The Role of GBK in Influencing Green Purchase Intention: A SEM Study of University Students

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Abstract

Green branding is a marketing approach that highlights the environmental benefits of a brand. It is another method that companies can use to differentiate their brand. Communicating their resolution towards a better environment can increase profit and create a blue ocean, especially in developing countries. In Developed countries, companies are already working towards their environmental goals and achieving them in developing nations. Companies are still learning the effect of green branding on purchase intentions. Despite its product's nature, Toyota has used green branding successfully to communicate its pledge to sustainability. This study was conducted to determine the perceptions of Pakistani consumers regarding the relations among Green Brand Positioning (GBP), Attitude towards Green Brands (ATGB), Environmental Concern (EC), and Green Purchase Intention (GPI), with a focus on Green Brand Knowledge (GBK). The quantitative method uses a cross-sectional design to collect data from organic product purchasers by applying stratified random sampling. Partial Least Squares, Structural Equation Modeling (PLS-SEM) analysis demonstrated that the Green Purchase Intention is significantly related to study variables (GBP, ATGB, and EC). This Study is filling some gaps in the previously available information on green branding. Therefore, elucidating the moderating effect is crucial for advancing knowledge that can influence future research into this relationship. Results suggest that familiarity with green brands would increase the impact of GBP and EC on GPI; furthermore, GBK acts as a mediator between GBP and GPI. This Study will be helpful for business managers and proprietors who wish to understand how green branding can be used while creating a brand image in this environmentally sensitive era.

Keywords: Green Brands, Green Purchase Intentions, Environmental Concern, and Green Brand Knowledge

Introduction

With the establishment of the Brundtland Commission in 1987 and the Earth Summit in 1992, sustainable development has become the most discussed issue in international circles. As Agha, Rashid, Rasheed, Khan, and Khan (2021) suggest, Global environmental anxiety has reached an all-time high, and businesses and consumers both appreciate the value of doing their part to preserve the planet's environment. There is a shift toward green production and consumption (Ding, Khattak, & Ahmad, 2021). Many companies emphasize eco-friendly practices because environmentally conscious consumers demand them (Jalees, Qabool, Zaman, & Alam Kazmi, 2021). The United Nations has identified 17 goals for global improvement called Sustainable Development Goals (SDGs). Ghauri, Hamid, and Zaman (2022) suggest that every country in the world will be affected by the SDG concerning climate change and ever-increasing greenhouse gas emissions. Many world leaders now agree that businesses must take drastic measures to prevent the global temperature increase of more than 2°C, leading countries to sign the Paris Agreement in November 2016 (A. Khan & Khan, 2022).

Dai and Sheng (2022) argue that a brand needs a significant environmentally friendly advantage over its competitors to get the attention of Eco-aware consumers. Wyss, Knoch, and Berger (2022) contend that consumers' environmental sensitivity is bolstered when they view a brand’s features as minimizing adverse ecological effects. The number of Eco-aware consumers willing to spend income on sustainable goods (SP) is growing (Iftikhar, Asghar, & Khan, 2022). Developed nations have already started taking action to address and prevent environmental crises. However, underdeveloped countries need more research and implementation (S. Khan, Anwar, & Qabool, 2023). Developing nations must coordinate efforts to reorient consumers' priorities toward eco-friendly purchases (Zaman, Jalees, Jiang, & Kazmi, 2018). Given this, the current research aims to fill the void by investigating consumers' green purchasing patterns and analyzing the connection between consumers' green purchase intentions (GPI), brand perceptions, and environmental consciousness (EC). Some academics argue that businesses should cater to consumer tastes and considerations to promote GPI, as environmentally conscious shoppers are changing their purchasing habits. Kaur, Gangwar, and Dash (2022) suggested looking into consumers' receptivity to environmentally friendly conduct, behaviors, and GP purchases, even though these consumers proliferate. According to Mehraj and Qureshi (2022), GBK is a crucial factor in achieving environmental sustainability. "a green brand node in the consumers' recall with

which a variety of associations have been associated for ecological dedication and EC" is how GBK has been described (S. Khan, Khan, Rais, & Aziz, 2023).

