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NAVIGATING CONSUMER PERCEPTIONS OF SUSTAINABILITY: THE INFLUENCE OF GREEN SUPPLY CHAIN MANAGEMENT ON PURCHASING DECISIONS

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Abstract

Purpose: *The purpose of this study is to examine the factors influencing consumers' green purchase intentions in Pakistan. It investigates the roles of brand awareness, advertisement attitude, cognitive and environmental attitudes, and green supply chain management, while assessing the mediating effects of consumer attitudes and the moderating role of cause-related marketing. The study aims to provide both theoretical insights and practical guidance for firms seeking to enhance environmentally responsible consumer behavior.*

Design: *The study was conducted using Partial Least Squares-Structural Equation Modelling (PLS-SEM) and a well- researched survey questionnaire.*

Findings: *The findings show that cognitive attitude is the most predictive of green purchase intention and environmental concern and advertisement attitude. Brand awareness has a major impact on Advertisement Attitude, Cognitive Attitude, Environmental Concern, and Purchase Intention, whereas green supply chain management impacts positively on consumer attitudes and PI. The effects Cognitive Attitude and Environmental Concern have on Purchase Intention are moderated by cause-related marketing and perceived image which reinforces the positive impact of Cognitive Attitude and exhibits a crossover effect with Environmental Concern. The mediation analysis proved the partial mediation of the relationships between Brand Awareness, GSCM, and Purchase Intention by Advertisement Attitude, Cognitive Attitude, and Environmental Concern with Cognitive Attitude being the most effective mediator. In general, the model had good explanatory power using an R square of 0.883 on Purchase Intention.*

Theoretical Contribution: *This study extends the Theory of Planned Behavior and the Stimulus-Organism-Response framework by demonstrating how brand awareness, attitudes, and green supply chain practices jointly influence green purchase intention. It also highlights the moderating role of cause-related marketing and the mediating effects of cognitive and environmental attitudes in sustainable consumer behavior.*

Practical Implications: *The findings guide firms to leverage brand awareness, sustainable supply chain practices, and cause-related marketing to enhance consumer engagement and green purchase intentions. Marketers should focus on*

shaping cognitive and environmental attitudes to effectively drive environmentally responsible consumer behavior.

INTRODUCTION

Sustainability has emerged as a central focus for businesses worldwide, shaping strategic priorities, corporate identity, and competitive advantage (Bari et al., 2022). Organizations are increasingly recognizing that environmentally responsible practices are no longer optional but essential for long-term viability (Bhutto, 2024). This shift is driven by multiple forces: growing consumer awareness of environmental issues, intensifying regulatory pressures, and the societal expectation that firms contribute to sustainable development. In emerging economies such as Pakistan, this trend is particularly significant, as consumers are gradually adopting environmentally conscious consumption behaviors while organizations navigate resource constraints, infrastructural limitations, and market volatility (Mehmood et al., 2024). These dynamics create a critical need to understand how sustainability-oriented organizational actions translate into consumer engagement, attitudes, and ultimately purchase intentions.

Green marketing initiatives, including brand awareness campaigns, advertisement strategies, green supply chain management (GSCM), and cause-related marketing (CRM), have become important mechanisms for shaping consumer perceptions and decision-making in environmentally oriented markets (Malviya et al., 2023). While previous studies have explored direct relationships between sustainable initiatives and purchase intention, there is a lack of research examining the psychological mechanisms and boundary conditions that drive these relationships (Li et al., 2025). In particular, the mediating role of cognitive, affective, and environmental attitudes, which reflect consumers' internal evaluation of brand credibility, environmental concern, and perceived product value, remains underexplored (Chang & Hsiao, 2025). Likewise, the moderating influence of CRM, through which socially responsible campaigns can amplify or attenuate the impact of attitudes on purchase intentions, has received limited empirical attention, especially in the context of developing countries like Pakistan, where institutional support for sustainability is less robust (Gong et al., 2023; Lyu et al., 2023).

The Theory of Planned Behavior (TPB) establishes a theoretical construct of conceptualizing the formation of consumer intention, beliefs, attitudes, and perception of control of behavioral opportunities in unison influence behavioral consequences (Ajzen, 1991). Incorporating, the Stimulus-Organism-Response (S-O-R) model describes how external stimuli (brand communication and sustainability efforts) trigger inner psychological conditions, emotional, cognitive and environmental appraisals, which subsequently result in behavioral reaction. This study combines TPB and S-O-R by formulating the entire model to study the antecedents and processes of green purchase intention and involves the interaction of the organizational activities, consumer perceptions and behavioral consequences.

Particularly, the study examines the relationship between brand awareness, advertisement attitude, cognitive attitude, environmental concern, and GSCM with purchase intention and considers the influence of consumer attitudes as the mediating factors and the moderating role of CRM. With this integrative view, the research will make its theoretical contribution by advancing the knowledge on the theoretical framework of cognitive and attitudinal processes by which sustainability programs affect consumer behavior, as well as practical contribution to the research by informing companies on how to embark on successful measures in enhancing environmentally friendly consumer behavior. The study is also sensitive to a contextual research gap that concentrates on the Pakistani market and provides evidence on a developing economy where consumer environmental awareness is on an increase, yet the organizational aspect of sustainable marketing practices is being challenged in a unique way.

The present research will create a more detailed conceptualization of the way sustainability-centered programs affect consumer attitudes and behavior and will offer practical suggestions to managers who are aiming at capitalizing on sustainability as a strategic differentiator. Thus, it fills a much-needed gap in the existing body of literature on sustainable consumer behavior in developing markets and sheds some light on the impact of organizational practices and marketing strategies on the formation of environmentally responsible consumption patterns.

2. Literature Review

2.1 Theoretical Foundation

The Theory of Planned Behavior states that consumer purchase intentions occur because of internalized beliefs, emotional responses, and cognitive evaluations as opposed to external exposure (Sun, 2020). Green supply chain initiatives and other sustainability-oriented company activities determine consumer attitudes of authenticity, making advertisements preferable and building a stronger cognitive trust in the brand (Alhomaid, 2025). When such activities are also consistent with personal values, environmental concern is made more morally essential, prompting further buying behavior. The theory is also confirmed proving that the power of attitudes to determine intentions is stronger when supported by socially responsible campaigns and the presence of a credible and positive brand image, which builds consumer confidence and emotional goodwill (Chu & Chen, 2019).

