



The Impact of Green Marketing Mix and Brand Equity on Cosmetic Green Purchase Intention: A Case Study of Gen Z in Ho Chi Minh City

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Abstract

Research purpose:

The main purpose of the research is to examine the key variables, namely the green marketing mix and brand equity which influence consumer's purchase intention under the green cosmetics industry in Vietnam. Moreover, the research also evaluated and measured the impact of those aspects on consumer purchase intention to come up with more effective implementations to build and promote the brand.

Research motivation:

Along with the rapid economic development, Vietnam is facing numerous challenges in terms of climate change and environmental pollution. Vietnam has achieved economic development, but it is not sustainable. Sustainable development has gained significant importance to managers as businesses are facing more stringent regulations by the government, pressure from stakeholders to prioritize the conservation of the natural environment and shifts in consumer preferences towards environmentally-friendly products. The concept of green marketing and brand equity is widely used throughout the world, but research on how to implement it in Vietnam has only been conducted in the last few years and has not contributed to many effective solutions in Vietnam.

Research design, approach, and method:

Both qualitative and quantitative research methods were employed to support the research objectives. An online questionnaire was utilized to gather the data from 328 samples who have purchased green cosmetic products in Ho Chi Minh city. Structural Equation Modeling is applied to test the impact of green marketing on green consumption, along with other variables in the research model.

Main findings:

Findings indicated that the impact of green marketing mix towards brand equity is highly significant. Furthermore, green marketing mix and brand equity are significant variables in determining customers' green purchase intention in the context of the green cosmetic industry. The research not only identifies limitations but also proposes new approach, contributing to the theoretical framework and serving as a reference for future studies in the relevant field.

Practical/managerial implications:

Businesses should incorporate green marketing strategies, emphasizing eco-friendly product attributes and promoting sustainable practices, to enhance consumer perceptions and stimulate green purchase intention. Furthermore, educating consumers about the importance of sustainable consumption and collaborating with stakeholders can further drive green purchase intention. By following these implications, businesses can contribute to sustainable economic development and gain a competitive advantage.

Keywords: Green marketing mix, Brand equity, Green purchase intention, Sustainable development.

1. INTRODUCTION

Vietnam's average income per capita has continuously increased over the past 30 years, from 2002 to 2023, the GDP per capita has risen nearly 3.6 times, from \$98 to \$3.756 in 2022 and demand is increasing 1.5 times for every 1% of GDP growth (World Bank, 2023). These positive results reflect the country's economic development strategy and the efforts of relevant agencies in promoting economic growth. Along with the rapid economic development, Vietnam is facing

numerous challenges in terms of climate change and environmental pollution. The alarming environmental pollution situation in Vietnam in recent years has doubled over the past 15 years as a warning that economic development does not guarantee the protection of natural resources (World Bank, 2023). It can be concluded that Vietnam has achieved economic development, but it is not sustainable.

Recognizing the urgency of the situation, the "National Green Growth Strategy for 2021-2030, vision towards 2050" implemented by Ministry of Industry and Trade of Vietnam in 2021 highlighted the need for Vietnam to adopt green production, reduce greenhouse gas emissions, increase the proportion of renewable energy use, and promote sustainable lifestyles and consumption. In the emerging market such as Vietnam, the promotion of green consumption is a crucial endeavor in mitigating the consequences of environmental pollution. This not only safeguards the environment but also preserves the planet for future generations (Nguyen, Pham, Nguyen, Do, & Ngo, 2021). There are positive signs that Vietnamese consumers are changing their consumption habits to support the country's journey towards sustainable economic development (Ngoc & Kopytova, 2020). On the production side, businesses have made changes from production to operations towards sustainability and green practices in recent years, to reduce negative environmental impacts and meet the green consumption demands of consumers (Pham, Le, & Vu, 2021). It can be concluded that there have been good developments in sustainable economic development by the government and businesses, and a trend towards green consumption is emerging among the population.

The global cosmetics and personal care industry has witnessed impressive revenue of USD 382.88 billion in 2021, with a projected annual growth rate of 5.93% from 2022 to 2030, and is expected to reach USD 643.03 billion by 2030 (Brainy Market Research Report, 2021). Up to now, the Vietnamese cosmetic market has been dominated by foreign cosmetic brands from South Korea, EU, Japan, etc. (Celina Pham, 2022). The emergence of more and more international cosmetic brands has caused fierce competition not only between domestic brands and foreign brands but also between foreign brands. It can be concluded that consumption now is not just about enjoying the quality as consumers are increasingly setting higher standards for the products they purchase. Generation Z consumers tend to care more about brand quality, image, product packaging, place, promotion, environmental problems (Kara, A., & Min, M. K., 2023). Therefore, investing in green marketing, brand equity and sustainable development becomes a top priority and more necessary than ever for businesses, especially in today's globalized economy.