Previous research has shown links between green branding, mindset towards the brand, environmental awareness, and green purchase intention. However, these studies have produced contradictory results (Miao, Jalees, Qabool, & Zaman, 2020). However, other studies have failed to find any association between the two. In the context of these conflicting findings, reexamining these relationships is warranted. This Study builds on the work of Borah, Dogbe, Pomegbe, Bamfo, and Hornuvo (2023) by including GBK as a moderator between such variables as green the positioning of brands, customer perception toward green brands, EC, and intention to make a green purchase. Additionally, earlier studies were conducted in countries other than Pakistan. This Study looks at the motivations behind eco-friendly purchases made by Pakistani consumers.

Statement of the Problem

The conduct of organic products has been the subject of previous research, but many unanswered questions remain. According to previous research, the effects of consumer spending abroad are less likely to be equivalent to less advanced nations like Pakistan. Many consumers continue to buy products that are harmful to the environment and their health because they are unaware of green alternatives. This research examines how familiarity with green brands influences the relationships between environmental worries, green attitudes, and green product purchases.

Significance of the Study

This research offers a conceptual framework for making informed decisions about purchasing green products. This study will provide an overview of the principles of consumers' green attitudes in creating buying behavior of green products. In addition, this study will also provide the theoretical foundation for future research on this concept. This data set helps researcher pinpoint theoretically meaningful mediator-moderator relationships. Recent research closes the void by acting as a moderator and mediator. The findings of this Study will help marketers meet Pakistani consumers' needs while respecting the country's rich cultural heritage. It will also highlight the context of eco-friendly product purchases in Pakistan.

Objective

- To examine how consumers’ environmental sensitivity affects their propensity to buy Green products.

- To determine the mediating role of familiarity with green brands.
- Connections among consumers' green mindsets, product preferences, and actual purchases

Literature Review

Green Branding is not a new concept. Humans have been discussing environmental issues for the last 50 years since the celebration of earth day in 1970. Conservationists thought that Environmental goals would be achieved in significantly less time with little effort. Yet, after so many years, we are still studying the importance of green branding in the customer's mind. (García-Salirrosas & Rondon-Eusebio, 2022). In recent years, a lot of pressure has been built on businesses to redesign their products and processes to match international standards set by governments and international environmental groups (Xia & Li, 2022). Previous studies have proven that companies using green branding are getting customers' attention and, in turn, increasing their profits. Still, the rate of environmental sensitivity makes it difficult for businesses to decide how environmentally focused strategies should be in a given region. This situation applies to developing nations where people are combating far more significant issues than worsening environmental conditions. Therefore in developing countries, much research has been done on green branding to understand and apply the findings customized to their market dynamics (Nekmahmud & Fekete-Farkas, 2020). This Study will further elaborate on the effect and usefulness of green branding on Pakistani consumers. The Theory of Reasoned Action will be used to understand consumer behaviors regarding green branding.

Theory of Reasoned Action

To ascertain shoppers' intent regarding eco-friendly purchases, researchers like (Hagger, Cheung, Ajzen, & Hamilton, 2022) used the "Theory of Planned Behavior (TPB)." Similarly, Rashid et al. (2021) zeroed in on consumer values to deduce EC via purchases of eco-friendly goods. The "Theory of Reasoned Action" will be analyzed in this paper. It is based on belief, attitude, and planned behavior (Mazhar, Jalees, Asim, Alam, & Zaman, 2022). TRA considers both out-of-the-ordinary ways of thinking and evaluation-worthy severe actions(Roh, Seok, & Kim, 2022). The central idea of TRA is that people engage in specific activities because they intend to (Panda et al., 2020).

In social psychology, TRA has been studied extensively (Saleem, Aslam, Kim, Nauman, & Khan, 2022). Due to its high predictive power, TRA is helpful in various fields, including marketing and consumer behavior (Siyal, Ahmed, Ahmad, Khan, & Xin, 2021). Intentions in environmentally friendly advertising domains like energy savings, recycling, and green

purchasing were predicted using TRA (Saha, 2022). However, TRA only addresses choices and disregards legal rights to readily available resources. Lacking essential non-voluntary methods of determining human actions (like GKB), Consumers' awareness of green brands and products could influence them to a green purchases (Mehraj & Qureshi, 2022). The current theories are improved by including a moderating component whenever the straightforward definition of an intention collapses to produce accurate predictions of customer behavior due to constraints. Therefore adding GBK and other non-voluntary variables to TPB widened the applicability of TRA.

