

FACTORS AFFECTING PURCHASE INTENTION OF GREEN COSMETICS PRODUCTS TOWARD YOUNG GENERATION IN HO CHI MINH CITY***Hoang Cuu Long, Huynh Le Thuy Van, Dang Ngoc Khanh Thi, Oh Hyo and Nguyen Hoang Thu Trang**

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Abstract

This research aims to discern the intricate impacts and interconnections among various factors including altruistic valuation, hedonic satisfaction, pro-environmental convictions, and personal ethical norms, in relation to the intention to procure green cosmetics. The scholarly exploration draws upon the Value-Belief-Norm (VBN) framework, adapting it to the context of green cosmetics within the Vietnamese university student consumer segment. A designed questionnaire was employed to gauge the research variables, which underwent assessment for content validity and reliability. The survey instrument was distributed among a sample of 318 individuals who had experience with green cosmetics. The findings illuminate that hedonic value exerts a significant and positive influence on pro-environmental beliefs. Conversely, the impact of altruistic values on pro-environmental beliefs was not found to be statistically significant. Additionally, the study unravels the favorable association between pro-environmental beliefs and personal norms, which subsequently shape consumers' decisions to embrace green cosmetics. The implications of these findings are extended to offer actionable insights for enterprises operating within the realm of green cosmetic products. Furthermore, the research study extends its purview to provide managerial recommendations, proposing a strategic approach tailored to this distinct market segment.

Keywords: Green cosmetics, Purchase intention, Altruistic value, Hedonic value, Pro-environmental Belief, Personal norms.

INTRODUCTION

Annually, natural resource depletion has accelerated at a faster pace across the world over the last few decades (Hussain, Khan, and Zhou, 2020). One of the reasons behind this is that the cosmetics industry introduces a multitude of chemicals into the environment, causing contamination of water sources and ecosystems. Cosmetic products infused with perilous compounds possess the potential to not only pollute the surroundings but also inflict harm upon flora, fauna, and human health. Thus, a transformative shift from conventional consumer behavior towards environmentally-conscious purchasing is imperative (Quoquab *et al.*, 2019). In response, local communities and governments have become concerned about environmental problems, and several countries have responded by joining the 'green revolution' (Ullah and Khan, 2020). An increasing agreement exists that consumers' grasp of individual welfare and ecological considerations impacts the occurrence of eco-friendly purchasing (Yue *et al.*, 2020; Mutum *et al.*, 2021). In step with this trend, a growing populace of individuals are exhibiting a heightened willingness to select eco-friendly alternatives as an acknowledgment of eco-awareness (Yadav *et al.*, 2019). Simultaneously, governments have initiated efforts to foster green consumerism, urging individuals to consider the implications of their consumption patterns on future living conditions. Subsequently, heightened environmental regulations and resource constraints have prompted numerous corporations to venture into the production and sale of eco-friendly merchandise. This research aims to investigate the determinants influencing the purchasing behavior of green cosmetic products among the younger generation in Ho Chi Minh City. Moreover, the study seeks to analyze insights derived from focus group data to formulate overarching concepts,

subsequently proposing strategic marketing interventions that companies can adopt to foster the future advancement of this demographic. The escalating prevalence of green cosmetic consumption in emerging markets underscores the imperative for further exploration in comprehending the nuances of green purchasing behavior. Concurrently, there has been a surge in scholarly attention directed towards the utilization and consumption of green cosmetics.