This is then complemented by the Stimulus-Organism-Response framework which introduces sustainability practices and brand visibility as external stimuli that trigger internal psychological states (the organism) such as emotional response to ads, logical evaluation of brand competence, and ecological sensitivity (Renner, 2020). These internal states are the mechanisms that transform external stimuli to the behavioral product of purchase intention. The framework also lends credence to the fact that cause related marketing and perceived brand image act as external reinforcers which enhances internal assessment of consumers with respect to purchase response link when emotional and cognitive attitudes or environmental concern is high (Amaya Rivas et al., 2022). When combined, TPB offers the conviction-informed basis behind intention development whereas S-O-R expounds the stimulus-mindset-behavior progression that propels and reinforces buying choices.

2.2 Hypothesis Development

2.2.1 GSCM, Advertisement Attitude, Cognitive Attitude & Environmental Concern

Green Supply Chain Management (GSCM) represents an effort of a company to make purchases, production and distribution processes environmentally responsible (Jaggernath & Khan, 2015). As previous studies illustrate, consumers are inclined to increasingly prefer the brands that base their operations on sustainability as opposed to a focus on the promotion exercises where green messages are restricted to computing claims (Olsen et al., 2014). Research based on the Attribution Theory maintains that visible organizational activities like GSCM have the effect of instilling positive attitude formation in consumers when they attach environmental assertions of a brand to genuine corporate accountability (Moehl & Friedman, 2022). Empirical studies also demonstrate that eco-friendly operations enhance the attractiveness and credibility of advertisements which reinforce affective reactions to green marketing messages (Kesa, 2025; Savale et al., 2023). Based on the Elaboration Likelihood Model, sustainability-based advertisement is processed by consumers using central (cognitive judgment) and peripheral (emotional appeal) channels, resulting in better advertisement and cognitive attitude with high sustainability competence (Elsantil et al., 2025). Also, the ecological consciousness of the buyers is raised with green operational strategies because they amplify the perceived ecological responsibility and decrease skepticism, which ultimately raises environmental concern as a positive consumer evaluative consequence (Albayrak et al., 2013).

H1: Green Supply Chain Management has a direct positive relationship with Advertisement

Attitude

H2: Green Supply Chain Management has a direct positive relationship with Cognitive Attitude

H3: Green Supply Chain Management has a direct positive relationship with Environmental Concern

2.2.2 Brand Awareness, Advertisement Attitude, Cognitive Attitude & Environmental Concern

Brand Awareness (BA) identifies how well a brand name can be remembered and identified by the consumers (Rossiter, 2014). It is proposed by the literature that greater awareness levels lead to a greater effectiveness of advertisements by boosting familiarity-based liking, decreasing perceived risk, and increasing message receptivity. The theoretical justification of the Mere Exposure Effect supports that attitude to the advertisements develops positively because of increased subconscious preference and cognitive fluency (Grimes & Kitchen, 2007). Familiar brands also attract higher rates of cognitive trust which makes them have more cognitive attitudes because consumers access product-related and environmental messages in a more positive fashion when they recognize the brand (Copeland & Bhaduri, 2020). It is also discovered that acceptable brands who invest in sustainability activate more environmental involvement because consumers anticipate that high-equity brands should possess socially responsible behaviors (Ho et al., 2019). Researchers who follow the Aaker model of Brand Equity exercise demonstrate that stronger brands stand at a better position to have an impact on the issue of environmental concern, due to the association of such a brand with legitimacy and long-term responsibility by the consumers (Ishaq & Di Maria, 2020). Therefore, BA does not only utilize the perception of advertisement but also bolsters the cognitive and environmental evaluative attitudes through enhancing brand credibility (Hussain et al., 2020).

H4: Brand Awareness has a direct positive relationship with Advertisement Attitude

H5: Brand Awareness has a direct positive relationship with Cognitive Attitude

H6: Brand Awareness has a direct positive relationship with Environmental Concern

2.2.3 GSCM, Brand Awareness, Purchase Intention

Purchase Intention (PI) is used to indicate the possibility of a consumer to purchase a product because of a perception and attitudes towards a brand (Sallam & Algammash, 2016). The current literature indicates that sustainability supply chain practices will play an important role in enhancing consumer PI by indicating ethical production, environmental stewardship and product safety (Eltayeb & Zailani, 2014). It has been shown that green operational excellence helps to minimize uncertainty, create more value perceptions, and enhance the intention to act. On the same note, BA has an already established influence on PI since the familiar brands enjoy more recall and consideration when making a purchase decision (Wang et al., 2021). Theory of Planned behavior supports the fact that consumer decisions are affected by proactive beliefs (cognitive attitude), affect (advertisement attitude), perceived norms (brand familiarity), and perceived behavioral control (credibility of green operations) (Lee et al., 2021). It has been found that, where sustainability actions are enhanced by a high BA, the purchasing intent is enhanced since customers are more eager to invest in a brand that they are made aware of, they believe they can provide both environmental and functional goodwill (Gong et al., 2023). Thus, it is concluded that both GSCM and BA are good predictors of PI in green consumer behavior studies.

H7: Green Supply Chain Management has a direct positive relationship with Purchase Intention

H8: Brand Awareness has a direct positive relationship with Purchase Intention

2.2.4 Mediation of Advertisement Attitude, Cognitive Attitude & Environmental Concern between GSCM, Purchase Intention

Advertisement Attitude, Cognitive Attitude and Environmental Concern are the major psychological states that convert the operations sustainability initiatives into consumer buying behavior (Balaskas et al., 2023). Literature suggests that sustainability initiatives influence consumer PI in a better manner via attitudinal pathways as opposed to isolated exposure to direct exposure (Sun et al., 2020). The reason behind the emerging consumer decisions is explained by the Dual Attitude Model, which is that consumer decisions are a result of both emotional (advertisement attitude) and rational (cognitive attitude) processing, which are positively influenced by the GSCM-driven green firm behavior, ultimately causing PI (Rakib et al., 2022). Moreover, green behavior is personally relevant when the consumer believes that the firms give back to the environment and this increases the level of environmental concern hence, purchasing intention (Vu et al., 2022). Theoretically, the attitude-based internalization of the environmental competence of a brand is stimulated by GSCM and sequentially the attitudinal constructs inspire behavioral intention. Regular results prove that the advertisement appeal positively correlates with message persuasiveness, cognitive attitude positively correlates with perceived functional value, and environmental concern positively correlates with moral self-identity, which are used as mediating factors to explain the PI promotion by GSCM (Rafiq & Xinru, 2025).

