

**The interplay between gender, ethical attributes and brand loyalty:
The moderating role of shopping motives**

By

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Abstract

In recent years, there has been an increased consumer preference for ethical product attributes. This research aims to investigate the moderating influence of consumers' shopping motives on the interplay between gender, ethical attributes preference, and brand loyalty. An online cross-sectional study was undertaken with 506 food consumers. Structural equation modelling was used to estimate direct, indirect, and moderating effects between the studied constructs and variables. We found that all the four investigated shopping motives (i.e., good atmosphere, low prices, high quality, and good assortment) moderate the relationship between gender and ethical attributes and that one shopping motive (i.e., good atmosphere) moderate the relationship between ethical attributes and brand loyalty. This research offers new insights into the consumer ethics and brand loyalty literature by describing a more fine-grained picture on how consumers develop preference for ethical attributes and how this preference, in turn, may influence brand loyalty.

1. Introduction

The focus on consumer preference for ethical product attributes has increased tremendously in recent years (Vanhamme et al., 2021; Bodur et al., 2016). Ethical attributes are product attributes, which consumers consider to have positive implications for environmental protection, human rights, animal welfare, and/or social issues (Gupta and Sen, 2013; Luchs et al., 2010; Mai et al., 2017). Consumer preference for ethical attributes may have an impact on suppliers' profit and market share. Empirical findings have demonstrated that consumers adhering to ethical attributes generally posit a willingness to pay a premium price for brands they believe are in line with certain ethical standards (Bangsa, A.B., Schlegelmilch, 2020; Hasselbach and Roosen, 2015; D'Amico et al., 2016) and that they tend to show higher brand loyalty towards such brands (e.g., Singh et al., 2012; Kim et al., 2010; Valenzuela et al., 2010; Lau and Lee, 2000).

Consumers' preference for ethical attributes can be seen as criteria, which transcend specific products (Grunert and Juhl, 1995) and which may act as a general motive that can be used by consumers to select and justify their overall brand choice behavior. However, consumers also bring other motives to the marketplace. A substantial amount of literature has addressed the importance of shopping motives in understanding consumers' decisions (e.g., Desmichel and Kocher, 2020; Noble et al., 2006; Arnold and Reynolds, 2012); focusing on motives such as low prices, high quality, and good atmosphere, among others. Shopping motives can be conceptualized as consumers' needs and wants related to their shopping decisions (Kang and Park-Poaps, 2010).

It has been suggested that shopping motives may not only influence consumers' tendency to show loyalty towards different stores (e.g., Noble et al., 2006) but also their tendency to show loyalty towards brands (Jamal et al., 2006). Although there is considerable research on factors that influence consumers' ethical preferences and brand loyalty, no previous research has specifically studied how consumers' demand for ethical attributes may *interplay* with shopping motives in influencing their brand loyalty. This is unfortunate, as a better understanding of this interplay may assist managers in improving the ethical positioning of their brands. For example, to what extent do shopping motives moderate the relationship between preference for ethical attributes and brand loyalty? We suggest that such research questions are highly relevant also from a theoretical perspective since both cognitive consistency theory (Festinger, 1957; Heider, 1958, 1979; Osgood and Tannenbaum, 1955; Newcomb, 1953) and cognitive congruence theory (Goodman, 1980;

Kuster-Boluda and Vila-Lopez, 2022; Heckler and Childers, 1992; Meyers-Levy and Tybout, 1989; Teng et al., 2014; Bodur et al., 2014) posit that consumers seek consistency/congruency between their preferences (e.g., preferences for ethical attributes), motives (e.g., shopping motives), and behavior (e.g., brand loyalty).

Research also indicates that men and women may differ in their interest in ethical attributes (Kennedy et al., 2017; Kouchaki and Kray, 2018) and possibly in their tendency to show loyalty (Rialti et al., 2017; Meyers-Levy and Loken, 2015). On the backdrop of such considerations, this research investigates whether consumers' general shopping motives may moderate the relationships between gender, ethical attributes preference, and brand loyalty.

In summary, the aim of this study is twofold. First, we analyze whether gender influences preference for ethical attributes and whether this preference, in turn, influences brand loyalty. Second, we investigate whether these relationships are moderated by shopping motives. Our study is based on an online survey of 506 food consumers. Ethical attributes are known to be particularly important to many consumers when shopping for food products (e.g., Kaiser et al., 2021; Allés et al., 2017; Pino et al., 2012).

