

## Sustainable Beauty: Understanding the Drivers of Green Cosmetics Purchasing Among Teenagers

Ni Putu Martina Pradnyani<sup>A</sup>, Eddy Supriyadinata<sup>B</sup>

### Abstract

The use of cosmetics is basically aimed at personal interests such as increasing attractiveness, cleanliness, and increasing self-confidence. Nowadays, the use of cosmetics is starting to pay attention to environmental impacts, which has caused the use of green cosmetic products to become increasingly popular. This research examines the purchasing behavior of teenagers towards green cosmetic products. This research examined the purchase behavior of 190 teenagers using questionnaires. Research data was analyzed using SEM-PLS. This research shows that altruistic value and hedonic value can increase pro-environmental beliefs in adolescents. The belief in protecting the environment causes teenagers to build a personal norm within themselves that purchasing green cosmetic products is the right choice. The association between pro-environmental beliefs and personal norms, as well as the relationship between altruistic ideals and pro-environmental beliefs, are both significantly moderated by gender. It is unable to mitigate the impact of personal norms and hedonic value on pro-environmental sentiments and green purchasing behavior, though. This study will be a contribution to the research literature regarding the purchase of sustainable beauty products among teenagers and can become a reference in the context of developing sustainable business strategies in the future.

**Keywords:** *Altruistic Value, Hedonic Value, Pro-Environmental Beliefs, Personal Norm, Green Purchase Behavior.*

### INTRODUCTION

The primary objective of sustainable consumption isn't to diminish the environmental quality by expanding the production of goods and services, but rather to mitigate its ecological footprint. Extensive exploitation of the environment has led to various detrimental consequences like climate change, pollution, and ozone layer depletion. Therefore, the focus is on minimizing environmental harm while maintaining consumption levels (Ahmed et al., 2021). When facing one of the current environmental challenges, consumers are increasingly experiencing increased concerns about environmental issues (Alshali et al., 2021). This illustrates that consumers are becoming more conscious of the environment, leading to a shift in their attitudes toward adopting greener lifestyles. In today's highly

<sup>A</sup>Universitas Pendidikan Nasional, Denpasar, Bali, Indonesia, Email: [mpradnyani55@gmail.com](mailto:mpradnyani55@gmail.com)

<sup>B</sup>Universitas Pendidikan Nasional, Denpasar, Bali, Indonesia, Email: [eddyupriyadinata@undiknas.ac.id](mailto:eddyupriyadinata@undiknas.ac.id)

competitive market context, businesses must truly understand consumer behavior and make relevant marketing decisions. This aims to guarantee sustainable purchases from consumers, which are based on their needs and desires for the product (Wahyuni & Darma, 2019).

Indonesia is grappling with significant issues stemming from the widespread use of chemical cosmetics. In 2022 alone, BPOM Indonesia identified approximately 1,541 cases of cosmetic products containing toxic substances, indicating a pervasive problem across the country. The use of prohibited materials such as mercury for skin is very dangerous, it can cause various negative effects and the worst is skin cancer (BPOM). For this reason, understanding sustainable green purchase consumption adopted by consumers is very important. This is because consumers are an important factor that has a significant role in the environmental context (Witek & Kuźniar, 2021). Unfortunately, the reasons to consider using eco-friendly cosmetics are still not fully explained.

Green Purchase Behavior (GPB) emerges as a pivotal driver of environmental sustainability. In recent times, there has been a noticeable uptick in consumer awareness regarding environmentally friendly purchasing practices. This shift is marked by a growing consideration for both environmental well-being and overall quality of life (Jaini et al., 2020). Certainly, this surge in consumer consciousness has spurred the global production and sale of environmentally friendly products. Globally, sales of environmentally friendly products have increased from 2020 by 13%. Increasing awareness of the negative impacts of using conventional cosmetics containing chemicals has indeed encouraged a paradigm shift in this industry.

