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The Role of Environmental Awareness, Social Influence and Eco-Label Trust in Shopping Green Purchase Intentions: A study of Pakistani Consumers

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ABSTRACT

Although prior literature has acknowledged that consumers express favorable intentions for purchasing green products. However, the present research confirms which factors are particularly instrumental in closing that gap, so the present study on green purchase intention seeks to examine the importance of the environmental awareness, social influence, environmental concern and green label trust in the context of Theory of Planned Behavior. This study adopts a quantitative approach using structural equation modeling (SEM) through AMOS to analyze relations among these variables; and data was collected specifically for those Individuals (N=350) who have knowledge about green products. Results show that environmental awareness and social influence have a significant impact on Pakistani consumers' environmental concern and trust in green labels. Moreover, environmental concerns and trust in green labels help influence green purchase intentions. Furthermore, environmental concern and trust in green labels indirectly mediate these transitions through awareness and social influence. This research proves that awareness and social influence has a positive attitude towards green products but trust on eco-labels reinforces consumers to purchase green products. The results of the study provide valuable insights for management and policy makers on foster sustainable customer behavior, whether through a trust-based approach or a social influence perspective.



Introduction

Environmental degradation has significantly increased global concerns, influencing consumer behavior in recent years. With climate change, pollution, and resource depletion becoming more and more pressing problem, consumers are increasingly aware of their environmental impact (Tang

et al., 2024). Environmental awareness is the primary determinant of green purchase intention, which entails a consumer's knowledge of environmental conditions and his response to them (Nguyen et al., 2022). Consumers with a higher level of environmental awareness are willing to recognize the environmental consequences of their behavior and to have a positive attitude toward green products (Lestari et al., 2021). Consumers are more inclined to seek products that align with their environmental values, with the belief that these products will lessen harmful ecological impact (Moslehpour et al., 2023). As a result, demand for green products, marketed with eco-labels and sustainable certifications, has increased in order to minimize harm to the environment (Daoud et al., 2024). However, despite the interest in sustainability, there is an attitude-behavior gap for green products, where consumers have favorable attitudes but are reluctant to buy (Xie et al., 2024). Therefore, many concerned consumers express a preference for eco-friendly products, but this preference does not always become an intention to purchase because of lack of trust (Chanda et al., 2024).

The social influence follows as societal norms, peer behavior, and social expectations have an effect on choices made by individuals (Indra et al., 2020). Particularly, consumers do not make purchasing decisions independently; their surroundings, including friends, family, and social networks, can influence on their purchase intentions (Liang et al., 2021). Social influence often exerts pressure on individuals to align with the values of their social group, such as purchasing environmentally friendly products. For instance, in environmentally conscious communities, individuals feel a greater need to purchase environmentally friendly products to avoid social displeasure or to receive social approval from their peers who also purchase these products (Sreen et al., 2018). Moreover, social influence strengthen positive attitudes toward green products, like awareness (Simiyu & Kariuki, 2024). Purchasing green products indicates a consumer's strong emotional connection to environmental issues (Duong et al., 2022). Environmental concern adds an emotional dimension to cognitive awareness, encouraging consumers to act in accordance with their environmental values (Al-Quran et al., 2020).

Trust in green labels influences whether consumers follow through on their intention to purchase green products or not (Shah et al., 2023). Green marketing often leads to green washing, which is the practice of making false or exaggerated environmental claims. This has resulted in widespread skepticism among consumers, and green consumer decisions demand trust in eco labels (Nguyen-Viet, 2022). When consumers trust green labels, they are more likely to purchase those products (Amin & Tarun, 2021). Even environmentally conscious and concerned consumers hesitate to purchase green products if they don't trust the green product (Xu et al., 2024).

The Theory of Planned Behavior (TPB) provides useful understanding for these relationships. TPB posits that behavior is influenced by three main factors: attitudes, subjective norms, and perceived behavioral control (Panda et al., 2024). Environmental awareness within the context of green purchasing influences consumers' attitudes toward green products, thereby promoting a positive evaluation of green behavior. Social influence, a subjective social norm, exerts an external pressure on consumers to conform to buying green products. According to TPB, even if consumers hold positive attitudes and feel social pressure to purchase green products, they need to believe that their actions will make a difference and that the claims made by green labels are credible. This study plays a significant role in bridging the gap between theory and practice. This study examines the mediating roles of environmental concern and trust in green labels within the TPB framework, seeking to enhance understanding of the psychological and social mechanisms that promote green purchase intention.

