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Materialism as a double-edged sword: ethical consumption in a Muslim-majority market

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Abstract

Purpose – This study aims to investigate the role of materialism in shaping ethical consumption behavior (ECB) within a Muslim-majority context. While materialism has traditionally been viewed as incompatible with Islamic and ethical values, this paper explores its potential to inhibit or condition ethical choices, particularly when aligned with status-seeking motives, in relation to environmentalism, fair-trade attitudes and consumption ethics.

Design/methodology/approach – A quantitative approach was adopted, using structured surveys distributed to 327 respondents in Pakistan, comprising students, faculty and professionals. Structural equation modeling using AMOS was used to test both the direct relationships and the interaction effects of materialism with key ethical constructs influencing consumption behavior.

Findings – Results indicate that environmentalism, fair-trade attitudes and consumption ethics are positively associated with ethical consumption. Materialism shows statistically significant interaction effects with environmentalism and consumption ethics in relation to ECB, suggesting that status-driven motives can enhance sustainability behaviors where ethical products confer social prestige. Conversely, materialism does not significantly moderate the relationship between fair-trade attitudes and ethical consumption, likely due to the overriding influence of religious imperatives such as Adl (justice).

Research limitations/implications – The study's cross-sectional design and reliance on a convenience sample of university-affiliated respondents limit the generalizability of the findings. Future research should adopt longitudinal methods, examine industry-specific dynamics and explore the multidimensional nature of materialism for broader applicability.

Practical implications – Marketers in Islamic markets may strategically position eco-friendly and ethical products as symbolically valued offerings to appeal to consumers with stronger materialistic orientations. At the same time, fair-trade campaigns should prioritize messaging grounded in intrinsic ethical and religious values to resonate with Sharia-oriented audiences.

Social implications – By offering culturally grounded strategies for promoting ethical consumption without disregarding consumer aspirations for social recognition, this study supports sustainable development goals in alignment with local values and community norms.

Originality/value – This study is among the first to empirically examine materialism's moderating role in ethical consumption within an Islamic context. It provides a nuanced, culturally relevant framework for understanding value-driven consumer behavior in emerging Muslim markets.

Keywords Ethical consumption, Materialism, Environmentalism, Fair-trade attitude, Islamic markets, Moderation analysis, Consumer behavior

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Introduction

Ethical consumption has gained significant attention in consumer research, reflecting the growing emphasis on social responsibility, environmental sustainability and corporate ethics (Carolyn, 1997). Ethical consumers actively seek products that align with their values, prioritizing those that minimize harm to society and the environment. However, this widely acknowledged attitude–behavior gap has been documented across multiple consumption domains, including fair trade and sustainable consumption (Carrington *et al.*, 2010; White *et al.*, 2019). While ethical consumption encompasses diverse dimensions, including fair trade, sustainable consumption and corporate social responsibility (Durning, 1992; Newholm, 2017), its interpretation remains fragmented. Scholars lack a universally accepted definition because of variations in cultural norms, economic conditions and personal values (Romu, 2009; Sharif, 2016). These factors collectively influence consumer decisions from product selection to disposal (Lee, 2008; McGoldrick and Freestone, 2008).

Within this broader context, the global Islamic economy has expanded rapidly in recent years, reflecting growing demand for halal and ethically framed products, which reached £1.77tn in 2023, grew at 5.5% annually and is projected to exceed $3tn by 2028, driven by increasing demand for halal and ethical products (Salaamgateway, 2025; Shiawaves, 2025). Halal imports alone are valued at $407.8bn in 2023 and are expected to reach $608bn by 2028, reflecting heightened focus on sustainability and ethical standards (Ali *et al.*, 2025). Despite this growth, prior research suggests that ethical attitudes among Muslim consumers do not consistently translate into purchasing behavior (Carrington *et al.*, 2010; White *et al.*, 2019), representing significant unrealized market potential within the global halal economy valued at over US$2,339bn (Rahman *et al.*, 2024).

The core problem, therefore, lies in the persistent disconnect between Islamic ethical teachings and actual consumer behavior in Muslim markets. Despite clear Islamic principles advocating justice (Adl), environmental stewardship (*Himā*) and moderation (*wasatiyyah*) (Muhamadul and Khatijah, 2019), the ethical consumption literature consistently identifies a persistent gap between consumers' ethical intentions and their actual purchasing behaviors, with materialism recognized as one of the most prominent barriers (Arman and Mark-Herbert, 2024). Pakistan exemplifies this tension acutely. As one of the world's fastest-urbanizing nations, with its urban population growing from 32% in 2000 to over 39% in 2023 (WorldBank, 2024), the country is witnessing a rapid expansion of consumer culture alongside deepening environmental pressures ranking among the top 10 countries most vulnerable to climate change (Eckstein *et al.*, 2021). Yet despite a 97% Muslim population whose faith explicitly mandates ethical stewardship, Pakistan's consumer landscape is increasingly shaped by status-driven consumption and aspirational materialism fueled by expanding media exposure and rising middle-class purchasing power (Hasan *et al.*, 2023; Wilson and Hollensen, 2013). This creates a pronounced dissonance – religious doctrine promotes responsible consumption through principles of contentment (qana'ah) and moderation, yet rapid urbanization, status-seeking norms and aspirational media representations drive competing materialistic values that undermine ethical purchasing behavior. The resulting societal challenge manifests in continued environmental degradation, exploitative labor practices and missed opportunities for equitable market development conditions that demand empirical investigation into the mechanisms through which materialistic orientations interact with ethical consumption in this specific Islamic context.

To examine this challenge, environmentalism, fair-trade attitudes and consumption ethics were selected as predictors because they encapsulate key ethical dimensions aligned with Islamic principles: environmentalism reflects the Quranic concept of stewardship (khalifa), fair-trade attitudes embody equitable trade (Adl) and consumption ethics represent moral

moderation (wasatiyyah) (Muhamadul and Khatijah, 2019). These variables have demonstrated significant explanatory power in predicting ethical consumption across diverse cultural contexts, yet their interaction effects and relative importance in Islamic settings remain underexplored.

Materialism has therefore been conceptualized as a potential moderating variable. Traditional theory posits that materialism is antithetical to ethical consumption, with materialistic individuals prioritizing possessions for self-enhancement over ethical considerations (Richins and Dawson, 1992). However, emerging evidence suggests materialism's dual role: while it may inhibit ethical consumption in some contexts, it can amplify ethical behaviors when ethical products serve as status symbols, such as premium halal eco-products (Ali and Agushi, 2024; Pusparini *et al*., 2024).

This duality becomes particularly complex in Islamic contexts, where materialism intersects with religiosity, creating competing motivational frameworks. Islamic teachings emphasize contentment (qana'ah) and warn against excessive attachment to possessions, suggesting that materialistic orientations should inhibit ethical consumption. Conversely, when ethical products signal both religious compliance and social status, such as luxury halal cosmetics or premium sustainable products, materialistic motivations may enhance ethical consumption behaviors (ECBs). Examining this interaction provides insight into how materialistic motivations may condition ECB within Islamic frameworks of moderation, promoting sustainable behaviors without endorsing excessive materialism.

Although extensive research on ethical consumption has focused on Western contexts (Andorfer and Liebe, 2012; De Pelsmacker and Janssens, 2007), leaving non-Western markets, particularly Islamic economies, underexplored. Islamic teachings emphasize ethical business practices (*Adl*, justice) and sustainable consumption (*Himā*, environmental stewardship), principles that likely shape consumer behavior in Muslim-majority nations (Sharif, 2016). However, existing studies in Islamic contexts often adopt Western ethical frameworks, neglecting the interplay between religious values, social norms and local economic realities (Mokhlis, 2009; Tabachnick and Fidell, 2001). For instance, Pakistan, a rapidly growing Islamic economy, lacks empirical insights into how its consumers reconcile ethical consumption with materialistic aspirations, despite Islam's doctrinal emphasis on fairness and moderation.

In this context, materialism, defined as prioritizing possessions as markers of success and self-worth (Richins and Dawson, 1992), is often perceived as antithetical to ethical values. However, emerging evidence suggests that materialistic individuals may engage in ethical consumption when they align with self-enhancement motives such as social status (Kasser and Ahuvia, 2002). This raises critical questions: Can materialism *amplify* ethical consumption in contexts where status-seeking coexists with religious values? How do cultural imperatives such as Islamic ethics modulate this relationship?

Current research has primarily examined direct relationships between religious values and ethical consumption while largely ignoring competing psychological orientations such as materialism. Most existing studies apply Western frameworks to Islamic markets without adequate cultural adaptation, resulting in an incomplete understanding of consumption behavior in Muslim-majority markets.

This study addresses these gaps by examining materialism's moderating role in the relationships among environmentalism, fair-trade attitudes, consumption ethics and ECB in Pakistan's Islamic consumer market. The research makes three key contributions: theoretically, it extends understanding of materialism's dual role in ethical consumption contexts, challenging assumptions about its uniform inhibitory effects; methodologically, it uses structural equation modeling (SEM) to test these complex relationships in an

underexplored Islamic market context; and practically, it provides actionable strategies for businesses seeking to promote ethical consumption by strategically aligning ethical products with both materialistic aspirations and religious values.

Accordingly, this study was conducted in Pakistan, strategically selected as a representative Muslim-majority nation with a rapidly expanding halal market and a young, urbanizing population driving ethical product demand (Hasan *et al.*, 2023). The research focuses on universities in Lahore, Gujranwala and Islamabad, representing diverse economic contexts while maintaining accessibility for robust data collection. This geographic selection addresses the limitations of single-city studies while maintaining cultural homogeneity within Pakistan's Islamic context, providing insights relevant to one of the world's fastest-growing consumer markets, where the intersection of materialism and religious values creates unique opportunities to promote ethical consumption.