Green Positioning and Purchase Intention

GBP is the public's perception of a company's ecological reputation in light of the company's green positioning. The GBP examines how eco-friendly brands differentiate themselves through messaging and personality traits.

Researchers found that consumers were more likely to link a brand via its greatest attributes if those qualities were reflected in its positioning. It’s more likely that consumers with in-depth environmental knowledge and positive experience with green products will express an interest in purchasing a GP due to its green features and effective GBP. This trend varies with consumers' levels of environmental concern and their preferred brands. Green business practices (GBP) stand for the ecological values that continue to matter to a company. Walia and Kumar (2022) argue that consumers will be more likely to associate environmentally friendly products with satisfaction if they are marketed to them. Based on previous studies, we have a few hypotheses.

H_1: GBP has a significant impact on green product purchase intention.

Attitude towards Green Brands and Green Purchase Intention

According to Moslehpour et al. (2023), ATGB is a customer-created term based on their evaluation and reasoning about the GP. Per previous research, consumers' beliefs about the importance of eco-friendly actions significantly affect their environmental literacy and propensity to buy GPs. This result is consistent with Mehraj and Qureshi (2022), who discovered that consumers' feelings about GP significantly affect their intent to make environmentally friendly purchases.

Temizkan (2022) noted how consumers' EC values shape eco-friendly product preferences. As studied by Ahmed, Streimikiene, Qadir, and Streimikis (2023), attitude is the determining factor in environmental literacy and GP purchase intentions. It is proposed in light of the existing literature:

H2: Consumers' attitude toward green brands significantly impacts green product purchase intention.

Environmental Concern and Green Purchase Intention

Environmental concern (EC) refers to an individual's worry about the environment and ecological issues. Companies have responded to customers' growing concern about environmental issues by marketing their products as sustainable alternatives (Majeed, Aslam, Murtaza, Attila, & Molnár, 2022). Wang, Zaman, and Alvi (2022) found a substantial and direct relationship between EC and GP behavior. Duong, Doan, Vu, Ha, and Dam (2022) discovered that EC immediately affected recycling rates and GP sales. Huang and Nuangjamnong (2022) found that Thai consumers' EC and GP purchase intent were intertwined.

Nonetheless, contradictory evidence suggests that EC has no effect whatsoever. Ghauri et al. (2022) revealed a positive correlation between environmental consciousness and recycling behavior. Consequently, the following hypothesis is formed:

H_3: Environmental concern has a significant impact on green product purchase intention.

Moderating Effect of GBK

According to (Kamu, Massie, & Tumewu, 2023), brand knowledge is the final puzzle piece that enables consumers to associate a brand identity (logo, color, name) with a product. GBK is illustrated by disseminating information encouraging consumers to make more sustainable purchases. Gaining an edge and cementing a reputation in consumers' minds are benefits of cultivating a strong brand identity. Therefore, green brands must communicate and stand out in ways that feature EC(Borah et al., 2023). Although Correia, Sousa, Viseu, and Larguinho (2023) investigation did not reveal a link between GBK and GP's intention to acquire. However, Mubarok, Jaya, and Rahmi (2023) declare that researchers can use brand knowledge to study the moderating effect of GBK on environmental attitudes and the intention to engage in green purchasing behavior.