Hypothesis Development and Structural Model

Environmental Awareness (EV) and Environmental Concern

Raising environmental awareness is one way to eliminate ecological problems on a global scale; it helps people understand the problems and impact on the environment more clearly (Seo et al., 2024) (Saif et al., 2024). Similarly, environmental concern refers to an individual's emotional and ethical commitment to the preservation of the environment (Ahmed et al., 2021). Several studies show that people develop environmental awareness and responses when they learn about the threats and consequences of their actions towards the environment (Daoud et al., 2024; Parashar et al., 2023).

It asserts one way to solve environmental problems on a global scale as it encourages people to grow their understanding of ecological problems and their consequences (Darvishmotevali & Altinay, 2022). Moreover, Malhotra and Srivastava (2024) found that environmental awareness is a significant driver of environmental concern as it structures people's perceptions of environmental risk and the quick solution of it. Following the idea, Zameer and Yasmeen (2022) examined that individuals with higher levels of environmental awareness also tend to express concern. Moreover, Germelmann et al. (2020), concluded that awareness enhances the sense of emotional congruency with these issues and encourages concern for action. These results extend people's generalized awareness to particular environmental emotional and cognitive concerns.

The theory of planned behavior (TPB) further clarifies this relationship by suggesting that attitude, subjective norms, and perceived control interact to shape intention or behavior (Dangelico et al., 2024). With the TPB framework, environmental awareness refers to the cognitive processes that shape an attitude before recognizing the emotional and moral aspect of environmental involvement (Ahmed et al., 2021). This reflects the view of environmental concern as both a reasoned response and an emotional reaction. Past studies like Saifulina et al. (2023), strengthen this view by demonstrating that awareness and knowledge significantly contribute to the development of attitudes that align with environmental concern. Therefore, based on the empirical and theoretical evidence we propose that,

Hypothesis 1 (H1): Environmental Awareness (EV) positively influences Environmental Concern.

Environmental Concern (ENVC) and Green Purchase Intention (GPI)

Consumer's environmental concern about climate change, pollution, and resource depletion encourages them to develop strategies about sustainability. Therefore, environmental concern serves as a foundation for an individual's emotional, cognitive, and value-oriented involvement, that suppresses environmental degradation (Duong et al., 2022).

Past studies present a strong relationship between environmental concern and green purchase intention (Hoang & Tung, 2024; Stojanova et al., 2023). Moreover, Raihan and Ramli (2024), concluded that people who are more environmentally concerned tend to buy sustainable products as they believe these products help them to contribute towards environmental protection. The findings of the study show that consumers are ready to pay a premium price for products and also extend their efforts to find sustainable products when they are more concerned about the environment. Saif et al. (2024), further demonstrated that environmental concern lead to more favorable attitudes towards green products, subsequently propelling them towards green consumption behavior. The results of this study show that environmental concern appears to express attitudes through the channel that directly affects purchase behavior (Durmaz & Akdoğan,

2024).

The Theory of Planned Behavior provides strong support to address this relationship between environmental concern and green purchase intention. The TPB presumes that subjective norms, attitudes, and perceived behavioral controls influence intentions (Khan et al., 2023). When consumers perceive green products as a strong element towards sustainability, environmental concern serves as a catalyst for developing a positive attitude toward them (Simiyu & Kariuki, 2024). Therefore, based on the finding we hypothesizes that,

Hypothesis 2 (H2): Environmental Concern (ENVC) positively influences Green purchase Intention (GPI).

Social Influence (SI) and Trust in Green Labels

Social influence (SI) has emerged as a key factor influencing green consumption and consumer trust in green products (Khare, 2023). Social influence encompasses the phenomenon that shapes individual's opinions, mindsets, and actions through their social settings, particularly their family, friends, socio-cultural environments, and social standards (Dwisuardinata & Darma, 2023). An empirical study has shown a strong link between social influence and trust in green labels; a study by Hisam et al. (2022), suggests that social influence serves as significant element in developing customer trust in eco-labels and green certification. The study revealed that customers are more likely to support eco-labeling when they perceive favorable environmental attitudes among people they know. Additionally, Kim et al. (2024) identifies that social influence changes consumer opinions regarding environmental certifications and their potential to foster sustainable buying. The findings of the research also reveals that consumers are more willing to trust green labels if they believe their peers uphold sustainability and support eco-friendly products. This trust not only reflects personal environmental values but also responds to the societal norms that prioritizes environmental responsibility. Study revealed that consumers, instead of relying solely on green labels, rely on their social group to reinforce their trust in these labels. Since social influence has been increasingly becoming an integral part of consumer decision in sustainability contexts, this study posits a positive relation between social influence and trust in green labels. Based on recent research and theoretical insights, we hypothesize that,

Hypothesis 3 (H3): Social Influence (SI) positively influences Trust in Green Labels (TGL).