Study objectives and contributions

This study addresses these questions by examining the moderating role of materialism in the relationships among environmentalism, fair-trade attitudes, consumption ethics and ECB in Pakistan's Islamic consumer market. Specifically, it asks:

- Do environmentalism, fair-trade attitudes and consumption ethics positively influence ECB?
- Does materialism strengthen or weaken the relationship between environmentalism and ethical consumption?
- Does materialism strengthen or weaken the relationship between fair-trade attitudes and ethical consumption?
- Does materialism strengthen or weaken the relationship between the consumption ethics and ethical consumption?

This study offers three key contributions by integrating Islamic ethical principles with consumer behavior theory. *Theoretically*, it advances the understanding of materialism's dual role in enhancing environmentalism and consumption ethics while leaving fair-trade attitudes unaffected, likely due to Islam's emphasis on justice (*Adl*). *Methodologically*, it uses SEM to dissect these interactions in a Muslim-majority market, a novel context for ethical consumption research. *Practically*, it provides actionable strategies for businesses to align ethical products with materialistic aspirations (e.g. framing eco-friendly goods as status symbols) while leveraging religious values to promote fair trade.

Contextual relevance

Pakistan's status as a burgeoning Islamic economy with a young, materialistic and increasingly conscientious consumer base makes it an ideal setting for this research. As businesses grapple with balancing profit and ethics, this study equips marketers and policymakers with culturally nuanced strategies to bridge the attitude–behavior gap in ethical consumption. By foregrounding the interplay between materialism and Islamic values, this research not only advances consumer behavior theory but also offers a blueprint for engaging one of the world's fastest-growing markets.

Literature review

ECB refers to consumer choices that prioritize ethical, environmental and social considerations over factors such as price or convenience (Bray *et al.*, 2011). This concept has gained considerable attention in recent years, driven by increasing public awareness and

concerns regarding sustainability and corporate responsibility (White *et al.*, 2019). Ethical consumers actively seek products and services that align with their personal values, consciously avoiding items or brands perceived as causing harm to society or the environment (Sharif, 2016). Despite widespread recognition and endorsement of ethical principles, many consumers struggle to consistently translate their ethical intentions into actual purchasing behaviors, resulting in a well-documented attitude–behavior gap (Carrigan *et al.*, 2004). This phenomenon underscores the importance of exploring cultural, psychological and value-based factors that facilitate or obstruct ethical consumption (Hasan *et al.*, 2023). Central to understanding these behaviors are key constructs, such as environmentalism, fair-trade attitudes, personal consumption ethics and materialism, each of which plays a significant and nuanced role in shaping consumer decision-making.

This study uses well-established measurement scales adapted from existing literature to operationalize key constructs clearly and effectively. To measure environmentalism, items focus on perceptions related to the severity and immediacy of environmental threats (e.g. "We are approaching the limit of the number of resources," and "In general, humans are severely abusing the environment"). These items align closely with prior literature emphasizing consumer recognition of and responsibility for environmental issues, adapted from the scales established by Sharif (2016).

The construct of fair-trade attitudes is operationalized through items capturing consumer behaviors in the context of ethical purchasing decisions, including preferences for fair-trade options in consumer products (e.g. "When there is a choice, I choose the Fair-Trade option") and opposition to unethical practices such as animal testing and unfair labor conditions (Sharif, 2016). These reflect consumers' deeply rooted ethical considerations, grounded in fairness principles and resonate with the Islamic principle of *Adl* (justice), making these items particularly relevant in a Muslim-majority context.

Consumption ethics are captured through statements that reflect ethical consumers' concerns about the potential harm their actions may cause. Items such as "One should never psychologically or physically harm another person," and "Risks to innocent people should be avoided" reflect an underlying ethical framework that aligns well with Islamic teachings, emphasizing moderation and harm avoidance, thus ensuring cultural relevance (Sharif, 2016).

Materialism is operationalized using items reflecting the significance of possessions and luxury as indicators of happiness, success and status. Examples such as "I like to own things that impress people," and "Buying things gives me pleasure" clearly tap into materialism's dimensions, notably status-driven and acquisition centrality (Siahtiri and Lee (2019). Although materialism was treated as a unidimensional construct, future research could further examine its multidimensional nature (status-driven, self-enhancement and acquisition centrality) to offer deeper theoretical insights into ECB.

Finally, ECB is measured through consumer actions, such as avoiding environmentally harmful products, rejecting unethical labor practices and willingness to pay a premium for ethical alternatives (e.g. "I do not buy household products that harm the environment," and "I have paid more for environmentally friendly products when there is a cheaper alternative") (Sharif, 2016). These items comprehensively capture the behavioral manifestation of ethical attitudes, providing a robust link between theoretical constructs and observable consumer behaviors.

The interplay between the above constructs (Figure 1) is underpinned by several theoretical frameworks that explain ECB. The theory of planned behavior (Ajzen, 1991) offers a broad predictive model, suggesting that consumers' intentions to make ethical purchases are influenced by their attitudes (such as environmentalism and fair-trade beliefs),

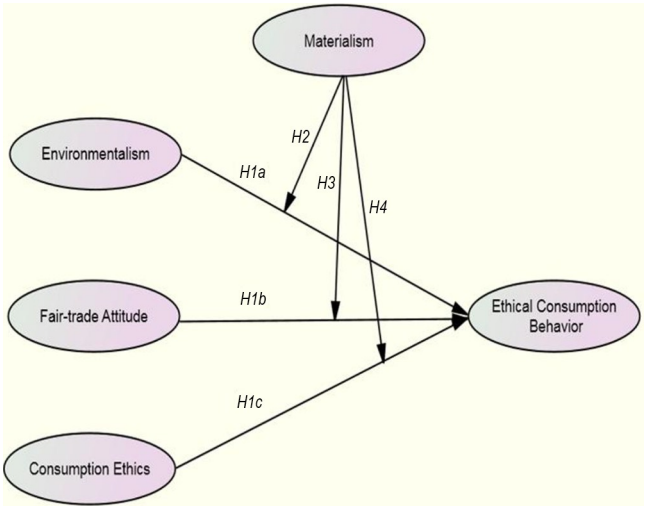

Figure 1. Conceptual framework
Source: Authors' own work

subjective norms (e.g. perceived social pressure to buy ethical products) and perceived behavioral control (ease or difficulty of ethical purchasing). Numerous studies applying TPB find that pro-ethical attitudes (such as concern for the environment or social justice) significantly enhance intentions to buy ethical products, consistent with the TPB's assertion that attitudes drive behavior. Meanwhile, the Hunt–Vitell general theory of marketing ethics provides insight into the role of moral judgment in consumption decisions, emphasizing that individuals incorporate personal moral codes (deontological norms, such as fairness and honesty) into purchase considerations (Hunt and Vitell, 1986). For example, a consumer with a strong sense of fairness is likely to view buying fair-trade goods as a moral obligation, which Hunt–Vitell's model predicts leads to ethical actions. Finally, self-concept and social identity theories help explain how values are integrated into one's self-identity and guide behavior. Consumers tend to act in ways that are congruent with their identity: an "environmentalist" will recycle and buy green products to reinforce that identity, just as a "status-driven" shopper will seek products that signal success. These theories collectively suggest that ECB is a function of both situational factors and internal value systems and, importantly, that conflicts between values (such as altruism vs materialism) can be resolved through clever positioning that aligns them.

Environmentalism and ethical consumption behavior

Environmentalism is the consumption of eco-friendly products and the sustainable use of natural resources, ensuring minimal harm to society and ecosystems (Urien and Kilbourne, 2011). This has emerged as a critical factor in consumer decision-making, with firms leveraging green labels to attract environmentally conscious consumers (Schaefer and Crane, 2001). Research suggests that companies that adopt socially responsible practices have higher levels of consumer loyalty (Baron and Diermeier, 2007; Besley and Ghatak, 2007). The theory of reasoned action explains how environmental concerns influence consumer attitudes and ethical purchasing behaviors.

Environmentalism has been examined in various research contexts, including its direct effects on ECB (Sharif, 2016). Studies have found that pro-environmental behaviors such as using low-carbon products and engaging in green consumption are increasingly prevalent in Western markets (Soyez, 2012). Considering the rapid economic and industrial growth that contributes to environmental concerns (Ehrgott *et al.*, 2011). In Islamic contexts, environmental concern often aligns with religious stewardship principles (khalifa), potentially creating synergistic effects that amplify ethical consumption. However, contemporary studies also reveal that environmentalism increasingly serves status-signaling functions rather than purely altruistic motivations (Griskevicius *et al.*, 2010), suggesting that traditional theoretical models may inadequately capture the complexity of environmental consumption in status-conscious societies:

H1a. Environmentalism positively influences ethical consumption behavior.

Fair-trade attitude and ethical consumption behavior

Fair trade is defined as a trading partnership based on transparency, dialogue and respect that promotes more significant equity in international trade (De Pelsmacker and Janssens, 2007). It has gained widespread adoption, with fair-trade labeling organizations endorsing a significant share of global consumer products (Low and Davenport, 2005). Fair-trade initiatives benefit small-scale producers and artisans economically and socially, fostering consumer support for ethical consumption (Friedman, 1996).