H9: Advertisement attitude mediates the relationship between Green Supply Chain Management and Purchase Intention

H10: Cognitive attitude mediates the relationship between Green Supply Chain Management and Purchase Intention

H11: Environmental Concern mediates the relationship between Green Supply Chain Management and Purchase Intention

2.2.5 Mediation of Advertisement Attitude, Cognitive Attitude & Environmental Concern between Brand Awareness, Purchase Intention

Other scholarly works on consumer behavior reveal that PI is dependent on attitude-based psychological reactions to awareness-related brand recall. Theoretical explanations provided in the Hierarchy of Effects Model indicate that brand knowledge has a sequence of awareness, formation of attitude, and behavioral intention (Ikpo Kobi et al., 2020). PI is stimulated by familiarity-based liking and emotional resonance resulting in a high BA which leads to the positive advertisement attitude. Meanwhile, familiar brands have a cognitive trust, which enhances cognitive attitude, which supports purchasing behavior (Md Husin et al., 2023). Moreover, by a famous brand sharing sustainable values, the level of environmental concern increases due to the fulfillment of expectations, and the more willing buyers can be to help the brand pursue its environmental goals (Majeed et al., 2022). According to literature, advertisement attitude, cognitive attitude and environmental concern are conversion filters which transform brand recognition into stronger PI by enhancing message credibility, perceived value and moral compatibility (Le & Wang, 2020). In this way, it is not that PI is not affected by BA but creates more purchase impetus by attitudinal and environmental relevant pathways.

H12: Advertisement attitude mediates the relationship between Brand Awareness and Purchase Intention

H13: Cognitive Attitude mediates the relationship between Brand Awareness and Purchase Intention

H14: Environmental concern mediates the relationship between Brand Awareness and Purchase Intention

2.2.6 Moderation of CRM & Perceived Image between Attitudinal Constructs, Purchase Intention

The effects of the consumer attitudes on PI are reinforced or undermined by the cause-Related Marketing (CRM) and Perceived Brand Image (PBI) (Kurian et al., 2025). The studies underline

that promotional campaigns connected socially enhance PI when consumers understand that there is a correspondence between competence in terms of sustainability and social contribution (Jia et al., 2023). The attitude-social identity interaction is conceptually underpinning with the help of the Social Identity Theory meaning that consumers select brands that resonate a positive social and moral self-presentation (Samadi, 2023). It has been documented that brands with high perceived image create greater PI since consumers perceive their advertisements and cognitive assessments as being more valid towards the consumer (Jia et al., 2022). In the same way, CRM enhances advertising persuasive ability and cognition by introducing an extra element of social value, making the process of green purchase decisions more meaningful and effective (Sartono et al., 2024). In theory, advertisement attitude results in higher PI when promotional messages induce emotional goodwill in the form of strong brand image whereas cognitive attitude is a stronger predictor of PI when the brand is seen to be responsible, credible and socially invested (Arshad, 2021). On the same note, eco-awareness influences PI better in presence of CRM and PBI because these two constructs generate moral reinforcement and minimize skepticism. Researchers have continuously attested that in cases where brand image and cause affiliation are high, the attitude PI association is much stronger (Rohit & Panda, 2018).

H15: Cause related Marketing and Perceived Image moderates the relationship between Advertisement attitude and Purchase Intention

H16: Cause related Marketing and Perceived Image moderates the relationship between Cognitive attitude and Purchase Intention

H17: Cause related Marketing and Perceived Image moderates the relationship between Environmental concern and purchase intention

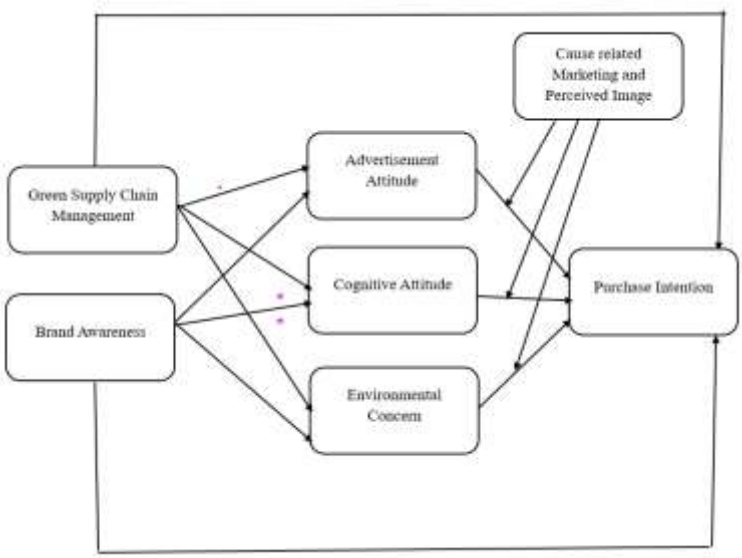


Figure 1: Conceptual Framework

3. Methodology

3.1 Design and Data Collection

The sample population applied in this study was the consumers in Pakistan that are well informed with the environmentally positioning brands and are exposed to the advertisement message on sustainability. The consumers sampled were general retail customers, social-media users who consumed green brand information on Instagram and Facebook, and they all qualify as end-buyers with the ability to judge brand awareness, attitudes about advertising, concern about the environment, and purchase intentions. As a primary data gathering tool, a self-administered

questionnaire was created based on the validated scales detached to the previous consumer-related sustainability and brand equity studies. As it is in line with the strategy suggested by Hox and Boeije (2005), the questionnaire items were measured on a five-point Likert scale. Purposive sampling was used to bring about enough knowledge on green brand exposure and recognition among the participants by selecting people who had purchase experience or sustainability-driven brand experience. Among the 500 questionnaires that were handed out (online and offline), 400 responses were returned leading to an estimated response rate of 80 per cent. The total number of empirical questionnaires that were retained after destroying the incomplete submissions was 361 and 39 were discarded owing to the lack of values. To test the hypothesis and to statistically infer, the two tailed significance test was applied with the confidence level of 5 percent (= 0.05) to ensure strength in modeling the relationship between attitudes and intents.