Trust in Green Labels and Green Purchase Intention

Since the demand for green products, those marketed as environmentally friendly or sustainable has increased. Companies introduce green labels and eco-certifications on their products to help consumers navigate this market (Nguyen-Viet, 2022). But labels have limited effectiveness in influencing consumer behavior, as they rely mainly on consumers trusting them (Gorton et al., 2021). Green labels signify trust that green labels truly imply a product's environmental quality and are not just a means to fool consumers (Cho et al., 2024). Recent research has proven that the trust consumers have in green labels significantly influences their green purchase intentions (GPI) (Cho et al., 2024). When consumers do trust the authenticity of eco-certification, they tend to trust the environmental claims of a product, and in turn, this enhances their intention of buying that product (Kim & Lee, 2024). (Maulida & Hapsari, 2024) In this regard, trust reduces uncertainty and feelings of danger, leading to more confident purchasing decisions.

Moreover, Kim and Lee (2024), found that consumers' trust in eco-certifications (as witnessed with the USDA Organic label) increases consumers' willingness to buy organic products. When consumers see a label as credible, it is more likely they will consider their purchasing decisions

with their environmental values. The constructs of the theory of planned behavior (TPB) reinforce this, as trust influences attitudes and subjective norms, which in turn influence behavioral intentions. Therefore, we assume, based on past studies and the theoretical support,

Hypothesis 4 (H4): Trust in Green Labels positively influences Green Purchase Intention.

The mediating role of Environmental Concern and Trust in Green Label

The literature has identified environmental awareness (EA) as one of the most important factors influencing sustainable consumer behavior, but the direct impact of awareness on green purchase intention (GPI) is inconsistent. Though environment knowledge can help the consumer know what is happening, it does not directly link to purchasing behavior (Jaiswal et al., 2022). There is a need to further understand the psychological mechanisms driving green purchase decisions, as evidenced by the gap between awareness and action.

Owing to numerous studies that conclusively explored the relationship between green awareness and green purchase intention, there is a growing interest in environmental concern as a mediator (Shehawy & Khan, 2024). Environmental awareness is an essential factor for sustainable consumption, yet it is not always conducive to pro-environmental behavior (Carrión-Bósquez et al., 2024). However, people interpret environmental concern as a collection of emotional and cognitive reactions to environmental degradation (Maduku, 2024), bridging the gap by inspiring consumers to take action based on their environmental awareness (Zameer & Yasmeen, 2022).

Moreover, environmental concern is considered an influencing factor of green purchase intentions (Duong et al., 2022). For instance, Hameed and Waris (2018), identified the environmental concern mediating the relationship between Eco label and eco conscious consumer behavior. In other words, the combination of environmental concern and environmental awareness can increase consumers' intentions to purchase green products. This hypothesis augments the existing research of what lies between awareness and sustained behavior by delineating that it is the incorporation of emotional and ethical elements that actually drives green purchase intentions. Therefore, we assume that,

Hypothesis 5 (H5): Environmental Concern mediates between environmental awareness and green purchase intention,

Social influence primarily shapes consumers' intentions to make green purchases, as has long been known. What people observe in their social networks, including family members, friends, and broader societal trends, can influence their decision to make environmentally responsible choices (Simiyu & Kariuki, 2024). Consumer attitudes and behaviors towards environmentally friendly products, which they may consider purchasing, can shape sustainability through social influence (Indra et al., 2020). However, transitioning from this to the actual purchase of a green good often requires a further aspect of trust: trust in the credibility of the green label (Shah et al., 2023).

Previous studies show a connection between eco-label and green purchase intention (Nguyen-Viet, 2022; Song et al., 2019), but none have fully explored the mediating role of trust in green labels in the relationship between social influence and green purchase intention. Moreover, studies like Xu et al. (2024), have determined that green label trust moderates between public opinion of food safety and green food purchase intention. Moreover, Nguyen-Viet (2022), suggested this potential, trust in green labels signifies the purchase intention of green products. Therefore, the arguments state that, social influence enhances environmental behaviour, trust in green labels become crucial for transforming this impact into real green purchase intention. So, we assume that,

Hypothesis 6 (H6): Trust in green labels mediates between Social influence and Green Purchase Intention.

