Journal of Infrastructure, Policy and Development 2024, 8(3), 2760.
https://doi.org/10.24294/jipd.v8i3.2760

Article

Shades of green: Exploring the fascinating landscape of consumer behavior towards eco-friendly cosmetics in Pakistan

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CITATION

Hussain Shah SS, Khalid MB, Khan MA, et al. (2024). Shades of green: Exploring the fascinating landscape of consumer behavior towards eco-friendly cosmetics in Pakistan. Journal of Infrastructure, Policy and Development. 8(3): 2760. https://doi.org/10.24294/jipd.v8i3.2760

ARTICLE INFO

Received: 4 September 2023
Accepted: 8 October 2023
Available online: 20 February 2024

Abstract: Green cosmetics made from organic ingredients are becoming increasingly popular due to their environmentally friendly nature. However, research on consumer behavior towards green cosmetics is rare, especially in developing countries like Pakistan. Previous studies have primarily focused on female consumers, and little is known about the behavior of male consumers. Therefore, this research aims to investigate the behavior of both male and female consumers towards green cosmetic products and analyze the factors that affect their purchase behavior. This study employs a quantitative approach with deductive reasoning and collects data through a questionnaire from major cities in Pakistan. The study finds that eco-awareness, social influence, price-quality instructions, health consciousness, and the need for uniqueness significantly influence consumer purchase behavior when buying green cosmetics. Interestingly, price sensitivity does not significantly affect consumer purchase behavior as consumers are willing to pay for high-quality green cosmetics. Based on the findings, the study recommends promoting eco-awareness and health consciousness among consumers through educational campaigns and workshops launched by the government and the private sector. Future research can explore factors such as age, gender, and specific generations like millennials and Generation Z, as well as packaging, branding, and product design to promote environmentally friendly and health-conscious products. Additionally, comparative studies between countries can identify universal and region-specific factors, and examining the overall impact of green cosmetic products on the environment can highlight areas for improvement in sustainability.

Keywords: consumer purchase behavior; eco-awareness; social influence; price-quality instructions; health consciousness; need for Uniqueness; price sensitivity

1. Introduction

People are becoming more aware of synthetic products' adverse effects on themselves and the environment in the twenty-first century. This awareness has changed consumer behavior towards using organic and "green" products (Franca & Ueno, 2020). Consumers are increasingly looking for safe and eco-friendly substitutes for risky synthetic products, and this tendency is especially pronounced in the cosmetic business, which is expanding quickly worldwide (Munamba & Nuangjamnong, 2021). Businesses and producers are also becoming more aware of consumer preferences and the negative impacts of synthetic cosmetics, such as petroleum, ethylene, and propylene, which are frequently included in these cosmetics, harming the skin and the

environment (Bom et al., 2020). Customers are switching to organic and green alternatives manufactured from non-hazardous and renewable materials as they become more aware of the risks associated with synthetic products and their non-renewable nature. Although there is still a dearth of studies on consumer behavior, especially related to green cosmetics, as most previous studies focus on green marketing, the growing sales of green products have piqued researchers' attention (Shabbir et al., 2020).

With the introduction of new brands, the cosmetics sector is increasing quickly, yet it presents formidable obstacles for newcomers. It is challenging for new businesses to establish a presence in the market because established brands have already solidified their position there (Nedumaran & M, 2020). The market is adjusting, nevertheless, to satisfy these preferences as demand for organic goods grows. Marketing and production strategies depend on understanding consumer behavior (Alamsyah et al., 2018). Green buying behavior combines ethical decision-making with socially responsible behavior to meet the needs of socially and environmentally sensitive customers (Shiel et al., 2020). Green cosmetics minimize negative user impacts while also being good for the environment. Several variables influence customer behavior, including price, product availability, and social awareness. The environment and consumers can benefit from green cosmetics (AL-Ghaswyneh, 2019). When referring to green cosmetics, "green" denotes safe, non-toxic goods manufactured with renewable and sustainable materials.

The use of green products, particularly in the cosmetics industry, has garnered increasing attention globally due to growing environmental concerns and the desire for healthier, sustainable alternatives (Chin et al., 2018). With its burgeoning beauty and skincare market, Pakistan has not remained immune to this global shift toward eco-conscious consumerism (Shaikh, 2018).

