

## Protective and Social Motives behind Green Purchase Value: Evidence from Gen Z Green Cosmetics Consumers

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### Abstract

Existing green marketing research largely conceptualizes Green Purchase Value (GPV) as the outcome of stable cognitive evaluations driven by environmental attitudes, social norms, and identity-based considerations. This approach overlooks how deeper, context-sensitive motivational systems may dynamically shape value construction, particularly in symbolic product categories such as cosmetics and within emerging markets. Addressing this theoretical gap, this study reconceptualizes GPV as a motivationally constructed outcome by integrating fundamental motives theory from evolutionary psychology into the sustainability marketing framework. Using a quantitative survey of 170 Generation Z consumers in Indonesia and analyzing the data with Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4, this study examines the effects of six fundamental motives, kin care, mate acquisition, mate retention, self-protection, group affiliation, and status seeking on GPV in the context of green cosmetics. The results reveal that group affiliation, mate acquisition, and self-protection exert significant positive effects on GPV, while kin care, mate retention, and status seeking do not. Theoretically, this study advances the GPV literature by demonstrating that value formation in green consumption is driven by adaptive social and protective motives rather than purely cognitive or identity-based evaluations. Practically, the findings suggest that green cosmetic brands should emphasize health protection narratives and community-based, lifestyle-oriented positioning to resonate with Generation Z consumers in emerging markets.

### Keywords

Green Purchase Value; Fundamental Motives; Generation Z; Green Cosmetics; Sustainable Consumer Behavior; PLS-SEM.

## INTRODUCTION

Economic growth and industrial expansion have driven increasingly intensive global consumption, particularly in symbolic product categories, while simultaneously accelerating environmental degradation (Akhtar et al., 2021; Le, 2019; Pérez-Castillo & Vera-Martínez, 2021).

Arruda Filho et al. (2017) found that environmental problems are largely caused by consumption activities. Approximately 10% of waste is recycled, while the rest is disposed of in landfills, the ocean, or incinerated (Geyer et al., 2017). Recognizing this, awareness of the importance of using environmentally friendly products has recently increased (van Rensburg et al., 2020). One sector undergoing major transformation is the cosmetics industry, which is now associated not only with lifestyle and aesthetics, but also with health and sustainability issues, triggering the emergence of the green cosmetics trend (Sahota, 2020). Green cosmetics offer not only beauty functions but also health and environmental values, thus becoming a focus of attention in sustainable marketing studies.

In green marketing literature, the concept of green purchase value (GPV) is an important variable in explaining consumer behavior. GPV is defined as the benefits consumers perceive from purchasing products that contribute to environmental sustainability and personal well-being (Chen & Chang, 2012). Several studies have shown that GPV positively influences consumer attitudes, purchase intentions, and willingness to pay for environmentally friendly products (Joshi & Rahman, 2019; Li et al., 2021; Han et al., 2022). Consumers perceive green products as healthier, safer, and socially responsible, thus increasing market acceptance.

Although the concept of green purchase value (GPV) has been shown to play a significant role in explaining consumer attitudes and purchase intentions, most dominant models in the sustainability marketing literature still treat value formation as a relatively stable and rational evaluation process rooted in subjective norms, self-identity, and cognitive considerations of product attributes. This approach fails to capture the symbolic and social nature of green cosmetics consumption, where value is derived not only from functional and environmental benefits but also dynamically constructed through the consumer's relational context, social status, and interpersonal goals. Thus, there are theoretical limitations in explaining how green purchase value can fluctuate across social and motivational situations, an aspect that has not been widely addressed in the conventional Green Product Value (GPV) framework. This limitation indicates the need for an alternative framework that captures the motivational dynamics behind value formation in green product consumption.

Although a number of studies have begun to link psychological factors and social identity to green consumption, most research still models the relationship linearly and statically, positioning green purchase value as a cognitive mediator between attitude and purchase intention. This approach fails to explain how changes in social contexts such as group affiliation, exposure to status symbols, or relational goals can shift how consumers interpret green product value across time and situations. Furthermore, cross-cultural empirical evidence on the role of fundamental motivational systems in the formation of green purchase value remains limited, particularly in emerging markets and in socially significant, symbolic product categories such as cosmetics. These limitations highlight a theoretical and empirical gap in the global literature, calling for the development of more dynamic, motivation-based models to explain how green consumption value is constructed under the influence of consumers' social and adaptive goals.