2. Theoretical background and research questions

Drawing on previous research concerning gender, consumer ethics, brand loyalty, and shopping motives, a conceptual model is initially developed for the purpose of guiding this research (Figure 1). Our model is developed based on the expectation that ethical attributes preference may partially mediate the relationship between gender and loyalty and that these relationship may be moderated by consumer shopping motives.

Insert Figure 1 about here

While consumers may be motivated by various shopping factors, a literature review (e.g., Noble et al., 2006; Horváth and Adigüzel, 2018; Jayasankaraprasad and Kathyayani, 2014; Wagner and Rudolph, 2010; Morschett et al., 2005; Donovan and Rossiter, 1982) suggests that four shopping motivations, in particular, may be dominant among food consumers: Good atmosphere, low prices, high quality products, and good assortment.

Consumers adhering to *good atmosphere* as a shopping motive are likely to prefer store environments characterized by a pleasant atmosphere (Donovan and Rossiter, 1982), which may provide them with sensory gratification (Geuens et al., 2001). Consumers may also seek to minimize purchase price and thus seek out retailers that offer *low prices*. This shopping motive, also known as economic value (Gallarza et al., 2011; Jayasankaraprasad and Kathyayani, 2014), has in a substantial amount of research been shown to influence consumer store patronage behavior (e.g., Hansen and Solgaard, 2004). Consumers adhering to this shopping motive are especially motivated to obtain price-related information in order to minimize purchase price (Noble et al., 2006). A perceived *good assortment* reduces search costs by offering the consumer option value (Hoch et al., 1999). Consumers adhering to this shopping motive are inclined to compare multiple offerings in order to find products that match their preferences (Geuens et al., 2001). Consumers adhering to *high quality* as a shopping motive are likely to focus on the general quality and freshness of food products (Morschett et al., 2005) while at the same time often reducing their focus on achieving a low purchase price (Hansen et al., 2011).

The model relationships displayed in Figure 1 are discussed in the following.

2.1. Gender, ethical attributes, and loyalty

Gender socialization theory posits that the self is largely a social product in which individuals' emotions and cognitions develop upon cultural values, ideals, and practices (Noble et al., 2006; Cross and Madson, 1997). In that respect, gender socialization theory suggests that males and females bring different sets of values and motivations to the marketplace, which may lead them to carry out different behaviors in similar contexts (Bateman and Valentine, 2010). Women and men may encode information and develop preferences using different socially-constructed cognitive structures, which also may influence their behavior (Nisbett and Ross, 1980; Venkatesh and Morris, 2000). In that respect, empirical research indicates that men generally value monetary gain and achievement, while women value positive relationships and helping others (Betz et al., 1989; Smith and Oakle, 1997). Given that women are generally more inclined than men to attend to others needs and wants, women may be especially prone to care about their surroundings and the wider effects of their behavior (Kouchaki and Kray, 2018). This indeed indicates that a gender difference may exist with regards to ethical preference. Supporting this view, past research suggests that women tend to have stronger moral identities than men and also are more likely to internalize moral traits in their self-definitions (Kennedy et al., 2017). In a similar vein, Ozdogan and Eser (2008) found that female students have higher ethical preference than their male counterparts.

Extant research suggests a positive relationship between perceived ethical level of a brand and brand loyalty. For instance, Singh et al. (2012) found a positive relationship between perceived ethicality of a brand and trust where both these variables, in turn, showed a positive relationship with brand loyalty. Valenzuela et al. (2010) found a direct relationship between consumers' perceived ethical level of a corporate brand and loyalty. We believe that such patterns may also extend to the relationship between preference for ethical attributes and brand loyalty. When searching for what product to buy consumers are likely to form expectations about product benefits (Hirschman and Holbrook, 1982) in order to achieve congruity between motivational preferences (e.g., preference for ethical attributes) and outcome. In that respect, consumers may develop loyalty toward specific brands to reinforce the feeling that the preference for ethical attributes is met (e.g., Steinhoff and Palmatier, 2016).

In summary, we seek to answer the following research question:

RQ1. To what extent does preference for ethical attributes mediate the relationship between gender and brand loyalty?