Existing literature reveals a predominant focus on attitudes, subjective norms, and perceived behavioral control concerning purchasing behavior. However, there has been comparatively less emphasis on evaluating concepts related to values, beliefs, and norms in this context (Nekmahmud & Fekete-Farkas, 2020). There is an opinion that consumer values play an important role in green product purchasing behavior (Wooliscroft & Wooliscroft, 2022). Quoquab et al., (2020), suggests that environmentally friendly consumption behavior does not only depend on consumer attitudes in general, but is more related to individual responsibility which is reflected in a series of consumer behaviors and beliefs to behave environmentally friendly. Besides that, (Roos & Hahn, 2017), values such as long-term behavioral factors, along with beliefs regarding consequences, responsibility, and personal norms, are behavioral factors that exert a more direct and influential impact on human actions. Thus, personal values, beliefs and norms are considered the main drivers of environmentally friendly purchasing behavior in consumers. Previous findings also show that awareness of environmental issues does not always result in environmentally friendly purchasing behavior. Some consumers remain reluctant to buy environmentally friendly products

even though they have an understanding of the benefits of adopting green purchasing behavior (Zhang & Dong, 2020).

While consumer values, beliefs, and norms typically play a significant role in influencing the purchase of environmentally friendly cosmetic products, this influence may vary between men and women. Specifically, differences may arise in emotional and psychological attachment, as well as in unique gender-specific behavioral characteristics (Quoquab, et al., 2020). However, only a few studies have explored in depth the causal link between consumers' values and their purchasing behavior, taking into account the role of beliefs and norms, especially in the context of gender differences (Hwang & Choi, 2018). Atulkar & Kesari (2017), argue that gender serves as a crucial personal characteristic that shapes individual decisions and behaviors. Aasen & Vatn (2018), provide support for this perspective by demonstrating that gender serves as a significant demographic predictor of consumers' green purchasing behavior.

The different views in previous research regarding the impact of gender on green purchasing behavior create interesting dynamics that need further research. Research conducted by Roberts (2019), states that the majority of environmentally friendly consumers are women. Likewise with Atulkar & Kesari (2017), which revealed that female consumers are more likely to behave in a caring way towards the environment than male consumers. In addition, the results of this study are in line with research Sreen et al., (2018), which states that female consumers have more concern for the environment.

This study delves into the purchasing behavior of environmentally friendly cosmetic products, particularly among teenagers. It sheds light on the imbalance stemming from the growing prevalence of non-organic cosmetics, driven by consumers' emphasis on personal benefits such as cleanliness, enhanced attractiveness, and heightened self-confidence. In this context, consumers tend to prioritize the direct benefits of cosmetics without considering their impact on the environment.

Based on the discussion above, to overcome inconsistent findings, it is necessary to carry out research related to the factors that influence green purchase behavior towards green cosmetics products, especially among teenagers. With this in mind, the aim of this research is to forecast both the direct and indirect impact of personal values, beliefs, and norms on consumers' environmentally friendly purchasing behavior regarding green cosmetic products. Additionally, the study assumes that gender may moderate all direct relationships established within the research framework.

Based on a review of previous research, there is a research gap which shows that research so far has only focused on attitudes, subjective norms and behavioral control, while other research explains that gender also determines consumer behavior towards purchasing environmentally friendly products. This research can provide an empirical contribution that separates green product purchasing

behavior between men and women. This research can show the differences in values held by green product consumers, especially for cosmetic products, between men and women, so that it becomes a reference for green cosmetic product business actors to analyze consumers based on gender.

## **LITERATURE REVIEW**

### **Theory of Value-Belief-Norm (VBN)**

The Theory of Value-Belief-Norm (VBN) was developed to clarify how human behavior and values relate to one another in an environmental setting. This theory shows how an individual's underlying values impact their beliefs and norms, which in turn influence their actions. It also suggests a causal relationship between values, beliefs, norms, and behaviors (Stern, 2000).

The connection between value orientations, namely biosphere, altruistic, and egoistic, is integral to understanding individuals' environmental attitudes and behaviors. Biosphere values are centered around the intrinsic worth of nature and the ecosystem, emphasizing the importance of preservation and sustainability. Altruistic principles put society's and other people's well-being first, encompassing concerns for social justice and equity in environmental decision-making. Egoistic values, on the other hand, revolve around self-interest and personal benefits, often associated with immediate gratification and convenience. Value-Belief-Norms (VBN) theory discusses the influences that influence a person's behavioral values in an environmental context.

### **Green Purchase Behavior**

Green purchase behavior is purchasing behavior that shows responsibility towards the environment for the behavior of purchasing environmentally friendly products/services to reduce damage to the environment (Pratiwi, 2020). The concept of green purchase behavior includes avoiding acquiring and using environmentally detrimental goods and services. Consumers who are sensitive to environmental sustainability will choose products and brands that can meet their needs and desires (Ahmed et al., 2021).

