



Consumer responses to trade-offs in eco-friendly clothing: The moderating effects of fashion leadership and regulatory focus

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ABSTRACT

Consumers of eco-friendly clothing often face trade-offs between eco-friendliness and other product attributes. Across two experiments, we investigate the moderating role of fashion leadership and regulatory focus in such trade-off situations. Our results suggest that while non-fashion leaders are willing to trade-off hedonic attributes for eco-friendliness, fashion leaders are not willing to trade-off either hedonic or utilitarian attributes. It is also suggested that prevention-focused fashion leaders are more likely than promotion-focused fashion leaders to trade-off hedonic attributes for eco-friendliness. Implications for practitioners as well as directions for future research are discussed.

1. Introduction

Recent market surveys suggest that U.S. consumers are reporting an increasing interest in the environmental impact of consumer goods (e.g., [Cone Communications, 2017](#); [Nielsen, 2019](#)). This consumer trend, which has been continuously growing during the past few decades, has prompted various retail industries such as automotive (e.g., [Chowdhury et al., 2016](#)), tourism (e.g., [Su et al., 2020](#)), and food (e.g., [Batat, 2020](#)) to develop and promote eco-friendly products and services. It is therefore not surprising that fashion companies also have been offering eco-friendly clothing (EFC) to garner positive reactions from consumers ([Carey and Cervellon, 2014](#); [Tung et al., 2017](#)). However, researchers indicate that there is an attitude-behavior gap. That is, the actual number of consumers who purchase EFCs is inordinately low when considering the widespread interest and strong support toward eco-friendliness ([Han et al., 2017](#); [McNeil and Moore, 2015](#); [White et al., 2019](#)). Thus, an important objective for practitioners and academics in the field of fashion is to understand the gap in order to enhance the consumption of EFCs among fashion consumers.

We attempt to do so via a conceptual framework that draws together multiple strands of research on trade-offs, fashion leadership, and regulatory focus (see [Fig. 1](#)). The trade-off literature is grounded in the notion that negative reaction toward eco-friendly products may be due to consumers inferring a trade-off between eco-friendliness and other product attributes. Recently, an extension of this approach has been

proposed by [Luchs and Kumar \(2017\)](#) who demonstrated that consumers in such trade-off situations favor products that trade-off hedonic attributes (e.g., aesthetics) for eco-friendliness as opposed to those that trade-off utilitarian attributes (e.g., functional performance) for eco-friendliness. In the context of EFCs, we anticipate typical consumers to behave in line with the above since hedonic attributes are usually considered a “want”, not a “need”. However, we argue that fashion leaders will behave in a distinct manner, given their inclination toward the hedonic aspects of clothing ([Beaudoin et al., 2000](#); [Cho et al., 2018](#); [Kim and Hong, 2011](#)). While one may question the significance of focusing on a particular consumer sub-group, we believe it is important especially due to the crucial role that fashion leaders play in the mass acceptance of apparel products; they are innovators and opinion leaders that can potentially initiate the popularity of specific apparel products among the general population ([Beaudoin et al., 2000](#); [Kang and Park-Poaps, 2010](#); [Lang and Armstrong, 2018](#); [Lee and Workman, 2014](#)). To put it another way, enhancement of EFC consumption is less likely without an accurate understanding of the preference of fashion leaders. Accordingly, we investigate whether fashion leaders and non-leaders differ in terms of their responses to trade-offs in EFCs. Our specific proposal is that consumers’ general tendency to favor EFCs that trade-off hedonic attributes (rather than utilitarian) for eco-friendliness will be attenuated as their level of fashion leadership increases.

The above proposed behavioral disparity between fashion leaders and non-leaders suggests EFC retailers to alter their strategy depending

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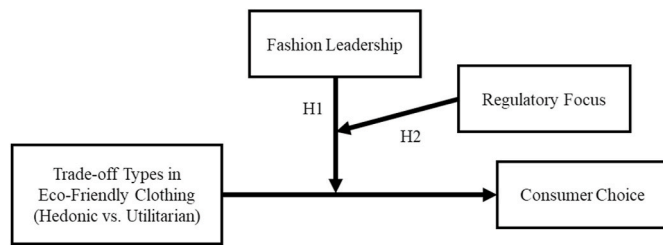


Fig. 1. Conceptual framework.

on their customers' level of fashion leadership. We recognize that this suggestion may cause strategic complications for EFC retailers. Thus, we investigate whether the behavioral disparity can be reduced via experimental manipulations. Since the disparity is likely to be caused by fashion leaders' tendency to place relatively more emphasis on the hedonic aspects of clothing, we utilize the regulatory focus theory (Higgins, 1997) which provides a framework for manipulating the relative salience of a product's hedonic or utilitarian attributes. Specifically, building on previous findings that prevention-focused individuals tend to overweight hedonic attributes (e.g., Chernev, 2004; Lin and Shen, 2012; Liu et al., 2020; Song and Qu, 2019; Tran et al., 2020), we propose that fashion leaders' unwillingness to trade-off hedonic attributes will be moderated by their regulatory focus such that prevention-focused fashion leaders (compared to promotion-focused) will be more likely to trade-off hedonic attributes for eco-friendliness. In all, our purpose is to address the attitude-behavior gap within the EFC industry by examining factors that may cause consumers to become more or less receptive to EFCs with different types of trade-offs. Our findings offer useful implications for researchers as well as practitioners, and we discuss them in terms of the previous literature and the EFC industry.

