

Mediating Effect of Environmental Attitude on Green Product Purchase Intention in Indonesia

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ABSTRACT

Purpose—This study aims to investigate the influence of green product quality and green brand image on green purchase intention, mediated by environmental attitude, among users of Love Beauty and Planet products in Indonesia. Given the increasing concern for environmental sustainability, this research addresses the relevance of consumer attitudes and green branding strategies in shaping eco-friendly purchasing behavior.

Design/methods/approach – The study utilized a quantitative research method with a structured questionnaire distributed to 100 respondents who are users of Love Beauty and Planet products in Indonesia. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the relationships among variables.

Findings—The findings show that green product quality and green brand image have a positive and significant effect on both environmental attitude and green purchase intention. Furthermore, environmental attitude positively influences green purchase intention. Mediation analysis reveals that environmental attitude successfully mediates the effect of green product quality and green brand image on green purchase intention.

Research implications/limitations—The study is limited to one specific brand and product category in Indonesia, which may restrict the generalizability of the findings. Additionally, it focuses on three main independent variables, excluding other potential influencing factors such as green knowledge or green lifestyle.

Originality/value—This study contributes to the existing literature by integrating environmental attitude as a mediating variable in the relationship between green brand elements and purchase intention. It offers practical insights for marketers to enhance eco-conscious branding strategies.

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Introduction

Plastic is one of the most widely used materials in modern society, commonly found in both products and packaging due to its versatility, durability, and low production cost. However, the overreliance on plastic has resulted in a significant environmental challenge—plastic waste. Because it is difficult to biodegrade, plastic waste can persist in the environment for hundreds of years, posing a severe threat to ecosystems and human health ([Letcher, 2020](#);

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Pan et al., 2020). One of the primary concerns is that plastic waste accumulates in landfills, rivers, and oceans, disrupting biodiversity and threatening the survival of marine life.

According to data from ResearchGate (2022), plastic waste is predicted to increase significantly by 2050, with an estimated 2,600 million metric tons of waste expected—four times more than current levels. Geyer et al. (2017) emphasize that if current trends continue, nearly 9,000 million metric tons of plastic will be recycled, 12,000 million metric tons incinerated, and another 12,000 million metric tons discarded in nature, amplifying the urgency of sustainable interventions.

In the Indonesian context, the plastic waste issue is equally alarming. Based on data from the Indonesian Plastic Industry Association (INAPLAS) and the Central Statistics Agency (BPS), Indonesia produces 64 million tons of plastic waste annually, a significant portion of which is mismanaged and ends up in rivers and oceans. A report from the Ministry of Environment and Forestry (KLHK) in 2020 revealed that Indonesian seas are polluted by approximately 1,727.7 grams of waste per square meter, with plastic accounting for 35.4% of that total (Menlhk.go.id, 2022). This equates to around 2 million tons of plastic waste in Indonesia's seas alone.

Marine ecosystems are directly affected by plastic pollution, as shown by Plastic-pollution.org (2022). Marine animals suffer from ingestion or entanglement, often leading to injury or death. The World-Wide Fund for Nature (WWF) states that at least 2,144 marine species are affected by plastic pollution, with 90% of seabirds and 52% of sea turtles documented to have consumed plastic waste (Liputan6.com).

These environmental challenges have led to a growing movement in both consumers and businesses to adopt eco-friendly practices. One such response is the rise of green marketing—a strategy where companies incorporate environmental awareness into their branding, product design, and marketing communications. Green marketing not only helps address environmental concerns but also aligns with the rising consumer demand for sustainable and ethically produced goods (Amier & Pradana, 2022).

Unilever Indonesia, a major player in the Fast Moving Consumer Goods (FMCG) sector, has taken significant steps through green marketing. Its product line, Love Beauty and Planet, embodies the principles of environmental sustainability by using organic ingredients, recycled and recyclable packaging, cruelty-free certification, and ethically sourced essential oils (Unilever.com, 2022). These products support Unilever's broader environmental goals as outlined in the Unilever Sustainable Living Plan (USLP), which follows the 3P framework: People, Profit, and Planet.

The concept of green brand image plays a crucial role in this transformation. A strong green brand image reflects the public's perception of a company's commitment to environmental responsibility (Ananda et al., 2021). Previous research has shown that when consumers develop a positive environmental attitude, they are more likely to support eco-friendly initiatives and purchase green products (Saragih et al., 2022). Therefore, fostering green product quality and brand image is critical for increasing green purchase intention.

