

The Impact of Pro-Environment Belief and Personal Norm toward the Beauty Purchase Behavior

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ABSTRACT

Objectives: The increasing use of eco-friendly beauty products in Indonesia attracts many researchers to understand buying behavior. Therefore, this study examines the effect of altruistic values, hedonic values, pro-environmental beliefs, personal norms, and independent decision-making on consumer buying behavior of eco-friendly beauty products.

Methodology: This research is quantitative with an online survey of consumers purchasing green cosmetics products in Greater Jakarta, Indonesia. The determination of the number of samples is ten times the number of indicators with a purposive sampling technique. The research questionnaire was developed by several prior researchers who had been tested for validity and reliability. Structural equation modeling uses structural equation modeling-partial least squares with SmartPLS software version 4 to test the research hypothesis.

Finding: The results of the study show that altruistic values and hedonic values have a positive effect on pro-environmental beliefs. Furthermore, pro-environmental beliefs have a positive effect on personal norms. Finally, personal norms and independent judgment-making positively affect consumers' purchase behavior of green beauty products in Greater Jakarta.

Conclusion: Green beauty purchase behavior in Greater Jakarta is influenced by personal norms and independent judgment-making which are also influenced by altruistic values, hedonic values, and pro-environmental beliefs. In the context of green beauty products, awareness that arises from within oneself can form a better level of consistency in buying green beauty product behavior. The findings from this study serve as a basis for managers and the Indonesian government to implement better eco-friendly strategies to motivate consumers to buy green products, especially cosmetics.

Keywords: Pro-Environment Belief; Independent Judgment Making; Personal Norm; Green Beauty Purchase Behavior.

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INTRODUCTION

In recent years, excessive food, energy, and natural resource consumption have led to severe environmental problems (Zhang et al., 2020). Most consumer products circulating in the market use plastic as their packaging. Plastic is considered a material that is easier to obtain, more durable, lighter, and cheaper for various purposes so it is the primary choice for manufacturers (Bucknall, 2020). Unfortunately, plastic packaging is not always safe. It is even dangerous for the health of living things because it takes a long time to decompose causing pollution in the soil and water. For example, plastic waste produces high carbon emissions contributing to climate change. Some plastic waste that is not managed correctly can cause problems in many countries, including Indonesia (Kamaruddin et al., 2022). Indonesia is the second largest contributor to plastic pollution in the world after China (Jambeck et al., 2015; Tibbetts John, 2015). Based on SIPSN's (2022) report, Indonesia generates more than 31 million tons of waste, 5.5 million tons of which are plastic. The report explained that DKI Jakarta is in fourth position with the most piles of waste in Indonesia.

This research focuses on the green beauty industry. In Indonesia, the projected development of the eco-friendly beauty industry will increase by 6.29% annually in 2023-2027 (Statista, 2022). According to data from the National Food and Drug Agency (BPOM) from 2021 to July 2022, consumer demand for local cosmetics, including green cosmetics, is in line with the increase in the number of cosmetic industry companies by up to 20.6% (Hamasy, 2022). According to the Annual Minderoo Foundation report, the global cosmetic industry produces more than 120 billion products with non-recyclable packaging (Putri, 2022). Therefore, environmental issues have become topics related to consumer behavior (Rizkiatami et al., 2023). Many consumers are aware of the consequences of consuming products on the environment (Pop et al., 2020). Consumers are part of the ecosystem so they have a responsibility to protect the earth as a place to live (Julia et al., 2016).

Green products are a solution to the problem of product waste because they have a more negligible impact on the environment than conventional products. Therefore, the use of green products can provide advantages and benefits for consumers (Jansson, 2011). Consumer awareness grows by buying products that are not harmful to the environment and the surrounding community (Lin et al., 2018). This statement is based on the increasing demand for green products (Handayani et al., 2018; Kong et al., 2014). One of the factors in the increasing demand for green products is that consumers are starting to realize a healthy lifestyle (Jaini et al., 2020; Lin et al., 2018). Due to following a healthy lifestyle, many consumers demand beauty products that are healthy for the skin and can minimize environmental damage (Lin et al., 2018).

The beauty industry responds to consumer trends by offering various eco-friendly beauty products (Dimitrova et al., 2009). According to the 2021 Katadata survey, 60.5% of consumers in Indonesia sustainably use green beauty products because they want to preserve the earth (Alika, 2021). Therefore, it is necessary to change conventional buying behavior into environmentally friendly buying behavior to reduce negative environmental impacts (Quoquab & Mohammad, 2016; Quoquab et al., 2019). Green purchase behavior is considered an effort to preserve the environment (Joshi & Rahman, 2016).