3.2 Measures

Every construct in this research was assessed by good and valid scales so that high reliability, validity and consistency would be attained to capture consumer perceptions. The attitudes and the intentions of the respondents were measured on a five-point Likert scale. Three refined items based on Roh et al. (2022) were used to measure Green Supply Chain Management whereas four customized items were used to measure Brand Awareness according to (Homburg et al., 2010). Advertisement Attitude measured through three constructs, which were adapted in Qiu et al. (2025), reflecting the affective reactions of the consumers on the advertisement message targeted at the brand. Cognitive Attitude was conceptualized as a factor of cognitive trust and perceived risk as a mixture of thirteen items in Chang et al. (2016) as seven items representing cognitive trust and six items representing perceived risk. Measurement of Environmental Concern was done using eight questions that were modified as per Bamberg (2003), and Purchase Intention measured using four questions as per (Shafiq et al., 2011). Six items of Anghel et al. (2011) were modified and measured Cause-Related Marketing and Perceived Brand Image. The validity and consistency and credibility of the data proved by using such predetermined and validated scales guaranteed the accuracy, consistency, and credibility of the data, which can be further statistically analyzed and the correlations between consumer attitudes, environmental concerns, and purchase intentions can be accurately modeled.

4. Empirical Analysis

PLS-SEM is a powerful tool of analysis since it enables the simultaneous evaluation of several relationships in a model (Ali et al., 2018). Ringle (2005) says that it is more flexible when testing complex models and is especially applicable in studies of small scale or non-normality data (Hair et al., 2016). This research was conducted in accordance with the guidelines presented in Henseler et al. (2012), where the proposed hypotheses were tested in two stages to use SmartPLS. The confirmatory factor analysis was used in the first stage to determine the convergent and discriminant validity of the measurement model. The second phase implied path analysis and mediation and moderation tests to investigate the structural relationships. Such a strict methodology guaranteed the thorough study of the relationships between all the study variables.

4.1 Measurement Model Assessment

The convergent validity was determined by using factor loadings, Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) and the results show that all constructs provide the required standards. The factor loading of Advertisement Attitude, Brand Awareness, Cause-related Marketing, Environmental Concern, Green Supply Chain Management and Purchase Intention was found to be above 0.70 and only a few items in Cognitive Attitude were slightly lower than the threshold yet acceptable. These constructs were also very consistent, and Cronbach's Alpha values were greater than 0.80 and CR values were

greater than 0.70. Moreover, the AVE of all constructs was more than 0.50 which confirms that every construct has a significant amount of variance in its measures.

The interaction terms (AA × CRM, CA × CRM, and EC × CRM) were theorized as single-item constructs, which generate ideal values of reliability (Alpha, CR and AVE = 1.00). These terms have a factor loading of more than 1.0 which is common among non-standardized product indicators in PLS-SEM and does not represent a problem. Overall, the findings indicate the high convergent validity of the measurement model, proving that the items always represent their intended constructs and that the model can be appropriate to further structural analysis.

Table 1: Convergent Validity

	Items	Factor Loadings	Alpha	CR	AVE
Advertisement Attitude	AA1	0.874	0.831	0.898	0.746
	AA2	0.869			
	AA3	0.848			
Brand Awareness	BA1	0.762	0.824	0.884	0.656
	BA2	0.785			
	BA3	0.875			
	BA4	0.812			
Cognitive Attitude	CA1	0.680	0.939	0.947	0.578
	CA2	0.811			
	CA3	0.721			
	CA4	0.837			
	CA5	0.807			
	CA6	0.700			
	CA7	0.806			
	CA8	0.756			
	CA9	0.698			
	CA10	0.806			
	CA11	0.742			
	CA12	0.770			
	CA13	0.726			
Cause-related marketing and perceived image	CRM1	0.846	0.883	0.915	0.682
	CRM2	0.811			
	CRM3	0.899			
	CRM4	0.781			
	CRM6	0.786			
Environmental Concern	EC1	0.750	0.910	0.927	0.614
	EC2	0.813			
	EC3	0.833			
	EC4	0.765			
	EC5	0.807			
	EC6	0.753			

	EC7	0.717			
	EC8	0.824			
Green Supply Chain Management	GSCM1	0.898	0.876	0.924	0.802
	GSCM2	0.868			
	GSCM3	0.920			
Purchase Intention	PI1	0.791	0.855	0.903	0.699
	PI2	0.911			
	PI3	0.861			
	PI4	0.775			
	AA * CRM	1.174	1.000	1.000	1.000
	CA * CRM	1.251	1.000	1.000	1.000
	EC * CRM	1.219	1.000	1.000	1.000

Fornell-Larcker criterion was used to assess discriminant validity and under this criterion the square root of the AVE of any construct must be larger than the correlations of the construct with other constructs. The results indicate that this criterion is met by all the main constructs because all the diagonal values (e.g., AA = 0.864, BA = 0.810, CA = 0.760, CRM = 0.826, EC = 0.784, GSCM = 0.896, PI = 0.836) are more positive than off-diagonal correlations. This implies that each construct has a high level of variance with its indicators more than other constructs, which shows that there is sufficient discriminant validity. The expected relationships between the terms of interaction (AAxCRM, CAxCRM, ECxCRM) exhibit expected correlations of close to or greater than 0.90 with the other because they are product-indicator constructs that are formed using the same base variables; high correlations are anticipated and do not suggest a validity concern. In general, the Fornell Larcker findings validate the constructs as being empirically different.

The distinctiveness of the constructs is also supported by the HTMT criterion that is a more stringent measure of discriminant validity. Most of the primary constructs have all HTMT ratios that are below or equal to the recommended 0.85 (strict) or 0.90 (liberal) standard. As an illustration, AA2BA =0.820, BA2CRM= 0.887, CA2EC= 0.796 and GSCM2PI= 0.798, which are within acceptable value. As anticipated, the values of HTMT in the interaction terms (e.g. AA × CRM = 0.903, EC × CRM = 0.950) are large because moderation constructs are computed as the product of indicators, which exaggerates the associations; in PLS-SEM the values are not viewed as the typical violation of discriminant validity. Taking into consideration the key constructs only, the HTMT table shows that there are no problematic overlaps between the variables. Therefore, the findings of Fornell Larcker and HTMT are consistent to the fact that the discriminant validity is established in the measurement model.