The Pakistani cosmetics market has witnessed a notable surge in the demand for eco-friendly and organic cosmetic products in recent years. This shift reflects changing consumer attitudes toward environmental sustainability, personal well-being, and ethical consumption (Ishaq et al., 2021). To understand this phenomenon more comprehensively, it is imperative to delve deeper into the factors driving the adoption of green cosmetics in Pakistan.

The rise of environmental consciousness in Pakistan has been influenced by global awareness of climate change, pollution, and the depletion of natural resources (Ajani & van der Geest, 2021). As consumers become increasingly aware of the adverse effects of conventional cosmetics on both personal health and the environment are seeking alternatives that align with their values and beliefs (Amberg & Fogarassy, 2019). However, it is worth noting that most existing research on consumer behavior towards green cosmetics originates from Western countries such as the United States and European nations (Haba et al., 2023).

Consumer preferences in Pakistan have also evolved in response to growing concerns about the potential health hazards posed by synthetic ingredients commonly found in conventional cosmetics; the desire for natural, non-toxic ingredients in personal care products has driven the demand for green cosmetics. This is a reflection of personal health consciousness and a testament to the interconnectedness of health and environmental well-being (Khan et al., 2021). While research in Western countries

has explored the link between health consciousness and green cosmetics usage, limited research has examined this relationship in the Pakistani context.

The primary goal of this research is to examine customer attitudes toward green cosmetic items to analyze consumer behavior toward green products. The study also tries to pinpoint the variables influencing customer purchasing decisions. Primary data will be gathered in Pakistan, where consumer views are shifting in favor of environmental sustainability, and recent green initiatives have been made. How do the six factors of eco-awareness, social influence, price-quality recommendations, health consciousness, need for Uniqueness, and price sensitivity affect consumer purchasing decisions when they choose green cosmetic products over synthetic cosmetic products?

This study is crucial because it attempts to quantify the influence of several variables on consumers' purchasing decisions. The results of this study will give marketers insightful information that will help them comprehend how these aspects affect customer purchasing decisions. This knowledge will make creating marketing plans and advertising campaigns for eco-friendly cosmetics easier. Marketers can customize their strategies and make these items more enticing and user-friendly by determining the elements that significantly impact customer purchase behavior. Ultimately, this will improve the sales of green cosmetics and benefit both the marketing industry and the general public. Additionally, this study will give customers a forum to express their opinions and preferences, ensuring that their demands are addressed by manufacturers.

2. Research development

The purpose of this study is to examine customer perceptions towards green products, with a focus on green cosmetics. The study also tries to pinpoint the variables influencing customer purchasing decisions. Pakistan is the primary data source for this study, a nation that has recently taken initiatives to promote environmental responsibility and where consumer views are shifting more and more in favor of environmental sustainability. How do the six factors (eco-awareness, social influence, price-quality recommendations, health consciousness, need for Uniqueness, and price sensitivity) affect consumers' decision to purchase green cosmetics instead of synthetic cosmetics? The study has a flowing research hypothesis:

Hypothesis 1: Eco-awareness positively and significantly affects consumer purchase behavior.

Hypothesis 2: Social Influence positively and significantly affects consumer purchase behavior.

Hypothesis 3: Price Quality information has a positive and significant effect on consumer purchase behavior.

Hypothesis 4: Price Sensitivity has a positive and significant effect on consumer purchase behavior.

Hypothesis 5: Health Consciousness positively and significantly affects consumer purchase behavior.

Hypothesis 6: The need for Uniqueness has a positive and significant effect on consumer purchase behavior.

2.1. Eco-awareness

The urge of consumers to preserve the environment and make greener decisions has grown over time. In the modern market, there is an increasing need for environmentally friendly products and services, and taking these issues into account can help brands establish a strong reputation and distinguishing feature (Mortimer, 2020). A company's success is greatly influenced by green marketing, which promotes ecologically friendly goods and services (Arseculeratne & Yazdanifard, 2013). Eco awareness is expected to have a positive relationship with consumer behavior regarding green cosmetics because more environmentally conscious individuals are likely to prioritize eco-friendly products. They are likely to be more informed about the environmental impact of conventional cosmetics, leading them to prefer green alternatives (H1).