Consumers increasingly make fair-trade purchasing decisions, such as engaging in ethical activism, rewarding or punishing businesses based on their trade practices (Howard and Allen, 2010). Fair-trade involvement is also associated with moralist lifestyles in which consumers use ethical consumption for social differentiation (Varul, 2009). However, fair-trade research in Islamic contexts remains theoretically underdeveloped, despite strong alignment between Islamic justice principles (*Adl*) and fair-trade values. This represents a significant theoretical gap given that Islamic teachings explicitly prohibit exploitation (*zulm*) and emphasize equitable trade relationships. Given these findings, fair-trade attitudes are expected to positively influence the ECB:

H1b. Fair-trade attitude positively influences ethical consumption behavior.

Consumption ethics and ethical consumption behavior

Consumption ethics are the moral considerations consumers have when purchasing and using products. However, defining consumption ethics is challenging because ethical standards vary across regions and cultures (Bray *et al.*, 2011). Ethical consumption encompasses diverse behaviors, including sustainable consumption, fair-trade participation and avoidance of products associated with human rights violations (Goodwin and Francis, 2003).

Prior research has predominantly examined ethical consumption from a Western perspective, often overlooking Muslim consumers who may have distinct ECBs influenced by religious teachings (Wilson and Hollensen, 2013). Islamic consumer behavior research suggests that religious teachings on moderation (wasatiyyah) and social responsibility create distinct ethical frameworks that may differ from Western models (Rice, 2003). However, empirical research testing these theoretical propositions remains limited, particularly regarding how Islamic ethical frameworks interact with competing value systems such as materialism.

Given the growing recognition of ethical considerations in consumer behavior, consumption ethics is expected to positively influence ethical consumption:

H1c. Consumption ethics positively influence ethical consumption behavior.

Materialism as a moderator

Materialism is the importance consumers place on acquiring and possessing material goods to achieve happiness and social status (Belk, 1985; Richins and Dawson, 1992). Materialistic consumers prioritize status-driven consumption, often disregarding ethical concerns (Fitzmaurice and Comegys, 2006). However, the relationship between materialism and ethical consumption remains complex, as materialistic values can diminish or enhance ethical concerns, depending on the context.

Materialism as a moderator between environmentalism and ethical consumption behavior

Environmental destruction first became a national issue with the observance of "Earth Day" on April 22, 1970. Promoted in part by increased media attention, the North American public has focused on issues such as air and water pollution, ozone layer depletion, deforestation and other environmental topics. The last two decades have seen increased legislation promoting environmentally friendly production processes and products (Landler *et al.*, 1991), new products launched with a specific environmental appeal, increased spending by firms on "Green Advertising" (Iyer and Banerjee, 1993) and increased public participation in.

An individual with materialist values emphasizes worldly goods (Belk, 1984). Materialists believe that possessions are essential to their happiness, so they will buy products even if they are harmful to nature and society. Thus, materialism weakens the relationship between environmentalism and ECB. Acquisition and consumption are central motives that drive materialists' behavior, so they do not hold environmental protection as a core value. On the other hand, individuals who care about the spiritual self and others and know environmental issues (which are also teachings of Islam, and we have discussed this in detail) will always care for products that are healthy for society, the environment and peers. Therefore, we can say that, in this case, materialism strengthens the relationship between environmentalism and ECB. While traditional theory predicts a weakening effect, recent evidence suggests that materialism may strengthen environmental behavior when ethical products convey social status:

H2. The interaction effects between materialism and environmentalism will predict ethical consumption behavior, such that the relationship between environmentalism and ethical consumption behavior varies as a function of materialism.

Materialism as a moderator between fair-trade attitude and ethical consumption behavior

Materialism pursues happiness through the acquisition of material things (Kasser and Ahuvia, 2002). This means that materialistic people do not care about fair-trade issues. Prior empirical research demonstrates that materialism is systematically associated with lower ethical sensitivity in consumption contexts. For example, Muncy and Eastman (1998) provide evidence that more materialistic consumers exhibit weaker consumer ethical standards and reduced concern for ethical issues in marketplace decisions, suggesting that the antecedents of materialism may simultaneously undermine ethical orientations. They

want to develop things that give them happiness, social status and recognition. They have no value in fair trade when fulfilling their materialistic needs.

On the other hand, consumers who are less materialistic and have a strong fair-trade attitude will prefer their spiritual happiness and deeds, which will please Allah, not the private self-construal, which is highly appreciated in individualistic societies, or the public self, which is valued in highly collectivistic societies (Sharif, 2016). Value-based research on fair-trade consumption further supports this negative association (Panico *et al.*, 2017). Drawing on Schwartz's value framework, show that power values, which emphasize social status, dominance and personal success and are conceptually aligned with materialism, exert a negative indirect effect on both intention and self-reported fair-trade purchasing behavior. In contrast, Universalism, reflecting concern for social justice and the well-being of others, exhibits a strong positive effect on fair-trade consumption. Because fair-trade behavior is grounded in altruism, distributive justice and ethical concern for producers, these motivations conflict with materialistic, self-enhancement-oriented value systems.

Therefore, this study proposes the following:

H3. Materialism negatively moderates the relationship between fair-trade attitude and ethical consumption behavior, such that higher levels of materialism weaken the positive association between fair-trade attitude and ethical consumption behavior.

Materialism as a moderator between consumption ethics and ethical consumption behavior

Consumption ethics refer to the moral considerations that individuals apply when purchasing or using products, and these considerations can vary significantly across societies, individuals and cultures (Bray *et al.*, 2011). Ger and Belk (1999) demonstrated that while consumers often voice disapproval of materialism, they simultaneously desire higher incomes, improved living standards, social recognition and other material goods, highlighting a paradox in ethical decision-making. Materialism, in this context, is associated with the belief that happiness and fulfillment can be attained through consumption and possessions (Kasser and Ahuvia, 2002). Consequently, materialistic individuals are more likely to prioritize personal gratification over ethical considerations, thereby weakening the link between consumption ethics and ECB. Conversely, individuals with lower materialistic tendencies, those who place greater emphasis on intrinsic or spiritual values, are more inclined to align their consumption behaviors with ethical standards. In such cases, materialism acts as a moderator, either weakening or strengthening the relationship between consumption ethics and ECB, depending on the individual's value orientation:

H4. The interaction effects between materialism and consumption ethics will predict ethical consumption behavior, such that increased materialism will strengthen the positive association between consumption ethics and ethical consumption behavior.

Methods

The research methodology encompasses a systematic, scientific approach used to address the research objectives and solve problems. A well-defined methodological framework is essential, as it directly influences the research process and validity of the findings. The primary objective of this study is to examine the moderating role of materialism in the relationships among environmentalism, fair-trade attitudes, consumption ethics and ECB. This empirical study uses hypothesis testing to establish the relationships between key variables.

A quantitative research design was adopted, using structured survey instruments to collect data within a specified timeframe. Given the significance of materialism, environmentalism, fair-trade attitude and consumption ethics in shaping ECB, this study ensured that data collection targeted an appropriate population segment to enhance reliability and relevance (Stake, 1995).

This study follows a positivist research paradigm and uses a deductive approach wherein established theories and frameworks are tested using empirical data. The research was noncontrived, with minimal researcher interference, allowing data collection in a natural environment and ensuring ecological validity. The study design is hypothesis-driven and aligned with the principles of confirmatory research.

Measurement scales and instrumentation: The constructs in this study were measured using validated scales from prior research. environmentalism, fair-trade attitude, consumption ethics and ECB were measured using items adapted from Sharif (2016), whereas materialism was measured using the scale from Siahtiri and Lee (2019). A five-point Likert scale was used, with respondents indicating their level of agreement with each statement, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was structured to ensure its construct validity and reliability.

The unit of analysis comprised individual consumers, specifically faculty members, staff and students from universities in Pakistan. The study focused on university students, faculty members and administrative staff in Pakistan. This population was not selected on the assumption that educated consumers are inherently more rational in their consumption decisions. Prior research demonstrates that materialism reflects a value orientation related to identity, status and self-enhancement rather than a lack of education or awareness (Belk, 1985; Richins and Dawson, 1992). Moreover, studies consistently show that educated and urban consumers often exhibit higher levels of consumption, greater brand exposure and stronger aspirational and status-oriented motivations, particularly in emerging market contexts (Arnould and Thompson, 2005). These characteristics make university-affiliated consumers theoretically appropriate for examining materialism as a moderating mechanism in ECB. From a diffusion-of-innovation perspective, university populations also function as early adopters and opinion leaders whose consumption practices often precede broader societal trends. Studying ethical consumption within this group allows examination of emerging behavioral patterns in contexts where ethical ideals and materialistic motivations intersect most visibly. University communities in Pakistan increasingly reflect diverse socioeconomic backgrounds due to expanding access to higher education and providing reasonable demographic representation. Fourth, this population's consumption decisions significantly influence household purchasing patterns, as educated consumers often serve as information gatekeepers for family consumption choices in collectivistic cultures, such as Pakistan (Hofstede, 2001).

A convenience sampling technique was used for data collection because of its practicality and cost-effectiveness (Malhotra and Peterson, 2001). This approach enabled efficient data collection from readily available respondents, facilitating the timely completion of the study. Data were collected from universities in Lahore, Gujranwala and Islamabad, chosen to represent Pakistan's diverse economic and cultural landscapes, while ensuring data collection feasibility (Malhotra *et al.*, 2017). Lahore is Pakistan's cultural and commercial hub, with a population exceeding 11 million, offering exposure to diverse consumer options and international brands. Islamabad, the capital city, represents the most educated and affluent consumer segment with the highest exposure to ethical consumption alternatives. Gujranwala is a medium-sized industrial city that characterizes Pakistan's urban landscape, providing a perspective from emerging middle-class consumers.