### **Green Cosmetic Product**

Green cosmetic products, also known as sustainable or eco-friendly beauty products, refer to beauty products that are produced with positive impacts on the environment and human health in mind. The growing environmental awareness and need to reduce the ecological footprint of beauty products has pushed the beauty industry to adopt sustainable practices (Ika & Jalantina, 2022).

### **Hypothesis**

Personal norms pertain to an individual's internalized sense of moral obligation to engage in behaviors that contribute to environmental protection, such as purchasing environmentally friendly

cosmetic products (Roos & Hahn, 2017). According to the Value-Belief-Norm (VBN) theory, individuals who exhibit positive behaviors can contribute to environmental benefits. These individuals hold a sense of moral obligation, known as moral norms, which drives them to act in ways that benefit the environment, especially when they believe that their acts have consequences. A person's sense of duty and awareness of the effects of their actions are essential components of their pro-environmental attitudes. These beliefs play a significant role in shaping personal norms, guiding individuals to engage in environmentally responsible actions as they internalize the importance of their impact on the environment. An individual's conscious involvement in such behavior occurs when a person becomes convinced that his or her personal values are threatened and that, with the right steps, he or she can remove the threat (Stern, 2000).

Altruistic values are defined as feelings of concern for other people for their environment. Previous research has emphasized the significance of taking humanitarian ideals into account in environmental studies (Werff & Steg, 2016). Based on these norms, altruistic values and hedonic values are anticipated to exert a direct influence on consumers' pro-environmental beliefs regarding the adoption of environmentally friendly behavior, particularly in the context of purchasing cosmetics. Based on the discussion above, the following hypothesis is developed:

H1: Altruistic value has a positive effect on pro-environmental beliefs

H2: Hedonic value has a positive effect on pro-environmental beliefs

The human-environment relationship (new environmental paradigm), which recognizes the consequences of human actions (awareness of negative consequences) and signals people to take corrective action (ascription of responsibility) towards the environment, is one of the three components of environmental beliefs, according to VBN theory (Stern, 2000). Consumer attitudes that express specific convictions about selecting ecologically friendly cosmetics as their contribution to environmental well-being, health, and general quality of life can be classified as pro-environmental beliefs (Chua et al., 2016).

Prior studies have explored the concept of beliefs concerning awareness of negative outcomes and perceived responsibility within personal norms regarding climate protection, environmentally friendly behavioral restrictions, marine conservation, and sustainable travel mode preferences (Hartmann et al., 2018). As a result, there is ample evidence to support the link between environmental citizenship, organizational behavior, and non-activist public behavior as well as other pro-environmental behaviors and personal norms (Aasen & Vatn, 2018).

However, there is still a deficiency of research that examines the relationship directly between pro-environmental attitudes, individual norms, and eco-friendly shopping practices when it comes to cosmetic purchases. Based on VBN theory, it is expected that environmental attitudes will have a direct effect on personal norms, which will then

influence customers' decisions to buy eco-friendly cosmetics. In light of this, the following theories are put forth:

H3: Pro-environmental beliefs have a positive effect on personal norms

H4: Personal norms have a positive effect on green purchase behavior

It is clear that genders differ in terms of decision making and information processing leading to multiple purchasing behavior (Quoquab, 2020). In fact, both men and women have different purchasing experiences, with women engaging in more hedonic consumption than men (Atulkar & Kesari, 2017). This is supported by previous research which shows that hedonic values influence the shopping experience of men and women differently (Liu et al., 2020). It's critical to tackle this subject sensitively and acknowledge that a variety of intricate biological, social, and cultural elements interact to shape gender roles. While there may be observed trends in certain behaviors between genders, it's crucial to avoid generalizations and acknowledge the diversity within each gender (Tam & Milfont, 2020). The study by Witek & Kuźniar (2021) offers a significant viewpoint that refutes widespread beliefs regarding the impact of sociodemographic factors on environmentally conscious consumer behavior. According to their research, consumers' decisions to make environmentally friendly purchases may not be significantly influenced by criteria like gender, income, age, or education.