2.2. Gender, ethical attributes, loyalty, and shopping motives

Cognitive consistency theory (Festinger, 1957; Heider, 1958, 1979; Osgood and Tannenbaum, 1955; Todd and Gigerenzer, 2003) and congruency theory (Goodman, 1980; Kuster-Boluda and Vila-Lopez, 2022; Heckler and Childers, 1992; Meyers-Levy and Tybout, 1989; Mattila and Wirtz, 2001; Teng et al., 2014; Bodur et al., 2014) provide a framework that is relevant to the moderation research questions that we develop in this study. Taken together, these theories suggest that when consumers are faced with a decision problem (like buying a food product in a supermarket) they seek to balance their knowledge, preferences, attitudes, goals, feelings or desires in order to avoid a state of cognitive dissonance and to serve their self-interest (Todd and Gigerenzer, 2003; Teng et al., 2014). The notion that consumers will seek to establish congruency and mental justification in relation to their decision-making has been widely verified as an important determinant of consumers' choice behavior. For example, past research suggests that people will be less likely to consume hedonic goods when the situation makes it difficult for them to justify it (Okada, 2005). On a similar note, Chernev (2005) found that consumers are likely to seek choice-combinations that are easiest to justify. Chandon et al., (2000) demonstrated that effectiveness of sales promotions is dependent on the congruity between promotion and product category benefits. More recently, Chun

(2016) found empathy congruence to be an important indicator of consumer loyalty behavior. If consumers with a high-empathy character see a brand lacking empathy, consumer loyalty would be reduced. Teng et al., (2014) showed that consumers are likely to favor an advertised brand when the cultural meaning expressed by the ad is congruent with their own cultural beliefs and values. Hence, cognitive consistency theory and congruency theory both propose that humans are motivated by the pursuit of internal consistency. Based on these theories, we argue that consumer shopping motivations may moderate the relationships between gender, ethical attributes, and brand loyalty.

We expect that consumers adhering to low price as a shopping motivation will be less likely to show a positive relationship between ethical attributes preference and brand loyalty as compared with consumers who are less motivated by price. This is consistent with empirical findings demonstrating that consumers adhering more to ethical attributes generally posit a willingness to pay a premium price for products they believe are in line with certain ethical standards (Hasselbach and Roosen, 2015; D'Amico et al., 2016); thereby being less sensitive to lower-priced alternatives. In a similar vein, consumers' motivated by high quality should be expected to show a more positive relationship between ethical attributes preference and brand loyalty. Consumers adhering to high quality as a shopping motivation may be more likely to view low priced products as diverging products that are not consistent with their ethical preferences. Hence, such consumers may be less attracted to economic value offerings in the market place. Consumers adhering to good atmosphere may be less likely to show a positive relationship between ethical attributes preferences and brand loyalty. This is because such consumers may spend more time on each shopping trip, which allows them to look for different brand offerings in the food marketplace (Heitz-Spahn, 2013). Consumers motivated by good assortment are likely to seek to minimize search costs (Hoch et al., 1999), which may be further reduced by developing brand loyalty. Hence, consumers adhering to good assortment may be more likely to show a positive relationship between preference for ethical attributes and brand loyalty.

We also expect that shopping motivations may moderate the relationships between gender and ethical attributes preference and between gender and brand loyalty, respectively. As an example, men (vs. women) adhering to low price as a shopping motivation may be less likely to show preference for ethical attributes and to develop brand loyalty. This is because low price as a shopping motivation may reinforce the generally tendency of men (vs. women) to value monetary gain and achievement, which may be at the expense of both preference for ethical attributes and brand loyalty. As another example, women (vs. men) adhering to good atmosphere may more likely be encouraged to develop preference for ethical attributes. This is because good atmosphere is most likely consistent with women's (vs. men's) generally higher tendency to care about their surroundings (i.e., ethical attributes) and the wider effects of their behavior.

In summary, we seek to answer the following research questions:

RQ2. In what way do shopping motives moderate the relationships between gender, preference for ethical attributes, and brand loyalty?

RQ3. To what extent do shopping motives determine the mediating role of preference for ethical attributes in the relationship between gender and brand loyalty?

3. Methodology

3.1. Data collection

The data collection was carried out by the market research agency Wilke A/S using its online Danish consumer panel. A total of 506 respondents completed usable questionnaires. Respondents were screened such that only consumers who most often carry out their household food purchase participated in the survey. Of the respondents, 51.6% were women; the average age was 48.8 years

and ranged between 18 and 87 years. We investigated if the profile of our final sample deviated from the Danish population aged 18-87 on gender, education, and income level. χ^2 -tests of differences between sample and population frequencies on each of these criteria produced p -values $>.05$. This indicates that the survey sample to a fairly degree reflects the demographic profile of the studied country population.