This geographic selection addresses the limitations of single-city studies while maintaining cultural homogeneity within Pakistan's Islamic context. The three cities collectively represent 19.2 million residents (Review, 2026), while Islamabad represents a smaller but administratively and economically significant urban center. Collectively, these cities capture major urban consumption environments within Pakistan.

The sample size was determined based on Hair Jr *et al.* (1995), who widely accepted the 10:1 ratio rule, which suggests that at least 10 responses are required for each survey item. Applying this criterion, the target sample size for this study was set at 330 respondents to ensure statistical power and generalizability of the findings.

Sample size adequacy was evaluated using an *a priori* power analysis (Figure 2) using G*Power 3.1.9.7 (Faul *et al.*, 2007). Using an *F*-test for linear multiple regression (fixed model, R^2 deviation from zero), with $\alpha = 0.05$, statistical power $(1 - \beta) = 0.95$, medium effect size ($f^2 = 0.15$) and seven predictors (including interaction terms), the required minimum sample size was 153 respondents. The final sample of 327 respondents substantially exceeded this threshold, indicating adequate statistical power for detecting medium-sized effects.

Data analysis techniques

The data collected were analyzed using a multistep approach to ensure the statistical rigor and validity of the findings. First, descriptive statistics (including means, standard deviations and frequency distributions) were computed to summarize the demographic characteristics of the respondents and key study variables.

Before hypothesis testing, the data set was examined for outliers, normality, heteroscedasticity and multicollinearity to confirm its compliance with the regression analysis assumptions. The scale's reliability was assessed using Cronbach's alpha to ensure internal consistency. In addition, a confirmatory factor analysis (CFA) was conducted to establish construct validity and evaluate factor loadings, convergent validity and discriminant validity.

SEM was used as the primary statistical technique for hypothesis testing because of its capability to test both direct and indirect effects within complex models. SEM allows for the simultaneous estimation of multiple relationships and provides a comprehensive assessment of the theoretical framework.

The path model was analyzed using SPSS 24 for initial diagnostics and AMOS 20.0 for CFA and hypothesis testing. Hypothesized relationships were assessed using standardized path coefficients, model fit indices (comparative fit index [CFI]; incremental fit index [IFI]; Tucker–Lewis index [TLI]; and root-mean-squared error associated [RMSEA]) and

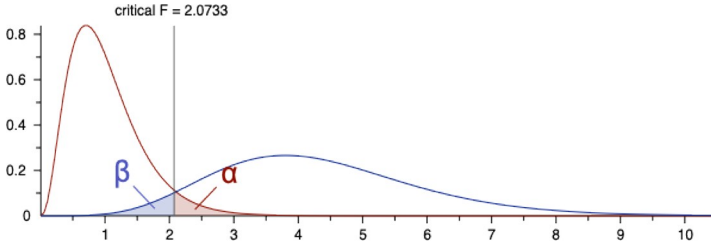

Figure 2. G-power analysis

Source: Authors' own work

significance levels (*p*-values) to determine the strength and direction of the relationships among the variables.

Results

Assumptions of multivariate analysis

Before conducting SEM, key assumptions underlying multivariate analysis were carefully examined to ensure the appropriateness and validity of the analytical procedures (Table 1). First, the normality assumption was assessed by inspecting QQ plots for each variable. Data points exhibiting significant deviations or extreme outliers, as indicated by the box and QQ (quantile–quantile) plots, were identified and subsequently removed to enhance the accuracy and generalizability of the findings.

The second assumption, multicollinearity, was evaluated by examining the correlation matrix between constructs. According to standard guidelines (Cohen, 2013), correlation coefficients of approximately 0.1 indicate weak relationships, coefficients around 0.3 signify moderate relationships and values exceeding 0.5 indicate strong correlations. The correlation values among the constructs were reviewed to confirm that they remained below problematic thresholds, thereby confirming the absence of severe multicollinearity and the robustness of the SEM analysis.

The variance inflation factor was used to assess multicollinearity; variance inflation factor (VIF) values should be lower. Conceptually, this is the reciprocal of the tolerance $1/(1-R^2)$. Multicollinearity was assessed using VIFs. Because moderation was tested using interaction terms, VIFs were evaluated for the full predictor set, including the product terms (ENV × MAT, FTA × MAT, and COE × MAT), Table 2. All predictors were mean-centered prior to creating interaction terms to reduce nonessential multicollinearity (Aiken *et al.*, 1991). The most common value of VIF is recommended to be 10; if VIF is less than 10, there is no multicollinearity among the constructs (Hair *et al.*, 1995). All VIF values were <10, indicating that multicollinearity was not severe among the constructs.

Reliability and unidimensionality

Validating the measurement items for each latent variable is crucial before analyzing the path model. According to Ping (2004), measurement items must demonstrate unidimensionality, meaning that each set of items measures only a single underlying construct. Reliability and construct validity assessments ensure the accuracy and consistency of measurement for these constructs.

Table 1. Data normality statistics ($N = 327$)

Constructs	Min.	Max.	Skewness	SE	Kurtosis	SE
ENV	5.00	20.00	−0.89	0.13	0.98	0.26
FTA	6.00	20.00	−0.77	0.13	0.27	0.26
COE	7.00	25.00	−0.67	0.13	−0.15	0.26
MAT	7.00	35.00	−0.71	0.13	−0.01	0.26
ECB	7.00	35.00	−0.92	0.13	0.66	0.26

Note(s): ENV = environmentalism; FTA = fair-trade attitude; COE = consumption ethics; MAT = materialism; ECB = ethical consumer behavior; Reported minimum and maximum values reflect summated scale scores across multiple items rather than single-item Likert responses
Source(s): Authors' own work

Table 2. VIF diagnostics for the full model (including interaction terms)

Constructs	Tolerance	VIF
ENV	0.65	1.52
FTA	0.70	1.40
COE	0.66	1.50
MAT	0.77	1.29
ENV*MAT	0.55	1.82
FTA*MAT	0.56	1.79
COE*MAT	0.56	1.79
ECB	Dependent variable	

Note(s): ENV = environmentalism; FTA = fair-trade attitude; COE = consumption ethics; MAT = materialism; ECB = ethical consumer behavior
Source(s): Authors' own work

All items were evaluated using CFA with a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). The CFA results for each latent variable are presented below.

For environmentalism, CFA was performed using four items. Item loadings ranged between 0.33 and 0.50, falling below commonly recommended thresholds (≥0.50 minimum; ≥0.70 ideal), indicating weak indicator reliability and limited convergent validity (Hair *et al.*, 2019). CFA demonstrated good fit indices (CMIN/DF = 0.71, root mean square residual (RMR) = 0.02, goodness of fit index [GFI] = 0.999, normed fit index [NFI] = 0.97, CFI = 1.00, RMSEA = 0.000), supporting structural coherence despite weak indicator loadings.

The CFA for the fair-trade attitude included four items, with factor loadings ranging from 0.57 to 0.63. The resulting model displayed strong fit indices (CMIN/DF = 0.34, RMR = 0.02, GFI = 0.98, NFI = 0.97, CFI = 0.98, RMSEA = 0.000), establishing item reliability and unidimensionality after the CFA.

Consumption ethics were measured using five items, with loadings ranging from 0.57 to 0.75. The CFA fit statistics (CMIN/DF = 2.42, RMR = 0.03, GFI = 0.98, NFI = 0.97, CFI = 0.98, RMSEA = 0.04) supported the construct validity and reliability.

The materialism construct consisted of seven items, each with factor loadings ranging from 0.50 to 0.69. CFA yielded a satisfactory model fit (CMIN/DF = 2.42, RMR = 0.04, GFI = 0.98, NFI = 0.97, CFI = 0.98, RMSEA = 0.04), indicating robust item reliability and confirming the scale's unidimensionality.

Finally, ECB was represented by five items, each exhibiting factor loadings ranging from 0.55 to 0.74. CFA resulted in an excellent model fit (CMIN/DF = 1.01, RMR = 0.01, GFI = 0.98, NFI = 0.97, CFI = 0.99, RMSEA = 0.01), supporting both reliability and construct validity.

Cronbach's alpha and composite reliability were assessed for all constructs. While most constructs exceeded recommended thresholds, environmentalism exhibited low internal consistency ($\alpha = 0.50$). Composite reliability (CR = 0.70) was therefore emphasized, consistent with SEM literature that prioritizes CR when factor loadings are unequal or modest. Cronbach's alpha for the Environmentalism construct was below the conventional threshold ($\alpha = 0.50$), indicating limited internal consistency (Nunnally, 1978). However, composite reliability (CR = 0.70) met the recommended criterion, consistent with prior SEM research suggesting that CR provides a more appropriate reliability estimate in models with unequal or low factor loadings. In addition, the NFI values were consistently above the acceptable threshold of 0.90 (Hair *et al.*, 2010; Kline, 2011). Overall, the measurement assessment supported acceptable psychometric properties for most constructs. However, environmentalism showed weaker measurement quality (low loadings and average variance extracted [AVE] below 0.50).

Discriminant validity was assessed using criteria proposed by Fornell and Larcker (1981); Sarstedt *et al*. (2021). According to this approach, discriminant validity is established when the square root of the AVE for each latent construct exceeds its correlations with all other constructs in the model. As presented in Table 3, the square roots of the AVE values for all constructs were greater than their corresponding inter-construct correlations, thereby providing evidence of adequate discriminant validity.