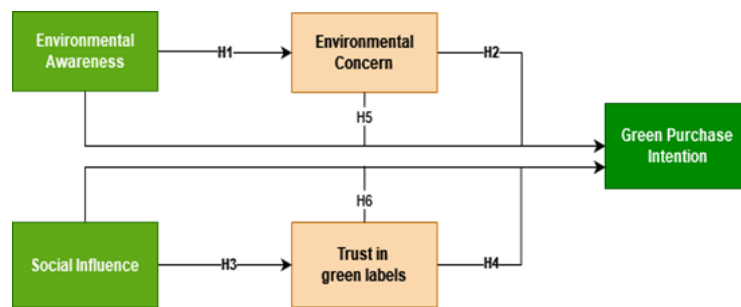


Figure 1: Conceptual Framework

The conceptual framework presents a structured conceptual framework illustrating the interconnected relationships between environmental awareness, social influences, environmental concern, and trust in green label toward green purchasing. It illustrates how environmental awareness heightens the concepts of environmental concern. Moreover, social influence works as a force to encourage trust in green labels. The model links the complexities of awareness and social influences through the mediation of concern and trust to guide consumer's actions towards green purchase intention.

Research Methodology

Research Design

The aim of this present study is to investigate the causes and effects of the behavior of existing variables within the paradigm of the positivist approach. To test and explore the proposed conceptual model a quantitative research design has been used (Creswell & Creswell, 2018). The primary method of collecting empirical evidence for this current investigation was through a self-administered questionnaire survey.

Sampling Technique

In the current study researcher use non probability sampling technique: snowball sampling and convenience sampling. The survey was distributed to 500 Pakistani customers residing in different cities. Various channels such as social media, alumni networks, friends, and personal recommendations were utilized to invite the respondents for data collection. From 500 customers, 300 valid responses were obtained. According to, Kline (2023) there should be at least 10 responses for each item in the research. Therefore, in the light of his recommendation the total number of responses exceeds the required criteria.

Measurement

In the current study, the variables used covered four key dimensions: "green purchase intention, environmental awareness, social influence, environmental concern, and trust in green labels". Based on the study of (Severo et al., 2021) the current study has adopted "a 6-item scale" for measuring "environmental awareness". Furthermore, based on the work of (Kim & Choi, 2005), this study used 4-item scale to measure environmental concern the current study has used "a 4-item scale" to measure social influence 3-item scale were used from the study of (Varshneya et al., 2017). Similarly, to measure trust in green labels, a 5-item scale was taken from the study of (Wong & Tzeng, 2021). Lastly, based on the study of Khare (2015) "a 5-item scale" has been taken to measure the "green purchase intention."

Data collection

The respondents for the survey were selected from Pakistan. The survey statements were presented in English to facilitate the engagement of participants. In the initial stage, 60 trial participants were surveyed to gather information. A self-reported questionnaire was adapted and subjected to pretesting to measure the specific constructs. The pretesting of the questionnaire was performed with the aim of ensuring study reliability and validity. During the questionnaire adaptation, several expert participants and reviewers offered supervision and guidance. The survey contained two segments. The first segment gathered demographic data, containing the respondent's age, gender, nationality, occupation background, and level of income. The second segment consists of questions regarding the measurement of "green purchase intention, environmental awareness, social influence, environmental concern, and trust in green labels". The respondents had been asked to evaluate the questions and statements using "A 5-point Likert scale", with 5 signifying "strongly disagree" and 1 signifying "strongly agree." The respondents completed the questionnaire survey within 10 minutes, and the data collection process lasted for 60 days.

Method of analysis

For this study, researcher used the software tools SPSS 24.0 and AMOS 23.0 based on the two-step approach (Anderson & Gerbing, 1988; Bryne, 2010). Hair, Black, et al. (2013) stated that structural equation modeling (SEM) is a reliable and effective practice for interpreting survey data. Researcher investigated the relationships predicted in the second phase using SEM. For 300 responses, 5000 resamples and a 95% confidence interval were utilized in the bootstrapping process to test mediating pathways.

Ethical Consideration

The survey was conducted anonymously to ensure the study's integrity and anonymity. Participants were assured that their data would not be shared and would be used solely for the intended research.