3.2. Measurements

Ethical attributes preference was measured by four ethical attributes selected from the literature (Bodur et al., 2016; Irwin and Naylor 2009; Wagner et al., 2009). For each of the four attributes, respondents were asked to indicate their level of agreement (1=strongly disagree; 7=strongly agree) with the statement that the particular attribute is as an important choice criteria when purchasing food products. The four attributes are displayed in Table 1.

The four general shopping motives included in this study (i.e., atmosphere, price, quality, and assortment) were each measured by multiple items derived from the literature (e.g., Morschett et al., 2005; Hansen et al., 2011) (Table 1). It is known that consumer sensitivity to ethical attributes may vary by product category (Folkes and Kamins, 1999; Strahilevitz, 1999). Hence, in order to avoid possible bias associated with product category differences, respondents' level of brand loyalty was measured by their brand loyalty towards a pool of six different food product types (see Table 1). Notably, all six product types are among the most frequently purchased food product types and are available in a large variety of brands in the investigated marketplace. We also suggest that three variables, household income, education and age, may be related to the endogenous constructs (i.e., ethical attribute preference and brand loyalty, respectively) in the conceptual model and their effects should therefore be taken into account (e.g., Johansson et al., 2012). Household income (before taxes) was measured on a 5-point scale ranging from 1=less than 200.000 dkk. to 5=more than 800.000 dkk (dkk=Danish Kroner). Educational level was measured on a 6-point scale ranging from 1=without any graduation to 6=medium/long advanced study. In the study, gender was coded as 1=male and 2=female. This study relies on considering gender as binary variable – i.e., male/female – since all respondents defined themselves within one of these two gender-categories.

4. Results

This section presents our results. We begin with a validation of the applied measurement items and with examining whether common method bias may pose a serious threat to the analysis and interpretation of the data. We then test our hypothesized model and the hypothesized moderation effects with the use of SPSS Amos 28.

4.1. Validation of measurements

Confirmatory factor analysis (CFA) was conducted on the six latent factors (i.e., ethical attribute preference, brand loyalty, atmosphere, price, quality, and assortment) with each indicator specified to load on its hypothesized latent factor. Raw data was used as input for the maximum likelihood estimation procedure using the pooled sample of respondents. Table 1 summarizes the CFA results.

The measurement model yields a chi-square of 420.42 (d.f.=155, $p<.01$). However, the Hoelter(.05) (Hoelter, 1983) estimate (n=222) suggests that the lack of absolute fit can be explained by sample size. Thus, since the chi-square test is highly sensitive to sample size other fit measures are given greater prominence in evaluating model fit (e.g., Ye et al., 2007). The root mean square error of approximation (RMSEA=.058) and the comparative fit index (CFI=.93) suggest that the measurement model fits the data reasonable well (Bagozzi and Yi, 1988). Composite reliabilities were equal to or greater than .70, except for assortment which however was $>.60$, indicating

reasonable reliability of measured constructs (Bagozzi and Yi, 1988). Finally, extracted variance was greater than .50 for all latent constructs (except for assortment which however was close to .40), which to a reasonable degree satisfies the threshold value recommended by Fornell and Larcker (1981).

Insert Table 1 about here

Discriminant validity is assessed in two ways. First, the method proposed by Fornell and Larcker (1981) was applied. According to this method, the extracted variance for each individual construct should be greater than the squared correlation (i.e., shared variance) between constructs. An examination of Table 2 shows that the extracted variance for each of the constructs exceeded the squared correlation.

Insert Table 2 about here

Second, the baseline measurement model was compared to alternative models where covariances between pairs of constructs were constrained to one (Anderson and Gerbing, 1988). In every case, the restricted model had a significant ($p < .05$) poorer fit than the unrestricted model suggesting sufficient discriminant validity.

In order to assess the effects of common-method variance, we re-estimated the CFA model by adding a same-source factor (all main construct items loading on it) to the model in Figure 1 (Netemeyer et al., 1997). Common method variance is a known limitation when using self-report measures. Comparing an unconstrained model in which all indicators are related to a common factor to one in which these paths are constrained to zero represents a significance test of the effects of the same-source factor. The fit of the constrained model was $\chi^2 = 416.92$, d.f. = 154; CFI = .93; RMSEA = .058. For the unconstrained model, the fit was $\chi^2 = 388.87$, d.f. = 135, $p < .01$; CFI = .94; RMSEA = .056. The fit of the unconstrained model did not differ from that of the constrained model ($\Delta\chi^2 = 28.05$, Δ d.f. = 19, $p = .08$). Hence, we conclude that common method variance does not appear a problem in our study.