2. Literature review and hypothesis development

2.1. Trade-offs in eco-friendly products

It is widely agreed in the marketing literature (e.g., Bettman et al., 1998; Luce et al., 1999) that consumer choices often involve the consideration of trade-offs among important product attributes (e.g., whether to trade-off reliability or performance when purchasing a car). Although the concept of trade-offs has been studied extensively during the past few decades, it was not applied to an eco-friendly product context, until when Luchs et al. (2010) investigated the potential reasons for the relatively low market share of such products. Their study did not specifically utilize the term "trade-off", however, a series of experiments showed that the negative reaction toward eco-friendly products could be due to consumers associating product eco-friendliness with inferior functional performance. In other words, consumers are often discouraged from purchasing eco-friendly products due to the feeling that they would have to trade-off functional performance. This finding is also in line with Lin and Chang (2012) who demonstrated that consumers perceive eco-friendly products within certain product categories (e.g., laundry detergent, hand sanitizer) to be less effective than conventional products.

While the studies above mainly focused on perceived trade-offs, Luchs et al. (2012) argued that such trade-offs may be real and not just perceived. These researchers examined how consumers would choose in actual trade-off situations where one option bears superior eco-friendliness (and average functional performance) while the other option bears superior functional performance (and average eco-friendliness). The results suggested that consumers in such trade-off situations are reluctant to trade-off functional performance for eco-friendliness, thus more likely to favor the option with superior functional performance. Luchs and Kumar (2017) further extended these results by examining trade-offs involving not only functional

performance but also hedonic features (e.g., aesthetic design). Specifically, they demonstrated that consumers are more likely to trade-off hedonic attributes for eco-friendliness than to trade-off utilitarian attributes for eco-friendliness. In other words, consumers tend to respond more negatively to eco-friendly products when the product trades-off utilitarian attributes rather than hedonic attributes. Given the above, it is plausible to assume that the low market share of eco-friendly products is at least in some part due to the trade-off effect. Companies that offer eco-friendly products may be discouraging potential customers by not placing enough focus on enhancing their products' utilitarian features or by over-relying on superior hedonic features. In the following section, we discuss how these findings would apply in the context of EFCs.

2.2. Trade-offs in EFCs and the moderating role of fashion leadership

In line with the marketing literature, a frequent topic of interest in the fashion consumer literature has also been the inconsistency between attitude toward eco-friendliness and the actual purchase of EFCs. Within this stream of EFC research, a commonly discussed potential cause of the inconsistency is the unsatisfactory product features of EFCs as compared to those of conventional clothing. Such product features include relatively inferior quality (Carrigan and Attala, 2001; Niimimaki, 2010), inferior functional performance (Meyer, 2001), and inferior fashionability (Gam, 2011; McNeil and Moore, 2015). Other studies that specifically focused on identifying the barriers to EFC consumption reported similar results such as lack of stylishness, fit, and comfort (Connell, 2010; Harris et al., 2016). Further extending these findings upon Luchs and Kumar (2017), one could argue that consumers may be reluctant to purchase EFCs because they often face trade-offs between eco-friendliness and other important product attributes, and that consumers may respond more favorably to EFCs that trade-off hedonic attributes such as fashionability rather than EFCs that trade off utilitarian attributes such as quality.

While this argument seems logical, it is questionable whether the argument would hold for fashion leaders as well. That is, we agree that non-fashion leaders will respond more favorably to EFCs that trade-off hedonic attributes since the hedonic aspect of clothing is usually considered a "want", not a "need". However, we argue that fashion leaders will behave in a distinct manner. The rationale for our argument comes from Lamb and Kallal (1992) who suggested that apparel products serve three different needs: functional, expressive, and aesthetic. They also found that any single need could outweigh the other two needs depending on the user of the apparel product. Accordingly, it may be assumed that some consumers place more emphasis on aesthetic or expressive needs rather than functional needs. We extend this assumption to the characteristics of fashion leaders – a group of consumers that have been found to value fun, enjoyment, and excitement (Goldsmith et al., 1991; Kang and Park-Poaps, 2010) and place more emphasis on hedonic aspects of apparel compared to other consumers in the market (Beaudoin et al., 2000; Cho et al., 2018; Kim and Hong, 2011). While it may be easier for non-fashion leaders to trade-off hedonic attributes for eco-friendliness, the same decision may be more difficult for fashion leaders given their tendency to overweight hedonic attributes. Thus, we propose that consumers' choices in trade-off situations will be moderated by their level of fashion leadership such that:

H1. Consumers' tendency to trade-off hedonic attributes rather than utilitarian attributes for eco-friendliness will be attenuated (amplified) as their level of fashion leadership increases (decreases).

2.3. Consumer response in trade-off situations and the moderating role of regulatory focus

The previous hypothesis (H1) provides an important implication for researchers; that fashion leaders and non-leaders may choose differently

in trade-off situations involving hedonic or utilitarian attributes. From a managerial standpoint, EFC retailers could take advantage of this implication by offering different EFCs depending on their customers' level of fashion leadership. However, such a strategy may be impractical for some retailers since it is likely to require extra resources and also complicate the manufacturing and distribution process. Therefore, we attempt to provide an additional implication for EFC retailers by investigating whether the choice disparity between fashion leaders and non-leaders can be reduced via the use of the regulatory focus theory.