2.2. Social influence

Consumption patterns are significantly influenced by reference groups and social influence (Hoyer & MacInnis, 2004). According to studies, social influence significantly impacts adolescents' propensity to make environmentally friendly purchases (Dagher & Itani, 2012). If individuals perceive that their peers or social groups endorse or use green cosmetics, they are more likely to follow suit to conform to social norms and maintain social harmony (H2).

2.3. Price quality

It's essential to green price items correctly since some environmentally conscientious consumers could be willing to pay more out of moral obligation. Price, however, impacts the decision-making process for the typical client (Laroche et al., 2001). Collaboration with organizations that support environmental concerns and the inclusion of eco-labels on packaging can increase credibility and have a favorable effect on consumers' purchasing attitudes (Shabbir et al., 2020). Price-quality information influences consumer behavior as it helps consumers make informed decisions. If consumers know the value and benefits green cosmetics offer about their price, they are more likely to choose these products (H3).

2.4. Price sensitivity

Green consumers who intentionally steer clear of products that hurt the environment would be willing to pay more for green substitutes (Katrandijev, 2016). However, consumers' price sensitivity varies, and some may be less ready to shell out more money for eco-friendly goods (Ritter, 2015). Green customers' preferences are influenced by the perception of long-term future returns and an understanding of the environmental impact of purchasing (Ritter, 2015). Price sensitivity implies that consumers are highly responsive to price changes. Green cosmetics are often perceived as premium products with higher prices due to their sustainable and natural ingredients. Price-sensitive consumers may opt for less expensive alternatives, even if they are not as eco-friendly (H4).

2.5. Health consciousness

Because they are healthier, consumers frequently prefer organic cosmetics. According to studies (Ashraf et al., 2017), health consciousness significantly influences consumers' attitudes towards organic cosmetics. Consumer decision-making is significantly influenced by well-being concerns, such as sun protection and environmental contamination (Ashraf et al., 2017). Health consciousness is linked to consumer behavior as health-conscious individuals often seek safe and free products from harmful chemicals. Green cosmetics, which often contain natural and non-toxic ingredients, align with the preferences of health-conscious consumers (H5).

2.6. The need for uniqueness

Because they regard organic products as different from conventional ones, customers looking for distinctive items are more inclined to pick them (Ghazali et al., 2017). Consumers' choices are influenced by the distinctive qualities of organic products and the notion of reduced amounts of hazardous chemicals (Gok & Ulu, 2019). Consumers learn about items based on their personal experiences and expertise, which influences how distinctive they believe them to be (Park & Kim, 2008). The need for uniqueness suggests a desire to stand out and be different. Green cosmetics, emphasizing sustainability and ethical consumption, may appeal to individuals who want to differentiate themselves from the mainstream by making eco-conscious choices (H6).

The model presented in **Figure 1** illustrates the variables and their interrelationships, specifically highlighting the correlation between independent and dependent variables.

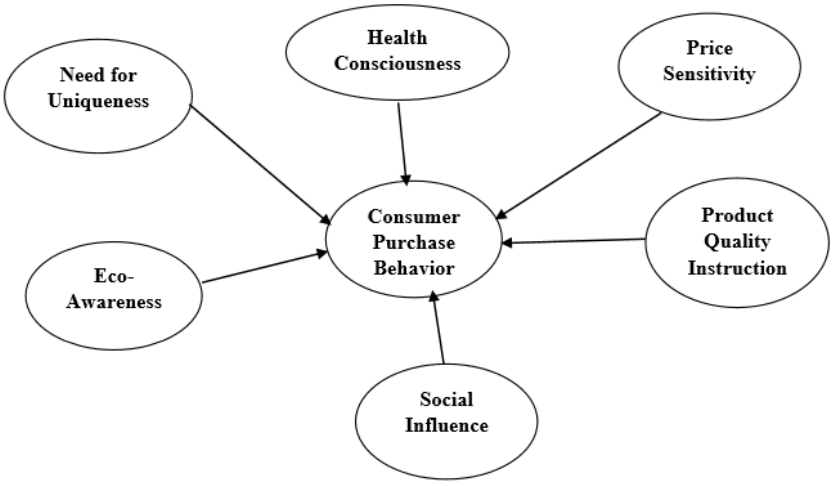

Figure 1. Model of variables.