Some consumers reject green products despite comprehending the perceived benefits (Sharma et al., 2019). This statement is supported by the studies of Akehurst et al. (2012) and Luchs et al. (2015) who found that consumers with a favorable attitude toward their surroundings do not always lead to substantial environmental care. Furthermore, studies of green purchase behavior

have been carried out by many previous researchers using the VBN theory approach (values, beliefs, and norms), which explains the relationship between these three variables and behavior in an environmental context. In addition, the research by Jaini et al. (2020) and Quoquab et al. (2020) found that hedonic values positively influence pro-environmental beliefs. Meanwhile, in the altruistic value construct, there are differences in results between the two researchers in the green behavior study: Jaini et al. (2020) concluded that altruistic values do not significantly affect pro-environmental beliefs. In contrast, research by Quoquab et al. (2020) states that there is an effect of altruistic values on pro-environmental beliefs. The relationship between pro-environmental beliefs and personal norms with green purchase behavior has a significant relationship (Jaini et al., 2020; Quoquab et al., 2020). Based on previous research, VBN theory significantly influences green purchase behavior. Meanwhile, in Khare and Kautish's (2022) research, one variable directly influences green purchase behavior: independent judgment-making. The results of this study state that independent judgment-making does not affect green purchase behavior.

Based on researchers Jaini et al. (2020); Quoquab et al. (2020); and Khare and Kautish (2022), this study re-examines the VBN theory literature by adding the construct of independent judgment-making in the context of purchasing green beauty products in Greater Jakarta, Indonesia. Previous researchers found that altruistic values and independent judgment-making did not significantly affect pro-environmental beliefs and green purchase behavior (Jaini et al., 2020; Khare & Kautish, 2022). Since previous researchers have yet to answer several hypotheses, this study aims to fill this gap by re-examining the relationship between altruistic and hedonic values, pro-environmental beliefs, personal norms, and independent judgment-making towards green beauty purchase behavior. The results of this study are also expected to contribute to developing a model of purchasing behavior for green beauty products that can increase society's contribution to protecting the environment and using beauty products that are safe for the skin.

LITERATURE REVIEW

VBN (Value-Belief-Norm) Theory

VBN Theory examines the role of personal values on consumers' willingness to contribute to the environment around them (Sánchez et al., 2018). Through VBN Theory, there are indications that consumers with a high value on living things will be more concerned about the surrounding environment while Li et al. (2018) argue that VBN Theory is designed by adjusting the environmental context which is focused on behavior towards the environment, specifically ecological worldviews and values. According to Liobikienė and Poškus (2019), VBN Theory shows 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. VBN Theory establishes a causal chain of psychological antecedents from the possibility of consumers acting in a certain way and begins with personal values (Megeirhi et al., 2020).

Green Purchase Behavior

Green purchase behavior refers to purchasing actions that meet environmentally friendly standards and are carried out consistently (Yarimoglu & Binboga, 2019). Green purchase behavior shows measurements of the frequency and number of purchases of green products (Cheung & To, 2019; Imaningsih et al., 2022). Mostafa (2007) states that green purchase behavior is the behavior of

purchasing environmentally friendly products and packaging. These factors can be stated to be a good driver for the environment. Green purchase behavior shows a series of behaviors that consumers repeat to consume environmentally friendly products, such as purchasing goods wisely, choosing goods that do not contain harmful ingredients for themselves and the environment, and purchasing items where the production process does not harm the environment and other living things (Jaini et al., 2020; Riyanto et al., 2018).

Altruistic Value

Altruistic value is a consumer value where consumers care about other people concerning the environment (Swami et al., 2010). Altruistic value is positively related to environmental awareness and VBN theory at each stage (van der Werff & Steg, 2016). Furthermore, Kim and Stepchenkova (2020) explain that altruistic value is a pro-environmental predictor that positively affects personal norms. As a form of concern for the welfare of society and other people, altruistic value is a psychological variable that has a significant effect on consumer preferences in consuming green products (Wang et al., 2020) because altruistic value plays an essential role in determining consumer efforts to protect the environment (Panda et al., 2020). A high sense of concern encourages altruistic responses that can foster pro-social moral values (Paciello et al., 2013). Consumers with a high sense of empathy usually partake actively in social activities (Pratono, 2019). Previous researchers have emphasized that altruistic values are essential in research related to the environment (van der Werff & Steg, 2016).