The regulatory focus theory (Higgins, 1997) is built based on the basic principle that people are motivated to approach pleasure and avoid pain. The theory states that regulatory focus is an individual's motivational orientation adopted during decision-making, and further proposes that an individual can be either approach or avoidance-oriented depending on the type of regulatory focus (promotion vs. prevention) adopted at the decision-making moment. Promotion-focused individuals are approach-oriented and focus on advancements, aspirations, and accomplishments (Forster et al., 1998). These individuals tend to prefer options that ensure achievement and are sensitive to the maximization of pleasure (Crowe and Higgins, 1997; Yoon et al., 2012). On the other hand, prevention-focused individuals are avoidance-oriented and focus on security, safety, and responsibility (Forster et al., 1998). These individuals tend to prefer options that help avoid losses and are sensitive to the minimization of pain (Crowe and Higgins, 1997; Yoon et al., 2012). To summarize, both promotion-focused and prevention-focused individuals' choices are driven by the goal of achieving a desired endpoint. The distinguishing aspect is that a promotion-focused individual's desired endpoint is the maximization of pleasure, whereas a prevention-focused individual's desired endpoint is the minimization of pain.

Building on the above, Chernev's (2004) initial research and many studies that followed (e.g., Lin and Shen, 2012; Liu et al., 2020; Song and Qu, 2019; Tran et al., 2020) showed that, during product evaluations, promotion-focused individuals are more likely to overweight hedonic attributes (e.g., an apartment with a nicer view) and underweight utilitarian attributes (e.g., an apartment with a shorter commute to work), whereas prevention-focused individuals are more likely to overweight utilitarian attributes and underweight hedonic attributes. These results can be further supported by the fact that hedonic attributes are associated with pleasure, fun, and experiential aspects of consumption, whereas utilitarian attributes are associated with function and practicality (Dhar and Wertenbroch, 2000; Hirschman and Holbrook, 1982). That is, hedonic attributes are relatively more promotion oriented, thus more likely to attract promotion-focused individuals and less likely to attract prevention-focused individuals. On the other hand, utilitarian attributes are relatively more prevention oriented, thus more likely to attract prevention-focused individuals and less likely to attract promotion-focused individuals. Consistent with this logic, we argue that the previously hypothesized (H1) choice disparity between fashion leaders and non-leaders can be reduced depending on their regulatory focus. Specifically, while fashion leaders are more likely to trade-off utilitarian attributes (overweight hedonic attributes), such tendency will be attenuated when they are prevention-focused. Likewise, while non-fashion leaders are more likely to trade-off hedonic attributes (overweight utilitarian attributes), such tendency will be attenuated when they are promotion-focused. This argument can be expressed more formally as follows:

H2. The effect of fashion leadership on consumer choice described in H1 is moderated by regulatory focus such that, a) prevention-focused fashion leaders, compared to promotion-focused, will be more likely to trade-off hedonic attributes for eco-friendliness (less likely to overweight hedonic attributes) and b) promotion-focused non-fashion leaders, compared to prevention-focused, will be more likely to trade-off utilitarian attributes for eco-friendliness (less likely to overweight utilitarian attributes).

3. Methodology

We conducted two experiments to test the proposed hypotheses. The first experiment examined the moderating role of fashion leadership in choice situations involving trade-offs between hedonic/utilitarian attributes and eco-friendliness (H1). The second experiment investigated whether fashion leaders' and non-leaders' choices in such trade-off situations are moderated by their regulatory focus (H2). Using a pilot test, we identified a set of hedonic and utilitarian attributes to utilize for our experiments. It should be noted that jeans was selected as the context for the pilot test and the two experiments, mostly due to two reasons. First, jeans is one of the most frequently utilized contexts in studies of apparel product attributes (e.g., Wu and Delong, 2006; Jin et al., 2010; Jin and Bennur, 2015). Thus, it was relatively easier, compared to other product categories, to obtain a verified list of important attributes. Second, we felt that the participant recruitment process would be more efficient due to the product category's universality and popularity across diverse demographic groups.

3.1. Pilot test

For the pilot test, we recruited 108 participants by posting a recruitment letter along with a survey link on Amazon Mechanical Turk (MTurk) – an online survey platform which allows researchers to access a pool of potential participants. Using the participant qualification tool available on MTurk, we limited our participants to those residing in the United States with a minimum of 90% approval rate (at least 90% of previous survey participations were satisfactorily completed). They were paid 25 cents each for completing the survey. Upon clicking the survey link, participants were taken to Qualtrics where they were presented with an online, self-administered questionnaire consisting of eight jeans attributes (workmanship, quality, fit, price, design, brand, fashionability, and versatility). These eight attributes were adopted from Jin and Bennur (2015) who compiled a list of important jeans attributes based on previous apparel product attributes studies that focused on jeans (Wu and Delong, 2006; Jin et al., 2010). The participants were asked to rate the relative hedonic and utilitarian content of each of the eight jeans attributes using a measure adopted from Dhar and Wertenbroch (2000); a 9-point bi-polar scale with 1 being utilitarian and 9 being hedonic. The collected ratings were tallied and averaged for each of the eight attributes: workmanship (3.23), quality (3.32), fit (3.42), versatility (3.79), price (4.13), brand (6.12), design (7.34), and fashionability (7.53). Based on these ratings, it was decided that our experiments would utilize the top two attributes with the highest average ratings (fashionability and design) as hedonic attributes and the bottom two (workmanship and quality) as utilitarian attributes.