In response to these limitations, this study adopts the fundamental motives theory framework from evolutionary psychology, which views consumption behavior as a manifestation of adaptive motivational systems that serve to fulfill basic human goals, such as self-protection, family care, mate acquisition and retention, group affiliation, and status seeking (Griskevicius & Kenrick, 2013; Kenrick et al., 2010). Thus, this study challenges the dominant assumption that green purchasing values are the result of stable cognitive evaluations and proposes that they are dynamically shaped by consumers' social and adaptive motivational systems.

Based on the above description, this study offers conceptual novelty by positioning fundamental motives as antecedent motivational systems that shape the construction of green purchasing values, rather than simply as direct predictors of purchase intentions or behavior. This study aims to expand the theoretical framework of green consumer behavior by integrating an evolutionary psychology perspective into the cross-cultural sustainability marketing literature.

## METHOD

This study employed an exploratory quantitative research design to test theoretically derived hypotheses regarding the influence of consumer motives on green purchasing values. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS for three main reasons: (1) its prediction-oriented approach that emphasizes variance explanation over theory confirmation; (2) its ability to handle models with multiple latent constructs, relatively complex structural configurations, and non-normal data distributions; and (3) its suitability for exploratory theoretical integration in the context of the relationship between motivational systems and value constructs, which is still limited in the literature (Hair et al., 2019, 2017).

Because the exact population size of Generation Z consumers who have purchased eco-friendly cosmetics is unknown, this study employed purposive non-probability sampling (Cooper & Schindler, 2014) with the following criteria: respondents belonging to the Generation Z age group and having experience purchasing eco-friendly cosmetic products. Data were collected through an online questionnaire distributed through various social media platforms and online communities. This approach has the potential to introduce self-selection bias and platform bias, which could lead to an overrepresentation of urban, highly educated, and digitally literate respondents; therefore, the findings should be interpreted with caution regarding generalizability. A total of 205 respondents completed the questionnaire, with only 170 valid responses obtained, exceeding the minimum sample size of 90 respondents based on the tenfold rule of thumb for PLS-SEM for nine structural paths, thus increasing the stability of the model estimates. Demographic profiles collected included gender, age, education level, residential location, and frequency of purchasing eco-friendly cosmetics to assess sample composition and potential bias. All constructs were measured using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The fundamental consumer motives item was adapted from (Griskevicius & Kenrick, 2013), while the green purchasing values item was adapted from Chen and Chang (2012). This study adhered to standard ethical research practices, with voluntary participation, informed consent prior to data collection, assurance of anonymity and confidentiality, respondents' right to withdraw at any time, and data used solely for academic purposes.

The primary data in this study were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), in accordance with the research objectives, which are oriented towards prediction and theory development. The analysis followed a two-stage procedure that included assessment of the measurement and structural models (Hair et al., 2017; Hair et al., 2021). In the measurement model, reliability indicators were evaluated using standardized outer loadings, with values above 0.708 considered acceptable. Indicators with very weak loadings were critically examined and removed if they did not improve composite reliability and convergent validity without compromising theoretical coherence. Internal consistency was assessed using Composite Reliability (CR) and Cronbach's Alpha (CA), while convergent validity was evaluated using Average Variance Extracted (AVE). Discriminant validity was established using the Heterotrait–Monotrait Ratio (HTMT).

The structural model was then evaluated by examining collinearity between predictor constructs using the Variance Inflation Factor (VIF), with all values below the recommended threshold (<3), indicating the absence of multicollinearity. Hypothesis testing was conducted using a non-parametric bootstrapping procedure with 5,000 resamplings at a 5% significance level. In line with the predictive focus of this study, model performance was further assessed using the coefficient of determination ( $R^2$ ), effect size ( $f^2$ ), predictive relevance ( $Q^2$ ), and out-of-sample prediction via PLSpredict to evaluate the explanatory and predictive power of the proposed theoretical model.

## Result And Discussion

### Model Measurement Assessment

The validity of the research instrument was assessed based on the outer loading value of each indicator. Based on the analysis, most indicators had values above the recommended limit of 0.708 (Hair et al., 2019), although some items fell below this value (e.g., MR2 = 0.699; SS1 =

0.637; GA1 = 0.673) and were still critically considered in terms of their theoretical relevance and contribution to the construct's reality. Indicators whose removal did not improve composite reliability or convergent validity were retained to maintain the construct's conceptual coherence. Furthermore, Cronbach's Alpha (CA) values for each construct also showed good results, with values >0.70, ranging from 0.786 to 0.896. Similarly, composite reliability (CR) values for all constructs were above 0.80 (ranging from 0.881 to 0.908), indicating reliable internal consistency of the instrument (Table 1).