Furthermore, Lee et al. (2014) found that altruistic values and pro-environmental beliefs can influence product choices, attitudes, and the environment. Other studies also prove that altruistic values impact positive consumer attitudes because these values tend to show pro-environmental belief behavior in the environment where consumers live (Kiatkawsin & Han, 2017). Acting pro-environmentally can support other positive values related to pro-environmental beliefs. Altruistic values also reflect concern for the welfare of others, for instance when consumers have confidence in pro-environmental beliefs, altruistic values will encourage them to adopt a positive attitude (Bouman et al., 2018). This research focuses on the influence of feelings of concern in consumers which can impact their concern for the environment. Therefore, the proposed hypothesis is as below:

H1. Altruistic values affect pro-environmental beliefs

Hedonic Value

Hedonic values reflect consumer beliefs in the environment, attitudes, preferences, and pro-environmental actions that require effort or reduce comfort (Steg et al., 2012). Hedonic value is classified as sensory satisfaction and affective knowledge (Cervellon & Carey, 2011). These values lead to satisfaction caused by feelings of pleasure when having a unique experience with the product (Steg et al., 2014). Hedonic values also strongly affect pro-environmental beliefs (Jaini et al., 2020). Steg et al. (2014) supported this argument that hedonic values are significant in studying consumer environmental behavior and are an essential predictor of pro-environmental beliefs (Hiratsuka et al., 2018; Jaini et al., 2020). Other studies also found that consumers who care about other species tend to care more about the environment. Therefore, hedonic values are the first phase of pro-environmental beliefs that underlie environmental matters (Jaini et al., 2020; van der Werff & Steg, 2016). The hedonic value is also a helpful marketing technique tool for managers to see the concept of happiness and ease when creating cosmetic products instead of only concentrating on product benefits (Jaini et al., 2020). This research focuses on the

relationship between consumers' happy feelings when using green beauty products and behavior that cares for the environment. Therefore, the proposed hypothesis is as below:

H2. Hedonic values influence pro-environmental beliefs

Pro-environmental Belief

Pro-environmental beliefs refer to consumer attitudes and beliefs that impact behavior related to the environment. Consumers with pro-environmental beliefs will always consider environmental safety factors (Li et al., 2021). Van der Werff and Steg (2016) stated that the things that greatly influence consumers to participate in protecting the environment are personal norms. Pro-environmental beliefs reflect consumer attitudes to be aware of their responsibilities on ecological issues. Beliefs about the environment are reflected in every decision and significantly influence attitudes and behavior (Young et al., 2010). van Riper and Kyle (2014) explain that norms are formed from social interactions, but ultimately, decisions are made at the individual level. According to the VBN theory, consumers tend to engage in pro-environmental behavior when they feel they have a moral obligation (van der Werff & Steg, 2016). Personal norms can create a tendency to respond to the surrounding environment because personal norms are a function of pro-environmental beliefs (Jaini et al., 2020; Lee et al., 2021). It is also confirmed by Lee et al. (2021) that the consumer's obligation to act according to the morals that apply environmental values is the impact of pro-environmental beliefs instilled in personal norms. This study aims to examine the influence of pro-environmental behavior on personal norms. Therefore, the proposed hypothesis is as below:

H3. Pro-environmental beliefs influence personal norms

Personal Norm

Personal norms are bound rules that every consumer uses to live his life according to the rules (Gkargkavouzi et al., 2019). In the environmental context, Oteng-Pepurah et al. (2020) explain personal norms as a way for consumers to perceive personal norms to be involved in environmental changes. Furthermore, personal norms are values that grow from within the consumer and serve as a motivation for good behavior and have a role that can assist in forming attitudes (Setiawan et al., 2020), more specifically when it relates to environmental sustainability (Gkargkavouzi et al., 2019). Consumers with high personal norms tend to care more about the environment (Kim et al., 2022), ultimately impacting purchasing behavior for environmentally friendly products.

Personal norms refer to consumers' moral obligations to engage in behavior that protects the environment, such as buying eco-friendly cosmetic products (Jaini et al., 2020). In VBN theory, pro-environmental personal norms support behavior favoring environmental movements (Chua et al., 2016). Consumers who commit to positive behavior can benefit the environment by doing the right thing, specifically when they feel responsible for their environmental efforts (Quoquab et al., 2020). Roos and Hahn (2017) found that values such as behavioral factors and beliefs about consequences, responsibilities, and personal norms are proximal behavioral factors that influence consumer behavior. Therefore, personal norms affect buying behavior for environmentally friendly products (Ateş, 2020; Jaini et al., 2020). Previous studies have further investigated this relationship by examining personal norms' influence on various types of pro-environmental behavior, such as consumer behavior and purchase intention of green products (Han, 2020; Song et al., 2019). Research by Kim and Seock (2019) shows that consumers with solid personal norms will buy environmentally friendly products because they have a moral obligation to the

environment. The research aims to determine the influence of personal norms on purchasing behavior of environmentally friendly products. Therefore, the proposed hypothesis is as below:

H4. Personal norms affect green purchase behavior

Independent Judgment Making

According to Elmustapha et al. (2018), independent judgment-making affects decision-making and norms in each activity, so examining consumer views in choosing products is essential. Furthermore, Khare and Kautish (2021) explain that independent judgment-making is a condition that measures the extent to which consumers can make decisions about the latest products independently. There is no power from other individuals which can be implemented after adopting a new product. Independent judgment-making will produce a genuine decision to solve something that is being faced (Khare & Kautish, 2022).

Independent judgment-making is the degree to which consumers freely purchase new products and innovative ideas (Khare & Kautish, 2021). It is because every consumer has his argument to justify something accompanied by reasons for justification (Oswald, 2018). Consumers consider price and product knowledge when purchasing green products (Kautish et al., 2020). Choi and Johnson (2019) suggest that consumer involvement in knowledge about green products and environmental awareness is significant in predicting behavior to buy green products. Personal judgment is a decision-making benchmark (Lu et al., 2019). The benchmarks in question are useful for measuring the extent to which consumers make decisions independently and as innovations from experiences conveyed by other consumers (Elmustapha et al., 2018). It also applies to consumers when they are about to purchase a product. Consumers do not judge products from the opinions of other people who have used or have experience. Since, consumers directly evaluate these products and if they feel they can fulfill their needs and desires, a purchase will occur (Khare & Kautish, 2021). Previous research has proven that independent judgment-making does not affect green purchase behavior (Khare & Kautish, 2022). Therefore, this study reexamines how personal decisions influence green product buying behavior. Therefore, the proposed hypothesis is as below:

H5. Independent judgment-making influences green purchase behavior.

The research model was created by developing Jaini et al. (2020) research model by adding one construct: independent judgment-making from the research results of Khare and Kautish (2022). The complete research model is summarized in Figure 1.

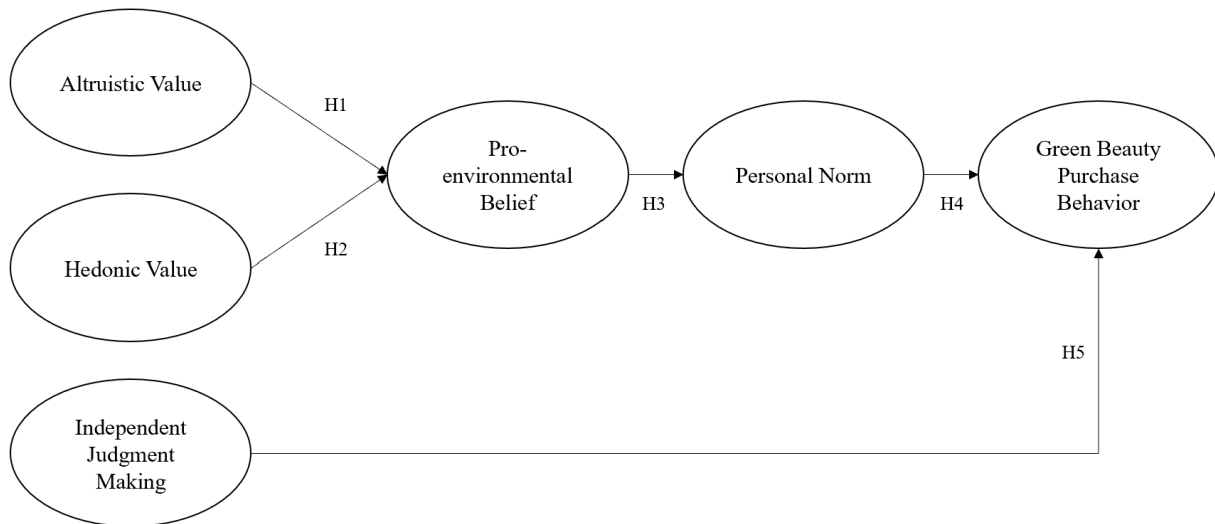


Figure 1. Conceptual Model

METHOD

This study uses a quantitative approach with a survey to collect data. The survey was conducted online, providing a list of questions as a URL to a predetermined target sample. Social media such as Instagram, Facebook, and Twitter are a means of distributing questionnaires. The population of this study is all consumers in Greater Jakarta who have purchased green cosmetics products in the last three months where the exact amount is unknown. Therefore, determining the minimum number of target samples refers to Hair et al. (2019), namely $10 \times$ the number of indicators (question items) so that a total sample of 250 is obtained and purposive sampling is applied in this study because the target sample has specific criteria.