Given this background, the present study aims to examine "The Influence of Green Product Quality and Green Brand Image on Green Purchase Intention of Love Beauty and Planet Mediated by Environmental Attitude." This research contributes to the growing body of knowledge in sustainable marketing and consumer behavior by exploring how environmental consciousness and corporate responsibility can influence consumer decision-making. Furthermore, it highlights the importance of aligning business strategies with global environmental concerns and changing consumer expectations. By understanding the interplay between green product attributes, brand perception, and consumer attitudes, this study seeks

to offer insights for companies aiming to promote sustainability through marketing and innovation.

Literature Review

Green Product Quality

Green product quality is the quality of a product designed and intended to reduce the effects that pollute the environment, both in production, distribution and consumption [8]. Green products can be considered safe for humans or the environment and in the production process do not produce excessive waste and can minimize negative impacts on nature [9]. The product quality has some dimensions included product packaging, product design, product features, warranties, etc [10].

Green Brand Image

According to Amier & Pradana (2022), green brand image defined as a series of perceptions and associations in the consumers mind on a particular brand that is concerned about the environmental conservation. According to Syarifuddin et al. (2022), green brand image can be measured with some indicators, such as:

1. The need for environmental preservation

The company has sufficient capabilities to meet customers' needs who attach importance to environmental preservation.

2. Reputation in the environmental field

The company has a good reputation, especially in the environmental field.

3. Performance in conservation management and innovation

The company has excellent performance in terms of conservation management and innovation.

Environmental Attitude

Environmental attitude is a tendency that happens to a person who can be formed when responding constantly to environmental circumstances in the form of positive or negative based on three things: perspective and knowledge about the environmental problems, feelings or emotions that occur to the environment, and a tendency to behave or act on the environment (Kumalasari et al., 2022).

Green Purchase Intention

Intention plays an important role in the consumers' buying process and marks the relationship between attitudes and the resultant behaviours. It also functions as a consumer's commitment and effort, practiced or invested to show certain behaviour such as product purchase [13]. Consumers desire to buy green products is usually influenced by their awareness to protect the environment [14].

Research Framework

In the conceptual framework, the researcher uses the X variable, namely Green Product Quality (X1) and Green Brand Image (X2) which will affect Y variable namely Environmental Attitude (Y), and variable Y will affect Green Purchase Intention (Z).

Methods

This study utilized a quantitative research method with an explanatory approach to investigate the relationship between green product quality, green brand image, environmental attitude, and green purchase intention. The research was conducted in Indonesia, targeting consumers who have purchased and used Love Beauty and Planet products. The study aims to examine both direct and indirect effects among the variables, as illustrated in the conceptual framework below. The framework proposes that green product quality (H₁) and green brand image (H₂) influence environmental attitude, which in turn influences green purchase intention (H₅). Additionally, the model includes direct effects of green product quality (H₃) and green brand image (H₄) on green purchase intention.

The population for this study includes consumers in Indonesia who are familiar with the concept of environmentally friendly products. A non-probability sampling technique, specifically purposive sampling, was employed to select respondents who had previously purchased and used Love Beauty and Planet products. Data were collected from 400 respondents through an online questionnaire distributed via social media platforms. The questionnaire consisted of items measured using a five-point Likert scale ranging from "strongly disagree" to "strongly agree." Prior to data collection, a pilot test was conducted with 30 respondents to assess the clarity, reliability, and validity of the instrument, resulting in acceptable reliability scores (Cronbach's alpha ≥ 0.7).

The data analysis was carried out using SPSS for descriptive statistics and SmartPLS for Structural Equation Modeling (SEM). The analysis included validity and reliability testing, as well as hypothesis testing to evaluate both direct and mediating effects among the variables as proposed in the framework. The image below presents the research framework that guides the analysis in this study.