4.2. Results pertaining to RQ1

Initially, the baseline model - including the control variables - was estimated using structural equation modelling (SEM) analysis (Table 3). The model chi-square statistic was 169.98 (d.f. = 66, $p < .01$), indicating that the model fails to fit in an absolute sense. However, the more robust fit indexes (CFI = .96; NFI = .94; RMSEA = .056; Hoelter(.05) = 255) suggested an acceptable model fit. In line with our expectations, gender was positively related ethical attribute preference ($\beta = .17$, $p < .01$), which in turn showed a positive effect on brand loyalty ($\beta = .23$, $p < .01$). The effect of gender on brand loyalty was non-significant ($\beta = .07$, $p = .15$). To test the potential mediating (indirect) effect (i.e., gender on brand loyalty through preference for ethical attributes), we used bias-corrected bootstrapping to generate a 95% confidence interval (CI) around the indirect effect, where mediation occurs if the confidence interval excludes zero. The indirect effect was $\beta = .04$ and the [CI] was [.02, .08]), suggesting that preference for ethical attributes fully mediates the effect of gender on brand loyalty.

Of the control variables, we found that education was negatively related to brand loyalty ($\beta = -.10$, $p = .03$), whereas age was positively related to preference for ethical attributes ($\beta = .12$, $p = .01$).

Insert Table 3 about here

4.3. Results pertaining to RQ's 2 and 3

The moderating effects pertaining to the four shopping motives were investigated using multiple-group latent variable structural equation modeling (SEM) analysis with chi-square difference tests (Table 3). The testing of path differences between the low vs. high shopping motivations groups assumes measurement invariance – meaning that the construct measures are assumed to be invariant across the two levels. Chi-square difference tests between unconstrained models and models where the measurement weights were constrained to be equal across groups suggest that the applied measures are invariant across groups in all four incidents (atmosphere: $\Delta\chi^2=6.73$, $\Delta d.f.=8$, $p=.57$; low price: $\Delta\chi^2=13.92$, $\Delta d.f.=8$, $p=.08$; high quality: $\Delta\chi^2=11.03$, $\Delta d.f.=8$, $p=.20$; good assortment: $\Delta\chi^2=8.33$, $\Delta d.f.=8$, $p=.40$).

Atmosphere: The positive influence of preference for ethical attributes on brand loyalty was higher for consumers with a high level of good atmosphere as a shopping motivation ($\beta=.27$, $p<.01$) than for consumers with a low level of good atmosphere ($\beta=.12$, $p=.11$). A chi-square difference test suggested that the difference between coefficients was significant ($\Delta\chi^2=11.47$, $\Delta d.f.=1$, $p<.01$). Also, gender had a positive effect on preference for ethical attributes when the level of atmosphere is high ($\beta=.19$, $p<.01$), whereas no significant effect was found when the level of atmosphere is low ($\beta=.08$, $p=.21$) ($\Delta\chi^2=7.85$, $\Delta d.f.=1$, $p<.01$). Hence, women are more likely than men to show a positive relationship between preference for ethical attributes and brand loyalty with high levels of atmosphere as a shopping motivation.

To test the potential moderated mediating (indirect) effect in our conceptual model (i.e., gender on brand loyalty through preference for ethical attributes), we used bias-corrected bootstrapping to generate a 95% confidence interval around each of the indirect effects, where mediation occurs if the confidence interval excludes zero. Since, gender showed no direct effect on brand loyalty (regardless of the level of atmosphere), our tests concern whether moderated full mediation can be obtained. The results indicated that the indirect effect of gender on brand loyalty through preference for ethical attributes was non-significant when atmosphere was on a low level (95% confidence interval [CI] = [-.01, .05]), whereas the indirect effect was significant when QSF was on a high level (95% confidence interval [CI] = [.02, .12]). This suggests that moderated full mediation exists with respect to the indirect effect of gender on brand loyalty through preference for ethical attributes.

Price: Gender had a more positive effect on preference for ethical attributes when the level of price is low ($\beta=.20$, $p<.01$) vs. high ($\beta=.14$, $p=.04$) ($\Delta\chi^2=15.17$, $\Delta d.f.=1$, $p<.01$). While women generally are more likely than men to show preference for ethical attributes, this likelihood is even larger when price as a shopping motivation is on a low level.

Quality: Gender showed a positive effect on preference for ethical attributes when the level of quality was low ($\beta=.16$, $p=.02$) but had no significant effect when the level of quality was high ($\beta=.11$, $p=.11$). Hence, women are more likely than men to show preference for ethical attributes when high quality as a shopping motivation is on a low (vs. high) level.