In designing the questionnaire and avoiding biased responses and social-desirability bias issues, several statements were given in the opening part of the questionnaire. The researcher did not ask for the respondent's data (such as name, address, and cellphone number). Next, ask the respondent to answer honestly, following the conditions felt, and state that each answer is neither right nor wrong. Finally, only respondents who have experienced buying green cosmetic products in the last three months are entitled to be responders (Fisman et al., 2020).

Measurements for each variable refer to previous researchers. In particular, the measurement of the VBN Theory constructs (altruistic value, hedonic value, personal norm, pro-environmental beliefs) and green purchase behavior adopts the research of Jaini et al. (2020). Meanwhile, the independent judgment-making construct adopts the research of Khare and Kautish (2022). All questionnaire items used a 5-point Likert scale (1 - strongly disagree and (5) strongly agree) and construct measurements were reflective. Furthermore, data collected from the questionnaire were tabulated and then analyzed using the Partial Least Square-Structural Equation Modeling (PLS-SEM). The selection of this method is based on non-normally distributed data. SmartPLS 4 software is the choice for data processing. Before testing the measurement and structural models, Common Method Bias (CMB) testing must be done to ensure that the research data is free from the response (Kock, 2015). CMB bias is necessary when analyzing data collected in self-administered ways, such as survey questionnaires (Kock, 2020).

RESULTS AND DISCUSSION

Respondent Profile

During the questionnaire distribution process, 282 responses were collected from the initial target of 252 respondents where 282 data were eligible for further analysis. Based on the recapitulation of respondents' responses, 96.1% were female and 3.9% were male. Concerning the age of the respondents, the average is dominated by 18–25 years (84.7%) and 26–30 years (13.2%). Furthermore, based on the respondent's occupations, 47% are students, and 37% work as private employees. The average level of income per month of respondents is less than < IDR 2,500,000 (51.2%) and IDR 2,500,000–IDR 5,000,000 (27.8%). The survey results also prove that the income and expenses for buying green beauty products for < IDR 250.000 is 69% and IDR 250.000–IDR 500.000 is 26.3%. Furthermore, the media used to purchase the greenest beauty products shows e-commerce is at 73.3%, offline stores at 14.6%, and official stores on websites at 12.1%.

Table 1. Respondent Profile

Item	N	%
Gender (N = 282)		
Male	11	4%
Female	271	96%
Age (N = 282)		
18–25	239	84.7%
26–30	37	13.2%
31–35	2	0.7%
36–40	1	0.4%
> 40	3	1.1%
Job (N = 282)		
Student	133	47%
Private employee	104	37%
Government employees	13	4.6%
Self-employed	7	2.5%
Housewife	18	6.4%
Unemployed	7	2.5%
Average income per month (IDR) (N = 282)		
< 2.500.000	145	51.2%
2.500.000 - 5.000.000	78	27.8%
5.000.000 - 7.500.000	46	16.4%
7.500.000 - 10.000.000	11	3.9%
> 10.000.000	2	0.7%
Spend to buying green beauty products (IDR) (N = 282)		
< 250,000	192	69%
250.000 - 500.000	74	26.3%
500,000 – 750.000	10	3.6%
> 750.000	6	2.1%
The media used to buy green beauty products (N = 282)		
E-commerce	207	73.3%
Official Online Store	34	12.1%
Offline Store	41	14.6%

Common Method Bias

The results of the CMB test are summarized in Table 3. The research data results are free from collinearity problems because all correlation values between constructs produce a VIF value < 3.3 Kock (2015). Thus, conclusively the data can be used to test the hypothesis.

Table 2. Common Method Bias (CMB)

	AV	CIJM	GPB	HV	PB	PN
AV		1.499	1.349	1.477	1.396	1.424
CIJM	1.197		1.147	1.202	1.180	1.168
GPB	1.683	1.811		1.578	1.834	1.804
HV	1.561	1.557	1.319		1.529	1.528
PB	1.191	1.215	1.221	1.208		1.173
PN	1.417	1.442	1.431	1.444	1.355	

Note: AV (Altruistic Value); CIJM (Independent Judgment Making); GPB (Green Beauty Purchase Behavior); HV (Hedonic Value); PB (Pro-environmental Belief); PN (Personal Norm)

Evaluation of Measurement Models

The first stage in the PLS-SEM analysis is evaluating the validity and reliability of the measuring instrument, namely the questionnaire. Table 4 summarizes that all measured variables produce a loading factor > 0.70 and AVE > 0.50. Furthermore, the six variables produce CR values > 0.70 and do not exceed 0.95, so all questionnaire items are declared valid and reliable (Hair Jr et al., 2022).