4. Experiment 1

The primary objective of the first experiment was to demonstrate that consumers' choices in trade-off situations are moderated by their level of fashion leadership (H1). Participants were recruited via a survey invitation letter posted on MTurk. Each participant was required to reside in the United States and have a minimum of 90% approval rate. They were paid 75 cents each for completing the survey. The final sample of 406 participants were slightly biased toward females ($n = 211$), and the mean age was 37.16 with a range of 20–74. Half of them were married and 41% were never married. Majority (87%) of them had a 4-year college degree or less education. Household income ranged widely from less than \$25,000 to more than \$150,000 with the highest percentage in the \$50,000 to \$74,999 range (23%). The online questionnaire consisted of two sections. The first section measured the participants' level of fashion leadership using five 5-point Likert-type items (1 = *strongly disagree*, 5 = *strongly agree*) adopted from Gutman and Mills (1982). The second section measured the participants' responses to trade-off situations using visual stimuli adopted from Luchs and Kumar

(2017). An example of our stimuli is shown below in Fig. 2.

As shown above, the participants were placed in a choice situation involving a trade-off between fashionability and eco-friendliness by having them choose between one jeans that was superior in terms of its eco-friendliness (Jeans A) and the other that was superior in terms of its fashionability (Jeans B). If a participant chooses Jeans A, the choice would suggest that the participant is willing to trade-off fashionability for eco-friendliness, whereas the selection of Jeans B would suggest that the participant is not willing to trade-off fashionability for eco-friendliness. Since a total of four attributes were selected in the pilot test, four versions of the trade-off condition were developed (fashionability vs eco-friendliness, design vs. eco-friendliness, quality vs. eco-friendliness, and workmanship vs. eco-friendliness), and each of the 406 participants was equally and randomly assigned to one of the four trade-off conditions.

4.1. Data preparation

Pearson’s correlation analysis suggested that the five questions about fashion leadership were significantly correlated (Cronbach $\alpha = 0.89$), thus, each participant’s responses to the five questions were averaged to create a single score that represents the individual’s level of fashion leadership. The distribution of the fashion leadership scores was slightly skewed toward lower values with a mean of 2.5 ($SD = 1.06$).

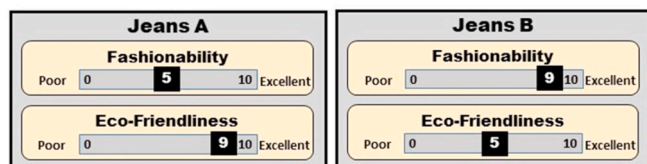
As proposed in H1, our focus was to examine trade-offs involving hedonic and utilitarian attributes. Therefore, rather than examining the four trade-off conditions separately, we combined the data from the two hedonic trade-off conditions (fashionability and design) and the two utilitarian trade-off conditions (quality and workmanship). The combination of the data was justified via a statistical confirmation of the invariance in responses: Levene’s tests confirmed the homogeneity of the variance for the fashion leadership scores between the two hedonic trade-off conditions ($F = 1.29, p = .26$) and the two utilitarian trade-off conditions ($F = 2.33, p = .13$), and chi-square tests confirmed that the choice tendencies are not significantly different between the two hedonic trade-off conditions ($\chi^2 = 2.42, p = .12$) and the two utilitarian trade-off conditions ($\chi^2 = 2.47, p = .12$).

4.2. Results

Prior to investigating the impact of fashion leadership, we utilized a logistic regression analysis to examine how the participants in general responded to the hedonic and utilitarian trade-offs. Overall, participants’ choices were shown to vary depending on the type of the trade-off situation ($\chi^2 = 20.88, p < .001$). Specifically, in the utilitarian trade-off condition where the choice was between superior eco-friendliness (Jeans A) and superior utilitarian attribute (Jeans B), significantly more participants chose the latter option (48:156), $\chi^2 = 57.18, p < .001$.

Please take a few moments to review the following scenario.

You’ve entered a store to purchase a pair of jeans. You look around the store for a while and narrow down your choice to two jeans: Jeans A and Jeans B. Your evaluations of the two jeans are summarized below in terms of their fashionability and eco-friendliness on a scale of 0 (poor) to 10 (excellent).



If you had to make a choice between Jeans A and Jeans B, which one would you choose?
 Jeans A
 Jeans B

Fig. 2. Stimuli example for trade-off between fashionability and eco-friendliness.

However, in the hedonic trade-off condition where the choice was between superior eco-friendliness (Jeans A) and superior hedonic attribute (Jeans B), no significant difference was found (91:111), $\chi^2 = 1.98, p = .16$, suggesting that the participants were more willing to trade-off hedonic attributes for eco-friendliness than to trade-off utilitarian attributes for eco-friendliness. This result is consistent with Luchs and Kumar’s (2017) previous finding that consumers tend to respond more favorably to products that trade-off hedonic attribute for eco-friendliness.

Next, we attempted to understand whether the participants’ fashion leadership moderates their responses to the hedonic and utilitarian trade-offs. Using a logistic regression analysis, we regressed the participants’ choices on trade-off type (hedonic vs. utilitarian), fashion leadership, and their interaction. Both main effects were significant, such that the likelihood of choosing the less eco-friendly option (Jeans B) increased in the hedonic trade-off condition ($\beta = 2.39, p < .001$) and as fashion leadership increased ($\beta = 0.54, p < .001$). In support of H1, trade-off type was shown to significantly interact with fashion leadership to predict choice ($\beta = -0.59, p = .006$). The moderator value defining the Johnson-Neyman significance region was 3.16 (Hayes, 2017). In other words, a disparity in choice pattern was identified between participants whose fashion leadership score was below 3.16 and their counterpart with a score of 3.16 and above. This interaction is graphed in Fig. 3.