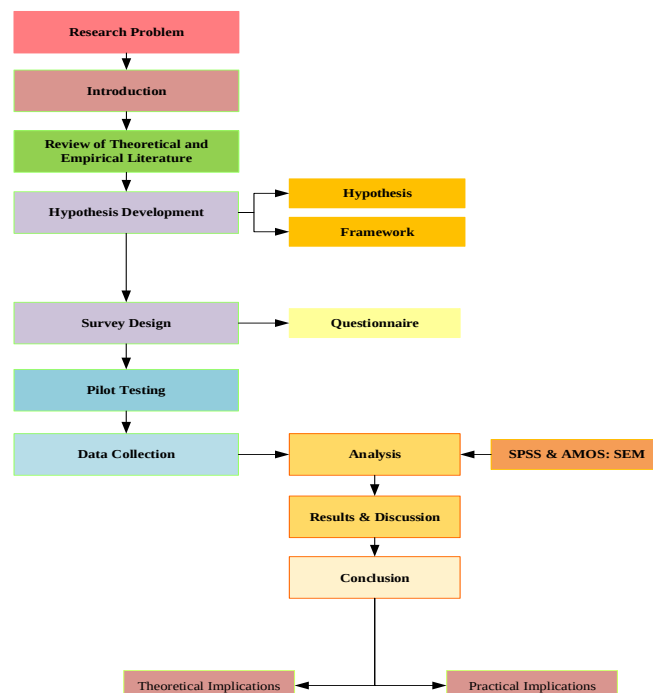


Figure 2 Research Design

Results

Table 1 Characteristics of the Respondents (N=300)

Variables	F(%)
Gender of Respondent	
Male	111 (37.0)
Female	179 (59.6)
Trans-gender	10 (3.4)
Age of Respondent	
19-25	57 (19.0)
26-35	102 (34.0)
36-45	72 (24.0)
46-55	69 (23.0)
Region	
Rural	142 (47.3)
Urban	158 (52.7)
Occupation	
Student	37 (12.3)
Professional	104 (34.6)
Business owner	87 (29.0)
House-wife	72 (24.1)
Frequency of Green Product Purchase	
Never	10 (3.3)
Rarely	27 (9.0)
Some times	132 (44.0)
Always	131 (43.6)
Preferred Shopping Channel	
Online	88 (29.3)
In-Store	212 (70.6)

The characteristics of the respondents (N=300) are summarized in Table 1. Of the respondents, 37.0 % were male (n = 111), 59.6 % were female (n = 179) and 3.4 % identified as transgender (n = 10). The age distribution was 19.0% (n=57) were aged 19-25, 34.0% (n=102) were 26-35 years old, 24.0.0% (n=72) were 36-45 years old and 23.0% (n=69) were 46-55 years old. Regarding the region, 47.3% (n=142) were from rural region, 52.7% (n=158) were from urban region. Of the respondents occupations, 12.3% (n=37) were students, 34.6% (n=104) were professionals, 29.0% (n=87) were business owners, and 24.1% (n=72) were housewives. Regarding the frequency of green product purchases, 3.3% (n=10) never, 9.0% (n=27) rarely, 44.0% (n=132) sometimes and 43.6% (n=131) always bought green products. Moreover, 29.3% (n=88) purchased online, and (n=212), 70.6%, in-store.

Table 2 Factor Loading

Constructs	Factor loading (>0.0.5)	Cronbach's α (>0.70)	C.R (>0.70)	AVE (>0.50)
Environmental Awareness		0.85	0.86	0.55
EV1	0.71			
EV2	0.75			
EV3	0.73			
EV4	0.77			
EV5	0.75			
EV6	0.73			
Social Influence		0.78	0.79	0.55
S11	0.76			
SI2	0.73			
SI3	0.74			
Trust in Green Labels		0.85	0.86	0.55
TGL1	0.72			
TGL2	0.72			
TGL3	0.74			
TGL4	0.78			
TGL5	0.74			
Environmental Concern		0.80	0.81	0.52
ENVC1	0.70			
ENVC2	0.72			
ENVC3	0.73			
ENVC4	0.73			
Green Purchase Intention		0.83	0.88	0.60
GPI1	0.77			
GPI2	0.74			
GPI3	0.78			
GPI4	0.80			
GPI5	0.77			