Theoretical background***Theory of value-belief-norm***

The *Value-Belief-Norm (VBN) theory*, developed in response to the environmental movement, suggests that supporting a particular cause or goal motivates action through combining feelings of personal responsibility and anticipation (Schwartz, 1977; Stern *et al.*, 1999). According to Stern *et al.* (1999), the general movement's support is based on three elements in general: values, beliefs, and personal norms. According to Liobikien and Pokus (2019), it demonstrates that values can influence beliefs and be operationalized through environmental views that affect the consequences of conscious awareness of behavior, assumptions of responsibility that lead to personal norms about behavior, and can finally predict behavior. In addition, the VBN theory begins with personal values and builds a causal chain of psychological antecedents from the likelihood of consumers responding in a certain way (Megeirhi *et al.*, 2020)

Green cosmetics products purchase

The terminology green or environmentally-friendly in relation to products is also defined through attributes characterized as natural, organic, sustainable, clean, eco-friendly, and non-toxic (Patnaik *et al.*, 2020). Green cosmetics encompass personal care products and natural cosmetics formulated using

ingredients sourced from animals, minerals, or plants. Their ultimate objectives include environmental preservation, pollution reduction, conscientious management of non-renewable resources, and the safeguarding of species and animal welfare (Ali, S., 2022)

Value orientations and pro-environmental belief toward cosmetics purchase

Value can be defined as conceptualizations of the desirable, influencing individuals' choices and evaluations of experiences (Schwartz and Bilsky, 1987). These choices, inherently advantageous for the natural world, environment, society, and others, garner support from both sides. Egoistic and hedonic values pertain to goals that enhance personal situations—such as possessions, power, prestige (*egoistic values*), and pleasure, comfort (*hedonic values*) (Bouman & Steg, 2019). Typically, these egoistic and hedonic values act as deterrents to pro-environmental actions due to their association with personal drawbacks. Altruism refers to how much individuals care about the well-being of others. When people are guided by altruistic values, they care about others without seeking personal benefits (Song *et al.*, 2019). Those who are very empathetic tend to be involved in social activities (Pratono, 2019). In a study about eco-friendly cosmetics, Pop and colleagues (Pop, R.-A, 2020) found that altruism positively affects how consumers feel about these products. However, there haven't been many studies that look at how caring for others influences buying makeup. This study suggests that people with strong altruistic values will have positive beliefs about buying eco-friendly cosmetics. This leads to the following idea:

Hypothesis H1. Altruistic value has a positive effect on pro-environmental belief

Numerous investigations have underscored the significance of consumer values and consciousness in shaping the intent to purchase green cosmetics. Hence, in the development of eco-friendly cosmetics, it is imperative to not solely concentrate on the utilitarian aspects of the product, but also to consider hedonic facets such as appealing design, packaging, and labelling, as pointed out by Jaini *et al.* (2019). Existing scholarly inquiries have scrutinized the interrelation between hedonic value and specific beliefs. The role of hedonic values becomes particularly noteworthy in the examination of consumer environmentally-friendly conduct and emerges as a crucial predictor of pro-environmental beliefs, as evidenced by Hiratsuka *et al.* (2018). Through their research, Jaini *et al.* (2019) has demonstrated a robust and positive association between hedonic values and pro-environmental beliefs. Nonetheless, a dearth of comprehensive studies exists concerning the interconnectedness of hedonic value and environmental advocacy. In light of this gap, the subsequent relationship is hypothesized:

Hypothesis H2. Hedonic value has a positive effect on pro-environmental belief

The effect of pro-environmental belief toward personal norm

According to Li *et al.* (2021), consumers that support the environment will always take environmental safety considerations into account. As personal norms are a result of pro-environmental attitudes, they can produce a predisposition

to respond to the surrounding environment (Jaini *et al.*, 2019; Lee *et al.*, 2021). Furthermore, Lee *et al.* (2021) also affirms that the consumer's need to act according to morals that apply environmental values is the result of pro-environmental ideas established in personal standards. Thus, it can be concluded that pro-environmental belief has an influence on personal norms. There is, however, a paucity of studies that have looked at how pro-environmental beliefs and personal norms relate to the acquisition of cosmetics. In light of this discrepancy, the following relationship is proposed:

Hypothesis H3. Pro-environmental belief has a positive effect on personal norm

The effect of personal norm toward green purchase intention

Personal norms are legally binding guidelines that each customer adopts to conduct his or her daily business (Gkargkavouzi *et al.*, 2019). Oteng-Peprah *et al.* (2020) describe personal norms in the context of the environment as a means for consumers to see personal norms as being involved in environmental changes. Additionally, personal norms are beliefs that a person develops on their own that act as a motivator for positive conduct and play a part in the formation of attitudes (Setiawan *et al.*, 2020), particularly when it comes to environmental sustainability (Gkargkavouzi *et al.*, 2019). High personal norms among consumers are associated with more environmental concern (Haldorai *et al.*, 2022), which has an impact on how consumers choose to spend their money on green products. Moreover, Previous research has looked into the impact of personal norms on many sorts of pro-environmental behavior, such as purchase intention of green items (Han, 2020; Song *et al.*, 2019). According to Kim and Seock (2019), people with strong personal norms will purchase environmentally friendly products because they have a moral commitment to the environment. In light of this discrepancy, the following relationship is proposed:

Hypothesis H4. Personal norm has a positive effect on green purchase behavior

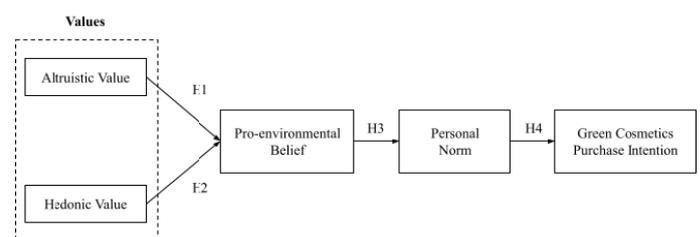


Figure 2.3: Proposed research model

RESEARCH SAMPLE AND METHODOLOGY

In the pursuit of assembling a representative sample for this study, an extensive cohort of young generation from Ho Chi Minh City, Vietnam, was meticulously surveyed, encompassing a diverse age range spanning from 18-25 years old. This meticulous selection ensured a comprehensive insight into the perceptions and experiences of this demographic. The survey platform chosen was Google Forms, known for its user-friendly interface and versatile survey design capabilities. Survey participation was sought through multiple channels, including email, messaging applications, and face-to-face interactions, all preceded by the acquisition of explicit

informed consent from the prospective participants. Commencing in June to August 2023, a total of 318 individuals diligently completed the survey, each response serving as a valuable brick in the foundation of this study. The data was gathered through an online questionnaire and any invalid samples were filtered out through screening tests. Following this, the data was processed and analyzed using SPSS and AMOS software.

Data collection

The total observations include 69.5% % of participants are female and 30.50% are male. Regarding the age range among respondents, the proportion of people in their early twenty accounts for 64.78%, while 18-to-20-year-old individuals along with 23-to-25-year-old citizens presented with 14.77% and 20.45%. In total, the main income source of participants is mainly from part-time/full-time family provision up to 67.92% while the third most popular source is retrieved from 21-to-22-year-old individuals of 25.17%, leaving the remaining 6.91% from savings. The study also gathered various data relating to the monthly income, small earning accounts for 26.73%, nearly doubling the figure for high-income individuals (12.90%)

RESULTS

Reliability test with Cronbach's alpha

The *Personal Norm* factor originally has a Cronbach's Alpha coefficient of 0.850 is more than 0.8, so the scale is considered very good. The scale consists of 3 observed variables, including PN1, PN2, PN3. Evaluating the reliability of the scale, there is one variable PI1 with Cronbach's Alpha If Item Deleted coefficients (0.866) larger than Cronbach's Alpha coefficient (0.850), so the research team eliminated this variable. The results of the second scale evaluation, Cronbach's Alpha is 0.866, the Corrected Item - Total Correlation of all observed variables are all greater than 0.3. Therefore, after evaluating the scale the second time, it includes the two observed variables: PN2, PN3.