Table 2: Discriminant Validity (Fornell-Larcker)

	AA	AA*CRM	BA	CA	CA*CRM	CRM	EC	EC*CRM	GSCM	PI
AA	0.864									
AA*CRM	-0.186	1.000								
BA	0.810	-0.201	0.810							
CA	0.838	-0.260	0.823	0.760						

CA*CRM	-0.244	0.903	-0.263	-0.300	1.000					
CRM	0.676	-0.298	0.759	0.717	-0.351	0.826				
EC	0.895	-0.202	0.801	0.910	-0.249	0.680	0.784			
EC*CRM	-0.194	0.950	-0.217	-0.256	0.956	-0.293	-0.199	1.000		
GSCM	0.762	-0.253	0.785	0.802	-0.288	0.824	0.760	-0.248	0.896	
PI	0.733	-0.268	0.749	0.919	-0.300	0.616	0.763	-0.275	0.693	0.836

Table 3: Discriminant Validity (HTMT Ratio)

	AA	AA*CRM	BA	CA	CA*CRM	CRM	EC	EC*CRM	GSCM	PI
AA										
AA*CRM	0.202									
BA	0.820	0.221								
CA	0.844	0.262	0.824							
CA*CRM	0.264	0.903	0.290	0.301						
CRM	0.785	0.317	0.887	0.788	0.372					
EC	0.760	0.207	0.845	0.796	0.255	0.754				
EC*CRM	0.210	0.950	0.239	0.255	0.756	0.311	0.203			
GSCM	0.888	0.270	0.824	0.881	0.307	0.738	0.845	0.265		
PI	0.865	0.291	0.890	0.769	0.324	0.703	0.857	0.296	0.798	

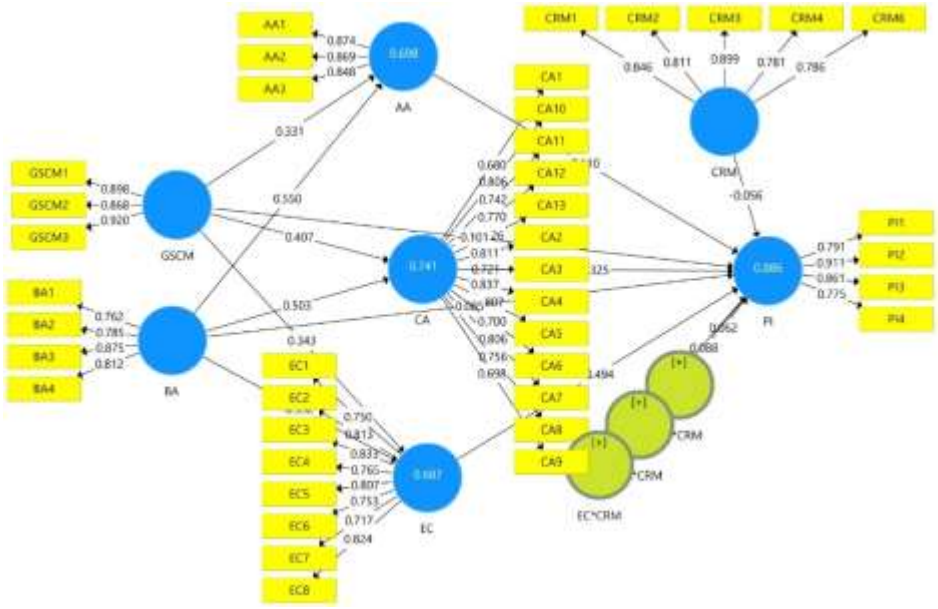


Figure 2: Measurement Model

4.2 Structural Model Assessment

The structural model demonstrates that there are some important relationships between the constructs. The Advertisement Attitude (AA) has a positive effect on the Purchase Intention (PI), whereby positive advertisement leads to higher chances of purchase. Brand Awareness (BA) has a constituent role, which is a major predictor of AA, Cognitive Attitude (CA), Environmental Concern (EC), and PI. The direct impact of CA on PI is the biggest, then EC, which supports the significance of cognitive assessments and environmental perceptions as determinants of the purchase behavior. Cause-related Marketing (CRM) has a minor yet significant direct impact

on PI, whereas Green Supply Chain Management (GSCM) is a significant predictor of AA, CA, EC and PI. CRM also balances the influence of CA and EC on PI but does not balance the influence of AA → PI path significantly.

The mediation analysis proves that AA, CA, and EC mediate the influences of BA and GSCM on PI partially where CA is the most powerful mediator. This implies that the perception of consumers and the environment are important processes whereby brand awareness and green supply chain practices affect purchase intention. The values of R-square also indicate the explaining power of the model: AA, CA and EC (0.696, 0.739, and 0.685 respectively) have a large variance explained, and PI has an extremely high R 2 of 0.883, which indicates that the model is strong enough to explain the purchase intention of consumers and these three variables support the hypothesized theoretical relationships.

Table 4: Path Analysis (Direct Effects)

Direct Effects	Beta	STDEV	T Statistics	P Values	UL	LL
AA -> PI	0.110	0.051	2.130	**0.017**	0.026	0.192
AA*CRM -> PI	0.062	0.048	1.287	**0.099**	-0.022	0.133
BA -> AA	0.550	0.045	12.110	**0.000**	0.477	0.627
BA -> CA	0.503	0.046	10.973	**0.000**	0.433	0.584
BA -> EC	0.532	0.048	11.121	**0.000**	0.453	0.608
BA -> PI	0.085	0.042	2.039	**0.021**	0.016	0.151
CA -> PI	1.325	0.043	30.530	**0.000**	1.245	1.387
CA*CRM -> PI	0.088	0.050	1.757	**0.040**	0.009	0.156
CRM -> PI	0.056	0.025	2.201	**0.014**	0.095	-0.014
EC -> PI	0.494	0.062	8.012	**0.000**	0.587	-0.392
EC*CRM -> PI	0.172	0.076	2.263	**0.012**	0.280	0.039
GSCM -> AA	0.331	0.052	6.342	**0.000**	0.235	0.404
GSCM -> CA	0.407	0.052	7.893	**0.000**	0.317	0.485
GSCM -> EC	0.343	0.054	6.343	**0.000**	0.249	0.429
GSCM -> PI	0.101	0.034	2.917	**0.002**	0.152	0.038

Table 5: R Square

	R Square
AA	0.696
CA	0.739
EC	0.685
PI	0.883

Table 6: Path Analysis (Indirect Effects)

Indirect Effects	Beta	(STDEV)	T Statistics	P Values	UL	LL
BA -> AA -> PI	0.060	0.030	2.007	**0.023**	0.013	0.109
GSCM -> AA -> PI	0.036	0.018	2.072	**0.019**	0.010	0.068
BA -> CA -> PI	0.667	0.063	10.583	**0.000**	0.567	0.773
GSCM -> CA ->	0.539	0.073	7.428	**0.000**	0.424	0.661