Assortment: Gender had a more positive effect on preference for ethical attributes when the level of good assortment is high ($\beta=.22$, $p<.01$) vs. low ($\beta=.13$, $p=.05$) ($\Delta\chi^2=6.32$, $\Delta d.f.=1$, $p<.01$). Hence, for both levels of assortment, women are more likely than men to show preference for ethical attributes. This likelihood is even larger when assortment is on a high level.

Control variables: We found that the negative influence of education on brand loyalty was higher when atmosphere as a shopping motivation was high ($\beta=-.14$, $p=.04$) vs. low ($\beta=-.01$, $p=.96$) ($\Delta\chi^2=8.14$, $\Delta d.f.=1$, $p<.01$).

4.4. Competing models

To explore the robustness of the proposed conceptual model (Figure 1) two competing models were specified. Competing model 1 was a full mediating model in which gender was only allowed to influence brand loyalty through preference for ethical attributes. Competing model 1 ($\chi^2=172.03$, d.f.=67, $p<.01$; CFI=.96; NFI=.94; RMSEA=.056; Hoelter(.05)=255) was not a better fit to the data as compared with the conceptual model ($\Delta\chi^2=2.05$, Δ d.f.=1, $p=.15$). Competing model 2 was a 'direct effects only' model in which gender and preference for ethical attributes, respectively, were only allowed to have a direct influence on brand loyalty. Compared with competing model 2 ($\chi^2=184.04$, d.f.=97, $p<.01$; CFI=.96; NFI=.94; RMSEA=.059; Hoelter(.05)=239), the conceptual model was a superior fit to the data ($\Delta\chi^2=14.06$, Δ d.f.=1, $p<.01$). Hence, we did not find compelling evidence suggesting that any of the competing models were superior to the proposed conceptual model.

5. Discussion

5.1. Theoretical and practical implications

While male and female consumer preferences for ethical attributes, brand loyalty, and shopping motivations each represents prominent trends in consumer behavior research, this research suggests the importance of understanding the interplay between these components. Specifically, the results add to previous research by indicating that the relationships between gender, ethical attributes preference, and brand loyalty are contingent upon shopping motivations. In line with previous research (Kennedy et al., 2017; Kouchaki and Kray, 2018) we found that gender was positively related to preference for ethical attributes such that women are more likely than men to show preference for ethical attributes. Also, supporting previous research (Jamal et al., 2006) the results suggest that preference for ethical attributes positively affects consumers' tendency to show brand loyalty. Adding substantially to previous research, we found that all the four investigated shopping motives moderate the relationship between gender and preference ethical attributes and that one shopping motive (i.e., good atmosphere) moderated the relationship between preference for ethical attributes and brand loyalty. While we are aware of previous studies on the influence of ethical attributes (e.g., Bodur et al., 2016) and gender (e.g., Rialti et al., 2017) on brand loyalty, we are not aware of previous studies that consider the impact of both gender and ethical attributes preference and, at the same time, takes into account consumers' shopping motives.

First, we found that women are more likely than men to show a positive relationship between preference for ethical attributes and brand loyalty with high levels of atmosphere as a shopping motivation. This finding is quite consistent with a number of studies, which have shown that women (vs. men) generally have a higher tendency to care about their surroundings (e.g., atmosphere) and the wider effects of their behavior (e.g., ethical food behavior) (Kouchaki and Kray, 2018). In addition, we even found that moderated full mediation exists with respect to the indirect effect of gender (higher for women vs. men) on brand loyalty through preference for ethical attributes. Thus, by introducing shopping motives as a moderator the present study contributes to the consumer ethics and brand loyalty literature by describing a more fine-grained picture on how consumers develop preference for ethical attributes and how this preference, in turn, may influence brand loyalty.

Second, for both levels of good assortment (low and high) as a shopping motivation, we found that women are more likely than men to show preference for ethical attributes but also that this likelihood is even larger when assortment as a shopping motive is on a high level. Since consumer demand for ethical attributes is on the increase, our findings thereby also contribute to the discussion on how brand managers might respond to the ongoing 'battle in the marketplace', which

in many countries has resulted in low cost food brands gaining increased market shares (e.g., Kantar Worldpanel, 2016). In that sense, our results provide some glimmer of hope to brand managers who wish to position themselves as social responsible and ethical as they to an increasingly degree may consider selling their brands in stores, which positioning themselves as offering both good atmosphere and assortment; thereby seeking, in particular, to attract female consumers with strong ethical preferences.