The relationship between green marketing and brand equity affecting the willingness of green purchasing of customers has been presented in many prior studies. Research of Rahmah, Sumarwan, & Najib (2018) has identified by modeling (SEM) that brand equity is partial mediation between the relationship of marketing mix in service and purchase decision, while, customers of the coffee shop are mainly repetitive buyers, so their purchase decision no longer depends on marketing mix. Beside, Surikhan et al. (2019) also examines the influence of the service marketing mix and four dimensions of brand equity, namely brand awareness, brand association, brand perceived quality, and brand loyalty, on customers' purchase intention for a local coffee bar situated in Thailand Modeling (SEM) by SPSS. The results indicated that only brand awareness, which was influenced by the service marketing mix activities, had a significant and strong relationship with customers' purchase intentions. However, some researchers such as Aghaei, Vahedi, Kahreh, & Pirooz (2014); Rienetta, Hati, & Gayatri (2017), Sanidewi & Paramita (2018), Firmansyah, Sumarwan, & Ali (2021) examined the importance of marketing and brand equity on purchase intention and the research's findings show a positive and meaningful relationship between the marketing mix of services and brand equity. In VietNam, Bang Nguyen-Viet (2022) found that eco-labels and green advertising have a positive and significant influence on green purchase intention, both directly and indirectly through a mediating effect mechanism called adaptive green brand equity dimensions. Most research uses the SEM model to examine the relationship between each variable.

The impact of green marketing mix and brand equity on purchase intention can vary depending on the product category and national context. However, there remains a gap in the literature regarding the specific relationship between green marketing mix, brand equity, and purchase intention, particularly in the context of the cosmetic industry in the Vietnamese market. The concept of green marketing and brand equity is widely used throughout the world, but research on how to implement it in Vietnam has only been conducted in the last few years. Since then, they have been utilized more regularly, but study on this idea has been sparse and has not contributed to any useful solutions in Vietnam; most of the research is done in other nations. As a result, the goal of this research is to investigate the impact of Green Marketing's combined 4P (price, product, place, promotion) in conjunction with the elements of Brand Equity (brand loyalty, brand awareness, brand association, and perceived quality) on the purchase intention.

The trend towards sustainable development is still relatively new in Vietnam, having emerged only in the past 10 years, but it has become a common strategy for sustainable economic development in many developed countries around the world (Pham et al., 2021). This is a tool that supports businesses in meeting the green consumption demands of consumers while minimizing negative environmental impacts. Numerous large businesses worldwide have achieved significant success by implementing green marketing strategies in sustainable business activities, while in Vietnam, the concept of green marketing is still in the stage of definition and initial application (Pham et al., 2021). Research on green consumer purchase behavior and relationship between green marketing and brand equity on promoting green consumption is limited and new in terms of theoretical and practical foundations (Mai, 2021). Therefore, the authors have decided to choose the

topic *"The impact of green marketing mix and brand equity on cosmetic green purchase intention: a case study of Gen Z in HCM city"*. With the increasingly serious environmental pollution and the shift of consumers towards green consumption, cosmetics businesses need to apply green marketing strategies to enhance brand equity via customer recognition and trust in their products, while minimizing negative environmental impacts. Ho Chi Minh city is the largest economic center in Vietnam with many businesses in the cosmetic industry, therefore, studying green marketing strategies applied to these businesses will have high practical significance and value.

The main objective of this study is to examine the key variables, namely the green marketing mix and brand equity which influence consumer’s purchase intention under the green cosmetics industry in Vietnam, with a particular focus on the perspectives and behaviors of Generation Z (aged 15-28 years). Moreover, the research also evaluated and measured the impact of these aspects on their purchase intention to come up with more effective solutions to build and promote the brand.

2. LITERATURE REVIEW

2.1 Green marketing mix and brand equity

Green marketing mix refers to the marketing strategies that aim to reduce the negative impact on the environment (Dangelico & Vocalelli, 2017). In academic terms, a marketing initiative can enhance a brand's value if it results in a more favorable behavioral response towards the branded product compared to a similar unbranded product (Yoo, Donthu, & Lee, 2000). This is in accordance with the result of many researchers such as Aghaei, Vahedi, Kahreh, & Pirooz (2014); Nguyen–Viet & Nguyen Anh (2022); Yoganathan, Jebarajakirthy, & Thaichon (2015); Rahmah, Sumarwan, & Najib (2018); Sanidewi & Paramita (2018); Firmansyah, Sumarwan, & Ali (2021); (Lang, Lim, & Guzmán (2022), etc. These discovers lead to the creation of the following hypothesis:

Hypothesis 1: Green marketing mix has significant positive impact upon Brand equity.

2.2 Green marketing mix and purchase intention

Kotler & Keller (2006) stated that green marketing mix for products is categorized in 4 different groups including price; promotion; place and product. The green marketing mix is the strategy completing the aims of green marketing so that the company will let customers be highly aware of the benefits and functions of green products which increases the willingness to possess them (Adebisi, 2006). Besides, consumers are exhibiting a growing awareness of environmental concerns, and are demanding for products that are eco-friendly (Simanjuntak et al., 2023). A positive effect of green marketing mix towards green purchase intention has also been supported by previous researchers for example Aghaei et al. (2014); Rahmah et al. (2018); Mahmoud (2018); Kartawinata, Maharani, Pradana, & Amani (2020); Firmansyah et al. (2021); Farid et al. (2023); Ahmed, Streimikiene, Qadir, Streimikis, Research (2023); Bi, Jin, Li, & Li (2023). Accordingly, the second hypothesis is developed as follows.