For further insight on the interaction effect, we split our participants into two groups (fashion leaders and non-leaders) based on a fashion leadership score of 3.16, then using chi-square analyses, compared their choices by different types of trade-offs. As shown in Table 1, participants’ choices were moderated by their level of fashion leadership such that non-fashion leaders’ choices were in line with Luchs and Kumar’s (2017) findings; non-fashion leaders were more likely to trade-off hedonic attributes for eco-friendliness than to trade-off utilitarian attributes, whereas fashion leaders were not willing to trade-off either hedonic or utilitarian attributes for eco-friendliness. To put it another way, when the participants were presented with a trade-off between utilitarian attribute and eco-friendliness, they were more likely to choose the jeans with superior utilitarian attribute regardless of their fashion leadership; there was no significant difference in choice tendency between fashion leaders (14:45) and non-leaders (34:111), $\chi^2 = 0.002, p = .97$. However, when the participants were presented with a trade-off between hedonic attribute and eco-friendliness, they were relatively more likely to choose the jeans with superior hedonic attribute when their level of fashion leadership was higher; there was a significant difference in choice tendency between fashion leaders (13:32) and non-leaders (78:79), $\chi^2 = 6.11, p = .01$.

In all, our results suggest that fashion leaders and non-leaders



Fig. 3. Interactive results of fashion leadership. Note. Fashion leader = participants with a fashion leadership score of 3.16 and above.

Table 1
Fashion leaders' and non-fashion leaders' choices by type of trade-offs.

Fashion leaders			
	Jeans A		Jeans B
Hedonic trade-off	13	<	32
	$\chi^2 = .35 p = .55$		$\chi^2 = 8.02 p = .01$
Utilitarian trade-off	14	<	45
			$\chi^2 = 16.29 p < .001$
Non-fashion leaders			
	Jeans A		Jeans B
Hedonic trade-off	78	≈	79
	$\chi^2 = 22.23 p < .001$		$\chi^2 = .01 p = .94$
Utilitarian trade-off	34	<	111
			$\chi^2 = 40.89 p < .001$

Note. Jeans A = Superior eco-friendliness. Jeans B = Superior hedonic/utilitarian attribute.

respond differently in trade-off situations. We admit that the identified difference is not extreme, at least not to a degree such that fashion leaders and non-leaders respond in a polar-opposite manner. Nonetheless, it is significant enough to suggest that EFC retailers should consider altering their product offerings depending on the customers' level of fashion leadership. This finding, while interesting from an academic perspective, may be impractical for some EFC retailers due to the reasons explained earlier in this study. Thus, we conducted the second experiment to provide additional pragmatic implications.

5. Experiment 2

The primary objective of the second experiment was to demonstrate that regulatory focus moderates fashion leaders' and non-leaders' choice tendencies in trade-off situations (H2). Participants were recruited via a survey invitation letter posted on MTurk. Each participant was required to reside in the United States and have a minimum of 90% approval rate. They were paid 75 cents each for completing the survey. The final sample of 455 participants were slightly biased toward females (n = 236), and the mean age was 34.20 with a range of 18–77. Half of them were married and 40% were never married. Majority (90%) of them had a 4-year college degree or less education. Household income ranged widely from less than \$25,000 to more than \$150,000 with the highest percentage in the \$50,000 to \$74,999 range (21%). The online questionnaire consisted of three sections. The first section measured the participants' level of fashion leadership using the same procedure used in experiment 1. The second section manipulated the participants' regulatory focus using fictitious EFC advertisements; each participant was randomly assigned to one of the two types of EFC advertisements that were developed to prime either a promotion-focus or a prevention-focus. The regulatory focus theory suggests that a promotion-focus emphasizes the maximization of pleasure, which is concerned with advancements and aspirations (Forster et al., 1998). Accordingly, the promotion-priming advertisement had an image of a green globe and the headline read, "Buy Eco-Friendly Clothing to Promote a Healthier Natural Environment", followed by a message that stated, "If you buy eco-friendly clothing, you can obtain positive results for the environment, such as ... Improved Air Quality, Increased Water Supply, and Reforestation". Prevention-focus, on the other hand, emphasizes the minimization of pain, which involves safety and security (Forster et al., 1998). Accordingly, the prevention priming advertisement had an image of a red globe and the headline read, "Buy Eco-Friendly Clothing to Prevent an Unhealthy Natural Environment", followed by a message that stated, "If you buy eco-friendly clothing, you can avoid negative results for the environment, such as ... Ozone Depletion, Decreased Water Supply, and Deforestation". The third section measured the participants' responses to one of the four different trade-off conditions using the same visual stimuli from experiment 1 (See Fig. 2). In all, each of the 455 participants were equally and randomly assigned to one of the eight different experimental conditions; (promotion, prevention) ×

(fashionability, design, quality, workmanship).

5.1. Manipulation check

We adopted items from Lee and Aaker (2004) to determine the effectiveness of the EFC advertisements as a regulatory focus priming tool. The participants were asked to rate the extent to which the advertisement concerned approaching gains (promotion-priming advertisement) or avoiding losses (prevention-priming advertisement) on a scale of 1 (*definitely not*) to 7 (*definitely yes*). According to our analysis, participants that were assigned to the promotion-priming condition perceived the advertisement to be more about approaching gains (M = 5.57) rather than avoiding losses (M = 3.68), F = 40.12, p < .001. On the other hand, participants that were assigned to the prevention-priming condition perceived the advertisement to be more about avoiding losses (M = 5.47) rather than approaching gains (M = 2.96), F = 58.49, p < .001. The above confirms that the regulatory focus priming was successful.