Third, our results also offer possibilities to low cost brand managers who seek to benefit from the increasing demand for ethical attributes by following a strategy towards a more ethical positioning. Indeed, the results suggest that low cost brand managers seeking to connect with a substantial proportion of 'ethical' female consumers may wish to focus on selling their brands in stores, which positioning themselves as offering decent quality products at low prices. This is because women are more likely than men to show preference for ethical attributes when quality and price as shopping motivations are on low (vs. high) levels.

Fourth, brand managers without a strong wish to position their brands as offering ethical attributes may seek to attract more both male and female consumers. Specifically, we did not find any differences with respect to men's and women's propensity to show brand loyalty. Also, the direct relationship between gender and brand loyalty was unaffected by levels (low vs. high) of the four investigated shopping motives.

5.2. Limitations and suggestions for future research

We are aware of the limitations of our study. Consumers were approached via online surveys; they may behave differently when engaging in specific choice settings. Thus, although a survey is generally accepted as a means of data collection there is little control over the contextual setting and over the response behavior of consumers. While this study included several ethical attributes (e.g., organic, fair trade, and animal welfare) it is acknowledged that including additional consumer aspects (e.g., healthy food preference, consumer brand experience, among others) (Steenkamp et al., 2010; Olson, 2012) may further detail the results. This study concentrated on analyzing the consumer population of one society/culture. Although the investigated shopping motivations are relevant for most societies, and even though the considered product categories are commonly found in most marketplaces, this could mean that the results may suffer from a lack of generalizability when other countries/cultures are considered (Sebri and Zaccour, 2017). Also, this study used consumers' self-reported brand loyalty behavior, which could be threatened by biased responses. Future studies could examine these issues by manipulating ethical attributes and/or shopping motives in an experimental setting. Such an experimental study would also replicate the present cross-sectional survey results in a more controlled laboratory setting, and thus provide even stronger evidence for the direction of causality in the conceptual model and the obtained moderating effects.

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Table 1 Confirmatory factor analysis results.

Construct/indicator	Standardized factor loading ^a	Critical ratio	Composite reliability	Extracted variance
<i>Preference for ethical attributes</i>			.90	.70
X1 Organic	.79	-		
X2 Certified 'fair trade' products	.74	17.81		
X3 Friendly to the environment	.92	23.32		
X4 Produced with respect to animal welfare	.89	22.60		
<i>Good atmosphere</i>			.77	.63
X5 Friendly staff	.88	-		
X6 Good atmosphere	.70	7.34		
<i>Low price</i>			.75	.51
X7 Cheapest food products	.61	-		
X8 Low price	.87	10.42		
X9 Good offers	.64	10.97		
<i>High quality</i>			.73	.59
X10 Fresh food products	.94	-		
X11 Good quality	.55	5.72		
<i>Good assortment</i>			.63	.37
X12 Assortment of specialties	.52	-		
X13 Food products are not sold out	.65	7.72		
X14 Good assortment	.64	7.72		
<i>Brand loyalty</i>			.90	.70
X15 Dairy products	.65	-		
X16 Bread	.78	14.42		
X17 Fruit & vegetables	.75	14.01		
X18 Cold cuts	.80	14.64		
X19 Colonial	.62	12.02		
X20 Meat	.76	14.11		

Notes

^a One item for each construct was set to 1.

CFA analysis (pooled sample): Model fit: $\chi^2 = 420.42$ (d.f.=155, $p < .01$); CFI=.93; RMSEA=.058; Hoelter(.05)=222.

Ethical attribute preference was measured on 7-point Likert scales (1=strongly disagree; 7=strongly agree), the four shopping motives (i.e., atmosphere, price, quality, and assortment) were measured on 7-point preference scales ranging from (1=highly unimportant to 7=highly important), whereas brand loyalty was measured on 7-point Likert scales ('when shopping for [product category], I always choose the same brand') (1=strongly disagree; 7=strongly agree)).

Table 2 Correlations and descriptive statistics.