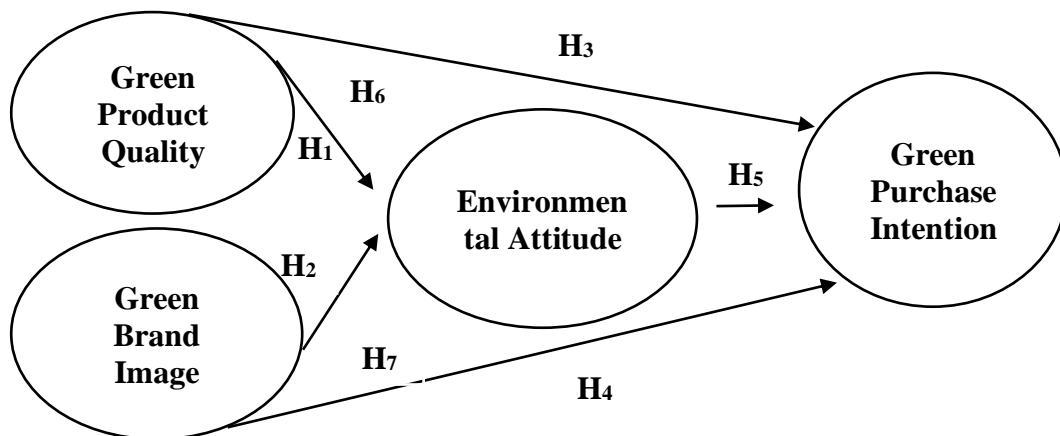


Figure 2. 1 Research Framework
Source: Author's Processed Data (2022)

Result and Discussion

Descriptive Analysis Result

Table 3. 1 Descriptive Analysis

Variable	Total Score	Ideal Score	Percentage	Category
Green Product Quality	10462	12000	87%	Very Good

Variable	Total Score	Ideal Score	Percentage	Category
Green Brand Image	10372	12000	86%	Very Good
Environmental Attitude	8370	10000	84%	Good
Green Purchase Intention	6875	8000	86%	Very Good

Source: Author’s Processed Data (2022)

Based on table 3.1 above, variable Green Product Quality (X1), Green Brand Image (X2) and Green Purchase Intention (Z) is categorized as very good. Meanwhile Environmental Attitude (Y) is categorized as good.

Partial Least Square

Outer Model

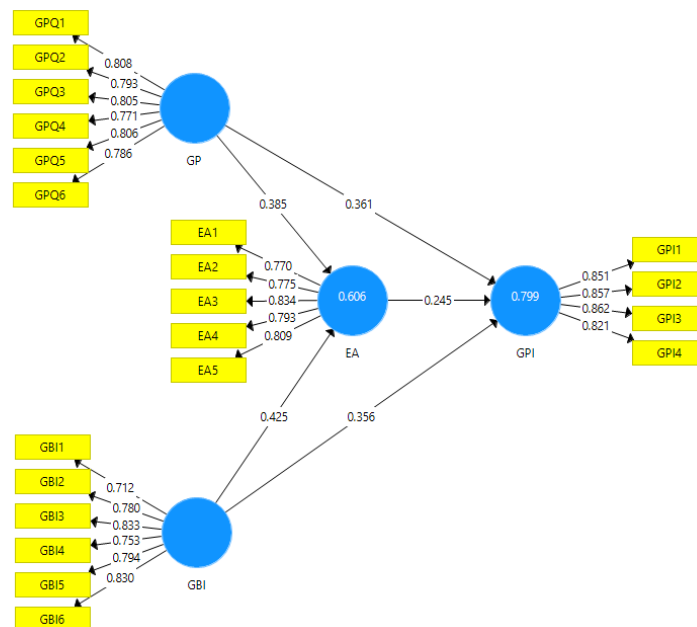


Figure 3. 1 Outer Model
Source: SmartPLS Output (2022)

a. Convergent Validity

The validity of the reflective indicators can be tested by using the correlation between the indicator scores and construct scores. Measurement with reflective indicators shows that there is a change in one indicator in a construct when other indicators in the same construct change. The following are the results of calculations using the SmartPLS software:

Table 3. 2 Convergent Validity Test

Variable	Average Variance Extracted (AVE)	Critical Value	Model Evaluation
Environmental Attitude	0,634	>0.5	Valid

Variable	Average Variance Extracted (AVE)	Critical Value	Model Evaluation
Green Brand Image	0,616		Valid
Green Product Quality	0,632		Valid
Green Purchase Intention	0,719		Valid

Source: SmartPLS Output (2022)

Based on the table 3.2 above, it is known that the fourth variable has an AVE value that exceeds the critical value, which is more than 0.5. Thus, it can be stated that each variable has met the requirements of convergent validity.