3. Research methodology

3.1. Research philosophy

The positivist research philosophy used in this study is consistent with the epistemological concept that the world is external and objective. Positive thinking strongly emphasizes empirical methods and the creation of generalizations that

resemble laws based on data (Junjie & Yingxin, 2022; Ryan, 2018). The emphasis of this study is on quantitative data and measurable outcomes. The researcher maintains objectivity by restricting their involvement in data collection and objective analysis. The objective is to track and evaluate the influences of many variables on customer purchasing decisions, which can only be done through empirical research.

3.2. Research approach

In this study, the deductive method is used, which entails developing hypotheses based on the study's goals and then interpreting the results in light of those hypotheses. With this method, it is possible to examine how theories and empirical data relate to one another (Benitez-Correa et al., 2019). The deductive strategy uses quantitative data collection techniques, unlike the inductive approach, which depends on qualitative techniques and theory development based on interviews with a few people. The deductive method was used in this study to help the researcher arrive at more exact and accurate results.

3.3. Research design

This study uses a single cross-sectional design and concentrates on a single population data point. Without the requirement for repeated measurements, this strategy entails gathering data from a sample at a particular time (Asiamah et al., 2019). Data from the sample are only collected once during a specific instance by the researcher using a single cross-sectional approach.

3.4. Data sources and data collection

This study uses primary data to tackle a particular research issue. Primary data gathering is more complex and resource-intensive than secondary data collection, but it is regarded as more reliable for this type of research (Van den Akker et al., 2021). To acquire relevant and correct data for the study, primary data collecting techniques are used to track the research hypotheses. A questionnaire survey was used to gather the data for this study. Given this study's use of quantitative data, a survey was thought to be the best method for gathering such information. Because they can reach more people, survey-based data collection techniques are frequently used in the management and business domains. Additionally, the cost-effectiveness of survey-based data collecting has increased because of technological developments like the creation of websites.

3.5. Data collection instrument and design

A web-based survey was used to gather the primary research data. The survey questionnaire was designed to capture essential information regarding consumer behavior regarding green cosmetics in Pakistan. To reach a wide and diverse audience, an online questionnaire was designed using Google Forms. The use of online surveys facilitated data collection from a geographically dispersed sample. Respondents were invited to participate in the survey through social media platforms, email invitations, and online forums dedicated to beauty and cosmetics. This approach allowed for the inclusion of tech-savvy individuals comfortable with digital surveys. Additionally,

Recognizing the need to include individuals who might not have easy access to the Internet or prefer traditional survey methods, a portion of the questionnaires was administered in hard copy format. These hard-copy questionnaires were distributed at selected physical locations such as beauty salons, colleges, and universities. This approach ensured the inclusion of a more diverse set of respondents, including those who may not be active online. The questionnaire's design was created after carefully examining the body of research in the area and considering the study's goals. The questionnaire was broken up into sections to ensure clarity regarding the purpose of the study. Individuals living in Pakistan's major cities who were 15 years of age or older received the questionnaire. The questionnaire's first portion was gathering data on gender, income, and employment status. One dependent variable and six independent variables were among the seven variables that were the subject of questions in the second segment.

3.6. Population and sampling

Individuals older than 15 years were chosen as the target population to ensure relevance to the study. This age criterion was based on the assumption that individuals in this age group are more likely to be consumers of cosmetic products and capable of providing insights into their consumer behavior. The study used a sample size of 483 individuals from Pakistan and was analyzed using structural equation modeling in SMART PLS 3.x. The sample was chosen using convenient sampling, a non-probability sampling technique. This approach allowed for data collection from a diverse group of respondents with varying levels of exposure to and interest in green cosmetics. Also, This method entails choosing people who are readily available or easily reachable. The general public made up the sample since the researcher wanted to choose participants who could react quickly. Compared to other sampling techniques, convenient sampling is less time-consuming and relatively simple, allowing the researcher to collect samples in less time.

4. Results and discussion

A structured questionnaire was created using Google Forms to collect the necessary data. Reaching people of various ages and backgrounds, the questionnaire was disseminated through well-known social media sites like WhatsApp, LinkedIn, Facebook, and Instagram. For the initial investigation, Google Forms was used to calculate descriptive statistics. Structural equation modeling (SEM), which tests hypotheses and examines the reliability and validity of acquired data, was done using the SMART PLS software to analyze the correlations between variables.