5.2. Data preparation

The data preparation procedure was similar to the first experiment. First, based on a Pearson's correlation analysis (Cronbach $\alpha = 0.92$), each participant's responses to the five fashion leadership questions were averaged to create a single fashion leadership score (M = 2.70, SD = 1.16). Then, we combined the data collected from the two hedonic trade-off conditions and the two utilitarian trade-off conditions in reference to a series of Levene's tests and chi-square tests. Since the participants were assigned to one of two different EFC advertisements for regulatory focus priming purposes, the data was combined separately for the promotion-primed group and the prevention-primed group. Within the promotion-primed group, Levene's tests confirmed the homogeneity of the variance on the fashion leadership scores between the two hedonic trade-off conditions (F = .03, p = .87) and the two utilitarian trade-off conditions (F = 0.04, p = .83), and chi-square tests confirmed that the choice tendencies were also not significantly different between the two hedonic trade-off conditions ($\chi^2 = 0.67, p = .41$) and the two utilitarian trade-off conditions ($\chi^2 = 0.03, p = .86$). Likewise, within the prevention-primed group, the variance of the fashion leadership scores between the two hedonic trade-off conditions (F = .00, p = .99) and the two utilitarian trade-off conditions (F = 1.85, p = .18) were not statistically significant. Chi-square tests were insignificant as well for the two hedonic trade-off conditions ($\chi^2 = 0.20, p = .66$) and the two utilitarian trade-off conditions ($\chi^2 = 0.43, p = .51$).

5.3. Results

Prior to testing the influence of regulatory focus, a series of logistic regression analyses were run to confirm whether the data collected for the second experiment is consistent with our findings from the first experiment. First, we confirmed that the general choice tendency was similar to the first experiment; participants were more willing to trade-off hedonic attributes for eco-friendliness rather than utilitarian attributes. Specifically, the participants' choices were shown to depend on the type of trade-off ($\chi^2 = 21.05, p < .001$), such that participants in the utilitarian trade-off condition were more likely to choose the jeans with superior utilitarian attributes (Jeans B) (52:149), $\chi^2 = 46.81, p < .001$, whereas no significant difference was found in the hedonic trade-off condition (119:135), $\chi^2 = 1.01, p = .32$. Second, we confirmed the moderating effect of fashion leadership; that trade-off type significantly interacts with fashion leadership to predict choice ($\beta = -0.446, p = .02$). Specifically, based on the Johnson-Neyman technique (Hayes, 2017), we found that there was a choice disparity between participants whose fashion leadership score was below 3.28 and their counterpart with a score of 3.28 and above. The participants' choices were in line with the first experiment such that participants in the utilitarian trade-off

condition were more likely to choose the jeans with superior utilitarian attribute regardless of their level of fashion leadership, whereas participants in the hedonic trade-off condition were relatively more likely to choose the jeans with superior hedonic attribute when their fashion leadership score was 3.28 and above.

Next, in order to understand the impact of the participants' regulatory focus on the moderating effect of fashion leadership, we regressed the participants' choices on trade-off type, fashion leadership, regulatory focus, and their interactions. Contrary to our expectations, only two main effects (trade-off type, $\beta = 4.57, p = .01$; and fashion leadership, $\beta = 2.50, p = .01$) and one two-way interaction (trade-off type \times fashion leadership, $\beta = -1.29, p = .04$) were significant. None of the variables that included regulatory focus was significant (regulatory focus, $\beta = 2.63, p = .11$; trade-off type \times regulatory focus, $\beta = -1.41, p = .20$; fashion leadership \times regulatory focus, $\beta = -1.08, p = .06$; trade-off type \times fashion leadership \times regulatory focus, $\beta = 0.55, p = .17$). However, rather than prematurely concluding that regulatory focus has no significant impact and rejecting H2, we decided to further analyze the interaction between fashion leadership and regulatory focus (fashion leadership \times regulatory focus) due to its significance at the 10% level; although the p -value of this interaction term (0.06) was unsatisfactory according to the conventional level of significance, we felt that it was significant enough for further examination.

Such an approach is also in line with Labovitz's (1968) suggestion regarding the criteria for selecting a significance level. The study suggested that a larger error rate of 10% or even 20% is sufficient if the purpose isn't to test a hypothesis but rather to identify potentially significant inter-relations that will be subsequently tested.

Accordingly, we split the data based on the trade-off type (hedonic vs. utilitarian), then regressed the participants' choices on fashion leadership, regulatory focus, and their interactions to examine how those variables influenced the participants' choices within each trade-off condition. Within the utilitarian trade-off condition, none of the variables were significant (fashion leadership, $\beta = -.09, p = .86$; regulatory focus, $\beta = -0.19, p = .82$; fashion leadership \times regulatory focus $\beta = 0.02, p = .95$). However, within the hedonic trade-off condition, there was a simple effect of fashion leadership on choice ($\beta = 1.20, p = .002$), such that the likelihood of choosing the jeans with superior hedonic attribute (Jeans B) increased as fashion leadership increased. Also, while regulatory focus did not have a simple effect ($\beta = 1.22, p = .09$), it did significantly interact with fashion leadership to predict choice ($\beta = -0.53, p = .02$). These interactions are graphed in Fig. 4.

For further insight on the interaction effect, we split both the promotion-primed and prevention-primed participants into fashion leaders and non-leaders based on a fashion leadership score of 3.28, then using chi-square analyses, compared their choices by different types of trade-offs. As shown in the upper section of Table 2, within the utilitarian trade-off condition, all choices were biased against the eco-friendly option regardless of the participants' fashion leadership or regulatory focus. However, within the hedonic trade-off condition, choices were biased against the eco-friendly option only among

promotion-focused fashion leaders. To put it another way, within the utilitarian trade-off condition, regulatory focus had no significant influence on choice regardless of the participants' level of fashion leadership, whereas in the hedonic trade-off condition, regulatory focus had a significant influence only on fashion leaders' choices.