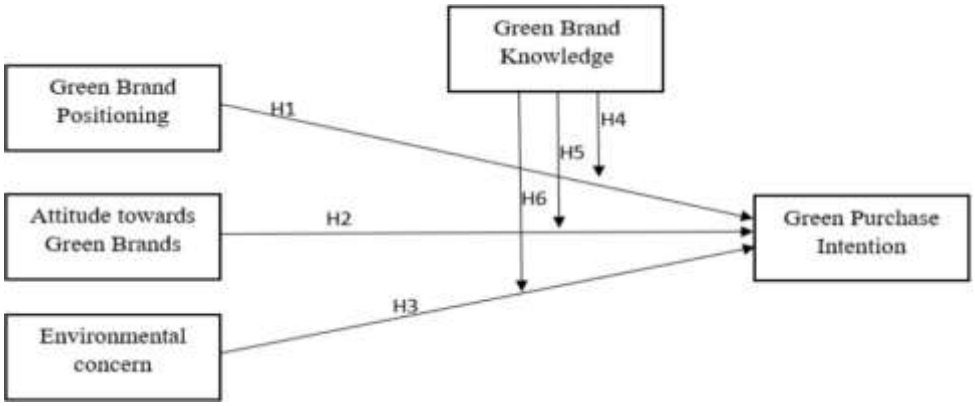
H_4: Green Brand Knowledge significantly moderates the relationship between Green Brand Positioning and Green purchase Intention

H_5: Brand-specific knowledge significantly moderates the relationship between green brand attitude and purchasing intent.

H_6: Consumers' familiarity with green businesses significantly reduces the correlation between environmental concern and the intention to make eco-friendly purchases.

Conceptual Framework

Figure 1
Conceptual Model.



Research Methodology

This Study analyzes human behavior toward green branding; therefore, the quantitative method helps identify a common trend in human behaviors (Reaves, 1992). PLS-SEM is used because of its capacity to explain multiple variables and its usefulness in business research. This study used a probabilistic (mall-intercept) method to acquire data from Islamabad, Lahore, and Karachi by randomly halting consumers in supermarkets and shopping malls. This method ensures an equal representation of respondents (Rahman, Tabash, Salamzadeh, Abduli, & Rahaman, 2022). 500 surveys were distributed in simulated mall intercepts. People who voluntarily completed an online survey were surveyed for information. 437 (83%) of the initial 500 respondents submitted complete responses; 41 (8%) were not advanced to the final screening due to insufficient data; therefore, data from 396 responses is used in analysis. It has been demonstrated that this sample size is adequate for statistical analysis (particularly in marketing research) (Lakens, 2022). One of the selection criteria was whether the respondent should be a university student or a recent graduate based on the belief that educated people are greener-oriented (Zeynalova & Namazova, 2022).

Questionnaire Development

The survey consists of two sections. The first section of the survey inquired about the personal information of respondents. Part two of the survey comprised 23 questions to elicit feedback on the Study's proposed model. Adopted are five items for environmental concern, five items for GBK and GBP, and three items of intent to purchase environmentally friendly products (all presented in Appendix A). Each item was rated on a five-point Likert scale, with one representing "strongly disagree" and five representing "strongly agree."

Data Analysis and Results

Descriptive analysis, data screening, missing data identification, and elimination of outliers were performed in SPSS, whereas inferential analysis was performed using Smart PLS.

Measurement Model

The Study's inferential analysis was checked using Partial Least Squares-Structural Equation Modeling (PLS-SEM). Chin et al. (2020) write that structural equation modeling is most suitable when the research has multiple ideas, each reflected through various factors that determine them and lets all linked equations be estimated simultaneously. Using the boot-strapping method, five hundred recreated data sets were used to generate an estimate. The PLS-SEM has been used for statistical analysis in various other studies. The Study's measurement model could be evaluated concerning its integration and discriminant validity. High convergent validity is indicated by Cronbach's alpha, AVE, and composite reliability values greater than 0.7 and factor loadings greater than 0.5. Several studies have suggested these parameters. All expected results are within the acceptable range, as shown in Table 1.

Table 1
Measurement model (factor loading, Cronbach's Alpha, CR, and AVE).