The response rate indicates the percentage of people who responded to the invitation to participate in the study. **Table 1** displays the collective responses gathered from the study, indicating a total of 483 replies provided by the respondents. Six hundred people were given access to the online survey, and 483 gave accurate, comprehensive responses. Every item on the questionnaire had a requirement, preventing any inaccurate or partial responses from being used in the analysis.

Table 1. Response rate calculation.

Responses Received	483
Inaccurate/irrelevant responses	0
Accepted responses	483
Shared respondents count (approx.)	600
Response Rate	80.5%

Source: Data developed for the present study by the researcher.

4.1. Sample description

People from diverse age groups and economic backgrounds who lived in various parts of Pakistan made up the survey's respondents. The questionnaire's first portion was dedicated to gathering data on demographics. According to **Figure 2**, the data shows that out of the 483 respondents, 71% (343 people) identified as female, 28.7% (138 people) as male, and 0.3% (2 people) as another gender. The distribution is seen in the following graph:

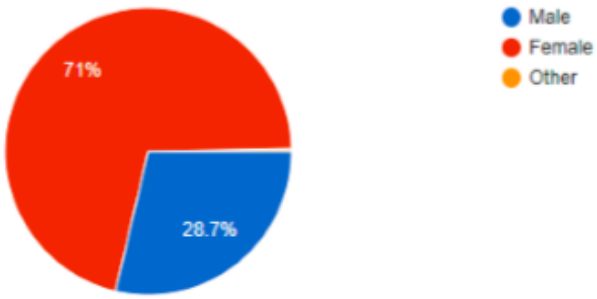

Figure 2. Gender.

Source: Data extracted from google forms for the present research.

There was a wide range in the respondents' ages, with a sizable proportion being students. Mainly, undergraduate students made up the majority of respondents. Among the responders, 71.6% were bachelor's degree candidates. In addition, master's degree students provided 12.0% of the responses, and 4.3% of respondents were doctoral candidates. 7.3% of the responders were from various educational backgrounds, like high school and technical and vocational fields.

Table 2 shows the age frequency of the respondents. 82.8% of the respondents were 15–25 years old, 15.5% were 26–35 years old. 1.2% were 36–45 years old, and 0.4% were above the age of 45 years.

Table 2. Age frequency.

Age	**Frequency**	**Percentage**
15–25	400	82.8
26–35	75	15.5
36–45	6	1.2
Above 45	2	0.4
Total	483	100.00

Source: Data developed for the present study by the researcher.

As depicted in **Figure 3**, the respondents were categorized into distinct groups: 71.5% (345 individuals) were students who depended on either their pocket money or engaged in freelance work; 11.8% (56 individuals) were unemployed; and 16.7% (82 individuals) were part of the workforce. **Table 3** exhibits that 483 respondents stated that their typical monthly salary was less than 30,000 PKR. There were 80 respondents, and their monthly incomes varied from 30,000 to 60,000 PKR. In addition, 54 respondents reported a monthly income of more than 90,000 PKR, compared to 32 respondents with a monthly income of between 60,001 and 90,000 PKR.

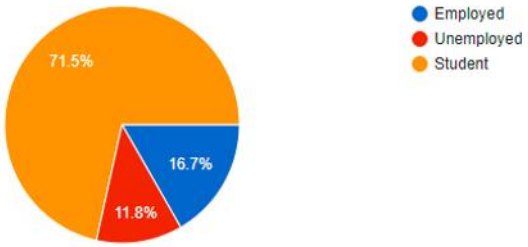

Figure 3. Employment status.
Source: Data extracted form google forms for the present research.

Table 3. Average month income.

Income Range	Frequency	Percentage
Below 30000	317	65.6
30000–60000	80	16.5
60001–90000	32	6.7
90000 above	54	11.2
Total	483	100.00

Source: Data developed for the present study by the researcher.