The above demonstrates that regulatory focus has a limited impact on choice. But what does this finding reveal about H2? Can regulatory focus reduce the choice disparity between fashion leaders and non-leaders? To address these questions, we conducted additional chi-square analyses comparing the participants' choices separately for fashion leaders and non-leaders. As shown in the lower section of Table 2, promotion-focused fashion leaders were not willing to trade-off either hedonic or utilitarian attributes for eco-friendliness, whereas prevention-focused fashion leaders were more willing to trade-off hedonic attributes rather than utilitarian attributes for eco-friendliness. This finding supports the first half of our H2 which proposed that prevention-focused fashion leaders, compared to promotion-focused, will be more likely to trade-off hedonics attributes for eco-friendliness. However, contrary to our predictions in the

latter half of H2, non-fashion leaders' choice tendency remained unchanged regardless of their regulatory focus. Thus, H2 was partially supported. Also important to note in the lower section of Table 2 is that the choice tendency is similar between fashion leaders and non-leaders only within the prevention condition (both groups are more likely to trade-off hedonic attributes rather utilitarian for eco-friendliness), thus suggesting that the choice disparity between fashion leaders and non-leaders may be reduced when they are prevention-focused. This finding can be further supported by the upper section of Table 2; within the prevention condition, there is no significant difference between fashion leaders and non-leaders for both hedonic trade-off ($\chi^2 = 0.21, p = .65$) and utilitarian trade-off ($\chi^2 = 0.01, p = .94$).

6. Discussion and implications

While previous studies of EFCs provide a wealth of knowledge regarding the attitude-behavior gap (e.g., Carrigan and Attalla, 2001; Niinimäki, 2010), our work provides distinct findings by investigating the issue in the context of trade-offs. Specifically, across two experiments, we examined factors that may cause consumers to become more or less receptive to EFCs with different types of attribute trade-offs. The first experiment, which investigated the impact of fashion leadership, demonstrated that non-fashion leaders are more likely to choose EFCs that trade-off hedonic attributes (e.g., fashionability) for eco-friendliness rather than EFCs that trade-off utilitarian attributes (e.g., workmanship), whereas fashion leaders are not willing to trade-off either hedonic or utilitarian attribute for eco-friendliness. In other words, EFCs are relatively more likely to be chosen when the product trades-off hedonic attributes (rather than utilitarian), however such choice tendency is attenuated when the consumer's level of fashion leadership is high. The second experiment investigated whether the choice disparity between fashion leaders and non-leaders (as

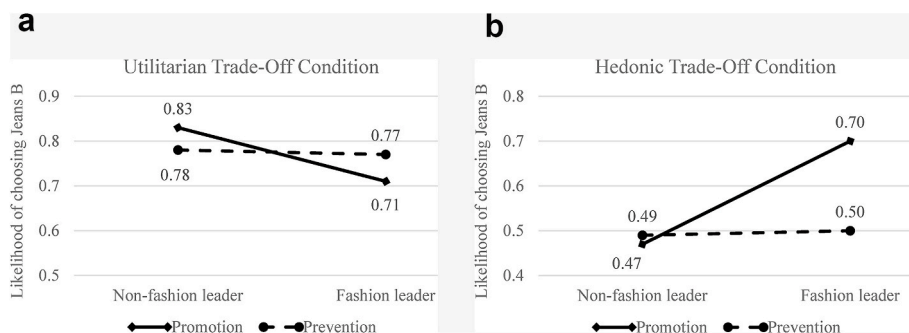


Fig. 4. Interactive results of regulatory focus. Note. Fashion leader = participants with a fashion leadership score of 3.28 and above.

Table 2
Promotion-primed and prevention-primed participants' choices by type of trade-offs and fashion leadership.

Hedonic vs. Utilitarian		Promotion		Prevention			
		A	B	A	B		
Hedonic trade-off	Non-fashion leaders	39	≈ 34	χ ² = .34 p = .56	34	≈ 33	χ ² = .02 p = .90
	Fashion leaders	16	< 38	χ ² = 7.158 p = .007	28	≈ 32	χ ² = .21 p = .65
Utilitarian trade-off	Non-fashion leaders	13	< 62	χ ² = 8.96 p = .003	17	< 59	χ ² = .27 p = .61
	Fashion leaders	7	< 17	χ ² = 32.01 p < .001	6	< 20	χ ² = .01 p = .94
Fashion leaders vs. Non-fashion leaders		Promotion		Prevention			
		A	B	A	B		
Fashion leaders	Hedonic trade-off	16	< 38	χ ² = 8.96 p = .003	28	≈ 32	χ ² = 12.50 p < .001
	Utilitarian trade-off	7	< 17	χ ² = .002 p = .97	6	< 20	χ ² = 4.22 p = .04
Non-fashion leaders	Hedonic trade-off	39	≈ 34	χ ² = 4.17 p = .04	34	≈ 33	χ ² = .02 p = .90
	Utilitarian trade-off	13	< 62	χ ² = 21.14 p < .001	17	< 59	χ ² = 23.21 p < .001

Note. A = Jeans with superior eco-friendliness. B = Jeans with superior hedonic/utilitarian attribute.

demonstrated in the first experiment) can be reduced by manipulating their regulatory focus. Results suggested that the choice disparity becomes insignificant when the participants are prevention-focused, while the disparity remains significant when the participants are promotion-focused. More simply, it was found that both fashion leaders and non-leaders are more likely to choose EFCs that trade-off hedonic attributes (rather than utilitarian) when they are prevention-focused.