Indeed, previous research has indicated that, in certain contexts or under specific conditions, female consumers tend to exhibit more environmentally friendly behavior and engage in greater pro-environmental actions compared to male consumers. These findings suggest that gender may play a role in shaping attitudes and behaviors towards the environment, albeit not universally (Atulkar & Kesari, 2017). Studies looking at how gender affects environmental behavior in 22 different nations have consistently shown that women tend to be more environmentally conscious than men. This includes actions such as purchasing organic food and engaging in recycling practices. These findings suggest that gender may indeed play a significant role in shaping individuals' environmental attitudes and behaviors on a global scale (Quoquab et al., 2020). Indeed, some research has presented findings that contradict the notion of significant gender differences in environmentally significant behaviors. This suggests that in certain contexts or under specific conditions, gender may not play a substantial role in determining individuals' actions towards the environment (Wolters, 2014). However, according to other studies, men are more likely than women to engage in pro-environmental behavior (Tam & Milfont, 2020).

Continuing from the previous debate, the present study posits that gender can function as a moderator in all of the direct correlations under investigation. In particular, it is suggested that, in the context of purchasing cosmetic products, gender may modify the relationships between value orientation and pro-environmental attitudes, pro-

environmental beliefs and personal norms, and personal norms and green purchase behavior:

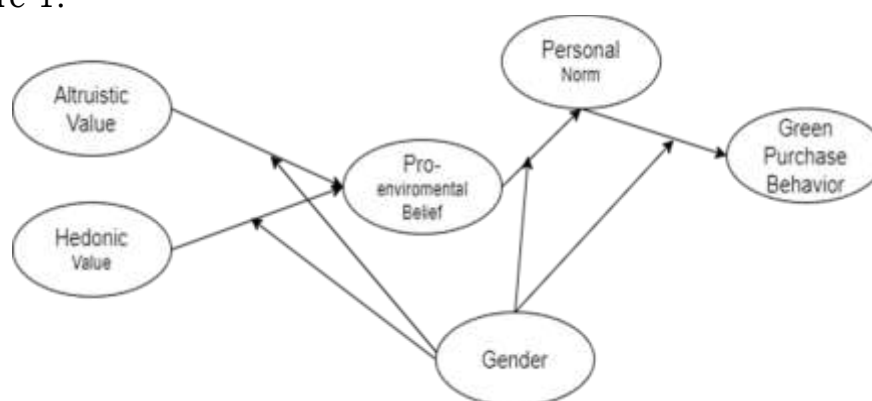
H5: Gender moderates the relationship between altruistic value and pro-environmental belief

H6: Gender moderates the relationship between hedonic value and pro-environmental beliefs

H7: Gender moderates the relationship between pro-environmental and personal norms

H8: Gender moderates the relationship between personal norms and green purchase behavior

The conceptual model developed in this research is summarized in Figure 1.



Source: Processed Data

**Figure 1. Conceptual Framework**

## METHODS

The population used in this research were teenagers aged 15-24 years who had previously purchased green cosmetics products from The Body Shop brand. The number of samples used in this study was calculated using the Hair formula. Determining the number of samples used in research where the population size is not known with certainty is recommended to be 5 - 10 times the number of indicators (Hair et al., 2019). Based on these calculations, the sample in this study was 190 respondents obtained from the number of indicators, namely 19 indicators multiplied by 10.

The data collection technique utilized in this research involved the distribution of questionnaires. This method typically involves designing a set of questions related to the research objectives and then administering these questionnaires to participants, who provide their responses. As time goes by, collecting questionnaires is no longer distributed using paper media, but can be done via the Google Form application and then distributed widely via social media. The questionnaire measurement scale that the author used in this research is the Likert scale. The Likert scale is used to measure attitudes, perceptions and opinions of individuals and groups regarding social phenomena (Sugiyono, 2019).