4.2. Model estimation and measurement

The variables were renamed for simplicity, and the measurement model was estimated using the SMART PLS program. The variable representations utilized in the analysis are as follows:

- Eco awareness factor: ECOA
- Social Influence Factor: SI
- Product quality instruction factor: PQ
- Price sensitivity: PS
- Health Consciousness: HC
- Need for Uniqueness in the product: UQ
- Consumer purchase behavior (dependent variable): CPB

The SMART PLS program evaluated the model's validity and dependability through discriminant and convergent validity. Three hundred iterations of the SMART PLS algorithm were performed while considering the valid response size of 483. The reliability and validity were estimated after a few signs were eliminated.

4.3. Indicator reliability

The outside loadings of the indicators were used to assess their dependability. The least acceptable value for outer loading is 0.4, and a value of 0.7 is ideal for confirming the dependability of the indicators.

Table 4. Indicator reliability.

Indicators	Outer Loadings
CPB1	0.760
CPB2	0.699
CPB3	0.723
CPB4	0.708
ECOA1	0.744
ECOA2	0.699
ECOA3	0.810
SI1	0.866
SI2	0.860
SI3	0.797
PQ1	0.800
PQ2	0.752
PQ3	0.745
HC1	0.692
HC2	0.752
HC3	0.764
PS1	0.751
PS2	0.859
PS3	0.657
UQ1	0.601
UQ2	0.800
UQ3	0.849

Source: Data developed from SMART PLS.

Table 4 above shows that the value of the outer loadings is all greater than 0.4, which is the minimum acceptable value. Hence, all the indicators of CPB, ECOA, SI, PQ, HC, UQ, and PS have acceptable outer loading values.

4.4. Internal consistency reliability

Internal consistency reliability is measured by Composite reliability values or Cronbach's Alpha. The value of Composite reliability and Cronbach's Alpha should be greater than 0.7, which is the minimum acceptance value. **Table 5** shows that Cronbach's Alpha and Composite reliability values are above 0.7, which is the minimum acceptable value; hence it shows a significant internal consistency of the constructs.

Table 5. Internal consistency reliability.

Variables	Cronbach's Alpha	Composite Reliability	Average variance Extracted
CPB	0.712	0.792	0.588
ECOA	0.709	0.763	0.520
SI	0.795	0.879	0.708
PQ	0.721	0.777	0.540
HC	0.735	0.780	0.542
PS	0.743	0.816	0.599
UQ	0.704	0.769	0.537

Source: Data developed from SMART PLS.

4.5. Convergent and discriminant validity

Convergent validity measures how closely a construct's indicators converge and is determined by the average variance extracted (AVE). A desirable AVE value is one larger than 0.5. Given that the AVE values for each construct in this study are more significant than 0.5, all variables show a considerable degree of convergent validity.

By contrasting the square root of the AVE with the correlations between latent variables, discriminant validity is assessed. When the square root of the AVE is higher than the correlation between the constructs, it is regarded as genuine. Every construct should also have a square root of the AVE greater than its highest correlation with any other construct in the model. Since the square root of the AVE for each construct is more significant than its maximum correlation with other constructs, all seven variables in this study fit these criteria.

4.6. Structural models

The hypotheses of the test were tested by using structural models. SMART PLS Algorithm was run to evaluate the relationship among the variables. Finally, the bootstrapping technique was used to evaluate the significance of the relationship among the variables.

4.7. Direct effect and indirect effect

The direct effect between dependent and independent variables can be assessed by *p*-value and *t*-value. The *p*-value for all the variables except Environmental Consciousness (EC) was less than 0.5, as the *p*-value below 0.5 is considered significant, so all the independent variables have a significant effect on the dependent variable except Environmental Consciousness (EC). The model had no mediating variable, so there was no indirect effect.

4.8. Coefficient of determination (R2)

The coefficient of determination (R2), which reflects the model's level of predictability, indicates the combined impact of the exogenous factors on the endogenous variable(s). It has a scale of 0 to 1, with 1 denoting perfect predictive accuracy. According to **Figure 4**, this investigation's R2 value of 0.547 denotes

moderate predictive accuracy. It indicates that the six independent variables in the model may account for about 54.7% of the variation in consumer purchase behaviour.

R2 numbers can be interpreted in the following ways. For example, 0.75 denotes a high degree of predictive accuracy, 0.5 denotes a moderate level, and 0.25 denotes a low level.