PI						
BA -> EC -> PI	0.263	0.043	6.153	0.000	0.332	0.196
GSCM -> EC -> PI	0.169	0.034	5.033	0.000	0.231	0.121

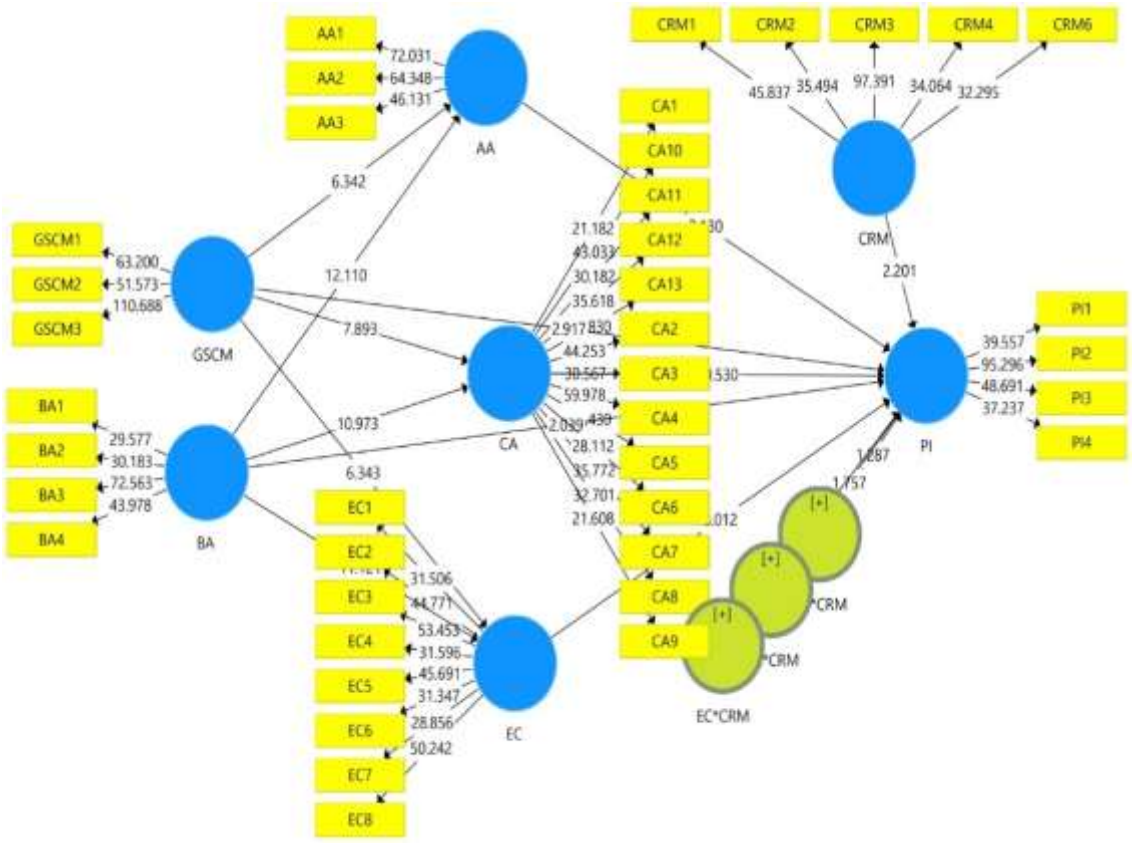


Figure 3: Structural Model Assessment

4.3 Moderation Analysis

The three lines on the plot of Moderation 1 denotes the various levels of CRM; -1 SD (low CRM), mean (average CRM) and +1 SD (high CRM). Where CA is plotted against PI on the x-axis and y-axis respectively. Each of the lines is positive sloping meaning that the higher the Cognitive Attitude, the higher the Purchase Intention irrespective of CRM level.

Nevertheless, the slope of the line is a little steeper as the CRM is stronger (green line +1 SD), i.e., the better the CRM is, the better the relationship between CA and PI. On the other hand, the influence of CA on PI is a little weaker in the low CRM levels (red line -1 SD). This corroborates the fact that CRM is a positive moderator which increases the effect of cognitive attitudes on purchase intention. The moderation analysis, in a nutshell, demonstrates that the stronger the CRM activities are more intensive, or favorable, the greater the influence of cognitive attitude on purchase intention, which proves the hypothesis that CRM has a positive moderating role between the two variables.

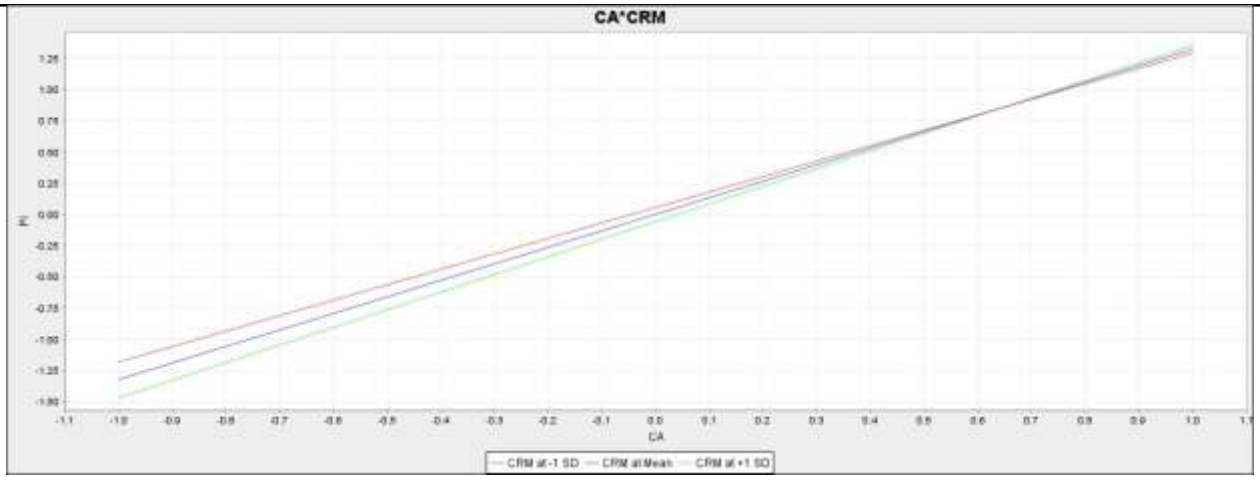


Figure 4: Moderation 1

The value in Moderation 2 shows that CRM has a moderation effect on the relationship between EC and PI: at all levels of CRM, EC is negatively related to PI, and the negative relationship is stronger with increased CRM such that a negative slope of the EC to PI is weakest when CRM is low (−1 SD), stronger when CRM is equal (mean), and strongest when CRM is high (+1 SD). The lines also intersect (around EC ≈ −0.3) which indicates that there is a cross-over interaction of higher CRM with higher PI at low EC values and an inverse result at high EC values.