b. Discriminant Validity

The reflective indicators need to be tested for discriminant validity by comparing the values in the cross-loading table. An indicator is declared valid if it has the highest loading factor value on the target variable compared to the loading factor value on other variables. The following is the result of the cross-loading value for each indicator:

Table 3. 3 Discriminant Validity (Cross Loading Factor)

Item	EA	GBI	GP	GPI
EA1	0,770	0,588	0,585	0,545
EA2	0,775	0,567	0,598	0,610
EA3	0,834	0,618	0,609	0,649
EA4	0,793	0,580	0,588	0,628
EA5	0,809	0,638	0,591	0,673
GBI1	0,578	0,712	0,616	0,634
GBI2	0,590	0,780	0,668	0,661
GBI3	0,630	0,833	0,664	0,669
GBI4	0,534	0,753	0,690	0,648
GBI5	0,584	0,794	0,686	0,701
GBI6	0,620	0,830	0,679	0,674
GPI1	0,648	0,731	0,717	0,851
GPI2	0,687	0,681	0,731	0,857
GPI3	0,668	0,734	0,730	0,862
GPI4	0,649	0,728	0,694	0,821
GPQ1	0,667	0,672	0,808	0,689
GPQ2	0,561	0,665	0,793	0,670
GPQ3	0,587	0,689	0,805	0,682
GPQ4	0,592	0,650	0,771	0,652
GPQ5	0,584	0,707	0,806	0,680
GPQ6	0,560	0,673	0,786	0,665

Source: SmartPLS Output (2022)

Based on the results obtained in the table 3.3, it can be seen that each question item has the largest cross loading value compared to the cross-loading value on

other variables. Then it can be stated that each item meets the criteria for the discriminant test.

c. Reliability Test

The reliability test is to find out how far a measurement result using the same object can produce the same data. In Partial Least Square, the reliability test uses two methods, namely composite reliability and Cronbach alpha. The following are the results of the reliability test using SmartPLS software:

Table 3.4 Reliability Test Result

Variable	Cronbach's Alpha	Critical Value	Composite Reliability	Critical Value	Model Evaluation
Environmental Attitude	0,855	>0.6	0,896	>0.7	Reliable
Green Brand Image	0,874		0,906		Reliable
Green Product Quality	0,884		0,912		Reliable
Green Purchase Intention	0,870		0,911		Reliable

Source: SmartPLS Output (2022)

Based on the table 3.4 above, it is known that four latent variables (environmental attitude, green brand image, green product quality, green purchase intention) has a composite reliability value greater than 0.7 and Cronbach's Alpha greater than 0.6, thus it can be said that each research variables has fulfill the requirements of the composite reliability and Cronbach alpha value.

Inner Model

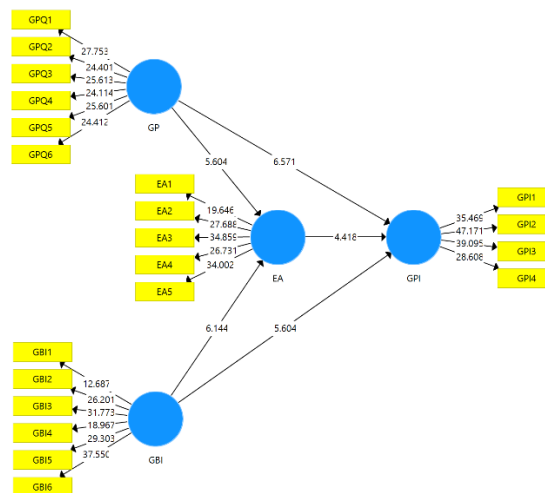


Figure 3.2 Inner Model
Source: SmartPLS Output (2022)

Based on figure 3.2 above, the inner model of this research was obtained through the SmartPLS software. This inner model will be used to test the r-square, predictive relevance, and research hypotheses.

a. Path Coefficient

According to the inner model shown in figure 3.2 above, it can be explained that the largest path coefficient value is indicated by the effect of green product quality on green purchase intention of 6.571. Then the second biggest is the effect of green brand image on environmental attitude of 6.144. Furthermore, the effect of green product quality on environmental attitude is 5.604, the effect of green brand image on green purchase intention is 2.807 and the smallest effect is shown by the influence of environmental attitude on green purchase intention of 4.418.

b. R-Square (R2)