**Table 1. Research Instruments**

Variable	Item	Indicator	Question
<i>Altruistic Value</i> (Prakash et al., 2019); Jaini et al., (2020)	AV1	Health	I always consider the health aspect in my cosmetic purchases.
	AV2	Awareness	When buying cosmetic products, I focus on environmentally friendly cosmetics.
	AV3	Environmental Awareness	I am concerned that people are consuming cosmetics with high chemical content that have a negative impact on the environment.
<i>Hedonic Value</i> Alshali et al., (2021); Jaini et al., (2020)	HV1	Pleasure	Buying organic cosmetics gives me pleasure.
	HV2	Feeling right	Buying eco-friendly cosmetics makes me feel like I'm doing the right thing morally.
	HV3	Personal well-being	Using eco-friendly cosmetics can positively influence my well-being.
	HV4	Environmental awareness	I like/like using environmentally friendly cosmetics.
	HV5	Calm	I feel calm (relaxed) when using environmentally friendly cosmetics.
<i>Pro-Environmental Belief</i> (Han et al., 2020)	PEB 1	Environmental Conservation	I am willing to participate in preserving the environment.
	PEB 2	Responsibility	I believe that having a sense of responsibility towards environmental issues is important.
	PEB 3	Awareness	I believe that protecting the environment is an important action and a moral obligation
<i>Personal Norm</i> (Prakash et al., 2019); Jaini et al., (2020)	PN1	Desire for preservation	I feel obligated to save the environment wherever possible.
	PN2	Environmental Values	I must do what I can to conserve natural resources.
	PN3	Personal Liability	I feel a strong personal obligation to use environmentally friendly cosmetics.
<i>Green Purchase Behavior</i> (Pratiwi, 2020)	GPB 1	Environmental Concern	I usually prefer to buy cosmetic products with reuseable packaging
	GPB 2	Health	Every time I want to buy cosmetic products, I always buy cosmetic products that do not contain chemicals.
	GPB 3	Price	I try to buy chemical-free cosmetic products even though they are more expensive.
	GPB 4	Utility	I always buy biodegradable cosmetic products (those that are easy to throw away after use).
	GPB 5	Self-resilience	I always refrain from buying cosmetic products that contain chemicals.

Source: Processed Data

In this research, the next stage after obtaining the research data is data analysis. The researchers utilized Structural Equation Modeling

(SEM)-Partial Least Squares (PLS) as the analytical approach, employing a variance-based method. SEM-PLS was chosen because it allows for modeling the relationships between variables in the research framework. SmartPLS software was employed for conducting the SEM-PLS analysis. This approach enables researchers to examine the interrelations between different variables in the proposed model and to assess the significance of these relationships. Ultimately, conclusions will be drawn based on the results of the data analysis, providing evidence to support or refute the hypotheses put forward in the study (Sarwono, 2018).

## **RESULTS AND DISCUSSION**

### **Respondent Characteristics**

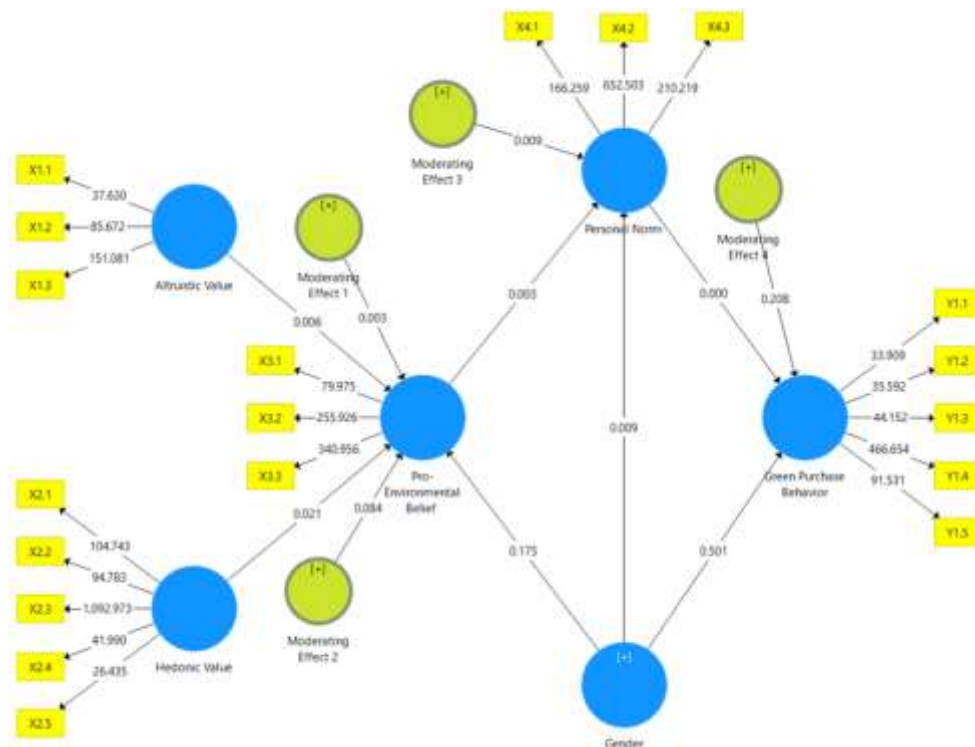
Respondents aged 15 - 20 years were 54 people with a percentage of 28.4%. Respondents aged 21 - 24 years were 136 people with a percentage of 71.6%. This shows that respondents aged 21 - 24 years are the most dominant. The number of male respondents and female respondents was the same, namely 95 people with a percentage of 50.0%.