Evaluation criteria

The KMO coefficient in EFA exploratory factor analysis is 0.800, satisfying the condition: $0.5 \leq KMO \leq 1$. This value proves that factor analysis is appropriate for actual data. The authors tested hypothesis H0: There is no correlation between the observed variables.

Table 1. Cronbach's Alpha analysis result

Variables	Cronbach's Alpha	Observed Variables	Statements	Corrected Item - Total Correlation	Cronbach's Alpha if Item Deleted
Altruistic Value - AV	0.780	AV1	I always consider the health aspects of my cosmetic purchases	0.626	0.732
		AV2	While purchasing cosmetics products, I focus on environmentally friendly cosmetics	0.726	0.625
		AV3	It concerns me that people consume high chemical cosmetic with negative environmental impact	0.647	0.779
Hedonic Value - HV	0.862	HV1	Buying organic cosmetic would give me pleasure	0.738	0.818
		HV2	Buying green cosmetics would feel like doing morally the right thing	0.689	0.831
		HV3	The use of green cosmetics can affect my well-being positively	0.659	0.839
		HV4	I would enjoy using green cosmetics	0.628	0.847
		HV5	I would feel relaxed using green cosmetics	0.691	0.831
Pro-environmental Belief - PB	0.782	PB1	I am willing to participate in preserving the environment	0.627	0.715
		PB2	I believe that personal responsibility for environmental problems is important	0.631	0.720
		PB3	I believe that the moral obligation to help the environment is important	0.644	0.682
Personal Norm - PN	0.866	PN1	I feel obliged to save the environment where possible	0.641	0.866
		PN2	I should do what I can to conserve natural resources	0.765	
		PN3	I feel a strong personal obligation to use green cosmetics	0.765	
Purchase Intention - PI	0.805	PI1	I usually prefer to purchase cosmetic products with reusable packaging	0.422	0.805
		PI2	If I have to buy cosmetic products, I always purchase cosmetic products with no chemical ingredients	0.702	0.713
		PI3	I try to purchase cosmetic products with free chemicals even though they are more expensive	0.590	0.770
		PI4	I always purchase biodegradable products (which can be easily disposed after use)	0.548	0.789
		PI5	I always refrain from purchasing cosmetics products with chemical ingredients	0.646	0.743

Source: by authors, 2023

Table 2. Kaiser-Meyer-Olkin and Bartlett's test

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.800
Bartlett's Test of Sphericity	Approx. Chi-square 2,462.654
	df 136
	Sig. 0.000

Source: by authors, 2023

Table 3. Test of extracted variance of factors

Component	Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.401	31.770	31.770	5.401	31.770	31.770	4.534
2	2.156	12.684	44.453	2.156	12.684	44.453	3.797
3	1.925	11.323	55.777	1.925	11.323	55.777	2.632
4	1.414	8.315	64.092	1.414	8.315	64.092	2.662
5	1.141	6.710	70.802	1.141	6.710	70.802	2.359
6	.703	4.135	74.937				
7	.638	3.753	78.690				
8	.578	3.398	82.088				
9	.504	2.965	85.053				
10	.444	2.610	87.663				
11	.395	2.321	89.984				
12	.380	2.234	92.218				
13	.360	2.117	94.336				
14	.277	1.630	95.966				
15	.268	1.575	97.541				
16	.238	1.399	98.940				
17	.180	1.060	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Source: by authors, 2023

Table 4. Pattern Matrix

Factor	Pattern Matrix					
		Component				
		1	2	3	4	5
HV	HV1	0.926				
	HV2	0.820				
	HV5	0.767				
	HV3	0.731				
	HV4	0.717				
PI	PI3		0.901			
	PI2		0.776			
	PI4		0.737			
	PI5		0.627			
AV	AV2			0.883		
	AV3			0.864		
	AV1			0.822		
PB	PB2				0.866	
	PB3				0.830	
	PB1				0.788	
PN	PN2					0.931
	PN3					0.929