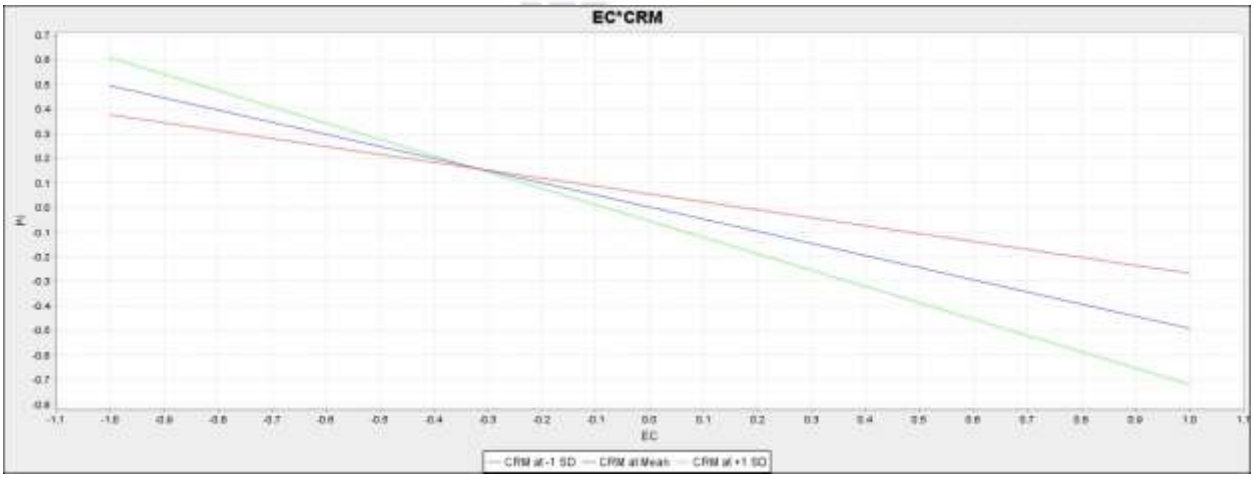


Figure 5: Moderation 2

This AA x CRM plot in Moderation 3 indicates that AA is positively correlated with PI at any level of CRM (all lines are sloping up), however, CRM modulates the magnitude of this positive association: at high levels of CRM (+1 SD) the slope of AA x PI is steepest (strongest positive effect), at the mean this is moderately positive, and at low levels of CRM (-1 SD) this slope is flattest (weakest positive effect). The lines also approach each other and barely cross in the high AA regions (around AA =0.9- 1.0) suggesting that PI differences by CRM are greatest when AA is low-to-moderate but are reduced (and even reversed somewhat) when AA is very high-so high CRM contributes most to PI when AA is not yet high.

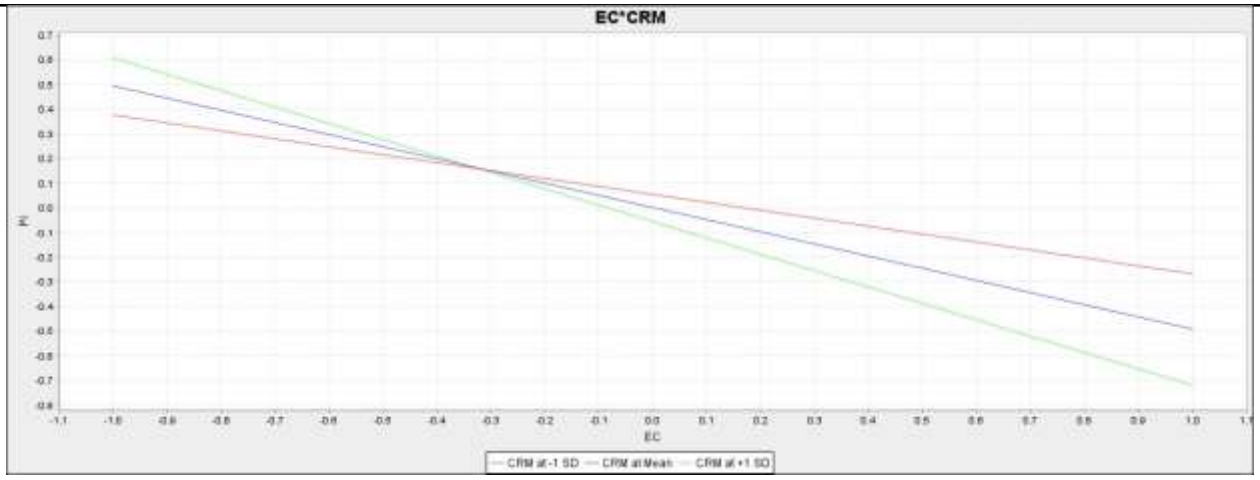


Figure 6: Moderation 3

5. Discussion and Implications

The current research has discussed the correlation between Advertisement Attitude (AA), Brand Awareness (BA), Cognitive Attitude (CA), Cause-related Marketing (CRM), Environmental Concern (EC), Green Supply Chain Management (GSCM), and Purchase Intention (PI) through a PLS-SEM methodology. The results are good empirical evidence of the suggested conceptual model, indicating both direct and indirect routes which affect the purchase intention of consumers.

First, the findings demonstrate that Cognitive Attitude (CA) is the best predictor of Purchase Intention that outweighs Advertisement Attitude and Environmental Concern. This implies that cognitive beliefs and judgments of consumers towards the products and environmental practices are the main factors in influencing their choices to purchase a product. The results of these studies are consistent with other studies highlighting the primacy of the cognitive processes in consumer decision-making (Ajzen, 1991).

Brand Awareness (BA) is developed as a supporting construct, which has a great impact on AA, CA, EC, and PI. This highlights the significance of keeping a good brand visibility and recognition as it has not only the ability to influence the attitude of the consumers, but also the intention to purchase through indirect mediating effects. Practically, the established brand is used as a signal of trust, which positively influences cognitive judgments and environmental perception.