Table 3. Convergent Validity and Reliability

Variable	Items	Loading Factor	CR	AVE
Altruistic value	3	0.800 - 0.844	0.752	0.669
Hedonic value	5	0.712 - 0.783	0.821	0.564
Pro-environmental belief	3	0.717 - 0.842	0.746	0.63
Personal norm	3	0.810 - 0.831	0.766	0.677
Independent judgment making	6	0.769 - 0.876	0.918	0.704
Green Beauty Purchase Behavior	5	0.708 - 0.782	0.805	0.549

It is next, testing the discriminant validity with the HTMT method. This validity aims to ensure that each (reflective) construct has a strong relationship with its indicator compared to other constructs in the PLS pathway model (Hair Jr et al., 2022). Based on Table 5, the correlation value between variables is 0.090 – 0.707 and less than 0.9, so discriminant validity is fulfilled in the research model.

Table 4. Discriminant Validity - HTMT

	AV	CIJM	GPB	HV	PB	PN
AV						
CIJM	0.271					
GPB	0.632	0.43				
HV	0.476	0.287	0.707			
PB	0.441	0.090	0.328	0.370		
PN	0.534	0.338	0.549	0.492	0.476	

Note: AV (Altruistic Value); CIJM (Independent Judgment Making); GPB (Green Beauty Purchase Behavior); HV (Hedonic Value); PB (Pro-environmental Belief); PN (Personal Norm)

Evaluation of Structural Model

The last stage is testing the evaluation of the structural model that represents the theory in the path model (Figure 2). Based on Table 6, the coefficient value of H1 ($\beta_1 = 0.253$; p-value <0.001; $R^2 = 0.147$ and $f^2 = 0.065$); and H2 ($\beta_2 = 0.209$; p-value = 0.004; $R^2 = 0.147$ and $f^2 = 0.044$). This value proves that the first and second hypotheses are accepted, namely, altruistic and hedonic values positively and significantly affect pro-environmental belief. In addition, altruistic and hedonic values contribute weakly to pro-environmental belief because the R^2 value is (14.7%) $0.147 < 0.49$ and the effect size of altruistic and hedonic values on pro-environmental belief is weak ($f^2 = 0.065$; $0.044 < 0.14$). Furthermore, the value of the H3 coefficient ($\beta_3 = 0.364$; p-value <0.001; $R^2 = 0.133$ and $f^2 = 0.153$). In other words, pro-environmental belief positively and significantly affects personal norms. Pro-environmental belief contributed 13.3% ($0.113 < 0.49$) in forming personal norms weakly with a moderate effect size ($f^2 = 0.153 < 0.35$). Finally, the H4 coefficient ($\beta_4 = 0.369$; p-value <0.001); and H5 ($\beta_5 = 0.269$; p-value <0.001). Personal norms and independent judgment-making positively and significantly affect green beauty purchase behavior. On the other hand, personal norms and

independent judgment-making contributed 26.6% in the formation of green beauty purchase behavior weakly ($R^2 = 0.266 < 0.49$) with a moderate effect size of personal norms (f^2) ($0.170 < 0.35$) on green beauty purchase behavior and a weak effect size of independent judgment-making (f^2 $0.091 < 0.14$) in green beauty purchase behavior.

Table 5. Result Statistics

Path	STD	STDEV	T stats	P values	Decisions	R ²	f ²
H1. AV→PB	0.253	0.067	3.766	<0.001	Supported	0.147	0.065
H2. HV→PB	0.209	0.073	2.851	<0.001	Supported		0.044
H3. PB→PN	0.364	0.076	4.816	<0.001	Supported	0.133	0.153
H4. PN→GPB	0.369	0.067	5.475	<0.001	Supported	0.266	0.170
H5. CIJM→GPB	0.269	0.061	4.440	<0.001	Supported		0.091

Noted: AV (Altruistic Value); CIJM (Independent Judgment Making); GPB (Green Beauty Purchase Behavior); HV (Hedonic Value); PB (Pro-environmental Belief); PN (Personal Norm)

Furthermore, predicting the performance of the PLS model strengthens the relevance of the model's predictions. This study uses the root means squared error of predictions (RMSE) measure because the data supports a symmetric distribution of prediction errors (Shmueli et al., 2019). Table 6 summarizes the PLS prediction results where all endogenous indicators produce RMSE values in the PLS-SEM < RMSE simple linear model (LM). It means the questionnaire items have high predictive power in the research model of green beauty purchase behavior. In addition, all indicators on endogenous variables produce Q² values greater than zero. In other words, PLS-based predictions result in more accurate out-of-sample predictions, i.e., more minor prediction errors for all indicators.