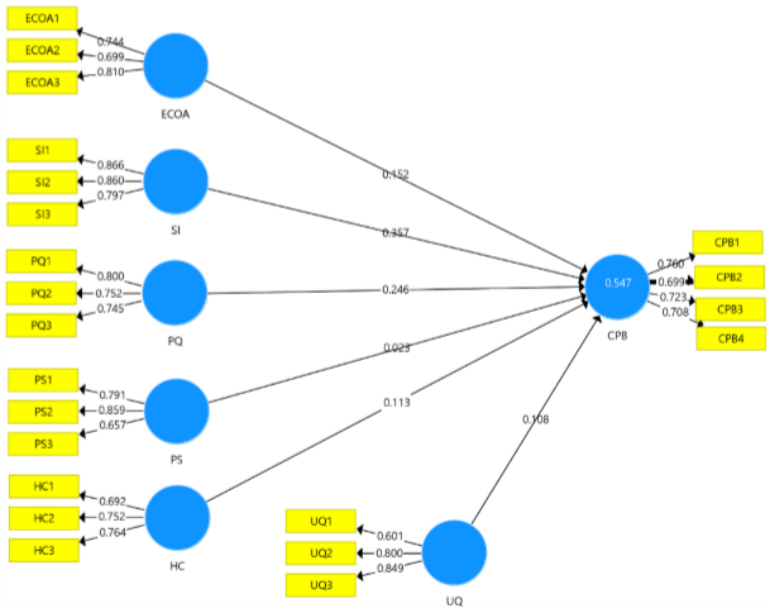

Figure 4. Path model of smart PLS.

4.9. Significance of path coefficient

Table 6 shows that the path coefficient of H1, H2, H3, H5, and H6 was considered significant because their *t*-values were above 1.96 and *p*-values were less than 0.05, which is the condition for the hypotheses to be accepted. Hypothesis H4 was rejected because their *p*-values were more significant than 0.05 and their *t*-values were less than 1.96.

Table 6. Significance of path coefficients.

Hypothesis	Paths	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	*t* Statistics (|O/STDEV|)	*p* Values	Accepted or not
H1	ECOA>CPB	0.152	0.156	0.042	3.630	0.000	Accepted
H2	SI>CPB	0.357	0.350	0.045	7.904	0.000	Accepted
H3	PQ>CPB	0.246	0.250	0.043	5.704	0.000	Accepted
H4	PS>CPB	0.023	0.030	0.034	0.695	0.487	Rejected
H5	HC>CPB	0.113	0.113	0.047	2.388	0.017	Accepted
H6	UQ>CPB	0.108	0.110	0.041	2.665	0.008	Accepted

Source: Data developed from SMART PLS.

4.10. Collinearity statistics

The Variance Inflation factor (VIF) values estimated the collinearity issues of the constructs. The value to VIF should be less than 5 to establish no collinearity issue

among the constructs. In **Table 7**, the VIF values of all the constructs were less than 5, showing no collinearity issue. The VIF value table of the constructs is given below.

Table 7. Collinearity statistics.

Indicators	VIF
CPB1	1.488
CPB2	1.434
CPB3	1.256
CPB4	1.278
ECOA1	1.192
ECOA2	1.223
ECOA3	1.110
PS1	1.278
PS2	1.446
PS3	1.290
PQ1	1.272
PQ2	1.291
PQ3	1.085
EC1	1.221
EC2	1.203
EC3	1.280
HC1	1.238
HC2	1.324
HC3	1.125
UQ1	1.081
UQ2	1.293
UQ3	1.276
SI1	1.737
SI2	1.958
SI3	1.543

Source: Data developed from SMART PLS.

5. Conclusion and recommendations

This study set out to find out what characteristics, if any, affect consumers' decisions to buy green or organic cosmetics. Eco Awareness, Social Influence, Product Quality Instructions, Price Sensitivity, Health Consciousness, and Need for Uniqueness were the six main issues that the study concentrated on. A summary of the research methodology, findings, and recommendations is given in the following section.

This study aimed to determine factors influencing customers' purchase of eco-friendly or organic cosmetics. The study focused on six key issues: eco-awareness, social influence, product quality instructions, price sensitivity, health consciousness, and the need for Uniqueness. The part that follows provides a brief explanation of the research methodology, conclusions, and suggestions.