Hypothesis 2: Green marketing mix has a significant impact on green purchase intention.

2.3 Brand equity and green purchase intention

Aaker (1991, 1996) indicated that there are 4 dimensions of brand equity including brand loyalty, brand awareness, brand associations, and perceived quality, which have a significant influence on the willingness of customers to purchase the products. This relationship has been examined and validated by several recent studies such as Aghaei et al. (2014); Lu, Gursoy, & Lu (2015); Rienetta, Hati, & Gayatri (2017); Sanidewi & Paramita (2018); Rahmah et al. (2018); Slaton, Testa, Bakhshian, & Fiore (2020); Firmansyah et al. (2021); Saeed & Shafique (2021); Ray, Bala, Chakraborty, & Dasgupta (2021). These discovers lead to the creation of the following hypothesis:

Hypothesis 3: Brand equity has a significant positive impact upon Green purchase intention.

From the mentioned hypotheses, the authors propose the following research model:

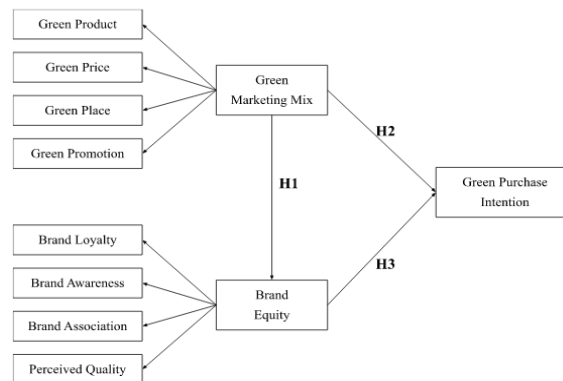


Fig 1. The proposed model

3. METHODOLOGY

3.1 Participants

The research aims to include a wide range of participants in Ho Chi Minh City who have either used or are currently using environmentally friendly cosmetics. The research does not prioritize any particular demographic factors such as sex, education, occupation, or educational background. Instead, the focus is on achieving a diverse and representative sample that encompasses the overall population of generation Z consumers who engage with green cosmetics in Ho Chi Minh City.

3.2 Sample determination and collection

Appropriate representation was a key factor that needed to be considered in determining the sample size. Bove and Roger (2006) stated the minimum sample size recommended for practical research is 150-200. Meanwhile, to perform the linear structure model analysis using the Structural Equation Modeling, the majority of experts in this field concur that a large sample size is necessary for this method, however the exact meaning of "large" depends on the researcher's estimation approach. Several researchers such as Hair, Black, Babin, Anderson, & Tatham (2006); Hoàng & Chu (2008); Kyriazos (2018); Singh & Masuku (2014) have suggested that, the minimum sample size for each estimated parameter should be five samples for one estimated parameter or depend on the technique employed to estimate the parameter. This research followed Hair et al. (2006) to determine sample size, they stated that the sample size must be (i) minimum observation = 50 or (ii) sample size is five times greater than estimated parameters. Therefore, with 47 items in this research, the sample size must be no fewer than 235 observations.

3.3 Sample collection

The research employs nonprobability sampling, specifically utilizing the convenience sampling method. The convenience sampling method allows researchers to access consumer information easily and quickly. The authors also formulated filtering questions to determine if the survey participants are suitable for the research (being Gen Z generation, living/working in Ho Chi Minh City and having used green cosmetic products), in order to identify the appropriate target population for the study scope. Moreover, this sampling method also proved to be time and cost effective for the study.

To obtain the desired target sample for the research, a broad survey method was employed. The researchers distributed self-administered questionnaires to individuals living in Ho Chi Minh City from February to June, 2023 without specifically targeting any specific segment. The total of 400 survey forms were sent through various online platforms such as Instagram, Twitter, Facebook, Zalo, Viber, and email. By using these platforms, the authors aimed to reach a wide range of potential respondents and increase the chances of obtaining a diverse sample. Additionally, the survey forms were also sent to different groups and communities to further enhance the diversity and comprehensiveness of the sample. This approach helped to capture a broader range of perspectives and experiences related to green consumer behavior and the impact of green marketing and brand equity factors. Although the sample was not specifically targeted, the authors strived to ensure a diverse and comprehensive participant pool, allowing for a more robust analysis of the research topic. After completing the survey, the authors collected a total of 328 answers from respondents, with 309 reliable samples meeting the criteria for the research.

3.3 Measurement

Willits, Theodori, & Luloff (2016) stated that the use of Likert Scales and Likert-type items have served the research community well through the years. Despite criticisms leveled against their use, analysis using Likert scales and Likert type items has contributed to advancements of knowledge in sociology, psychology, political science, biology, economics, marketing, medicine, and other fields. The Likert scale is a valuable tool in social science research due to its simplicity and ability to produce quantitative measurements of attitudes and opinions. Respondents find it easy to understand and complete, and researchers can analyze the data using numerical scores for comparison across different studies. Additionally, the versatility of the Likert scale allows for its use in measuring a wide range of variables, including attitudes, beliefs, values, and behaviors. Its familiarity to many respondents due to its common use in surveys and other data collection methods makes it a reliable and valid tool for measuring variables in social science research.