Table 6. PLSpredict

Construct Endogen	Item	Q ² predict	PLS-SEM	LM	PLS-SEM < LM
			RMSE	RMSE	RMSE
Green Beauty Purchase Behavior	GPB1	0.083	0.711	0.725	-0.014
	GPB2	0.064	0.617	0.655	-0.038
	GPB3	0.109	0.701	0.726	-0.025
	GPB4	0.103	0.637	0.693	-0.056
	GPB5	0.104	0.659	0.731	-0.072
Pro-environmental belief	PB1	0.095	0.634	0.660	-0.026
	PB2	0.085	0.601	0.627	-0.026
Personal norm	PB3	0.030	0.560	0.575	-0.015
	PN1	0.063	0.670	0.647	0.023
	PN2	0.067	0.627	0.630	-0.003
	PN3	0.092	0.608	0.649	-0.041

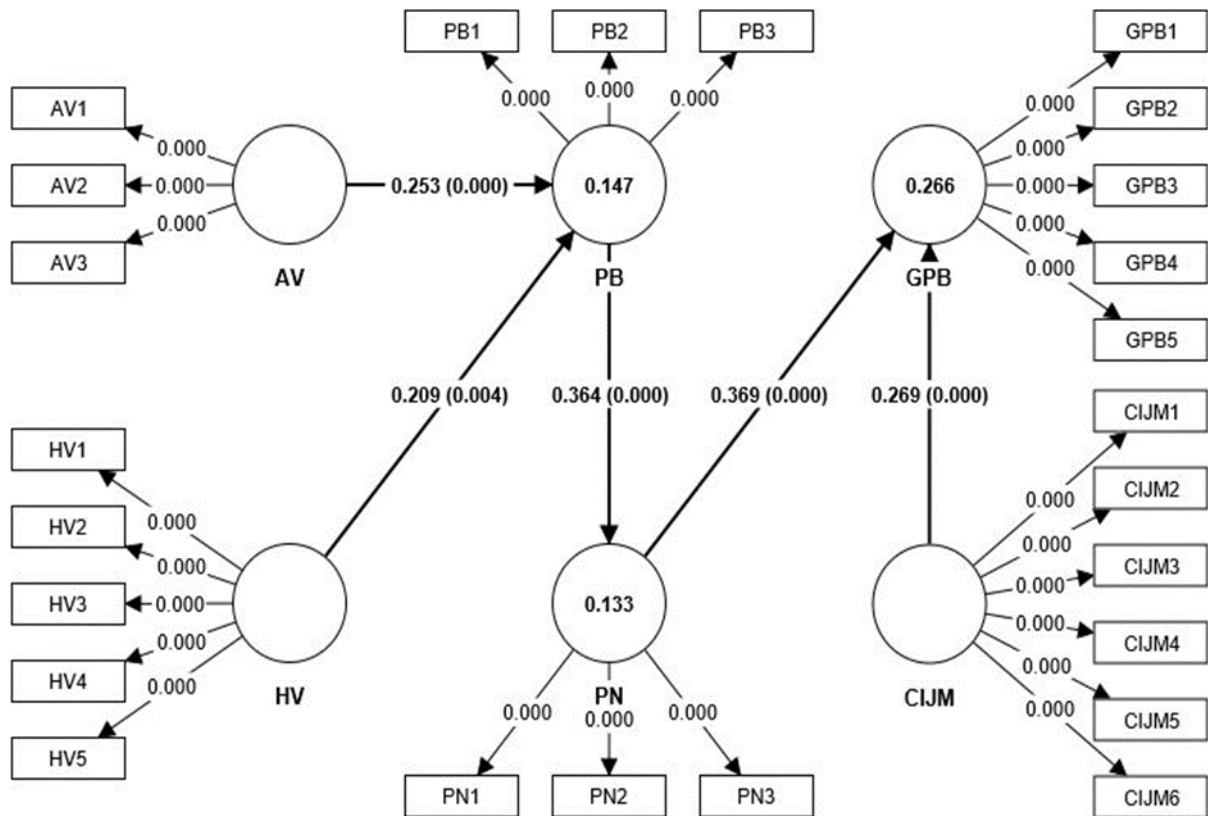


Figure 2: Inner Model–Green Beauty Purchase Behavior

Discussion

Based on consumer perceptions, this study investigates the factors influencing green beauty purchase behavior in Greater Jakarta. In addition, a research framework based on VBN theory was developed to understand the problem of green buying behavior in the context of the green beauty industry. There are five hypotheses tested and all five hypotheses are statistically accepted. The study's empirical results found that altruistic values positively and significantly affect pro-environmental beliefs. These findings suggest that consumers are motivated to contribute to the welfare of others or society by buying green beauty products that care about the environment. Consumers feel concerned when other consumers buy beauty products with high chemical content because they are not suitable for health but also not environmentally friendly. This study improves on the findings of a study conducted by Jaini et al. (2020) who proved that altruistic values have no significant effect on pro-environmental beliefs because environmentally friendly behavior is challenging to determine. After all, consumers act in activities that benefit them. Thus, this study shows that altruistic values can explain pro-environmental beliefs and become a stimulus in purchasing green beauty products by consumers in Greater Jakarta.

Hedonic values have a positive and significant influence on pro-environmental beliefs. Research results prove that eco-friendly beauty products can provide satisfaction and peace for those who wear them. Safe materials are one of the reasons these feelings can arise and be felt. In addition, buying green beauty products also creates pleasure for consumers because they feel like they are doing the morally right thing. The findings of this study support the findings of previous researchers (Jaini et al., 2020; Quoquab et al., 2020; Zhang et al., 2022) who found

that consumers feel happy and satisfied when they contribute to the use of environmentally friendly products, especially green beauty product because they feel that this is truly done morally.

Furthermore, pro-environmental beliefs have a positive and significant effect on personal norms. Consumer awareness of consequences and responsibilities can awaken their norms to behave so that they can help and protect the environment (Ramli et al., 2020). This research finding strengthens the results of Jaini et al. (2020) that the obligation to act according to morals and apply environmental values is the impact of pro-environmental beliefs instilled in personal consumer norms.