Table 4 shows that ENV and FTA were positively correlated (r = 0.47), ENV and COE were positively correlated with each other (r = 0.48) and similarly, ENV and MAT were positively correlated (r = 0.35). MAT and ECB were positively correlated (r = 0.47). All correlations were significant at the 0.01 level. CR and AVE values were calculated using the formulae from Fornell and Larcker (1981):

$$P_{com} = \frac{[(\Sigma\boldsymbol{\lambda})]^2}{[(\Sigma\boldsymbol{\lambda})]^2 + [\Sigma\theta]} \quad (1)$$

P_{com} = CR = composite reliability;
$\sum$ = sum;
λ = standardized loadings;
λ^2 = square of the indicator's standardized loadings; and
θ = (1 − λ2) measurement error.

Table 3. Results of individual CFA (N = 327)

			Unidimensionality				Convergent validity			Reliability	
Constructs	Items	χ^2/df	GFI	CFI	RMR	RMSEA	NFI	FL (min–max)	AVE	α	CR
ENV	4	0.71	0.99	1.00	0.02	0.00	0.97	0.33–0.50	0.38	0.50	0.70
FTA	4	0.34	0.99	0.98	0.02	0.06	0.97	0.57–0.63	0.60	0.69	0.81
COE	5	2.42	0.98	0.98	0.03	0.06	0.97	0.60–0.75	0.55	0.79	0.85
MAT	7	1.60	0.98	0.98	0.04	0.04	0.97	0.57–0.69	0.50	0.83	0.87
ECB	7	1.11	0.98	0.99	0.03	0.01	0.97	0.55–0.69	0.47	0.81	0.86

Note(s): ENV = environmentalism; FTA = fair-trade attitude; COE = consumption ethics; MAT = materialism; ECB = ethical consumer behavior; α = Cronbach's alpha; CR = composite reliability; NFI = normed fit index
Source(s): Authors' own work

Table 4. Discriminant validity (covariance among latent variables) (N = 327)

Constructs	ENV	FTA	COE	MAT	ECB	Mean	SD
ENV	*0.62*†	0.48**	0.48**	0.35**	0.47**	15.76	2.66
FTA		*0.72*†	0.43**	0.34**	0.34**	15.79	2.98
COE			*0.74*†	0.42**	0.51**	19.20	4.06
MAT				*0.70*†	0.48**	25.46	5.89
ECB					*0.69*†	26.74	5.31

Note(s): ENV = environmentalism; FTA = fair-trade attitude; COE = consumption ethics; MAT = materialism; ECB = ethical consumer behavior; **correlation is significant at 0.01; †italic diagonal values are the square root of the AVE
Source(s): Authors' own work

$$P_{ave} = \frac{[(\Sigma\lambda^2)]}{[(\Sigma\lambda^2) + [\Sigma\theta]} \quad (2)$$

P_{ave} = AVE = average variance extracted;
$\sum$ = sum;
λ^2 = square of the indicator's standardized loadings; and
θ = $(1 - \lambda^2)$ measurement error.

CFA was used to evaluate the measurement model following established methodological recommendations. According to Reisinger and Mavondo (2007), CFA is ideally conducted with latent variables consisting of five to seven indicators, although at least three indicators per construct are considered acceptable. Cheng (2001) advised conducting CFA in two distinct phases. Each latent construct should be analyzed individually to ensure construct dimensionality and reliability, and to identify and remove any negatively responding or poorly loaded items. Subsequently, a full CFA was performed on all latent constructs to confirm the overall measurement model's validity and reliability.

In alignment with these recommendations, the CFA was conducted in two stages. First, the individual latent variables were assessed separately to ensure the adequacy of their indicators. Indicators exhibiting inadequate factor loadings or cross-loadings were removed at this stage. Reisinger and Mavondo's (2007) recommendation of having between five and seven items per construct was considered to maintain an optimal construct representation. After this initial screening, a complete CFA model encompassing all latent constructs was tested simultaneously to comprehensively validate the final measurement model.

Furthermore, each latent variable retained a minimum of three post-item deletion indicators, complying with the methodological standards suggested by Cheng (2001) and Reisinger and Mavondo (2007). These procedures were essential to rigorously confirm construct reliability and discriminant validity before proceeding to SEM.

Overall model fitness was assessed using multiple criteria to ensure robustness and validity. The measurement model (Figure 3) was evaluated without including the items previously deleted during the individual CFAs. The results demonstrated a strong overall model fit, as indicated by the widely accepted indices (Table 5): Bentler–Bonett NFI = 0.81, CFI = 0.92, GFI = 0.90, RMSEA = 0.04 and RMR = 0.03, thus confirming an acceptable model (Ahire *et al.*, 1996; Bagozzi and Phillips, 1982).

Convergent validity, which reflects the degree of agreement among multiple measures of the same construct, was assessed using three methods, as suggested by Bagozzi and Phillips (1982). First, standardized factor loadings for each item were examined and found to be significant, confirming that the indicators reliably measured their corresponding latent variables and satisfying the convergent validity criteria. Second, the Bentler–Bonett NFI, which exceeded the acceptable threshold, confirmed the adequacy of the measurement model. Finally, CR and AVE were evaluated, with CR scores above the recommended threshold of 0.70 for all constructs, signifying robust internal consistency (Fornell and Larcker, 1981). Convergent validity was assessed using AVE. AVE exceeded 0.50 for FTA (0.60), COE (0.55) and MAT (0.50), indicating adequate convergent validity for these constructs. However, environmentalism (AVE = 0.38) and ECB (AVE = 0.47) did not meet the 0.50 benchmark, suggesting limited convergent validity for these two constructs. Given that composite reliability values were acceptable (CR ≥ 0.70), these measures were retained.

Discriminant validity was evaluated using the method recommended by Fornell and Larcker (1981), by comparing the square root of the AVE values against inter-construct correlations. The results indicated that the square root of each construct's AVE was greater than its correlations with

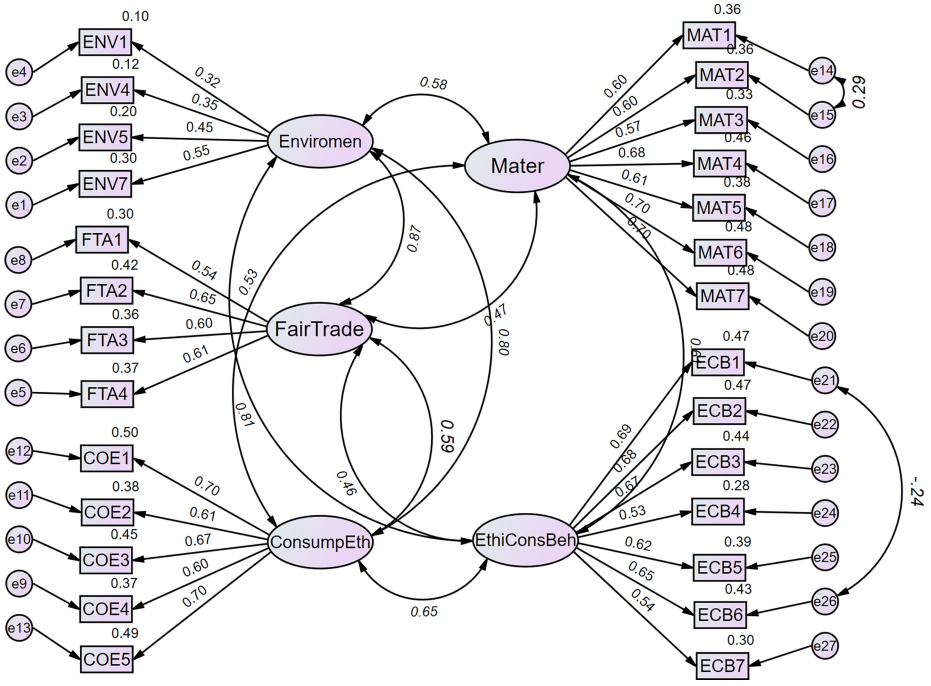

Figure 3. Nested CFA
Source: Authors' own work

Table 5. Nested confirmatory factor analysis ($n = 327$)

Model	Initial fit indices		Modifications		Final fit indices	
Nested model	χ^2	591.93	Items removed		χ^2	556.81
	df	314	ENV2, ENV3, ENV6, ENV8		Df	312
	χ^2/df	1.88	FTA5, FTA6, COE6, COE7, COE8, MAT8		χ^2/df	1.78
	GFI	0.88	Covariance		GFI	0.89
	NFI	0.80		MI	0.81	0.81
	CFI	0.89	e14↔e15	20.48	0.90	0.90
	RMSEA	0.05	e21↔e26	10.31	0.04	0.04

Note(s): χ^2 = chi square; Df = degree of freedom; NFI = normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation
Source(s): Authors' own work

the other constructs (Table 3). Discriminant validity was established, confirming that each construct was distinct and appropriately differentiated within the measurement model. Successful validation of the reliability and validity metrics indicates that the model is suitable for subsequent path analysis and hypothesis testing.

In total, 330 responses were collected using convenience sampling. After carefully screening for missing values, biased responses and inappropriate entries, three

questionnaires were excluded, resulting in a final usable sample of 327 respondents. The sample size met Hair's (1998) recommended ratio of at least 10 responses per survey item, ensuring sufficient statistical power and reliability for multivariate analysis.

The respondents represented diverse segments of society (Table 6), including students (49.6%), businesspeople (12.2%) and professionals from various other fields (38.2%). The demographic breakdown of the respondents showed a balanced gender representation, with 53.5% male and 46.5% female. Regarding educational attainment, most respondents held bachelor's (36.7%) or master's degrees (48.0%); 10.4% held vocational qualifications or other qualifications; and only 4.9% had education up to F.A./F.Sc.