Our findings complement and extend the literature in three ways. First, we advance the understanding of how consumers respond to trade-offs between eco-friendliness and hedonic/utilitarian attributes by identifying significant moderators that were not considered in previous studies. While our finding regarding the impact of fashion leadership is likely to be relevant only to fashion researchers and practitioners, we point to the fact that the concept of fashion leadership shares important similarities with the concept of product involvement: both personality traits are characterized by an inclination toward the hedonic aspects of a product (see [Laurent and Kapferer, 1985](#)). Since product involvement is a more general concept that is applicable to a wider range of products, we expect our findings to be extendable to other product categories by utilizing the concept of product involvement instead of fashion leadership. Second, with respect to EFC research, previous studies that investigated the gap between eco-friendly attitude and actual behavior mostly focused on identifying product attributes that consumers want (or perceive as missing) in EFCs, but not on identifying product attributes consumers do not necessarily need or look for. For instance, [Ha-Brookshire and Norum \(2011\)](#) suggested strong brand name, easy care, and high quality as factors that positively impact the consumers' willingness to pay more for EFCs; [Connell \(2010\)](#) identified a number of attributes that are desired in EFCs (e.g., style, fit); and [Wagner et al. \(2019\)](#) found that consumers look for style, versatility, and fashionability when evaluating EFCs. However, all of these studies placed no particular focus on identifying attributes that consumers are inattentive to. In this regard, the trade-off perspective that we utilize enables one to examine both aspects: attributes that consumers are not willing to trade-off and willing to trade-off for eco-friendliness. Such perspective is especially useful for EFC retailers as it allows them to determine whether de-emphasizing or reducing the investment on a certain product attribute is a trade-off that would deter the customers; the ability to make such decisions could provide increased financial flexibility for the company. Third, it is widely agreed among researchers and practitioners that fashion leaders are one of the most important group of consumers due to their interest in fashion and the influence they have on other consumers' adoption of fashion items (e.g., [Beaudoin et al., 2000](#); [Kang and Park-Poaps, 2010](#); [Lee and Workman, 2014](#)). Thus, it is obvious that attracting fashion leaders is vital to the success of any type of fashion

businesses, including EFC retailers. Number of studies suggest potential solutions for enhancing fashion leaders' EFC consumption such as better educating the consumers or offering EFCs that better match consumer needs and wants (e.g., [Connell, 2010](#); [Ha-Brookshire and Norum, 2011](#)), yet most of those are long-term solutions that do not provide immediate outcomes upon implementation. While the value of these long-term solutions should not be overlooked, our results provide a potential short-term solution by demonstrating that fashion leaders' tendency to avoid unattractive EFCs (EFCs with only superior utilitarian features) may be attenuated via regulatory focus manipulations.

Our findings also provide managerial implications in terms of product development and marketing strategies. While previous studies suggest EFC retailers to focus their resources on developing and offering products with superior utilitarian features and avoid over-investing in hedonic features (e.g., [Luchs and Kumar, 2017](#)), our results from H1 suggests that such choice tendency is attenuated as consumers' level of fashion leadership becomes higher. That is, EFC retailers may fail to attract fashion leaders if their focus is slanted toward utilitarian attributes without enough attention placed on hedonic attributes. In order to attract fashion leaders, retailers should develop and offer EFCs with not only strong utilitarian features but also equally strong hedonic features. This suggestion is also in line with [Gam's \(2011\)](#) assumption that fashion leaders' unwillingness to purchase EFCs may be due the product not being fashionable or attractive enough. A concern one may raise, however, is that developing an EFC that is desirable in both utilitarian and hedonic aspects could be unrealistic and impractical. Unless a retailer possesses sufficient resources and capabilities, added product complexity such as shown above, is likely to create difficulties across various stages of the supply chain including product development and manufacturing ([Closs et al., 2008](#)). Accordingly, we provide EFC retailers an alternative strategy for attracting fashion leaders, which we discuss subsequently.

Our results from H2 demonstrate that prevention-focused fashion leaders (compared to promotion-focused) are less likely to focus on the hedonic aspects of a product, and that fashion leaders and non-leaders display similar choice tendencies in trade-off situations when they are prevention focused. That is, as opposed to having separate strategies based on the customers' level of fashion leadership, EFC retailers may be able to attract fashion leaders and non-leaders simultaneously by priming both of them to be in a prevention-focused state and offering EFCs with superior utilitarian features (EFCs lacking hedonic features). In regards to the regulatory focus of the customers, our experimental procedure suggest that EFC retailers may increase the likeliness of their customers being prevention-focused by exposing them to prevention-priming messages. While we utilized a print advertisement setting as

the stimulus, the variety of methods utilized by researchers for priming regulatory focus (see Motyka et al., 2014) suggest that any type of communication tools such as videos (e.g., video showing how purchasing EFC prevents global warming) or sales conversation (e.g., sales rep talking to customers about how supporting the brand helps prevent ozone depletion) can be equally effective as long as the embedded message is correctly designed to prime a prevention orientation. EFC retailers may also consider utilizing multiple communication tools simultaneously to enhance the effectiveness of the message. However, given Aaker and Lee's (2001) finding that such enhancement is likely to occur only when the messages are consistent with one's regulatory orientation, care should be taken to ensure that all messages are consistently prevention-focused.

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