Personal norms and independent judgment-making positively and significantly affect green beauty purchase behavior. Strong personal norms create a feeling of obligation to participate in preserving the environment and will indirectly show a positive response to purchasing green products. The results of this study strengthen research conducted by Han (2020) and Jaini et al. (2020) which stated that personal norms encourage the formation of green beauty purchase behavior because they are related to moral behavior as a prominent determinant and have the most significant influence compared to other variables. In addition, each consumer has a personal judgment that influences the final decision. The results of this study improve the research findings of Khare and Kautish (2022) which state that independent judgment-making does not affect green purchase behavior. However, consumers always depend on other people to be able to buy green products.

There are several managerial implications for consumers and companies related to this research. First, consumers must realize the importance of the ingredients in beauty products so as not to harm the skin. Second, the benefits of beauty products take time to achieve maximum results. In addition, it is also essential to increase awareness that the environment is the responsibility of consumers together. Third, companies must also actively participate in environmental protection by paying attention to environmentally friendly production processes and using materials that are easily recycled and cosmetic ingredients that do not harm consumers. Establishing safe products for consumers' skin, providing detailed product information to consumers, and actively participating in environmental management is essential to green marketing strategies (Adi et al., 2022; Soelton et al., 2020). The government needs to control business actors in the cosmetic industry to comply with using environmentally friendly materials and ingredients for cosmetic ingredients.

CONCLUSION

The results of this study have contributed to the VBN Theory by developing a green beauty purchase behavior model based on altruistic values, hedonic values, pro-environmental beliefs, personal norms, and independent judgment based on consumers' perceptions of who has used green beauty products. This study expands the research variables by adding independent judgment-making variables because they influence green product purchasing behavior. The research model was developed based on the VBN Theory which explains the relationship between four supporting factors for using green beauty products. These findings fill the gaps in the green purchase behavior model which is based on altruistic values, hedonic values, pro-environmental beliefs, personal norms, and independent judgment-making. Proven evidence from the testing shows that all research hypotheses are accepted. This research has been designed and carried out as accurately as possible but still has some limitations. Therefore, there

are opportunities for future research. First, this research is limited to green beauty products. For further research, it is suggested that researchers conduct relevant research by considering other green products, such as vehicles, clothing, and electronic equipment. Second, this research was only conducted in Greater Jakarta. Future researchers can expand the research area to other cities in Indonesia. To expand the green purchase behavior model, future researchers can include green marketing factors applied by companies and brands as external factors that can influence consumer behavior. Consumers must have their preferences for a brand and interest in product marketing activities to stimulate purchasing behavior for green beauty products.

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