Previous studies such as Aghaei et al. (2014); Rahmah et al. (2018); Rienetta et al., (2017); Firmansyah et al. (2021); Nguyen-Viet (2022); Dinh, Nguyen-Viet, & Phuong Vo (2023) have all supported the Likert scale with a 5-point rating system (1 Strongly disagree/5 Strongly agree) to measure the relationship between marketing, brand equity and purchase intention. Therefore, this study will follow those previous and apply 5-point Likert scale in order to ensure the validity and reliability of this selection rationale.

3.4 Adjustment

Additionally, after the initial survey refinement, the authors performed a pilot test with 50 responses to ensure the acceptable reliability and validity of the instrument. The purpose of conducting pilot testing and adjusting measurement scales is to supplement missing factors or eliminate items that are not relevant to the research topic in order to develop a measurement scale and questionnaire that are realistic and relevant to the research participants and target population. The results show that there is no overlap because Cronbach's Alpha coefficient > 0.7 , which is reliable. Besides, after exploratory factor analysis EFA, the results of the factor loading coefficient of all indicators are greater than 0.5 and no indicator appears in two different groups of factors. On the basis of the above, this study will still remain 47 observed variables as stated in the original proposal (see Appendix 1).

3.5 Data analysis method

After collecting the survey questionnaires, valid answer sheets will be encrypted, entered and cleaned on Microsoft Excel software. Using SPSS and AMOS 24.0 software, data analysis is processed through the following steps: The descriptive statistical method to analyze the characteristics of the research sample, Cronbach's Alpha to test reliability; Exploratory Factor Analysis (EFA) to examine the relationships between variables across all different factor; Confirmatory Factor Analysis (CFA) to test how well the observed variables represent the factors, whilst a Structural Equations Model was also implemented. The findings were significant at 0.05 level confidence.

3.6 SEM analysis

Structural Equation Modeling (SEM) using SPSS AMOS was employed due to the multivariate nature of the proposed model and the examination of the relationships between the model constructs because SEM linear structural models allow combining latent concepts with their measurements and can consider measuring the cases independently or in combination with the theoretical model at the same time. Therefore, the SEM analysis method has been widely used in the social sciences in recent years and is often referred to as the second generation data analysis method (Hair Jr et al., 2021).

The linear structural analysis method is used to examine the research hypothesis. The Maximum Likelihood estimation method is used to estimate the parameters in the models. The reason is that when testing the distribution of observed variables, this distribution deviates a little from the multi-sea normal distribution, but most of the Kurtosis and Skewness are in the range $[-1; +1]$ so the ML is still a suitable estimation method (Muthén & Kaplan, 1985).

4. RESULT

4.1 Descriptive statistic

After the process of synthesizing and checking survey data, the authors selected 309 valid samples out of a total of 328 surveyed samples, ensuring that the sample size is larger than the minimum required sample size ($n = 235$) for this topic, including 137 men and 172 women. University education level is 182 observations, accounting for 67.2%. The number of people under 18 is 59 people, from 18 to 24 is 233 people and over 25 is 17 people. This observation sample is mainly students with 282 observations, accounting for 91.6%, employed people are 24 people, and others are 3 people. Their monthly income is diverse, whose income under 8 million VND accounted for 45.1%, from 8-12 million and from 12-15 million VND is 62 and 76 people respectively and over 15 million is 31 people.

Based on the mean values, variables with mean values ranging from more than 3 to 4 accounted for a large proportion, which was associated with the neutral option. It is evident that neither the elements of brand equity nor the green marketing mix have significant influence on customers' intentions to purchase in the Vietnamese market for green cosmetic products.

4.2 Reliability

Based on the result from Appendix 2, all Cronbach's Alpha coefficients are greater than 0.7; satisfy conditions to ensure the consistency of these scales (Hair, 2009). Moreover, the correlation coefficient of the total variables of the observed variables all met the requirements of greater than 0.3. From the above two statements, it can be confirmed that the factors satisfy the criteria of Cronbach's Alpha test and meet the reliability to conduct the next analysis.

4.3 Exploratory factor analysis (EFA)

The results of exploratory factor analysis (see Appendix 3) shown that for dependent variables and intermediate variables all show that the KMO value is greater than 0.5, the Bartlett test is statistically significant with a significance level of 5%. All observed variables of brand equity and green purchase intention have Factor loading greater than 0.5 and no observed variables simultaneously upload two factors to ensure the convergence of the scale. However, in the result of EFA for independent variable green marketing mix, there are two observed variables (GP4 and GPro6) which do not score over the factor loading 0.5. Therefore, 2 unsatisfied variables are eliminated from the research model. And finally, 20 observed variables of green marketing mix are used to analyze in the following steps.