	1	2	3	4	5	6	7	8	9	10
1. Ethical attribute preference	.70									
2. Atmosphere	.01	.63								
3. Price	-.06	<.01	.51							
4. Quality	.13	<-.01	<.01	.59						
5. Assortment	<.01	.20	<.01	.02	.37					
6. Brand loyalty	.06	<-.01	<.01	.09	<-.01	.70				
7. Gender	na	na	na	na	na	na	na			
8. Income	<-.01	<-.01	-.04	<.01	<.01	<-.01	na	na		
9. Education	<.01	<-.01	-.04	<-.01	<-.01	<-.01	na	.04	na	
10. Age	.01	-.01	-.02	.06	<.01	<.01	na	<.01	<.01	na
Mean	4.27	5.07	4.63	5.92	5.29	4.09	.52 ^b	3.11	5.93	49.8
Std. deviation	1.55	1.38	1.24	.91	1.01	1.23	na	1.12	1.60	16.5

Notes

^bProportion of female respondents is reported.

Na: not applicable.

Averaged scale means are reported.

The diagonal represents average amount of extracted variance for each construct.

Values reported below the diagonal represent the squared correlations (i.e., shared variance) between constructs (positive/negative signs maintained).

Table 3
Estimated standardized coefficients.

Relationship	Shopping motives - moderating effects																	
	Main model effects		Good atmosphere		Low price		High quality		Good assortment									
	β (SE)	t-Value	Low	High	Low	High	Low	High	Low	High								
<i>Main model relationships</i>																		
Gender																		
→preference for ethical attributes	.17(.14)	3.75 ^a	.08(.19)	1.27	.19(.20)	2.89^a	.20(.20)	3.11^a	.14(.19)	2.08^b	.16(.19)	2.30^b	.11(.21)	1.60	.13(.20)	2.00^a	.22(.20)	3.26^a
Gender																		
→brand loyalty	.07(.11)	1.43	.04(.14)	0.62	.05(.18)	.69	.11(.17)	1.67	.05(.13)	.68	.14(.15)	2.03 ^b	-.04(.16)	-.58	.18(.16)	2.67 ^a	-.05(.15)	-.07
Preference for ethical attributes																		
→brand loyalty	.23(.04)	4.45 ^a	.12(.05)	1.59	.27(.06)	3.71^a	.24(.06)	3.41 ^a	.22(.05)	2.94 ^a	.20(.06)	2.75 ^a	.20(.05)	2.70 ^a	.21(.06)	2.91 ^a	.26(.06)	3.50 ^a
<i>Controls</i>																		
Income																		
→preference for ethical attributes	-.04(.06)	-.75	-.03(.09)	-.40	-.09(.09)	-1.24	-.03(.09)	.41	-.09(.08)	-1.30	.03(.08)	.41	-.10(.10)	-1.42	.03(.09)	.05	-.08(.09)	-1.11
Income																		
→brand loyalty	-.01(.05)	-.02	-.03(.05)	-0.38	.04(.08)	.58	-.01(.08)	-.07	.03(.06)	.37	.08(.06)	1.17	-.06(.07)	-.88	-.03(.07)	-.43	.02(.07)	.34
Education																		
→preference for ethical attributes	.06(.04)	1.21	.10(.07)	1.42	.09(.06)	1.25	.07(.07)	1.04	-.02(.06)	-.03	.11(.06)	1.67	.06(.06)	.85	.05(.06)	.80	.07(.06)	1.00
Education																		
→brand loyalty	-.10(.03)	-2.15 ^b	-.01(.05)	-0.05	-.14(.05)	-2.02^b	-.15(.06)	-2.22 ^b	-.04(.04)	-.54	-.07(.05)	-1.08	-.09(.05)	-1.33	-.02(.05)	-.27	-.14(.05)	-2.07 ^b
Age																		
→preference for ethical attributes	.12(.01)	2.56 ^a	.10(.01)	1.53	-.02(.01)	-.27	.06(.01)	.93	.14(.01)	2.04 ^b	-.01(.01)	-.01	.09(.01)	1.42	.12(.01)	1.89	.09(.01)	1.28
Age																		
→brand loyalty	.03(.01)	0.63	-.07(.01)	-.97	.03(.01)	.49	-.04(.01)	-.53	.10(.01)	1.47	-.04(.01)	-.62	.05(.01)	.72	-.02(.01)	-.29	.06(.01)	.86

Notes Model fit (baseline model effects): $\chi^2=169.98$, d.f.=66, $p<.01$; CFI=.96; NFI=.94; RMSEA=.056; Hoelter(.05)=255.

^aSignificant on the 1% level; ^bsignificant on the 5% level. Sample $n=506$.

Coefficients in bold are statistically different ($p\leq.05$); only differences in which at least one coefficient was significant were inspected.

Median splits created the low vs. high levels of the four shopping motives (i.e., atmosphere, price, quality, and assortment, respectively).

Fig. 1

Conceptual model.

