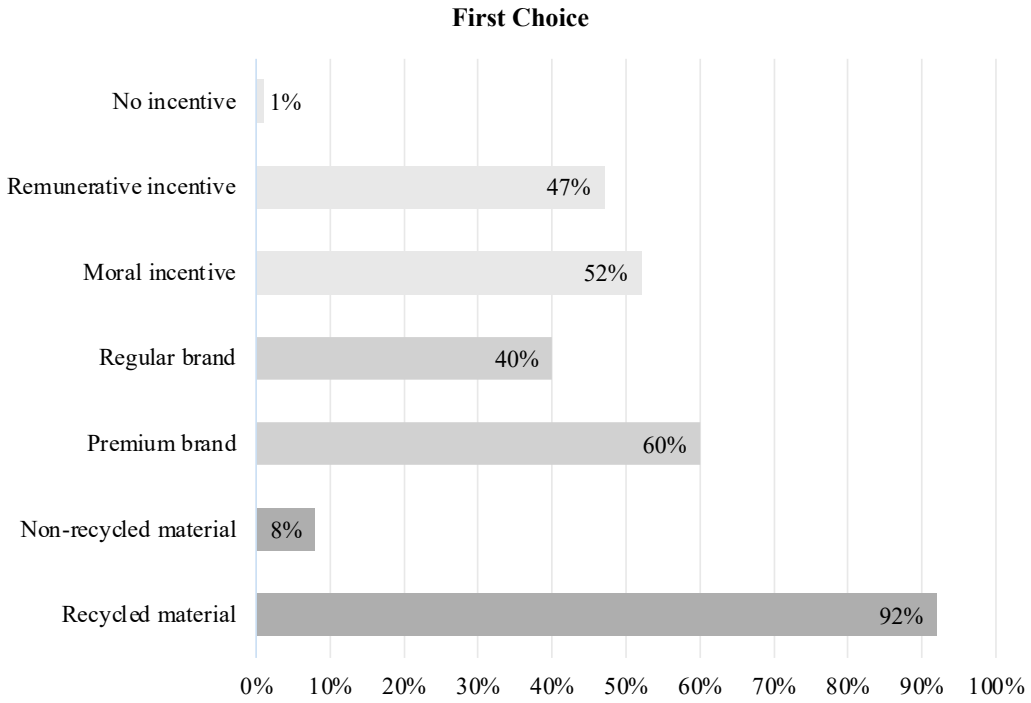

Figure 3 – First choice