4.4 Confirmatory Factor Analysis

Based on the results of EFA analysis, the authors conducted an evaluation of the CFA model fit indexes.

From the test results (see Appendix 3), the authors got the following values:

- Chi-square/df value equal to 1.785 is less than 3;
- Comparative fit index (CFI) equal to 0.942 greater than 0.9;
- Goodness-of-fit index (GFI) equal to 0.81 is greater than 0.8;
- RMSEA is equal to $0.05 < 0.06$;
- PCLOSE index equals 0.415 higher than 0.05.

Table 1. Validity of the research model

	BE	GMM	GPI
CR	0.924	0.899	0.916
AVE	0.752	0.691	0.732
MSV	0.715	0.593	0.715
MaxR(H)	0.928	0.906	0.92
SQRTAVE	0.867	0.831	0.856
(Inter – Construct Correlation)			
BE	1		
GMM	0.77	1	
GPI	0.846	0.761	1

According to Hu & Bentler (1999), Chi-square/df, CFI, GFI are in the range of 0.8 and 0.9, RMSEA is smaller than 0.06 and PCLOSE is greater than 0.05 which still ensures the appropriateness of the model in the CFA analysis. Therefore, it can be confirmed that the research model meets the criteria of the model in accordance with the collected data set. In addition, as shown in Table 1, the scales all meet the requirements of reliability, convergence value, discriminant value and unidirectionality. Therefore, the model satisfied the conditions for conducting research running SEM to examine the relationship between factors according to the research model proposed by the authors.

4.5 Structural equation modeling analysis

Table 2. SEM model estimation results

Relationship		Estimate	P Value	Hypothesis	
BE	<---	GMM	0.79	***	H1: accepted
GPI	<---	GMM	0.3	***	H2: accepted
GPI	<---	BE	0.689	***	H3: accepted

In the proposed research model, the authors consider the relationship between Green Marketing mix (GMM) and two dependent factors, which are Brand Equity (BE) and Green Purchase Intention (GPI), and also consider the direct relationship of BE to the dependent factor GPI. The estimated results shown in Table 2 indicate that the impact relationship of GMM is statistically significant to two dependent factors, BE and GPI, at 5% significance level. In which, BE is affected the most by GMM ($\beta = 0.79$) and GMM also helps to explain 59.3% of variation in BE factor.

Table 3. Square Multiple Correlation result result

	Estimate (R^2)
Brand Equity (BE)	0.593
Green Purchase Intention (GPI)	0.745

In addition, for the impact relationship of two intermediate factors, BE and GPI, the estimated results show that the factor BE has a statistically significant impact on GPI at 5% significance level. In general, the two factors (GMM and BE) have an impact on GPI. BE is the most important factor affecting GPI, followed by GMM with $\beta = 0.689$ and 0.3 respectively. Furthermore, these two factors also help to explain 74.5% of the variation in GPI as shown in Table 3.

Based on the above results, it can be concluded that brand equity plays an intermediating role in the relationship between green marketing mix and green purchase intention. Therefore, a green marketing mix has a direct and indirect impact on green purchase intention.

5. DISCUSSION

5.1. Analyzing the study's findings

Firstly, in the research context, green marketing mix has a significant positive impact on brand equity. Therefore, hypothesis 1 is acceptable in the scope of the topic. The result is similar with previous studies Aghaei, Vahedi, Kahreh, & Pirooz (2014); Nguyen-Viet & Nguyen Anh (2022); Yoganathan, Jebarajakirthy, & Thaichon (2015); Rahmah, Sumarwan, & Najib (2018); Sanidewi & Paramita (2018); Firmansyah, Sumarwan, & Ali (2021); (Lang, Lim, & Guzmán (2022) which supports the idea that the cosmetics companies which better apply green marketing mix strategies may increase their brand equity under consumer perspective. In practice, green marketing mix strategies enhance consumers' awareness, association, and perceived quality of a company's products (Chou, Horng, Liu, & Lin, 2020). These green marketing strategies demonstrate the brand's commitment to environmental responsibility and sustainability, which aligns with the values and concerns of environmentally conscious consumers. By emphasizing eco-friendly product attributes, sustainable packaging, ethical sourcing, and other green initiatives, the brand establishes itself as a responsible and trustworthy entity in the eyes of consumers. Companies that lack an adequate green marketing strategy face challenges in brand positioning (Peattie, 2016). This impact is substantial, suggesting that a company's failure to prioritize green marketing could result in decreased competitiveness compared to its rivals.