Table. 1 Validity Test Result

Item	Outer Loading	AVE	CA	CR
SP1	0,726			
SP2	0,805			
SP3	0,851	0,631	0,853	0,863
SP4	0,741			
SP5	0,842			
KC1	0,751			
KC2	0,881			
KC3	0,861	0,708	0,896	0,908
KC4	0,889			
KC5	0,816			
MA1	0,850			
MA2	0,845	0,731	0,878	0,89
MA3	0,880			
MA4	0,843			
MR1	0,914			
MR2	0,699	0,706	0,786	0,826
MR3	0,890			
SS1	0,637			
SS2	0,723			
SS3	0,843	0,604	0,832	0,833
SS4	0,807			
SS5	0,854			
GA1	0,673			
GA2	0,845			
GA3	0,895	0,663	0,872	0,896
GA4	0,854			
GA5	0,784			
GPV1	0,821			
GPV2	0,830			
GPV3	0,789	0,669	0,877	0,881
GPV4	0,816			
GPV5	0,835			

Source: Processed Research Survey Data (2025)

Furthermore, discriminant validity testing using the Heterotrait-Monotrait Ratio (HTMT) approach showed that all constructs had values below the threshold of 0.85 (Hair et al., 2022). This indicates that each construct is able to differentiate itself from other constructs in the research model. In other words, the instrument used meets the criteria for good discriminant validity (Table 2). Overall, the results of convergent validity, reliability, and discriminant validity tests indicate that the research instrument used in this study is suitable for proceeding to the structural analysis stage.

Table 2. Discriminant Validity Test

Konstruk	GA	GPV	KC	MA	MR	SP	SS
<b>GA</b>							
<b>GPV</b>	0.554						
<b>KC</b>	0.463	0.456					
<b>MA</b>	0.388	0.506	0.233				
<b>MR</b>	0.397	0.434	0.434	0.309			
<b>SP</b>	0.669	0.576	0.708	0.329	0.632		
<b>SS</b>	0.403	0.335	0.183	0.494	0.389	0.355	

Source: Processed Research Survey Data (2025)

### Structural Model Assessment and Hypothetical Testing

The structural model was assessed by examining collinearity, path significance, effect sizes, and predictive performance (Tables 3 and 4). Collinearity diagnostics showed that all Variance Inflation Factor (VIF) values were below the recommended threshold of 3, confirming the absence of multicollinearity and alleviating concerns regarding potential common method bias (Table 3). Hypothesis testing was conducted using a non-parametric bootstrapping procedure with 5,000 resamples at a 5% significance level. Results indicated that three of the proposed structural paths were statistically supported. Group affiliation (GA) had a positive effect on Green Purchase Value (GPV) ( $\beta = 0.124, p = 0.003$ ), mate acquisition (MA) also showed a significant positive effect ( $\beta = 0.085, p = 0.010$ ), and self-protection (SP) emerged as the strongest predictor among the tested motives ( $\beta = 0.161, p < 0.001$ ). The corresponding effect sizes ( $f^2$ ) for these relationships ranged from small to medium, indicating that while each motive made a meaningful contribution to the model, self-protection provided the largest additional explanatory contribution (Table 3).

Table 3. Structural Model Assessment

Construct	F <sup>2</sup>	VIF	$\beta$	P-value	Hipotesis	Conclusion
GA -> GPV	0,044	1,61	0,124	0,003	H1	Accepted
KC -> GPV	0,009	1,64	0,057	0,060	H2	Rejected
MA -> GPV	0,024	1,34	0,085	0,010	H3	Accepted
MR -> GPV	0,002	1,35	0,025	0,427	H4	Rejected
SP -> GPV	0,062	2,31	0,161	0,000	H5	Accepted
SS -> GPV	0,002	1,44	0,024	0,377	H6	Rejected

Source: Processed Research Survey Data (2025)

In contrast, family care (KC), mate retention (MR), and social status (SS) did not show a statistically significant effect on GPV ( $p > 0.05$ ), indicating that family-oriented concerns, relationship maintenance, and status signaling are less prominent in the construct of green purchase value among Generation Z consumers in Indonesia. The model demonstrated moderate explanatory power, with an  $R^2$  value of 0.410 for GPV, indicating that the proposed motive explained 41% of the variance in green purchase value. The predictive relevance was further supported by a  $Q^2$  value of 0.346, confirming the model's adequate out-of-sample predictive ability (Table 4).