The first stage of the study was to validate the tested hypotheses using the results of the previously developed hypotheses. Confirmatory factor analysis (CFA) results indicated that all Next, the convergent validity was examined by variance analysis, that is, whether the AVE values meet >0.50 (Hair, Ringle, et al., 2013) and the average variance extracted (AVE) method. The results showed that all constructs (table 2) have AVE values above the 0.50 threshold, which indicates a number of statistical measures were used to validate the variables of the scale and by finding the factor loadings, composite reliability, and variance analysis; the outcomes confirmed the scale's validity and reliability. The study then proceeded to confirm discriminant validity by using the Fornell and Larcker (1981) criteria, which is widely regarded as a rigorous standard for ascertaining this aspect of validity (Table 3). As can be seen from Table 3, the correlations among

the constructs are smaller than the square root of the average variance extracted (AVE) for the constructs, therefore meeting discriminant validity threshold.

Table 3 Discriminant Validity

Latent variables	EV	SI	ENVC	TGL	GPI
EV	0.81*				
SI	0.23	0.81*			
ENVC	0.43	0.23	0.74*		
TGL	0.26	0.28	0.27	0.86*	
GPI	0.47	0.32	0.51	0.41	0.90*

Note: EV= (Environmental Awareness), SI= (Social Influence), ENVC= (Environmental Concern), TGL= (Trust Green Label), GPI= (Green Purchase Intentions)

Structure Model

Furthermore, Fit indices that assess the adequacy of the structural equation model in the study are summarized in Table 4. Thus, the Comparative Fit Index (CFI) = 0.948 is greater than the cut off of 0.90, which explains that the model has a reasonable fit with the data. The Goodness-of-Fit Index (GFI), which measures the proportion of variance accounted for by the estimated population covariance, is also acceptable with value 0.915, well above the accepted threshold of 0.80 and therefore, demonstrating a well-fitting model. Furthermore, the Root Means Square Residual (RMR) value is 0.068, which is less than the maximum acceptable value indicating a good fit. Another such critical fit index is the Root Mean Square Error of Approximation (RMSEA), it is 0.053 in our study, which is below the recommended cut-off value.

Finally, the ratio of Chi-Square Minimized per Degrees of Freedom (CMIN/DF) is 2.514, which is much lower than the 5.0 threshold. Therefore, according to the field standards of structural equation modeling these collective results support the argument that by these indices represents the data in a robust and satisfactory form.

Table 4 Indexes for Structural Evaluation for goodness of fit evaluation

Indexes	Measured value	Cut-off-value	Reference	Decision
CFI	0.948	> 0.90	(Bentler, 1990)	☑
GFI	0.915	> 0.80	(Hu & Bentler, 1995)	☑
RMR	0.068	< 0.08	(Byrne, 2013)	☑
RMSEA	0.053	< 0.06	MacCallum et al. (1996)	☑

Hypothesis Testing

Table 5 Direct Relation of Hypothesis Testing

Hypothesis	Effects	B-Value	SE-Value	CR-Value	P-Value
H1	EV → ENVC	0.46	0.048	6.17	0.00
H2	ENVC → GPI	0.25	0.066	3.75	0.00
H3	SI → TGL	0.24	0.078	3.68	0.00
H4	TGL → GPI	0.40	0.058	6.14	0.00

Note: EV= (Environmental Awareness), SI= (Social Influence), ENVC= (Environmental Concern), TGL= (Trust Green Label), GPI= (Green Purchase Intentions)

Furthermore, to validate the theoretical framework, the authors used SEM to determine the relationships between environmental awareness, environmental concern, social influences, trust in green labels, and green purchasing intentions (Table 5). SEM analysis showed robust statistical evidence for significant paths among the constructs in supporting the individual contribution of each one to what really drives green consumer behaviors. Initially, the first hypothesis (H1) shows that Environmental Awareness (EV) positively influences Environmental Concern (ENVC). Based on the idea that being aware of environmental issues would necessarily provoke greater concern for them, this hypothesis was posited. The SEM results provided strong support to this hypothesis with an estimated beta coefficient of 0.46, and a p-value of 0.000, to indicate substantial and statistically significant effect. First, this result proves valuable insight of demonstration of how awareness plays a foundational role in nurturing a sense of environmental responsibility, which becomes the precursor for motivating more sustainable ways of acting in the world. The second hypothesis (H2), then studied the relationship of green purchase intention (GPI) as function of environmental concern (ENVC). Moreover, the results supported this hypothesis, with a beta value of 0.25. The meaning of this relationship (p-value of 0.000) indicates the environmental concern motivates consumers toward green purchase intention.