Table 3.5 R-square Value

Item	R Square
EA	0,606
GPI	0,799

Source: SmartPLS Output (2022)

Based on table 3.5 above, it can be explained that the R-Square for the Environmental attitude is 0.606 or 60,6% and for the Green Purchase Intention variable it is 0.799 or 79%. The R-Square value for the Environmental Attitude variable is 60.6%, which means that the Environmental Attitude variable can be explained by the Green Product Quality and Green Brand Image variables and the remaining 39.4% is influenced by other variables not explained in this study. The R-Square value for the Green Purchase Intention variable is 79%, which means that the Green Purchase Intention variable can be explained by the Environmental Attitude variable and the remaining 21% is influenced by other variables not explained in this study.

c. Q-Square

Q-square can measure whether or not the observation value obtained from the model and its parameter estimates is good or not. Therefore, the model can be said to have predictive relevance if the Q-square value is > 0 (zero), while the model that lacks predictive relevance is if the Q-square value is < 0 (zero). However, if the calculation involves a Q-square value > 0 (zero) then the model deserves to be said to have a relevant predictive value. The following is the calculation of the inner model test with predictive relevance using the formula:

$$Q^2 = 1 - (1 - R^2) (1 - R^2) \dots (1 - R^2)$$

$$Q^2 = 1 - (1 - 0.6062) (1 - 0.7992)$$

$$Q^2 = 0.771$$

Predictive relevance of 0.771 means that it is greater than 0 (zero) explained that the model has a relevant predictive value.

d. Hypothesis Test

Research hypothesis is a provisional answer to the formulation of a research problem that must be proven with the data that has been obtained. To test the hypothesis, it is prominent to compare the t-statistic value (t_o) with the t-table

value (t_1) where the t-table value in this study is 1.96 with the following conditions for acceptance of the hypothesis:

- a. If the value to $> (t\alpha)$, then H_0 is rejected and H_1 is accepted
- b. If the value to $< (t\alpha)$, then H_0 is accepted and H_1 is rejected

Table 3.6 Hypothesis Test Between Research Variables

Variable	Original Sample (O)	Sample Mean (M)	(STDEV)	T Statistics (O/STDEV)	P Values	Description
Green Product Quality -> Environmental Attitude	0,385	0,388	0,065	5,923	0,000	Accepted (Significant) H1
Green Brand Image -> Environmental Attitude	0,425	0,421	0,065	6,553	0,000	Accepted (Significant) H2
Green Product Quality -> Green Purchase Intention	0,361	0,366	0,057	6,353	0,000	Accepted (Significant) H3
Green Brand Image -> Green Purchase Intention	0,356	0,354	0,063	5,630	0,000	Accepted (Significant) H4
Environmental Attitude -> Green Purchase Intention	0,245	0,242	0,057	4,315	0,000	Accepted (Significant) H5

Source: SmartPLS Output (2022)

Based on the test results obtained in the table 3.6 above. The results obtained are as follows:

1. The relationship between Green Product Quality on Environmental Attitude.

The results show the significance value or P-Value is 0.000 with a t count of 5.923 P-Value < 0.05 and T count $>$ from T table, it can be stated that GPQ on EA has a positive and significant effect.

2. The relationship between Green Brand Image on Environmental Attitude.

The results show the significance value or P-Value is 0.000 with a t count of 6.553. P-Value < 0.05 and T count $>$ from T table, it can be stated that GBI on EA has a positive and significant effect.

3. The relationship between Green Product Quality and Green Purchase Intention.

The results showed that the significance value or P-Value was 0.000 with a t-count of 6.353. P-Value < 0.05 and T count > from T table, it can be stated that GPQ has a positive and significant effect on GPI.

4. The relationship between Green Brand Image and Green Purchase Intention.

The results showed that the significance value or P-Value was 0.000 with a t-count of 5.630. P-Value < 0.05 and T count > from T table, it can be stated that GBI has a positive and significant effect on GPI.

5. The relationship between Environmental Attitudes and Green Purchase Intention.

The results showed that the significance value or P-Value was 0.000 with a T count of 4.315. P-Value < 0.05 and T count > from T table, it can be stated that EA has a positive and significant effect on GPI.