Sample size adequacy was assessed according to Hair's (1998) recommended ratio of respondents to survey items (a minimum of 10:1), which was comfortably met. This ensured statistical robustness and generalizability of the findings.

The collected data underwent preliminary analyses to ensure compliance with the assumptions of the multivariate analysis, including checks for normality. Normality was assessed by visually inspecting QQ plots and calculating skewness and kurtosis. Skewness and kurtosis values fell within acceptable ranges (skewness between −1 and +1, kurtosis between −3 and +3), confirming a normal data distribution suitable for further statistical analyses.

Hypotheses testing

A path analysis (Figure 4) was conducted to test this hypothesis. In the analysis, all latent variables were modeled as first-order. environmentalism, materialism and multiplicative

Table 6. Descriptive of demographics ($N = 327$)

Demographic variable	Category	Frequency	%	Valid (%)	Cumulative (%)
Gender	Male	175	53.5	53.5	53.5
	Female	152	46.5	46.5	100
	Total	327	100	100	
Age	18–30	293	89.60	89.60	89.60
	31–40	24	7.34	7.34	96.94
	41–above	10	3.06	3.06	100
	Total	327	100	100	
Occupation	Student	162	49.5	49.5	49.5
	Business	40	12.2	12.2	61.8
	Teaching	55	16.8	16.8	78.6
	Other	70	21.4	21.4	100.0
	Total	327	100	100	
Education	F.A./F.Sc	16	4.9	4.9	4.9
	Bachelors	120	36.7	36.7	41.6
	Masters	157	48.0	48.0	89.6
	Others	34	10.4	10.4	100.0
	Total	327	100	100	
University distribution	SZABIST Islamabad	38	11.6	11.6	11.6
	Foundation University Islamabad	42	12.8	12.8	24.4
	Bahria University Islamabad	34	10.4	10.4	34.8
	GIFT University Gujranwala	71	21.7	21.7	56.5
	University of the Punjab Gujranwala Campus	55	16.8	16.8	73.3
	University of Central Punjab	35	10.7	10.7	84.0
	University of the Punjab Lahore	34	10.4	10.4	94.4
	FAST University Lahore Campus	18	5.5	5.5	99.99

Source(s): Authors' own work

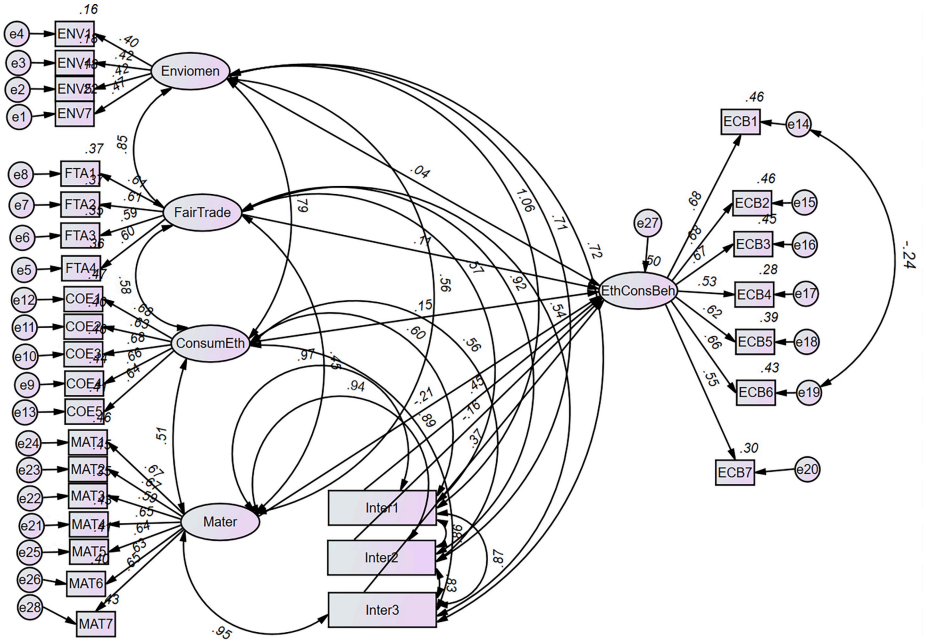

Figure 4. Path model
Source: Authors' own work

terms (e.g. ENV × MAT) were considered as exogenous variables in the model. For this analysis, an interaction term was calculated by multiplying the mean-centered variables of environmentalism and materialism. Similarly, the interaction term for fair-trade attitude and consumption ethics was also calculated by multiplying FTA*MAT and COE*MAT.

Busemeyer and Jones (1983) and Kenny and Judd (1984) established this approach for testing moderation in SEM, which was later refined by Marsh *et al.* (2004). Moderation effects were tested using a product-term approach based on mean-centered composite variables, whereby interaction terms were constructed by multiplying the mean-centered composite scores of the predictor and moderator (Kenny and Judd, 1984).

The maximum likelihood method was used to estimate structural parameters. The model fit indices were within acceptable ranges (χ^2 = 680.55, df = 379.00, χ^2/df = 1.79, GFI = 0.88, NFI = 0.90, CFI = 0.95, RMSEA = 0.04). The structural model explains the significant variance in ECB (R^2 = 0.50).

Table 7 shows β-values, p-values and standard errors for the structural model. *H1a* suggests that, in addition to testing linear effects, we also measure interaction effects of materialism. The equation used in SEM to measure the interaction is represented in equation (3):

$$\acute{\eta} = \beta_0 + \beta_1{}^*\xi + \beta_2{}^*\mu + \beta_3{}^*\xi^*\mu + \varepsilon \quad (3)$$

Here, $\acute{\eta}$ is the ECB, ξ shows the ENV, μ represents the MAT and $\xi^*\mu$ shows the interaction term of ENV and MAT. β_s corresponds to the regression parameters, β_0 is a constant and ε is

Table 7. Structural model results ($n = 327$)

Effects	Hypothesized path	β	SE	p-value	Conclusion
Linear effects					
H1a (+)	ENV → ECB	0.04**	0.027	0.02	Accepted
H1b (+)	FTA → ECB	0.11*	0.044	0.00	Accepted
H1c (+)	COE → ECB	0.14*	0.060	0.00	Accepted
Interaction effects					
H2 (+↑)	ENV*MAT → ECB	0.45*	0.004	0.00	Accepted
H3 (+↑)	FTA*MAT → ECB	−0.15	0.003	0.13	Rejected
H4 (+↑)	COE*MAT → ECB	0.36*	0.003	0.00	Accepted

Note(s): ENV = environmentalism; FTA = fair-trade attitude; COE = consumption ethics; MAT = materialism; ECB = ethical consumer behavior; *$p < 0.01$, **$p < 0.05$
Source(s): Authors' own work

an error term. The reliability and measurement error for $\xi \times \mu$ are calculated using the formula suggested by Ping (1995). $\xi^*\mu$ reliability = $\sqrt{\left(P_x P_z + r_{xz}^2\right)} = \left(r_{xz}^2 + 1\right)$ and measurement error = (1– $\xi^*\mu$ reliability), where P_x and P_z are the reliabilities of the independent variable (ENV) and the moderating variable (MAT) and r_{xz} is the intercorrelation of $_X$ and $_Z$.

Table 7 shows that environmentalism positively affects ECB, supporting *H1a*. Because the value of ($\beta = 0.04$ and p-value = 0.02) *H1a* is accepted. Similarly, *H1b* shows that a fair-trade attitude positively affects ECB. Because the value of ($\beta = 0.11$ and p-value = 0.00), *H1b* is also accepted. *H1c* for this investigation is that consumption ethics positively affect ECB because the value of ($\beta = 0.14$ and p-value = 0.00) is also accepted.

Three interactional relationships make up *H2*, *H3* and *H4* in this study. *H2* hypothesizes that the interaction effects between materialism and environmentalism will predict ECB, such that increased materialism will strengthen the positive association between environmentalism and ECB. The interaction between environmentalism and materialism is statistically significant ($\beta = 0.45$, $p < 0.01$); however, this result is interpreted as evidence of conditional association rather than as a uniform strengthening effect. *H3*, which proposed that materialism negatively moderates the relationship between fair-trade attitudes and ECB, is not supported. The interaction term is negative but statistically nonsignificant ($\beta = -0.15$, $p = 0.13$), indicating that materialism does not meaningfully condition the effect of fair-trade attitudes on ECB. *H4*, which proposes that materialism positively moderates the relationship between consumption ethics and ECB, is supported ($\beta = 0.36$, $p < 0.01$), indicating a statistically significant interaction effect.

Different global fit indices were used to check the fitness of the structural model. The most important fit indices are reported here, and their cut points are discussed in the discussion of the earlier measurement model. The maximum likelihood method was used to estimate structural parameters. The model fit indices were within acceptable ranges ($\chi^2 = 680.55$, df = 379.00, χ^2/df = 1.79, GFI = 0.88, NFI = 0.90, CFI = 0.95, RMSEA = 0.04). The structural model explains the significant variance in ECB ($R^2 = 0.50$). Although the structural model explains a substantial proportion of variance in ECB ($R^2 = 0.50$), this explanatory power is not evenly distributed across predictors. The direct effect of environmentalism on ethical consumption is statistically significant but small ($\beta = 0.04$), suggesting a limited standalone contribution. In contrast, the interaction terms involving materialism, particularly environmentalism × materialism ($\beta = 0.45$) and consumption

ethics × materialism ($\beta = 0.36$), exhibit substantially larger effect sizes. This indicates that the model's explanatory strength is driven primarily by moderation effects rather than by main effects alone. These results indicate that a substantial proportion of the explained variance is associated with interaction terms, suggesting that ethical orientations operate conditionally. However, without estimating conditional effects at specific values of the moderator, these findings should be interpreted cautiously.