Furthermore, the hypothesis three (H3), was developed on the basis of relationship between, social influence (SI) and trust in green labels (TGL). The result showing the hypothesis to be valid was obtained with a beta of 0.24, and p value of 0.000. This finding is important because it shows that environmental behaviors are influenced not only by individual values but also by the social environment. Our fourth hypothesis (H4, trust in green labels (CT) would have a significant impact on Green Purchase Intention (GPI). In markets where information asymmetry is high, like for example eco-friendly products, trust is a key factor in a consumer decision. Results showed great influence with a beta value of 0.40 and p-value 0.000. The results showed a strongest correlation among variables as trust in eco-labels works as a driver of purchasing decisions. The trustable green marketing is very important as it will encourage consumers to buy products.

Table 6 Mediating Effect

H	Effects	B-Value	SE-Value	P-value
H5	EV → ENVC → GPI	0.35	0.57	0.001
H6	SI → TGL → GPI	0.47	0.046	0.000

Note: EV= (Environmental Awareness), SI= (Social Influence), ENVC= (Environmental Concern), TGL= (Trust Green Label), GPI= (Green Purchase Intentions)

Next, Table 6 shows clearly the mediation effect of the hypothesized relationships. Two specific hypotheses were used to test the indirect effects within the identified constructs of environmental behavior and green purchasing intentions. The hypothesis 5 shows a mediation pathway induced by Environmental Awareness (EV) on its way to Green Purchase Intention (GPI) through Environmental Concern (ENVC). Using this secondary relationship, the estimated beta coefficient is 0.35 and p=0.001, demonstrating a statistically significant indirect relationship with an estimate approaching significance. The result thus confirms the hypothesis and demonstrates that environmental concern significantly mediates the influence of environmental awareness on green purchase intentions. In this respect, the strength of this pathway highlights significant concern is in bridging the gap between awareness about environmental issues on the one hand and decisions to change one's purchasing practices on the other.

Hypothesis 6 (H6) stated that Social Influence (SI), affects Green Purchase Intention (GPI), via mediation of Trust in Green Labels (CT). The path's beta is estimated quite strongly with beta of 0.47 and p = 0.000, thus, the hypothesis is strongly supported. This robust result underscores the

criticality of trust in eco-labels as the channel by which social influences are converted into buying behavior. The results imply that consumers are motivated to purchase green when green marketing is backed by social endorsement and is perceived to be credible. In both mediation paths analyzed and accepted in Table 6, indirect relationships should be observed in order to influence green purchasing behaviors. By understanding these mediated relationships, we can delineate the more nuanced processes of how broader environmental attitudes are translated into consumer action that are also more useful for efforts of changing consumer practice towards more sustainable practice.

Discussion

In this study, the authors examined relationships between consumer behaviors towards environmentally sustainable products and tested the hypothesized relationships with structural equation modeling (SEM). We attempted to examine the roles of environmental awareness, social influence and trust in green labels in predicting green purchasing intentions. The result (H1) revealed that environmental awareness is the main predictor of environmental concern as current study has the positive association. This finding is consistent with the idea espoused by the Norm Activation Model (NAM) theory as projected by (Stern et al., 1985) that environmental attitudes are developed through a feeling of responsibility created by environmental awareness. These results are in line with previous research; as (Saifulina et al., 2023) pointed out that environmental knowledge shapes individual attitude. Similar to (Li et al., 2013), found that environmental awareness has a positive influence with green perceived value. According to Ogiemwonyi et al. (2023), environmental concern is not only positively and directly associated with a positive attitude towards green products but is also positively and indirectly associated with brand attitudes. The current study is conducted in Pakistan an emerging country; result revealed that consumer in Pakistan has the environmental awareness to protect the environment. As in the current study we examined environmental concern has the significant positive association with green purchase intention (H2), the findings shows consumers' decision to purchase green products depends on their optimistic attitude and strong personal commitment to the environment. They think that more sustainable behaviors will come from a positive attitude towards environmental issues. In addition, consumers are convinced that by adopting the right attitude, they are advocating more eco-friendly buying decisions and decreasing pollution and increase environmental protection. In the current study researcher examine the mediate effect of environmental concern between environmental awareness and green purchase intentions (H5). The result demonstrates that environmental concern significantly mediates the influence of environmental awareness on green purchase intentions. The results are aligning with the previous research in which attitudes, which are significantly and comparably driven by environmental concern, in turn predict the purchase intention for green products in India (Paul et al., 2016). Furthermore, another study elaborates that the values of environmental concern and the feeling of responsibility leads consumers to be more inclined towards green product purchasing, and people tend to feel more responsible to the environment when they buy eco-friendly products (Ogiemwonyi et al., 2023).