Construct Name	Items	Loading	C-Alpha	CR	AVE
GBP	GBP1	0.652	0.912	0.936	0.747
	GBP2	0.904			
	GBP3	0.913			
	GBP4	0.914			
	GBP5	0.907			
ATGB	ATGB1	0.924	0.941	0.955	0.809
	ATGB2	0.857			
	ATGB3	0.916			
	ATGB4	0.923			
	ATGB5	0.874			
EC	EC1	0.825	0.875	0.908	0.666
	EC2	0.883			
	EC3	0.86			
	EC4	0.675			
	EC5	0.821			
GBK	GBK1	0.919	0.945	0.958	0.819
	GBK2	0.894			
	GBK3	0.911			
	GBK4	0.908			
	GBK5	0.892			
GPI	GPI1	0.895	0.901	0.938	0.835
	GPI2	0.940			
	GPI3	0.905			

Discriminant Validity

Discriminant validity was determined using the Cross-Loadings technique, the Fornell and Larcker criterion, and the Heterotrait-Monotrait percentage of correlations (HTMT). The item cross-loadings served as the primary evaluation criteria. There are no cross-loadings between any of the signs and any of the measured constructs. Table 3 provides details about the cross-loadings.

Table 2
Discriminant validity Fornell and FornellLarcker.

	ATGB	EC	GBK	GBP	GPI
ATGB	0.899				
EC	0.418	0.816			
GBK	0.476	0.554	0.905		
GBP	0.533	0.454	0.427	0.864	
GPI	0.583	0.487	0.477	0.618	0.914

It was later decided to use the Larcker and Fornell criterion. This is the strongest possible correlation between a latent construct and its indicators in a structural model. This criterion requires that the measured squared value of the AVE be greater than the correlation between the individual constructs. Table 2 shows each construct's off-diagonal values (i.e., discriminant validity). The square root of the AVE values is larger than the correlation values of any other latent variable. Discriminant validity, a cornerstone of model validation, can now be assessed with the PLS-SEM through the HTMT. While the HTMT criteria use a 0.90 threshold, the standard for discriminant validity is a value of less than 0.85. Results for each construct are summarized in Table 4; all ratios between constructs are less than 0.85, and no confidence interval contains 1.0. That is excellent news because the HTMT ratio predicts that all the constructs we measure are discriminately valid.

Table 3
Discriminant validity (HTMT).

	ATGB	EC	GBK	GBP	GPI
ATGB					
EC	0.442				
GBK	0.502	0.589			
GBP	0.569	0.495	0.457		
GPI	0.628	0.524	0.513	0.676	

Common Method Variance, Variance Inflation Factor, R Square, and F Square

According to Kock l, a model is valid for further Study if its VIF from a full collinearity test is less than or equal to 3.3. Table 4 shows that the model's VIF is less than 3.3. According to the results of this research, CMB poses no health risks. In Table 5, we can see the result of a basic regression test applied to CMB.

Table 4.
Harman's Single Factor Test. (Criterion Acceptability)
Harman's Single Factor Test

VIF < 5	GPI
GBK	2.998
GBP	2.182
ATGB	1.877
EC	1.599

31.472% variance proportion.

Table 4 Collinearity Assessment for Inner model (Variance inflation factor (VIF) values). Through numerical analysis, we also calculate the R2 of the structural model for latent variables generated internally. R2 equals 50%, as shown in Table 5—the model's capacity to account for half the variation in criticized quantities or data. Because R2 was more significant than the 10% cutoff, suggesting substantial justification power for the present model, we determine that the regression model is suitable for the statistical data or observations. In light of these results, consumers' intentions to buy environmentally friendly products showed a 50% range.

Table 5
R^2 and Adjusted R^2 values.

		R Square
	GPI	0.506
GBP	0.345	
ATGB	0.049	
EC	0.021	

The magnitude of an effect can be determined by calculating f. According to Cohen (2013), f values of 0.35, 0.15, and 0.02 are considered significant, medium, and small, respectively. Table 8 displays the effect size (f 2), which is substantial for green purchasing stances (GBP) but tiny for attitudes toward sustainable businesses (ATGB) and EC (EC). The estimated model fits the data extremely well.