To further interpret the significant interaction effects, simple slope analyses were conducted at low (−1 SD), mean and high (+1 SD) levels of materialism. For environmentalism, the positive association with ECB increased from $b = 0.043$ at low materialism to $b = 0.079$ at high materialism, indicating that the effect of environmentalism on ethical consumption becomes stronger as materialism increases. Similarly, for consumption ethics, the slope increased from $b = 0.143$ at low materialism to $b = 0.167$ at high materialism. These findings demonstrate that materialism strengthens the translation of ethical orientations into ECB. In contrast, the interaction between fair-trade attitudes and materialism was not statistically significant ($p = 0.131$), and therefore no conditional slope analysis was conducted. The interaction patterns are illustrated in Figures 5 and 6.

Discussion

The findings of this study reveal statistically significant (Table 8), but modest, positive associations among environmentalism, fair-trade attitude, consumption ethics and ECB. This suggests that Islamic ethical values are reflected in consumption attitudes, though their translation into behavior remains partial. However, further research is needed to determine whether this agreement translates into actual purchasing behavior.

The results support *H1a*, confirming that environmentalism significantly influences ECB ($\beta = 0.04$, $p = 0.02$). This finding indicates that Pakistani consumers exhibit environmental concern that is associated with ECB by preferring eco-friendly products and responsibly

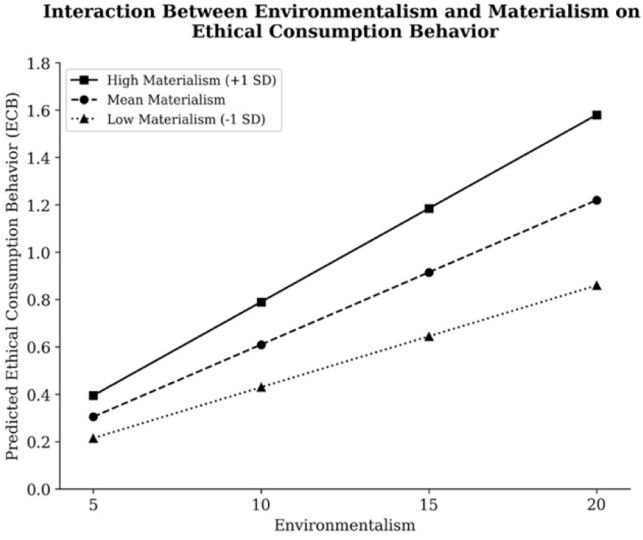

Figure 5. Simple slope ENV × MAT

Source: Authors' own work

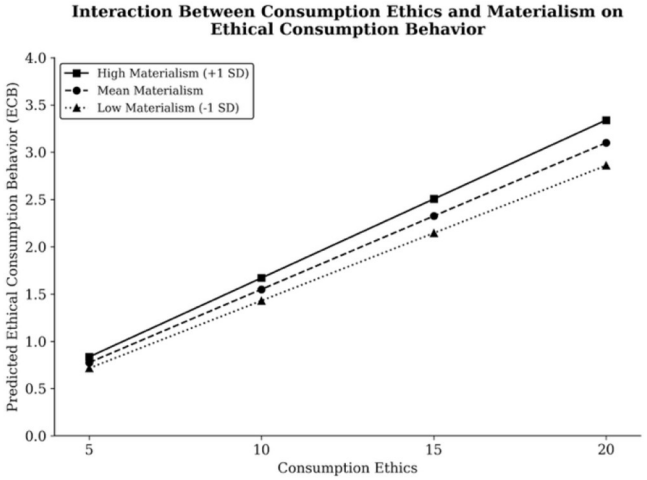

Figure 6. Simple slope CE × MAT
Source: Authors' own work

Table 8. Summary of hypotheses

Hypotheses	Statement	Results
H1a	Environmentalism positively affects ethical consumption behavior	Accepted
H1b	Fair-trade attitude positively affects ethical consumption behavior	Accepted
H1c	Consumption ethics positively affect the ethical consumption behavior	Accepted
H2	The interaction effects between materialism and environmentalism will predict ethical consumption behavior, such that the relationship between environmentalism and ethical consumption behavior varies as a function of materialism	Accepted
H3	Materialism negatively moderates the relationship between fair-trade attitude and ethical consumption behavior, such that higher levels of materialism weaken the positive association between fair-trade attitude and ethical consumption behavior	Rejected
H4	The interaction effects between materialism and consumption ethics will predict ethical consumption behavior, such that increased materialism will strengthen the positive association between consumption ethics and ethical consumption behavior	Accepted

Source(s): Authors' own work

using natural resources. These results align with the existing literature, highlighting an increasing consumer preference for sustainable products (Howard and Allen, 2010). The modest but significant effect size suggests that, while environmental concern drives ethical consumption, it operates alongside other influential factors in the decision-making process.

Similarly, fair-trade attitudes are positively associated with ECB (*H1b* supported: $\beta = 0.11$, $p < 0.01$), suggesting that consumers consciously reward businesses that adhere to ethical trade practices. These findings reinforce prior research indicating that consumers view ethical consumption as a form of activism through their purchasing choices (Natale and Doran, 2012). The stronger effect size for fair-trade attitudes compared to environmentalism reflects the deep cultural resonance of fairness and justice principles within Islamic contexts,

where the concepts of equitable trade align closely with religious teachings about social responsibility.

This study further demonstrates that consumption ethics positively influences ECB (*H1c* supported: $\beta = 0.14$, $p < 0.01$), reflecting the significant role religion and societal norms play in guiding consumer decisions within the Pakistani context. This finding corroborates previous research, highlighting religion as a critical driver of ethical consumer behavior (Wilson and Hollensen, 2013). The strongest direct effect among all predictors underscores that general ethical orientation serves as a fundamental driver of specific ethical consumption choices, consistent with moral foundations theory (Haidt and Graham, 2007).

However, materialism exhibits complex moderating effects that challenge the conventional wisdom regarding its role in ethical consumption. Most notably, the interaction between materialism and environmentalism significantly predicted ECB (*H2* supported: $\beta = 0.45$, $p < 0.01$). This substantial effect represents a significant theoretical contribution that requires careful examination through multiple theoretical lenses.

The observed interaction between materialism and the environmentalism-ethical consumption relationship can be explained through several complementary theoretical mechanisms. First, status signaling theory suggests that materialistic individuals use consumption to signal their social status and personal identity (Veblen, 1899). In contemporary Pakistan, environmental consciousness has become increasingly associated with education, sophistication and global awareness. When environmental products serve as status symbols, such as hybrid vehicles, organic foods, or eco-friendly technology, materialistic consumers may embrace these products not despite their materialism but because of it (Griskevicius *et al.*, 2010). This transformation of environmental consumption from sacrifice-based to status-based behavior explains how materialism can amplify rather than inhibit environmental choices.

Social identity processes may provide an explanatory mechanism. Materialistic individuals often seek to enhance their social identity through consumption choices that align with socially desirable values (Arndt *et al.*, 2004). As environmental awareness has gained social prestige in educated Pakistani circles, particularly among university communities, environmentally conscious consumption has become a means of signaling membership in progressively educated social groups (Belk *et al.*, 2005). This aligns with self-enhancement theory, in which materialistic consumers engage in conspicuous virtue signaling to compensate for potential moral deficits associated with their materialistic orientation (Sezer *et al.*, 2015).

Within Pakistan's Islamic cultural context, this interaction may be shaped by religious teachings that emphasize the stewardship (khalifa) of the Earth's resources. Materialistic Muslims may view environmental consumption as simultaneously fulfilling religious obligations and social status needs, creating powerful dual motivations that reinforce environmental behaviors. This finding aligns with emerging research suggesting context-dependent effects of materialism on ethical behavior. Hurst *et al.* (2013) found that materialistic consumers demonstrated increased environmental concern when environmental products were positioned as luxury items, while Kidwell *et al.* (2013) demonstrated that materialistic individuals exhibited stronger pro-social behaviors when such behaviors enhanced their social image.

In contrast, the hypothesized moderating role of materialism on fair-trade attitudes and ethical consumption (*H3*) was not supported ($\beta = -0.15$, $p = 0.13$), suggesting that increased materialism does not amplify fair-trade purchasing decisions. This finding is particularly intriguing and warrants a deeper theoretical reflection. The rejection of *H3* provides important insights into the boundary conditions of the positive moderating effects of

materialism. Islamic teachings strongly emphasize the principles of justice (Adl), fairness and equitable treatment, which underpin fair-trade attitudes. These religious imperatives may create "moral immunity" to materialistic influences, making fair-trade consumption inherently ethical rather than status driven. This supports moral foundations theory (Haidt and Graham, 2007), which suggests that certain moral domains, particularly justice and fairness, are so fundamental that they resist the influence of self-interested motivations.

Thus, even highly materialistic individuals may not compromise their adherence to fair-trade principles because Islam's inherent religious framing of fairness and justice diminishes the moderating potential of materialism. This contrasts sharply with environmental consumption, where ethical products can more readily become status symbols. The selective pattern of moderation effects contributes to Islamic marketing theory by identifying domains in which religious values override materialistic considerations, suggesting that fair trade should be marketed through religious and moral appeals rather than status-based positioning in Islamic markets.