Secondly, green marketing mix variable has a significant positive impact on green purchase intention. The result is similar with previous studies of Aghaei et al. (2014); Rahmah et al. (2018); Mahmoud (2018); Kartawinata, Maharani, Pradana, & Amani (2020); Firmansyah et al. (2021); Farid et al. (2023); Ahmed, Streimikiene, Qadir, Streimikis (2023); Bi, Jin, Li, & Li (2023) which supports the idea that the cosmetics companies which better apply green marketing mix strategies will increase consumer willingness to purchase their green products. This can be explained through transparent communication of eco-friendly features, fostering trust via environmental initiatives, and cultivating a perception of heightened product quality and value. The incorporation of eco-friendly products, pricing strategies, and environmentally responsible promotional activities can shape consumers' perceptions of a brand's values and drive consumers' purchase intention. However, the contribution of green marketing may not highly impactful on green purchase intention in research context. One possible explanation for this outcome is that the impact of green marketing mix strategies on green purchase intention is not direct, but rather mediated by a variable such as brand equity (Majeed, Owusu-Ansah, & Ashmond, 2021). Another explanation is that consumers are now more aware about the proliferation of greenwashing, where products are falsely marketed as environmentally friendly, can lead to a loss of trust among consumers and ultimately (Sun & Shi, 2022).

Finally, brand equity has a significant positive impact on green purchase intention at a significant level of 5%. The result is similar to previous studies conducted by Aghaei et al. (2014); Lu, Gursoy, & Lu (2015); Rienetta, Hati, & Gayatri (2017); Sanidewi & Paramita (2018); Rahmah et al. (2018); Slaton, Testa, Bakhshian, & Fiore (2020); Firmansyah et al. (2021); Saeed & Shafique (2021); Ray, Bala, Chakraborty, & Dasgupta (2021) which supports the idea that the cosmetics companies which have higher brand equity may increase consumer intentions to buy their green products. The consumers have a tendency to purchase products which have popular brand names than others, especially in the field of green cosmetics as larger brand identity may assure better transparency and quality of the products provided (Srivastava, Ramakanth, Akhila, & Gaikwad, 2022). Companies that have successfully built strong brand equity are more likely to attract consumers and gain their trust, leading to increased intentions to purchase their green products. The positive impact of brand equity on green purchase intention reinforces the importance of brand building and the cultivation of a positive brand image in the cosmetics industry.

In practice, a lot of companies have also reported the same result of the effectiveness of applying green marketing strategies in the company operations. According to a recent report of Buzzmetrics published in 2022, the revenue of Cocoon has increased more than 7.6% since the same period in 2021, which is in the top 5 of cosmetics brands that achieve this growth rate. In addition, Cocoon was recognized for its sustainable strategies by receiving the "Best Vietnamese Domestic Brands" award from Elly. Likewise, other significant brands in the cosmetics industry, including The Body Shop and Innisfree, etc. as well as companies in other industries such as Vinamilk, Masan Group, and Viettel, etc. have achieved remarkable success by implementing green strategies in Vietnam, according to VietNam ESG Readiness Report (2022).

5.2 Managerial implications

The research highlights that green marketing and brand equity have a positive impact on green purchase intention. Based on this, several managerial implications emerge. Businesses should incorporate green marketing strategies, emphasizing eco-friendly product attributes and promoting sustainable practices, to enhance consumer perceptions and stimulate green purchase intention. It is crucial for businesses to focus on building and strengthening brand equity, particularly in relation to environmental sustainability, through consistent messaging, high-quality offerings, and engaging in corporate social responsibility initiatives. Educating consumers about the importance of sustainable consumption and collaborating with stakeholders can further drive green purchase intention. Continuous improvement and innovation in green marketing practices are essential to adapt to evolving consumer preferences and technological advancements. Collaborating with influencers who share a passion for environmental issues to promote the business and its products to their audiences, reaching a wider demographic. By following these implications, businesses can contribute to sustainable economic development and gain a competitive edge while meeting the demand for eco-friendly products and services. Acknowledging the limitations and considering them for future research ensures continuous progress towards the sustainable development of the country.

6. CONCLUSION

Regarding the significance of promoting green marketing strategies among consumers in an emerging market such as Vietnam, the paper provides an essential understanding of the relationship between green marketing, brand equity and consumer intention to purchase environmentally friendly products. Based on the research and the context of Ho Chi Minh city, the authors proposed several recommendations and practical implications for businesses and marketers to enhance their competitiveness in today's highly competitive market.

In practical terms, the research findings provide valuable insights into the significance of marketers and businesses adapting to the emerging trend of sustainable consumption. It is crucial for them to acknowledge and respond to the changing social and environmental contexts by adjusting their strategies accordingly. By highlighting eco-friendly product attributes and promoting sustainable practices, businesses can establish themselves as environmentally responsible and gain a competitive edge in the market. Educating consumers about the importance of sustainable consumption becomes vital in cultivating a consumer base that values and supports eco-friendly products. The ability to align with evolving social and environmental expectations is essential for long-term success and sustainability in the marketplace.

Although the research has successfully established the essential relationship among factors and offered managerial recommendations, there are still some limitations that should be considered. Firstly, the authors used a convenience sampling method within a limited timeframe and scope, which might not sufficiently represent the overall population. Therefore, future research should aim to collect a larger sample size and survey more cities to better represent consumers in Vietnam. Secondly, the research focused solely on the cosmetics industry, and to generalize the findings, it is necessary for future researchers to examine other industries as well. Finally, in studies related to humanistic activities such as environmental and green consumption, respondents may provide overly positive responses about their consumption behavior to portray themselves as environmentally conscious. Hence, future researchers should consider employing open-ended questions or qualitative methods to gather more authentic information about consumers' opinions.