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Source: by authors, 2023

Table 5. Result of Model Fit

Fit Index	Standard	Source	Realistic Model
Chi-square/df	≤ 3 is good, ≤ 5 is acceptable	Hu & Bentler (1999)	2.726
CFI	≥ 0.9 is good, ≥ 0.8 is acceptable	Hu & Bentler (1999)	0.921
GFI	≥ 0.9 is good, 0.8 ≤ GFI ≤ 0.9 is acceptable	Baumgartner & Homburg (1996)	0.901
TLI	≥ 0.9 is good	Hu & Bentler (1999)	0.901
RMSEA	≤ 0.03 is very good, ≤ 0.08 is good	Hair et al. (2019)	0.074

Source: by authors, 2023

From the Bartlett test results table, we have the Sig. = 0.000 < 0.05; reject hypothesis H0. Therefore, the observed variables are correlated with each other in each factor group.

Extracting independent factors impacting customer behaviors

Total Variance Explained together with the Promax rotation and the principal components method, the EFA factor analysis identified 5 components from 18 observable variables. The total variance retrieved is 70,802% higher than 50%, satisfying the requirement and indicating that the EFA model is appropriate.

Hence, 5 factors were recovered to account for 70,802% of the data variance of the 17 observed variables involved in EFA. In the analysis results table of the Pattern Matrix, the observed variable factor loading coefficients are all more than 0.5, and 5 factors are formed. Therefore, exploratory factor analysis for independent variables was conducted just once, and 17 observed variables converged and separated into 5 components.

Confirmatory Factor Analysis (CFA)

Both Hu and Bentler (1999) and Hair et al. (2019) agree that the thresholds for accepting the Model fit index in CFA

will differ based on sample size, number of factor groups, number of observed variables, etc. *Table 5* shows that the Model's fit indicators are acceptable and meet the general statistical regulations to conduct the SEM analysis in the next step.

Structural equation modelling (SEM)

Table 6. Result of hypothesis test

		Estimate	S.E.	C.R.	P	
PB	← AV	0.093	0.072	1.295	0.195	Ignored
PB	← HV	0.365	0.064	5.665	***	Accepted
PN	← PB	0.424	0.079	5.364	***	Accepted
PI	← PN	0.200	0.053	3.761	***	Accepted

Source: by authors, 2023

Hypothesis test results in *Table 7* shows that the independent variable HV has a positive impact on the PB factor with Standardized Beta Coefficients of 0.365; with P-value meeting statistical standards (hypothesis H2 has P-value < 0.05, so this hypothesis is accepted). Meanwhile, there is insufficient evidence to show a relationship between AV and PB due to P-value > 0.05, so hypothesis H1 is ignored. Besides, the factor PB affects positively to variable PN with Standardized Beta Coefficients of 0.424 with P-value meeting statistical standards (hypothesis H3 has P-value < 0.05, so this hypothesis accepted). Furthermore, with Standardized Beta Coefficients of 0.053, PN has a positive effect on the variable PI along with P-value meeting statistical standards (hypothesis H4 has P-value < 0.05, so this hypothesis accepted). Thus, the accepted hypotheses are presented in *Table 6*.

Table 7. Summary of hypothesis testing result

Hypothesis	Decision
H2: Hedonic value has a positive effect on pro-environmental belief	Sig. = 0 < 0.05 and β = 0.XXX Supported
H3: Pro-environmental belief has a positive effect on personal norm	Sig. = 0 < 0.05 and β = 0.XXX Supported
H4: Personal norm has a positive effect on green purchase behavior	Sig. = 0 < 0.05 and β = 0.XXX Supported

Source: by authors, 2023

From the obtained research results, we have the following modified research model (The model retains four factors, including one independent variable, two intermediate variables and one dependent variable), as