In addition, the interaction between materialism and consumption ethics (*H4* supported: $\beta = 0.36$, $p < 0.01$) revealed that materialistic individuals become ethically conscious consumers when ethical behaviors align with personal and social rewards. This interaction may be interpreted through moral licensing theory, in which materialistic individuals engage in heightened ethical consumption as a form of moral licensing, providing psychological permission for self-interested behaviors in other domains (Monin and Miller, 2001). Social proof principles also apply to materialistic individuals as being highly sensitive to social cues and status implications, which may amplify their ethical consumption when they perceive it as socially valued behavior (Cialdini, 2009). In Pakistan's collectivistic culture, conformity to social expectations is particularly strong, making materialistic individuals especially responsive to ethical consumption norms when they become socially prestigious (Bond and Smith, 1996).

The self-concept maintenance theory further explains this interaction, as individuals strive to maintain positive self-concepts while maximizing personal benefits (Mazar *et al.*, 2008). Materialistic consumers may engage in enhanced ethical consumption to maintain moral self-regard while pursuing material acquisitions, creating a balance between self-interest and ethical behavior that strengthens the ethics–behavior relationship. Within Pakistan's Islamic context, the interaction between materialism and ethics becomes more complex through the Islamic concept of balance (*Mizan*), which allows materialistic Muslims to interpret ethical consumption as a means of balancing their material desires with spiritual obligations.

The positive moderating effects of both environmentalism and consumption ethics make several important theoretical contributions. These findings challenge the simplistic view that materialism uniformly inhibits ethical behavior, revealing its context-dependent, potentially beneficial effects on ethical consumption (Richins, 2017). The results support value compatibility theory by demonstrating how apparently conflicting values can be made compatible through appropriate framing and cultural contexts (Schwartz, 2012). Furthermore, the findings advance Islamic consumer behavior theory by demonstrating how religious and materialistic motivations work synergistically rather than in opposition (Wilson and Liu, 2010).

Overall, the differential impacts of materialism highlight the need for context-specific marketing strategies. These strengthening effects suggest that businesses can strategically position ethical products to appeal to materialistic consumers by associating them with their social status and prestige. Environmental and consumption ethics-driven products should emphasize exclusivity, innovation and social recognition rather than focusing solely on

sacrifice-based messaging (Luchs *et al.*, 2010). Conversely, businesses and policymakers aiming to encourage fair-trade consumption in Muslim markets should emphasize moral and religious dimensions, leveraging Islamic principles of fairness and justice that resonate with religious convictions and appear immune to materialistic influences. These findings provide actionable insights for marketers seeking to promote ethical consumption by leveraging, rather than opposing, materialistic motivations, a strategy critical for engaging emerging markets where status and sustainability increasingly intersect.

Conclusion

This study provides empirical evidence that environmentalism, fair-trade attitudes and consumption ethics shape ECB in a Muslim-majority market, and that materialism functions as a conditional moderator of these relationships. The findings offer several contributions to the literature on Islamic marketing and ethical consumption.

First, this research contributes to the ethical consumption literature by demonstrating that the relationship between ethical orientations and consumption behavior is not uniform but varies as a function of consumers' materialistic values. Prior research has predominantly treated materialism as a barrier to ethical consumption, positioning it as fundamentally incompatible with ethical concerns. The present findings challenge this assumption by revealing that materialism strengthens the association between environmentalism and ethical consumption ($\beta = 0.45$, $p < 0.01$) and between consumption ethics and ethical consumption ($\beta = 0.36$, $p < 0.01$). This suggests that in certain cultural contexts, materialistic orientations can amplify rather than inhibit ethical behavior, particularly when ethical consumption acquires status-signaling properties. This reframing of materialism as a "double-edged sword" extends the theoretical understanding of how value orientations interact to produce consumer behavior, moving beyond the simplistic view that materialism and ethics operate in opposition.

Second, the study advances Islamic marketing theory by identifying domain-specific boundary conditions for the moderating effects of materialism. The nonsignificant interaction between materialism and fair-trade attitudes ($\beta = -0.15$, $p = 0.13$) reveals that certain ethical domains are insulated from materialistic influences within Islamic contexts. Islamic teachings on justice (Adl), fairness and equitable treatment provide a moral framework that renders fair-trade consumption inherently ethical rather than status driven. The religious imperative to uphold justice may create a form of "moral immunity" that protects fair-trade attitudes from being co-opted by materialistic motivations. This selective pattern of moderation has not been documented in previous ethical consumption research and contributes a nuanced understanding of how religious values interact with materialistic orientations across different ethical consumption domains.

Third, this research extends the application of the Hunt–Vitell general theory of marketing ethics and social identity theory to the context of Muslim consumer behavior. By demonstrating that Islamic values do not simply suppress materialism but rather channel it selectively, the findings suggest that religious ethical frameworks create a more complex relationship between values and behavior than previously theorized. The concept of *Mizan* (balance) in Islamic ethics provides a theoretical lens for understanding how materialistic Muslims may reconcile their material aspirations with ethical obligations not by choosing one over the other, but by integrating ethical consumption into their identity as sophisticated, status-conscious consumers who also fulfil their religious responsibilities. This integration of Islamic ethical principles with consumer behavior theory broadens the explanatory scope of existing frameworks and opens new avenues for understanding ethical consumption in the growing Muslim consumer market.

Taken together, these contributions position materialism not as a fixed trait that uniformly predicts consumption outcomes, but as a contextually embedded orientation whose effects on ethical behavior depend on the specific ethical domain, the cultural and religious context and the degree to which ethical consumption acquires symbolic value. This perspective has implications for how researchers conceptualize the materialism–ethics interface and for how practitioners design strategies to promote ethical consumption in diverse market contexts.

Managerial implications

This study offers insights for marketers, policymakers and retailers operating in Pakistan's rapidly growing halal and ethical products market. Given that Pakistan's urban consumer base is expanding at pace, with a young population increasingly exposed to aspirational media and global consumption norms, the findings suggest that businesses should strategically position ethical products to appeal to materialistic consumers by associating them with symbolic or self-expressive attributes. For instance, Pakistani brands marketing premium halal cosmetics, organic food, or sustainably sourced textiles could leverage aspirational messaging that frames ethical consumption not merely as responsible but as a marker of sophistication and social distinction appealing directly to the status-driven motivations that this study found to amplify ethical behavior.

Simultaneously, fair-trade promotion in Pakistan should adopt a different approach. Because materialism does not significantly moderate the relationship between fair-trade attitudes and ethical consumption, fair-trade campaigns targeting Pakistani consumers may benefit from emphasizing intrinsic moral and religious value rather than status signaling. Given the strong resonance of Adl (justice) and equitable dealing in Pakistan's Islamic culture, fair-trade branding should foreground these principles, for example, through messaging that connects fair-trade purchasing to fulfilling one's religious obligation toward just and honest commerce, rather than positioning it as a lifestyle choice.

Consumer awareness campaigns may play a supportive role in fostering ethical consumption, particularly among consumers with strong materialistic orientations. Given that ethical awareness enhances ethical behavior, policymakers and advocacy groups should implement educational initiatives that highlight the long-term benefits of responsible purchasing. Public campaigns should reinforce the economic, social and environmental impacts of ethical consumption, making consumers more conscious of their role in promoting sustainability. In Pakistan, where university-educated young consumers represent a rapidly growing and influential market segment, such initiatives could be embedded within higher education curricula and campus-based sustainability initiatives to reach consumers at a formative stage of their purchasing habits.

Furthermore, retailers and manufacturers may integrate sustainability messaging into their branding strategies to reflect evolving consumer preferences. Ethical product labeling, third-party certification and social impact-driven marketing can significantly enhance consumer trust and loyalty. Businesses must ensure transparency in their sustainability claims and leverage storytelling techniques to communicate the positive impact of ethical consumption. By aligning ethical products with status-driven and value-driven motivations, companies can effectively appeal to a wider range of consumers and drive the adoption of responsible consumption behaviors. In Pakistan specifically, where the halal certification ecosystem is still maturing, businesses that invest in credible third-party ethical certifications and transparent supply chain communication stand to gain a significant first-mover advantage among the country's increasingly conscientious urban consumers.

Limitations and future directions

Although this study provided significant insights, several limitations must be acknowledged. First, convenience sampling restricts the generalizability of the findings beyond the sampled university-affiliated respondents. Future research should use more rigorous sampling methods, such as quota or probability sampling, to improve representativeness and enhance external validity.

In addition, the sample comprised predominantly university professors, students and professionals, who typically exhibit greater awareness of ethical issues than the general population. Future research should include broader demographic segments to capture better variations in ECBs across different societal groups.

Another limitation of this study is the absence of industry-specific analyses. ECBs likely vary by industry (e.g. food, cosmetics and apparel), with sectors such as fashion and luxury goods potentially exhibiting distinct dynamics. Future research could benefit significantly by examining these behaviors within specific industry contexts to provide deeper, more actionable managerial insights.

Treating materialism as a unidimensional construct is another limitation. Given materialism's multifaceted nature, future research should investigate deeper into its subdimensions, such as status-driven materialism, self-enhancement materialism and acquisition centrality. Investigating these subdimensions could offer nuanced insights into their differential impacts on ethical consumption.

Promising avenues for future research include exploring cross-cultural contexts to determine the universality of these findings. Cross-cultural studies can verify whether established relationships hold in diverse consumer markets, thereby improving external validity and informing global marketing strategies. In addition, adopting longitudinal research methods could provide valuable insights into the sustainability and evolution of ECBs over time, particularly in response to changing economic circumstances, societal norms and ethical paradigms.

By addressing these limitations and following the recommended directions, future research can deepen understanding of the intricate roles of ethical consumption and materialism, particularly in emerging markets.

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Ethics statement

All procedures performed in this study involving human participants were in accordance with the ethical standards of the SZABIST Islamabad, Pakistan.

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