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APPENDIX

APPENDIX 1: MEASUREMENT SCALE AFTER ADJUSTMENT

No	Observed indicators	Code	Source
GREEN PRODUCT			
1.1	The recyclable or biodegradable nature of green cosmetics is what made me choose these products.	GP1	Inherited from - Hoai Ao et al (2021) - Kumar and Ghodeswar (2015)
1.2	Cosmetics with organic origin, 100% from nature make me have a positive opinion about green products.	GP2	
1.3	Green cosmetics are usually non-toxic and do not pollute the environment.	GP3	
1.4	Green cosmetics also meet my needs.	GP4	
1.5	I am willing to buy cosmetics with ingredients that are free from strong harmful materials.	GP5	
1.6	I want to buy cosmetics with biodegradable packaging.	GP6	
GREEN PRICE			
2.1	I am willing to pay more money to buy green cosmetics.	Gpr1	Inherited from - Hossain and Khan (2018)
2.2	I agree to pay a fee for the company to package the cosmetics in an environmentally friendly way.	Gpr2	
2.3	I will be willing to pay for cosmetics that are less harmful to the environment.	Gpr3	
2.4	I am willing to pay more for cosmetics that have not been tested on animals.	Gpr4	
2.5	I am willing to pay for cosmetics that are less harmful.	Gpr5	
GREEN PLACE			
3.1	I am willing to buy cosmetics sold at environmentally friendly distributors.	Gpl1	Inherited from - Achola and Were (2018)
3.2	I will be willing to buy cosmetics that the distributor is using reusable packaging.	Gpl2	
3.3	I can buy green cosmetics through distribution channels.	Gpl3	

3.4	I am willing to buy cosmetics that the distributor is using energy-saving methods.	Gpl4	
3.5	I can buy green cosmetics at distributors that are particularly environmentally friendly.	Gpl5	
GREEN PROMOTION			
4.1	I know about green cosmetics through media channels.	Gpro1	
4.2	I see green cosmetics at booths in fairs.	Gpro2	
4.3	I know about green cosmetics through promotions at supermarkets.	Gpro3	Inherited from
4.4	Green cosmetics companies favor hosting environmental activities, festivities, seminars, and conferences.	Gpro4	- Hashem & Al-Rifai (2011)
4.5	Employees of green cosmetics companies advise customers on how to use their products not to harm the environment.	Gpro5	- Munamba, R., & Nuangjamnong, C., (2021)
4.6	Green cosmetics companies contribute to supporting environmental centers.	Gpro6	
BRAND LOYALTY			
5.1	I consider myself to be loyal to cosmetics of green brands.	BL1	
5.2	I will not choose other brands if green cosmetic brands are available at the store.	BL2	Inherited from
5.3	I will suggest green cosmetic brands to other consumers.	BL3	- Yoo et al (2000)
5.4	Green cosmetic brands would be my first choice.	BL4	- Villarejo-Ramos and Sánchez-Franco (2005)
5.5	The price of non-green brands would have to be considerably inferior to not choose green brands.	BL5	
BRAND AWARENESS			
6.1	I can recognize green cosmetic brands among other competing brands.	BAW1	Inherited from
6.2	I am aware of green cosmetic brands.	BAW2	- Sharma (2017)
6.3	I am acquainted with green cosmetic brands.	BAW3	- Sasmita J. et al (2015)

6.4	I know green cosmetic brands very well.	BAW4	
6.5	I can quickly recall the symbol or logo of the particular green cosmetic brand that appeared in social media.	BAW5	
6.6	I have some opinions about green cosmetic brands.	BAW6	
BRAND ASSOCIATION			
7.1	I can recognize green cosmetic brands among others because of its environmental commitments.	BAS1	Inherited from - Chang and Chen (2014)
7.2	I am aware of green cosmetic brands because of their environmental reputation.	BAS2	
7.3	Some environmental characteristics of green cosmetic brands come to the top-of-mind in my consideration set quickly.	BAS3	
7.4	I can quickly recall the green image of green cosmetic brands.	BAS4	
7.5	I can easily figure out green cosmetic brands because of their environmental concerns.	BAS5	
PERCEIVED QUALITY			
8.1	The quality of green cosmetic brands is regarded as the best benchmark with respect to environmental concern.	PQ1	Inherited from - Saeed, M., & Shafique, I. (2021)
8.2	The quality of green cosmetic brands is reliable with respect to environmental consideration.	PQ2	
8.3	The quality of green cosmetic brands is durable with respect to environmental performance.	PQ3	
8.4	The quality of green cosmetic brands is excellent with respect to environmental image.	PQ4	
8.5	The quality of green cosmetic brands is professional with respect to environmental reputation.	PQ5	
GREEN PURCHASE INTENTION			
9.1	I will consider buying green cosmetics because they are less polluting in the coming times.	GPI1	Inherited from - Paul, J., Modi, A., and Patel, J. (2016)
9.2	I will consider switching to green cosmetic brands for ecological reasons.	GPI2	