Table 3.7 Hypothesis Test Between Research Variables

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Description
Green Product Quality -> Environmental Attitude -> Green Purchase Intention	0,094	0,094	0,028	3,317	0,001	Accepted (Significant) H6
Green Brand Image -> Environmental Attitude -> Green Purchase Intention	0,104	0,101	0,027	3,824	0,000	Accepted (Significant) H7

Source: SmartPLS Output (2022)

Based on the test results obtained in the table 3.7 above, the results obtained are as follows:

1. The influence of Green Product Quality on Green Purchase Intention through Environmental Attitudes.

The results showed that the significance value or P-Value was 0.001 with a t-count of 3.317. P-Value < 0.05 and T count > from T table, it can be stated that GPQ on GPI through EA has a positive and significant effect.

2. The influence of Green Brand Image on Green Purchase Intention through Environmental Attitude.

The results showed that the significance value or P-Value was 0.000 with a t-count of 3.824. P-Value < 0.05 and T count > from T table, it can be stated that GP on GPI through EA has a positive and significant effect.

Conclusion

This study aimed to analyze the influence of green product quality and green brand image on green purchase intention, with environmental attitude as a mediating variable, focusing on users of Love Beauty and Planet products in Indonesia. The findings confirm that green product quality and green brand image significantly affect green purchase intention, both directly and indirectly through environmental attitude. Hypothesis testing demonstrated that green product quality and green brand image have a positive and significant impact on environmental attitude and green purchase intention, supported by statistical results showing significant path coefficients and p-values below the 0.05 threshold. These results reinforce the idea that environmentally responsible product features and strong eco-friendly branding enhance consumer willingness to support green products.

The first research question addressed consumer perceptions of green product quality. The findings indicate that consumers perceive Love Beauty and Planet products as high-quality, environmentally friendly, and in line with sustainable values. The brand's commitment to natural ingredients, biodegradable packaging, and cruelty-free production practices contributes to a favorable evaluation of its product quality. These results align with previous studies such as [Chen & Chang \(2013\)](#), which emphasized the role of green product attributes in fostering positive consumer attitudes and intentions.

The second research question explored the impact of green brand image. The study found that Love Beauty and Planet is perceived as a brand that promotes eco-conscious values and environmental sustainability, which strengthens its emotional connection with consumers. This confirms the findings of scholars like [Hartmann & Ibáñez \(2006\)](#), who argue that a positive green brand image enhances consumer trust, brand loyalty, and ultimately purchase behavior.

The third research question examined the role of environmental attitude as a mediating variable. The results show that environmental attitude significantly mediates the relationship between green product perceptions (quality and brand image) and green purchase intention. This supports the framework proposed by [Ajzen's \(1991\)](#) Theory of Planned Behavior, which posits that individual attitudes influence intentions and behaviors. Consumers with stronger environmental attitudes are more likely to translate their favorable product perceptions into actual green purchasing decisions.

From a managerial perspective, the findings highlight the importance of maintaining high green product standards while strengthening brand image through consistent environmental messaging. Love Beauty and Planet should continue promoting its sustainable initiatives via social media, influencer marketing, and community engagement. Educating consumers about environmental issues and showcasing transparency in production processes can further deepen brand trust and consumer advocacy.

Despite the significant findings, this study has certain limitations. The research is limited to one brand and focuses only on a specific consumer demographic in Indonesia, which may restrict the generalizability of the results. Future research could compare multiple green beauty brands, investigate additional variables such as green satisfaction or environmental consciousness, or apply different mediating models to gain broader insights into green consumer behavior.

In conclusion, this study confirms the significant role of green product quality and green brand image in shaping green purchase intention, particularly when mediated by environmental attitudes. A strong commitment to sustainability not only enhances brand

perception but also builds long-term consumer engagement and market competitiveness in the environmentally conscious beauty industry.

Declarations

Author contribution statement

The lead author participated in the study's conceptualization and design, analysis, interpretation of data, and initial drafting of the paper. Each author contributed to the critical revision of the content for intellectual rigor and provided final approval for the published version. All authors are responsible for every aspect of the work.

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Not applicable.

Data availability statement

The data supporting this study's findings are available from the corresponding author upon reasonable request. However, due to privacy and ethical considerations, the data are not publicly accessible.

Declaration of Interests Statement

The author states that there is no potential conflict of interest during the preparation of this research article. This research was conducted without funding or grant support from any individual, organization, or institution. The author would like to thank all respondents who have participated in the study.

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