Structural Model

After evaluating the measurement model, the proposed hypothesis was put through its paces using a structural framework. It is possible to gain insight into the nature of the relationship between the variables by examining the path of the beta coefficient. Bootstrapping can be used to evaluate the significance of how the coefficients take. A positive and highly significant correlation (= 0.323, t-value = 6.492, p-value = 0.000) exists between green product prices and indices, as shown by the predicted values in Table 9. As a result, we must accept H1. The data also support a positive correlation between buyers' ATGB and their GPI for environmentally conscious goods (= 0.346, the t-value = 6.612, p-value = 0.000), providing further evidence favoring H2. The path coefficient (= 0.223, t-value = 3.425, p = 0.001) supports the alternative hypothesis (H3) that there is a positive relationship between EC and the GPI. The anticipated values for these factors are shown in Table 7.

Table 6
Direct Relationship Results

Hypotheses	Relationship	Beta	STDEV	T Statistics	*p*-Values	Decision
H1	GBP → GPI	0.323	0.05	6.492	0.000	Supported
H2	ATGB → GPI	0.346	0.052	6.612	0.000	Supported
H3	EC → GPI	0.223	0.065	3.425	0.001	Supported

Two of the three hypotheses about indirect relationships examined in depth in light of the warning effect were supported. The results back up H5, which hypothesized that familiarity with the brand would increase the link between green product opinions and intent to buy (= 0.125, t = 2.408, p = 0.016). Figure 2 and Table 8 indicate that people aware of green brands have a more optimistic view of the importance of preserving the environment. Additionally, H4 must be corroborated due to the lack of mediation between familiarity with green brands and purchase intent (= 0.073, t = 1.563, p = 0.119). These results suggest no significant moderating effect of GBK on the connection between green business image and GPI.

Figure 2.
Moderating effect Model

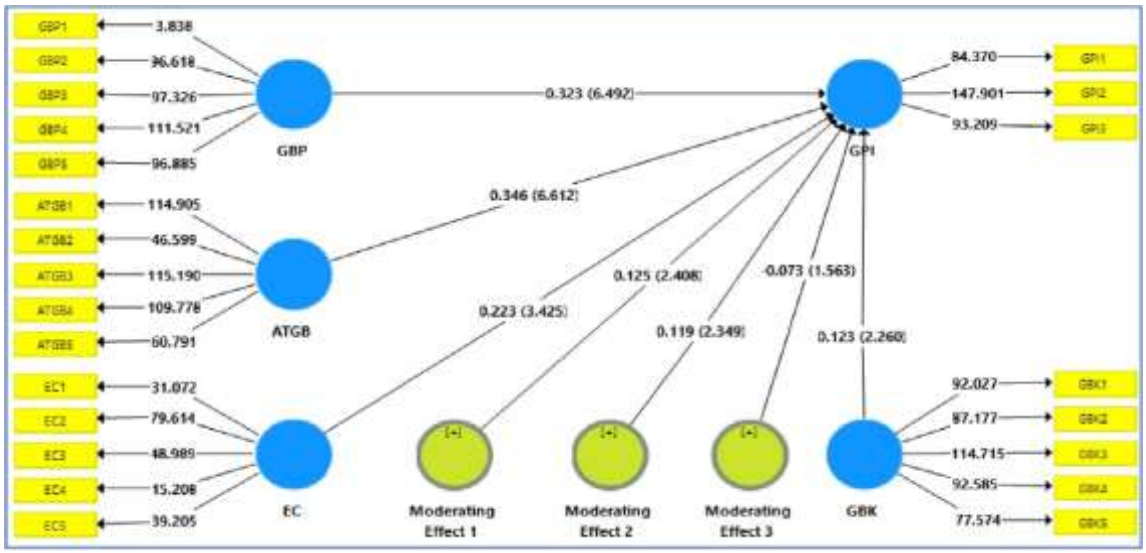


Table 7
Moderation results.