A subtle feature of Cause-related Marketing (CRM) is present in this study. Its direct impact on PI is not that notable, but CRM has a strong moderate effect on the relationships among CA → PI and EC → PI. It is noteworthy that CRM enhances the beneficial effect of cognitive attitudes on the purchase intention, which means that the marketing campaigns associated with the social causes have the power to reinforce the role of positive cognitive appraisals of the consumers. On the other hand, the moderation effect of CRM on the Environmental Concern, Purchase Intention relationship indicates that there exists crossover interaction with high CRM enhancing the positive impact of Environmental Concern at lower levels of EC but decreasing Purchase Intention at higher levels of EC. This underlines the fact that although CRM can be effective in increasing the level of consumer engagement, its success might be constrained by the prevailing environmental attitudes and assumptions.

The overall impact of green Supply chain Management (GSCM) is very large, and it is very predictive of Advertisement Attitude, Cognitive Attitude, Environmental Concern and Purchase Intention. This observation underlines the fact that observable and communicated environmentally sustainable practices do not only create favorable attitudes, but also directly affect the purchase intention, which supports the

significance of sustainability in contemporary supply chains.

Lastly, the mediation analysis shows that Advertisement Attitude, Cognitive Attitude and Environmental Concern partially mediate effects of Brand Awareness and GSCM on Purchase Intention and Cognitive Attitude mediates most. This highlights the fact that the attitudes of consumers and their views towards the environment can be considered as the important mechanisms by which brand awareness and sustainable practices impact purchase behavior

5.1 Theoretical Contribution

This research contributes to the body of literature on green marketing and consumer behavior by encompassing the attitudinal, cognitive, and environmental constructs in one framework thus showing how they all interact to impact on the consumer purchase intentions. It emphasizes having the central part of the mediating role of cognitive and environmental attitudes, and the results prove that the consumer attitude-based green purchasing decision is primarily attitude-driven. The study gives a more profound insight into the relationship between brand awareness and sustainability practices to purchase behavior in terms of attitudes of the consumers by applying the Theory of Planned Behavior (Ajzen, 1991) to the sustainable consumption context.

The study also adds to the knowledge base on Cause-related Marketing (CRM) as a moderating variable and indicates that the phenomenon reinforces the impact of the cognitive attitudes on the purchase intention and interacts with consumer perceptions, as opposed to independently. Another area of study where the research highlights the impact of Green Supply Chain Management (GSCM) is on consumer attitude and behavior, which links the body of operations management to consumer behavior. All these findings together provide a thoroughly developed theoretical framework that may help in further studies of green marketing, sustainable consumption and strategic implementation of CRM to influence the formation of environmentally responsible consumer behavior.

5.2 Practical Implications

The results of this research are practical for marketers and managers who want to increase the green purchase intentions of consumers. To begin with, creating good brand awareness is important because it indirectly determines the purchase intention via the effect on both cognition and environmental attitudes. The marketing tactics are supposed to be aimed at the development of positive cognitive evaluations through conveying the product benefits and sustainability programs and environmental responsibility. The strategy may be used to make consumers develop positive attitudes, which, as the research indicates, are a major determinant of purchase intention in a green situation.

Second, the findings identify the strategic position of Cause-related Marketing (CRM) and Green Supply Chain Management (GSCM). The interplay between CRM programs and consumer perception can reinforce the influence of cognitive attitudes on consumer buying behaviors, which implies that socially responsible campaigns are most impactful when they are combined with more general brand and environmental appeals. In the same manner, clear reporting of GSCM activities helps not only increase the environmental concern of consumers but also increases the purchase intention by building trust. All these insights combined highlight the point that the organizations can use sustainability-oriented practices and cause-specific initiatives to shape consumer behavior, improve brand awareness and gain a competitive edge in the market that is environmentally conscious.

5.3 Limitations and Future Research

Although this study has offered valuable insights, it has several limitations that should be noted. To begin with, the study is based on cross-sectional survey data collected among Pakistani consumers and thus it does not provide an opportunity to make causal associations, and it might also undermine the validity of the research to different cultural or geographical settings. Longitudinal or experimental designs may be used in future research to enhance the concept of causality and how consumer attitudes and intent

to purchase change, especially when the research is conducted over a period.

Second, the research directions are mostly based on self-reported attitudes, perceptions and purchase intentions, which can be affected by social desirability issues or subjective nature of respondents on understanding sustainability concepts. Further studies would include behavioral or observational data, including real purchase or involvement statistics on green marketing campaigns, to support and check up on self-reported responses.

Third, the moderating variables of Cause-related Marketing (CRM) and the mediating variables of cognitive and environmental attitudes were the only alternatives that were investigated, unlike other moderators and mediators that might have been used like social norms, cultural values, perceived product quality, or brand trust. Future studies may investigate these other elements to get a more detailed picture of the circumstances in which sustainability initiatives affect consumer behavior.

Lastly, the perspectives of consumers were considered in this study, although the perspectives of the organizations were analyzed at the organizational level in an indirect manner, including leadership commitment, employee engagement, and supply chain practices. Future studies may apply multi-level theories, where the organizational sustainability practices are connected to the consumer reactions, to obtain a more detailed picture of how internal corporate strategies are converted into the market-level results. Overcoming these weaknesses will contribute to the improvement of theoretical frameworks and provide more practical information to scholars and practitioners in sustainable marketing and green consumer behavior.

5.4 Conclusion

This study gives a thorough analysis of the variables that affect the purchase intention of consumers toward going green and the mediating variables are cognitive and environmental attitudes, and the moderating influence of cause-related marketing (CRM) in enhancing these associations. It was also discovered that brand awareness and green supply chain management (GSCM) influence consumer attitudes and purchase intentions to a significant degree and thus both marketing visibility and sustainable operational practices were important aspects to focus on. The synthesis of the Theory of Planned Behavior (TPB) and the Stimulus-Organism-Response (S-O-R) model will prove the activation of inner psychological conditions occurring when organizational behavior and marketing stimulus evoke environmentally friendly purchasing. The results provide not only theoretical value, as they contribute to the existing knowledge of belief-based and attitude-based consumer behavior in sustainable situations but also practical value, as they can guide advertisers and companies on how to use sustainability measures, transparent supply channels, and socially responsible advertising to improve consumer interest, trust and buying intent.

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