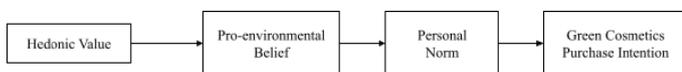


Figure 4.3.1.2: Finalised Research Model

DISCUSSION

This study posited that HV would exert an influence on PB among the chosen respondents. This observation aligns with earlier investigations that indicated a positive association between HV and the inclination towards customer loyalty (Limbu & Ahamed, 2023). Consequently, when formulating ecologically mindful cosmetics, the hedonic value, encompassing aspects such as captivating design, packaging, and labelling, necessitates contemplation alongside the product's inherent benefits, as suggested by Jaini et al (2019). This conclusion resonates with the discovery made by RR

Dyah Astarini and Luki Adiati Pratomo (2022) that heightened enjoyment and satisfaction with the acquisition of green products escalate individuals' willingness to partake in the preservation of the environment. Moreover, the hypothesized interconnection between PB and PN garners substantiation, affirming the VBN theory's proposition of PB wielding a substantial, positive, and potent impact on PN (Stern et al., 1999). This observation also corroborates preceding research, which affirmed PB's formidable influence on eco-citizenship, green consumption, and purchase intent (Jaini et al., 2020). The direct correlation between PN and PI unveils a notable connection, thereby corroborating the tenets of the VBN theory in elucidating the nexus between values and behaviors. Consequently, delving into the realm of green purchase intent from the vantage points of values, beliefs, and norms offers illuminating insights into comprehending consumer behavior within the Vietnamese cosmetics industry. One plausible rationale for this finding is that individuals exhibiting robust PN harbor a profound dedication to environmental well-being, consequently manifesting favorable responses towards procuring green commodities.

This research study bears significant implications for the investigation of determinants influencing the purchase intent of the younger demographic towards green cosmetics. In the context of predicting PB, the VBN theory incorporates egoistic, biospheric, and altruistic values as identified by Stern et al. (1999). The empirical findings reveal that three distinct factors exert a positive influence on the intention to purchase green cosmetics: hedonic value, pro-environmental beliefs, and personal norms. Notably, the altruistic value factor was excluded from the analysis due to its incongruence with the research context. The research findings affirm the validation of the link, revealing that PB serves as a full mediator between HV and PN. As such, this study equips marketers, managers and policymakers with insights to effectively devise and execute eco-friendly campaigns, thereby driving the adoption of environmentally conscious products. These findings underscore the necessity of delving into the role of individual values in cultivating the intent to make ecologically mindful purchases. Therefore, to ensure an upsurge in demand for green cosmetics, marketers are advised to imbue their offerings with these visually appealing and functionally beneficial attributes.

Limitations and future research

The current study is not without limitations. Nevertheless, the constraints delineated in this inquiry could serve as a groundwork for forthcoming scholarly exploration. Primarily, the duration of the survey was constrained, and the study's ambit was delimited, resulting in a lack of comprehensive coverage. Additionally, the survey respondents exclusively represented the younger demographic within Ho Chi Minh City, thereby inadequately representing the entirety of green purchasing inclinations within the Vietnamese cosmetics industry. Secondly, this inquiry adopted a quantitative methodology to scrutinize the research agenda; however, forthcoming studies might consider employing a qualitative approach to glean insights from marketers' standpoints, thereby affording supplementary perspectives. A mixed-method approach could also be contemplated to amass insights from both consumer and marketer standpoints, facilitating a more profound comprehension of this phenomenon. Thirdly, the model's altruistic worth has been deprecated, leading to its disconnection from other values. Thus, future inquiries ought

to delve deeper into the interconnectedness of other values within the same altruistic cluster. Furthermore, it is advisable to incorporate other variables, like gender and income level, into the model as moderators. This proposition stems from the notion that distinct consumer backgrounds may evoke diverse responses, thus furnishing supplementary insights for policymakers, marketers, and practitioners to comprehensively explore green behavior from multifaceted standpoints.

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