Hypotheses	Relationship	Beta	STDEV	T Statistics	*p*-Values	Decision
H4	GBP × GBK -> GPI	−0.073	0.047	1.563	0.119	Not Accepted
H5	ATGB × GBK -> GPI	0.125	0.052	2.408	0.016	Accepted
H6	EC × GBK -> GPI	0.119	0.051	2.349	0.019	Accepted

Discussion and Conclusions

In light of the increasing recognition of EC, the current study determined what factors influence consumers' decisions to purchase eco-friendly products. Data was collected from Lahore, Karachi, and Islamabad at supermarkets. The Study tested the first hypothesis that exposure to environmental advertising increases consumers' likelihood of making future green product purchases. According to the Study, consumers are likelier to choose greener investments from companies with a more prominent green positioning. Customers are more likely to support green businesses when those businesses promote environmental

responsibility and offer goods and services that directly aid in that goal. According to García-Salirrosas and Rondon-Eusebio (2022), consumers are more likely to purchase a company's environmentally friendly products if the company puts a high value on the green image. Consumers' intentions to buy green products have been shown to increase when they are subjected to brands in a green positioning, according to research by Therefore, Huang, Yang, and Wang (2014), the current Study's findings align with those of previous studies. It was also postulated that consumers' predispositions towards the green brand and EC would influence their decision to buy green products. According to the results of this study, consumers who care about the environment may be affected by their opinions of green brands when making purchases. The findings of other studies support the results of this Study. Papp (2022) argued that shoppers' views of green brands foreshadow their own green purchasing decisions. Consumers with a favorable impression of green brands are more inclined to plan to buy green products(Kamalanon, Chen, & Le, 2022). It is hypothesized that customers who have a positive impression of a business will be more inclined to make green purchases. Customers with a favorable green impression of the company out of environmental concern are more likely to buy sustainably. The study also tested the hypothesis that environmental worries would increase the likelihood of consumers making environmentally friendly purchases. The findings suggest that consumers who place a higher value on environmental protection also tend to buy more sustainably produced goods. Prior studies support these findings discovered that consumers' values that are green influenced their buying choices. However, Liao, Wu, and Pham (2020) argued that the increased environmental awareness of modern consumers is what really drives the growth of green purchase intentions. This supports Hypotheses 2 and 3, so we will use them.

This Study speculated that exposure to green brands would strengthen the relationship between green purchasing motives and the variables that are not dependent (ATGB, EC, and GBP). These findings suggest that as consumers gain more knowledge about a product, a more vital link is established between their attitudes and subsequent actions. Specifically, they learn about eco-friendly brands because they are consistently exposed to information about them. The study found that the potency of the correlation between environmental concern and the intent to buy green products was moderated by the extent to which consumers were already familiar with green brands; this suggests that a brand's green positioning compels consumers to make sustainable purchases but that their intentions are similar as their grasp of ecological literacy increases. These findings are consistent with those of the earlier research.

Theoretical and Practical Implications

This Study helped us better understand the factors influencing green consumers' purchase intentions and strengthened the theory of thought actions. The Study provides empirical evidence for the moderating role of familiarity with green brands and how consumers' understanding of one another's GBK affects their green purchase intentions regarding company positioning, mindset, and EC.

The Study's findings had real-world relevance because they demonstrated the importance of GBP in predicting green purchase intentions. How well marketers position their brands can influence consumers' purchasing decisions. It has been suggested that companies should highlight their commitment to environmental responsibility when marketing their products because it will increase their chances of gaining a green reputation. As the Study proves that customers trust a business that values ecological protection, finding solutions to environmental issues captures consumers' interest.

In addition to GBP, the Study presented EC as an indicator of environmentally conscious purchasing behavior. Organizations need to increase the favorable view of green brands, resulting in more green purchases. Brands need to use targeted marketing communication techniques to cultivate green brand sensitivity. Businesses should work to increase eco-awareness by showing how vulnerable the world is; therefore, raising awareness about the brand through social media will increase the demand for eco-friendly products and services.

Limitations and Future Directions

Longitudinal research designs should be used in future studies to confirm and test hypotheses about causal relationships between variables and observe whether or not respondents' answers change throughout the Study. PLS-SEM is used for statistical analysis in this Study. It has been suggested that more rigorous tests be used in future research to ascertain the character of the connection between parameters. There are avenues to explore new dimensions and variables. One-dimensional treatment of "GBP," which includes "functional," "emotional," and "green" positioning, may have limited the extrapolation in this Study; future studies consider the multi-dimensional nature of GBP to more fully comprehend how various kinds of positioning influence consumers' green purchasing decisions. The authors are urged to look into other theories, such as planned behavior, to better predict consumers' green purchasing decisions.

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