### **Measurement Model Evaluation Results (Outer model)**

All of the convergent validity test values exceed 0.7, according to the data analysis. As a result, it may be said that the study's data are considered reliable. All Average Variance Extracted (AVE) values surpass 0.5, according to the data analysis. Therefore, it may be said that the study's findings are reliable. The analysis also shows that all outer loading values are greater than other cross-loading values, which supports the validity of the study findings. Every variable's Cronbach's alpha value is over 0.7, and every Composite Reliability value is greater than 0.6, according to the data analysis. As a result, it makes sense to draw the conclusion that the research's data is trustworthy.

### **Evaluation Results of the Measurement Model (Inner model)**

When evaluating the inner model, assessments were conducted for both direct and indirect effects, alongside examinations of the effect sizes. These analyses included conducting direct effect tests and indirect effect tests, as well as evaluating the coefficient of determination (R-Square), F-Square, and Q-Square to gauge the magnitude of the effects (Sarwono, 2018).



Source: Processed Data

**Figure 2. Inner Model**

The altruistic value and hedonic value variables had a small R-square value of 0.065 on green buying behavior, meaning that they had a large influence of  $0.065 \times 100\% = 6.5\%$ . The altruistic value and hedonic value variables have a large influence of  $0.073 \times 100\% = 7.3\%$  on personal norms, according to the R-square value of 0.073. On the other hand, the pro-environmental beliefs have a large influence of  $0.743 \times 100\% = 74.3\%$  on the altruistic value and hedonic value variables. We can conclude that the model has predictive relevance value because the calculated Q-square value is 0.777, which is more than 0 and close to 1.

## Hypothesis Test

**Table 2. Direct Effect Test Results**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
<i>Altruistic Value -&gt; Pro-Environmental Belief</i>	0.468	0.430	0.036	12.886	0.006
<i>Hedonic Value -&gt; Pro-Environmental Belief</i>	0.426	0.454	0.063	6.727	0.021
<i>Moderating Effect 1 -&gt; Pro-Environmental Belief</i>	0.056	0.165	0.003	17.572	0.003
<i>Moderating Effect 2 -&gt; Pro-Environmental Belief</i>	-0.063	-0.172	0.019	3.229	0.084
<i>Moderating Effect 3 -&gt; Personal Norm</i>	0.037	0.028	0.004	10.340	0.009
<i>Moderating Effect 4 -&gt; Green Purchase Behavior</i>	-0.016	0.006	0.009	1.833	0.208
<i>Personal Norm -&gt; Green</i>	0.250	0.104	0.004	69.415	0.000

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
<i>Purchase Behavior</i>					
<i>Pro-Environmental Belief</i> -> <i>Personal Norm</i>	0.258	0.176	0.015	16.955	0.003

Source: processed data

In order to investigate this hypothesis, we choose a 95% significance level ( $\alpha$ ) on the t-statistic value, which corresponds to a 0.05 or 5% significance level. The following criteria determine whether a hypothesis is accepted or rejected: 1) We accept the alternative hypothesis ( $H_a$ ) and reject the null hypothesis ( $H_0$ ) if the p-value is larger than 0.05; 2) On the other hand, we reject the alternative hypothesis ( $H_a$ ) and accept the null hypothesis ( $H_0$ ) if the p-value is less than or equal to 0.05.