Second, it was discovered that social influence significantly and favourably affected customer purchasing decisions. The influence of friends, family, and society significantly impacts how customers buy organic cosmetics. The theory of planned behaviour supports these findings because social influences influence people's attitudes and purchase decisions.

A positive and considerable impact of product quality information on consumer purchase behaviour was found by the third hypothesis. The quality and contents of the products consumers purchase are essential to them; thus, this information easily visible on the package helps them make decisions. Clearly stating the product's quality helps consumers overcome their uncertainties and distinguishes green cosmetics from synthetic equivalents.

The fourth hypothesis did not support the association between price sensitivity and customer buying behaviour. The findings demonstrated that price does not significantly influence consumers' propensity to purchase eco-friendly cosmetics. Consumers prioritize the benefits of high-quality organic cosmetic products over price and are willing to pay higher rates.

The fifth hypothesis proved that consumer purchases of green cosmetic goods are significantly and favourably impacted by health consciousness. Consumers more concerned about their health exhibit a favourable tendency when buying organic cosmetics. The knowledge of the adverse health effects of synthetic items encourages customers to pick eco-friendly substitutes.

The sixth hypothesis concluded that organic cosmetics' quest for Uniqueness positively influences consumers' buying decisions. Green cosmetics are said to be distinctive and allow customers to stand out from the crowd. This unique element significantly influences their purchasing choices.

While consumer behavior towards green cosmetics has been studied in various contexts globally, there is a noticeable research gap concerning this phenomenon in Pakistan. This study provides valuable insights into influencing consumer behavior regarding green cosmetics in the Pakistani market. The research enriches the global body of literature on green consumerism by filling this gap.This research offers empirical evidence and data-driven insights into the Pakistani consumer's perspective on green cosmetics. Providing quantitative data and analysis strengthens the existing literature, which often relies on qualitative or anecdotal evidence.Including a diverse set of independent variables, including eco awareness, health consciousness, social influence, price quality information, price sensitivity, and need for uniqueness, enriches the existing literature by exploring multiple dimensions of consumer behavior in green cosmetics. This multifaceted approach can help researchers and practitioners better understand the complexities involved.

5.1. Study limitations and recommendations

The use of non-sampling approaches for data collecting, which may limit the generalizability of the results, is one limitation of this study. Future studies may consider using sampling procedures to improve the representativeness of the participant sample.

According to the results, while creating marketing strategies for green cosmetic products, marketers should consider the following factors: eco-awareness, product quality information, social impact, health conscience, and the need for Uniqueness. Promotional strategies ought to stress the environmental advantages of organic cosmetics and include details on the calibre of the goods. Health campaigns can inform people about the negative consequences of synthetic cosmetics and highlight the advantages of eco-friendly alternatives. Additionally, by highlighting the unique qualities of green cosmetics, marketers can appeal to consumers' desire for individuality.

5.2. Implications

Cosmetic companies operating in Pakistan can use the insights from this study to tailor their product offerings and marketing strategies. Understanding the factors that drive consumers to choose green cosmetics can help them develop and promote eco-friendly product lines more effectively. Policymakers can use the research findings to support and implement regulations and incentives that encourage the production and consumption of green cosmetics. This can contribute to environmental sustainability and public health.The study empowers consumers in Pakistan with knowledge about the factors influencing their behavior regarding green cosmetics. With this information, consumers can make more informed choices aligning with their values, whether related to health, the environment, or ethical considerations.This research adds to the academic literature on consumer behavior and green products, providing a basis for further studies and research inquiries in the context of Pakistan and other similar emerging markets.

5.3. Directions for future research

Future studies could examine how people in particular generations—like millennials or Generation Z—buy green cosmetics. Further research into additional elements that may affect customer purchasing decisions in this situation would also be beneficial. The effects of numerous factors on customer preferences may be revealed by using various statistical sampling approaches.

Author contributions: Conceptualization, SSHS and MBK; methodology, SSHS; software, MAK; validation, MAK, HH and NMA; formal analysis, MBK; investigation, SSHS; resources, MBK; data curation, SSHS; writing—original draft preparation, MBK; writing—review and editing, SSHS; visualization, MAK; supervision, HH; project administration, NMA; funding acquisition, NMA. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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