9.3	I plan to spend more on environmentally friendly cosmetics rather than conventional cosmetics.	GPI3	
9.4	I definitely want to purchase green cosmetics in the near future.	GPI4	

APPENDIX 2: CRONBACH'S ALPHA RESULT

Observed variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Green Product			Cronbach's Alpha: 0.903	
GP1	19.86	14.692	0.792	0.876
GP2	19.78	15.049	0.740	0.884
GP3	19.96	15.307	0.720	0.887
GP4	20.17	15.751	0.603	0.905
GP5	19.87	14.994	0.764	0.881
GP6	19.93	14.486	0.787	0.877
Green Price			Cronbach's Alpha: 0.919	
Gpr1	14.89	11.875	0.792	0.900
Gpr2	14.78	11.802	0.788	0.901
Gpr3	14.52	11.725	0.794	0.900
Gpr4	14.68	11.225	0.780	0.903
Gpr5	14.55	11.391	0.802	0.898
Green Place			Cronbach's Alpha: 0.934	
Gpl1	14.89	11.875	0.792	0.900
Gpl2	14.78	11.802	0.788	0.901
Gpl3	14.52	11.725	0.794	0.900
Gpl4	14.68	11.225	0.780	0.903
Gpl5	14.55	11.391	0.802	0.898
Green Promotion			Cronbach's Alpha: 0.914	
Gpro1	18.26	17.743	0.764	0.898
Gpro2	18.63	17.682	0.804	0.893

Gpro3	18.52	17.477	0.793	0.894
Gpro4	18.41	17.522	0.809	0.892
Gpro5	18.50	17.588	0.803	0.893
Gpro6	18.61	18.603	0.597	0.923
Brand loyalty			Cronbach's Alpha: 0.924	
BL1	14.50	11.179	0.759	0.915
BL2	14.42	10.985	0.816	0.904
BL3	14.12	11.147	0.798	0.907
BL4	14.18	10.971	0.826	0.902
BL5	14.24	10.752	0.810	0.905
Brand association			Cronbach's Alpha: 0.932	
BAS1	14.61	11.471	0.814	0.918
BAS2	14.70	11.068	0.820	0.917
BAS3	14.73	11.176	0.808	0.919
BAS4	14.80	11.070	0.824	0.916
BAS5	14.65	11.195	0.836	0.914
Brand awareness			Cronbach's Alpha: 0.932	
BAW1	18.15	15.744	0.797	0.920
BAW2	18.32	15.652	0.799	0.920
BAW3	18.28	15.512	0.809	0.919
BAW4	18.31	15.352	0.808	0.919
BAW5	18.32	15.393	0.793	0.921
BAW6	18.27	15.264	0.798	0.920
Perceived quality			Cronbach's Alpha: 0.916	

PQ1	14.79	10.355	0.769	0.900
PQ2	14.97	97.704	0.790	0.897
PQ3	14.68	10.335	0.803	0.893
PQ4	14.69	10.377	0.770	0.900
PQ5	14.63	10.532	0.798	0.895
Green purchase intention			Cronbach's Alpha: 0.915	
GPI1	11.56	55.572	0.798	0.892
GPI2	11.61	54.433	0.820	0.885
GPI3	11.77	55.585	0.760	0.905
GPI4	11.61	53.310	0.845	0.876

APPENDIX 3. CRONBACH'S ALPHA AND LOADINGS PRODUCED BY FACTOR ANALYSIS.

State- ment	Cron- bach's Alpha	Green Promotion	Green product	Green price	Green place	Brand awareness	Brand loyalty	Brand asso- ciation	Per- ceived quality	Green pur- chase inten- tion
Gpro2	0.914	0.920								
Gpro3		0.844								
Gpro4		0.821								
Gpro5		0.746								
Gpro1		0.706								
Gpro6		<i>Eliminated from factor analysis based on a low commonality</i>								
GP1	0.903		0.882							
GP2			0.843							
GP6			0.779							
GP5			0.663							
GP3			0.635							
GP4		<i>Eliminated from factor analysis based on a low commonality</i>								
Gpr1	0.919			0.884						
Gpr3				0.838						
Gpr2				0.832						
Gpr4				0.746						
Gpr5				0.734						
Gpl4	0.934				0.880					
Gpl5					0.842					
Gpl2					0.832					
Gpl1					0.802					
Gpl3					0.720					
BAW3	0.932					0.914				
BAW2						0.840				
BAW4						0.816				
BAW5						0.803				
BAW6						0.754				
BAW1						0.614				
BL2	0.924						0.895			
BL3							0.816			
BL4							0.813			
BL1							0.798			

BL5							0.772			
BAS1	0.932							0.890		
BAS5								0.853		
BAS2								0.822		
BAS4								0.742		
BAS3								0.676		
PQ2	0.916								0.871	
PQ1									0.869	
PQ5									0.700	
PQ3									0.648	
PQ4									0.622	
GPI4	0.915									0.901
GPI2										0.871
GPI1										0.845
GPI3										0.799

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