### **The Influence of Altruistic Value on Pro-environmental Belief**

Altruistic value has a positive effect on pro-environmental beliefs. The influence of altruistic values on pro-environmental beliefs in purchasing green cosmetic products is an important aspect in understanding consumer behavior that supports sustainability. Consumers with altruistic values may be more willing to pay a price premium for sustainable cosmetic products, viewing them as an investment in environmental sustainability efforts and support for responsible business practices. Altruistic values can also be influenced by social and personality factors. Individuals who frequently engage in social activities or have a more pro-social personality orientation may be more likely to consider sustainability factors in their purchasing decisions. Awareness of altruistic values in a peer group or social environment can strengthen its influence on pro-environmental beliefs. Discussions, peer influence, or group activities related to sustainability can strengthen an individual's belief in purchasing sustainable cosmetic products.

The results of this research are in line with the results of research conducted by (Shanmugavel et al., 2022); (Alam et al., 2023); (Alyahya et al., 2023) shows that it is important to consider altruistic values in environmental studies.

### **The Influence of Hedonic Value on Pro-environmental Belief**

Hedonic value has a positive effect on pro-environmental beliefs. The influence of hedonic values on pro-environmental beliefs in purchasing sustainable cosmetic products (green cosmetic products) involves understanding aspects of sensory satisfaction, aesthetics, and personal experience that might motivate consumers to choose products that focus on sustainability. Consumers seeking hedonic value may be attracted to sustainable cosmetic product innovations that offer additional benefits, such as better formulations, the latest technology, or unique aesthetic effects. This can create greater appeal towards sustainable products. Aspects of hedonic value, such as attractive

packaging design and strong branding, can influence consumer perceptions of the product. If sustainable cosmetic products have visual appeal and attractive branding, consumers may be more likely to engage with and believe in the sustainability value conveyed.

Consumers who experience personal satisfaction from product use may be more likely to develop pro-environmental beliefs. Understanding that their contribution to sustainability can increase their sense of personal satisfaction can be a strong motivating factor. Hedonic value can also be related to lifestyle attractiveness. Consumers who identify themselves with a lifestyle focused on enjoyment and personal satisfaction may be more open to choosing sustainable products that can meet their preferences. The results of this research are in line with the results of research conducted by (Akram et al., 2023); (Kim et al., 2023); (Qian, 2023); (Giacalone et al., 2022) which shows that hedonic value orientation has a relationship with pro-environmental behavior.

### **The Influence of Pro-environmental Belief on Personal Norms**

Personal norms are positively impacted by environmental ideas. Pro-environmental beliefs can create personal norms that are based on moral and ethical considerations. Consumers who believe that purchasing sustainable products is an ethical action that supports environmental conservation may internalize personal norms to choose products that conform to these beliefs. Pro-environmental beliefs can shape consumers' personal norms by highlighting the positive impact they can generate personally and socially through purchasing sustainable cosmetic products. Feelings of involvement and responsibility towards the environment can create personal norms to act in accordance with these values.

Consumers who identify themselves as environmental advocates may have strong personal norms to confirm this identity through purchasing behavior. They may feel that choosing sustainable products is a way to fulfill their personal norms as environmentally conscious individuals. Pro-environmental beliefs received from social influences or reference groups can shape personal norms. If a social group or peers endorse pro-environmental beliefs, consumers may be more likely to internalize those norms as part of their identity and behavior.

Education and awareness about environmental issues can play an important role in shaping personal norms. Consumers who are informed about the beauty industry's impact on the environment may feel they have a personal norm to choose more sustainable products. The higher a consumer's level of personal involvement and awareness of environmental issues, the more likely they are to develop strong personal norms to support the purchase of sustainable products. The results of this research are in line with the results of research conducted by (Pegan et al., 2023); (Garcia-Vazquez et al., 2023); (Duong et al., 2023) shows that pro-environmental beliefs have a positive effect on personal norms.

### **The Influence of Personal Norms on Green Purchase Behavior**

Green purchasing habit is positively impacted by personal norms. When it comes to buying sustainable cosmetics, the impact of personal norms on sustainable shopping behavior (also known as green purchase behavior) can play a significant role in influencing customer choices. Personal norms can develop through the internalization of environmental values. Consumers who have strong personal norms to support sustainability may view the purchase of sustainable cosmetic products as a way to honor their values regarding environmental preservation.