In the current study researcher also examines the impact of social influence on trust in green label products (H3). Our result validate that social influence has the significant positive impact to trust in green label products. This supports prior research findings showing that social influence is important in consumer choice, and particularly for environmentally conscious products. As Islam et al. (2024) have studied social influence have impact on people's perception and behaviors towards eco-friendly products. Individuals are more likely to adopt similar attitudes and behaviors, including using of green labelled products when they perceive their peers, family or social networks value, believe in and trust green products (Zhao et al., 2019). In support of this phenomenon, the Theory of Planned Behavior posits that subjective norms, influenced by social

spheres, have the potential to not only influence a person's attitudes and intention but also purchase decisions (Ajzen, 1991). Studies by Chen et al. (2015) and Liang et al. (2024), shows that social pressure and peer recommendations increase consumer trust and willingness to perform pro-environmental behaviors. Therefore, endorsement by respected social groups or influential figures of green products is a powerful means to build trust and promote the adoption of sustainable consumption.

The current study also examined the trust in green label and green purchase intentions (H4), and the result confirms that when consumer has the trust on green label it increases the green purchase intentions. Consistent with existing literature highlighting the role of trust in shaping consumer behavior, especially related to environmentally sustainable products, this result is expected. Past research has suggested that the consumers tend to buy green products when they trust the authenticity and credibility of these environmental claims (Zhang & Dong, 2020). Moreover, De Canio (2023), Zhang and Dong (2020), demonstrated that trust in eco labels significantly affects consumers' willingness to pay a premium for green products, since it springs consumers to believe that the environmental benefits of green products are real, rather than created by marketing strategies. Theory of Planned Behavior Ajzen (1991), also supports the importance of trust in green labels as in the theory attitudes, perceived behavioral control and subjective norms (like trust) influence behavioral intentions. Consumers' attitudes toward the product are enhanced, and hence, their purchase intention increases, when consumers believe that green labels are trustworthy and accurately reflect the environmental benefits of the product. Lastly, the researcher examines the mediating role of trust green label between social influence and green purchase intentions. This shows that consumers are motivated to purchase green when green marketing is backed by social endorsement and is perceived to be credible. Along these lines, the research performed by Darnall et al. (2018), suggested that consumers are more willing to trust and to act upon eco-labels supported by credible third party certification bodies, which reinforces their purchase intentions.

Conclusion

This study offers important contributions to the behavioral studies on consumer attitudes toward green products by exploring the antecedents of such attitudes such as environmental awareness, social influence, and trust in green labels, and the effects of these attitudes on purchase intentions. Results support that environmental awareness strengthens environmental concern and that environmental concern results in pro environmental behaviors such as green product purchases. In addition, the study finds that social influence has a tremendous effect on trust in green label products, showing that people are more likely to trust such products if they are adopting the behaviors and endorsing the use of such products with their social networks. Additionally, the study confirms that green label affect green purchase intentions are contingent on trust. This emphasizes the importance of companies building and keeping trust in this chain of trust through transparent communication, credible certifications and consistent product performance.

Limitations

Although the study is useful, it is not without limitations. Although the sample is adequate, it is confined to Pakistani consumers which restrict the generalizability of the findings to other cultural contexts. Further studies could make the direct replication of this study in the other geographical and cultural setting to expand the scope and reliability. Moreover, uncovering new possible mediators and moderators with possible additional mediators and moderators, including economic factors and personal values, can be a step further for comprehensively understanding the factors that contribute towards green purchasing intentions.

Implications

This study has important implications for the role of environmental awareness, social influence, and trust in generating sustainable consumer behavior. First, since environmental awareness is an important antecedent to environmental concern and green purchase intentions, efforts that promote environmental awareness may exert significant influence on pro environmental behavior. Second, the influence of social influences on trust in green products implies that marketers and policymakers can use peer endorsements, social media, and community based campaigns to increase trust in green products. Lastly, the study shows that companies should invest in transparent communication and credible eco-certifications in order to increase green labels trustworthiness and consumer trust which, in turn, leads to greater green purchase intentions. The results also indicate that while education and social influence can lead to sustainable consumer choices, so can building trust.

No potential competing interest was reported by the author(s)

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