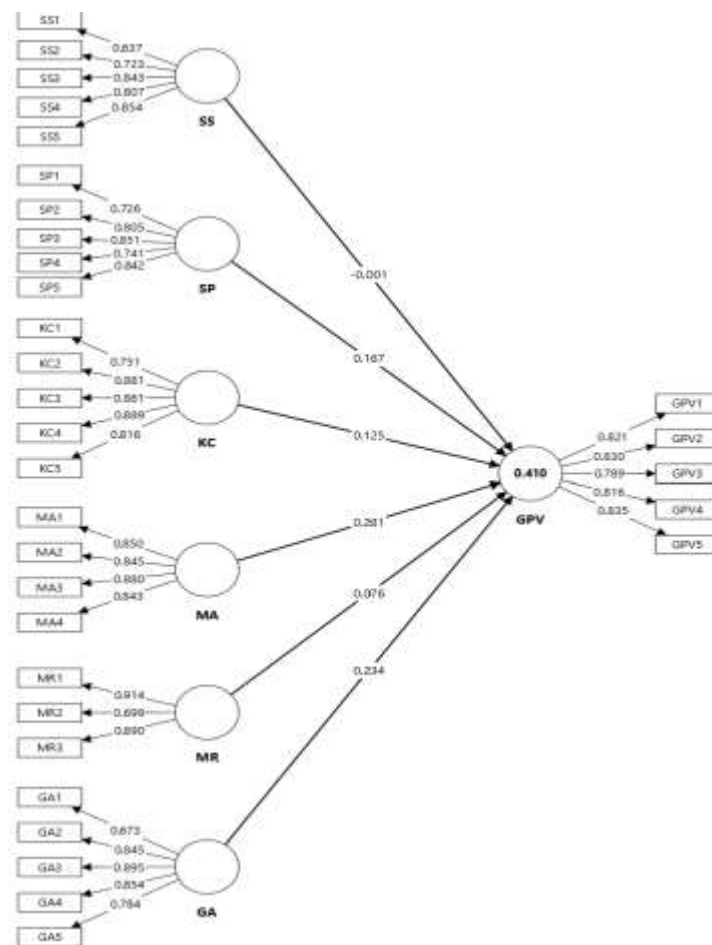


Figure 2. Structural Model Measurement Results

Table 4. Result  $R^2$  and  $Q^2$

Variabel Endogen	R-Square	Q-Square
Green Purchase Value	0,410	0,346

Source: Processed Research Survey Data (2025)

### Discussion

This study reveals that consumer fundamental motives play a distinct and differentiated role in shaping Green Purchase Value (GPV), which refers to the perceived functional, social, and emotional benefits that consumers associate with purchasing environmentally friendly products, beyond their purely ecological attributes (Biswas & Roy, 2015). The results showed that of the six fundamental motives tested, only group affiliation (GA), mate acquisition (MA), and self-protection (SP) significantly influenced Green Purchase Value (GPV). This finding confirms that

social connectedness, the drive to attract a partner, and self-protection motivation are important factors in shaping consumer value perceptions of green cosmetics among Gen Z Indonesians. In contrast, kin care (KC), mate retention (MR), and status seeking (SS) did not significantly influence GPV. This indicates that concern for family, efforts to maintain a partner, or the pursuit of social status are not strongly linked to consumer value perceptions of green products in this context. Thus, GPV is more influenced by protective and social affiliation motives than by kinship, mate retention, or status seeking motives.

First, the significant results on kin care and self-protection support the fundamental motives theory proposed by (Griskevicius & Kenrick, 2013), which states that humans tend to exhibit prosocial behavior to protect themselves and their closest relatives. In the context of this study, this is clearly evident in Indonesian Gen Z as the main respondents, who view eco-friendly cosmetics not only as an ecological choice but also as an instrument to maintain the health of themselves and those closest to them. Green products are perceived as safer for the body and provide long-term protection, thus driving an increase in GPV (Biswas & Roy, 2015). This finding is also consistent with White et al. (2019), who emphasized that protective motivation is often the initial driver in purchasing decisions for sustainable products. This relevance is even stronger for Gen Z, given that this group is known to be more aware of health risks, more selective in consumption, and more responsive to sustainability issues than previous generations.

Second, The significant positive effect of mate acquisition on Green Purchase Value (GPV) suggests that Indonesian Generation Z increasingly interprets green cosmetics consumption as a socially meaningful signal in the context of mate attractiveness. Consistent with fundamental motive theory, mate acquisition motives increase sensitivity to cues associated with attractiveness, such as health, responsibility, and ethical awareness (Griskevicius et al., 2013). In this context, green cosmetics serve not only as functional products but also as symbolic markers of a modern and socially responsible lifestyle. Consistent with signaling research, green consumption may function as a form of prosocial signaling that enhances perceived attractiveness by projecting qualities associated with long-term mate suitability, including caring, trustworthiness, and self-regulation (Sundie et al., 2011; Van der Werff et al., 2014). This suggests that, for this group, green cosmetics operate as a “soft status” cue that integrates personal health, social identity, and interpersonal attractiveness in the construction of perceived value.

Third, the significance of group affiliation and status confirms that green consumption also functions as a medium for social identity formation, particularly among Gen Z Indonesians. This generation uses green cosmetics as a sign of connectedness to groups concerned with environmental and health issues, as well as a means to strengthen a positive self-image within their social circles. This aligns with the findings of Johnstone and Tan (2015) and Muralidharan and Xue (2016), which show that green consumption is increasingly positioned as a symbol of social affiliation and lifestyle. In the Indonesian context, this finding is even more relevant because the rise of green communities and the high intensity of social media use among Gen Z have made eco-friendly cosmetics part of this generation's collective identity narrative. Furthermore, for Gen Z, choosing green products is not only an individual decision, but also a strategy to present themselves as part of a progressive, environmentally conscious generation with digitally recognized social status.

Interestingly, these results also reveal variations across contexts. Studies in the West, for example, show that status orientation in green consumption is much more prominent because consumers use it to assert moral identity in public spaces (Griskevicius et al., 2010; White et al., 2019). Conversely, in Southeast Asian markets, particularly Indonesia, protective motives (kin care and self-protection) are more dominant, reflecting the importance of collective orientation and health values (Biswas & Roy, 2015). This difference confirms that although GPV has universal dimensions, the weight of each fundamental motive remains contextual to cultural and market norms.

Theoretically, this study extends the literature by placing GPV within the fundamental motives framework of Griskevicius et al. (2010). This provides a new perspective that green

behavior is not merely a response to global environmental issues but also a manifestation of fundamental human motives. Practically, the research findings provide guidance for green cosmetics marketers in Indonesia to emphasize self- and family-protection narratives while packaging products as social symbols that can enhance status and group affiliation. Thus, communication strategies that combine protective and social identity aspects may be more effective in increasing GPV among young consumers.

### CONCLUSION

This study examines the influence of six fundamental motives on Green Purchase Value (GPV) among Generation Z consumers in Indonesia, focusing on green cosmetic products. PLS-SEM analysis results indicate that self-protection, group affiliation, and mate acquisition have significant effects, while kin care, mate retention, and status seeking have no effect. These findings confirm that Gen Z values green cosmetics more as a means of self-protection and health, as well as a medium for building social identity, rather than as an instrument for demonstrating status, retaining a partner, or expressing family care.

Theoretically, this study enriches the literature by integrating an evolutionary psychology perspective into the study of green consumer behavior. GPV, which is generally explained through cognitive variables such as attitudes, subjective norms, and behavioral control, can now be more deeply understood through the evolutionary nature of human motivational systems. This demonstrates that green behavior is not only rational but also rooted in protective and social motives, which are highly relevant in the context of Gen Z Indonesia.

Practically, these findings recommend green cosmetic marketing strategies that emphasize narratives of self-protection, health, and group affiliation. Given that Gen Z is heavily influenced by community and social media, a brand community and collective identity-based approach is predicted to be more effective than emphasizing status or prestige symbols. Future research is recommended to expand the context across generations or cultures to provide a more comprehensive picture of the dynamics of the interaction between fundamental motives and GPV in green consumer behavior.

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