The belief that each individual has personal responsibility for the environment can form personal norms to act in accordance with that responsibility. Consumers who feel responsible for the environmental impact of cosmetic purchases may be more inclined to choose more sustainable products. Personal experiences, such as direct observation of environmental problems, or awareness of the impact of the beauty industry on the environment, can strengthen personal norms for acting sustainably. Consumers who have negative environmental experiences may be more likely to internalize personal norms to improve their behavior. An individual's identity as a consumer who cares about the environment can form personal norms to be consistent with this identity through purchasing decisions. Consumers who identify themselves as environmentally conscious may feel that purchasing sustainable cosmetic products is a way to voice their identity. Personal norms can be influenced by social norms and group references. If individuals perceive that their social group or peers support personal norms for sustainable purchasing, this may strengthen such purchasing behavior.

The results of this research are in line with the opinion expressed by (Yuda Bakti et al., 2020); (de Groot et al., 2021); (Koller et al., 2023), it demonstrates that values are more behavioral elements that are closer to or directly influence human activities, such as long-term behavioral factors and attitudes regarding consequences, responsibility, and personal norms.

### **The Role of Gender in Moderating the Influence of Altruistic Value on Pro-environmental Belief**

The association between pro-environmental beliefs and altruistic values is moderated by gender. The correlation between pro-environmental ideas and altruistic values in the purchase of sustainable cosmetic products, also known as green cosmetic products, is gender moderated, indicating that the impact of altruistic values can differ depending on the gender of the consumer. Altruistic values in men may have a different impact on pro-environmental beliefs compared to women. There may be certain factors that are more salient or relevant for men in the context of altruistic values regarding purchasing sustainable cosmetic products.

Women are often thought to have a higher propensity to adopt sustainable behavior and care about environmental issues. However, it is important to understand the ways in which altruistic values in particular influence pro-environmental beliefs among women. Altruistic values can be interpreted and interpreted differently by men and women. There may be certain altruistic motivations that encourage men or women more to support sustainability in the context of beauty products

Culture and social norms may moderate how altruistic values influence pro-environmental beliefs among men and women. Cultural differences or social norms may play a role in determining the extent to which these values are seen as important in the purchase of sustainable cosmetic products. Understanding whether altruistic values have a stronger impact on sustainable product purchasing among a particular gender can help cosmetics companies adjust their marketing strategies. For example, if women are more responsive to altruistic values, marketing strategies can be focused on highlighting those aspects. The findings of this study are consistent with those of the study carried out by Sreen et al., (2018); (Gundala et al., 2022) believes that women fulfill specific duties that men do not, such women being more social, emotional, and altruistic in their caring for others. This research is also in line with (Quoquab et al., 2020), research showed that, compared to male customers, female consumers are more inclined to act in a way that is considerate of the environment.

### **The Role of Gender in Moderating the Influence of Hedonic Value on Pro-environmental Belief**

Gender is not able to moderate the relationship between hedonic value and pro-environmental beliefs. Hedonic value is often closely related to sensory experiences, such as a product's fragrance, texture, and comfort. Gender roles may moderate preferences for certain sensory experiences. Women may focus more on the scent or softness of the product, while men may pay more attention to other factors such as the texture or effectiveness of the product. The influence of hedonic values on pro-environment can be influenced by aesthetic perceptions which may be different between men and women. For example, women may be more responsive to attractive product packaging and design, while men may be more focused on practical factors or performance.

Social norms and gender roles may moderate the way hedonic values influence pro-environmental beliefs. Gender stereotypes or certain norms can shape consumer preferences in terms of hedonic value and how it relates to sustainability. The emotions involved in product experiences and purchases can vary between men and women. Emotional engagement with hedonic value and sustainability may have different impacts, moderating how consumers form their pro-environmental beliefs.

Motivations for purchasing sustainable cosmetic products may vary between men and women. Hedonic value may motivate purchases

more strongly for one gender than the other, and this might mitigate the association between pro-environmental views and hedonic value. Women and men may respond differently to brand messages and advertising that highlight hedonic and sustainability values. Considering these differences can help design marketing campaigns that are more effective and relevant to the target audience. The findings of this study are consistent with those of the study carried out by (Sarango-Lalangui et al., 2023) it asserts that gender differences don't exist in carrying out significant behavior towards the environment. Roberts, (2019), states that the majority of environmentally friendly consumers are women.

### **The Role of Gender in Moderating the Influence of Pro-environmental Belief on Personal Norms**

The association between personal norms and pro-environmental sentiments is moderated by gender. Gaining insight into how these variables interact based on gender can be achieved by recognizing the role that gender plays in modulating the relationship between pro-environmental views and personal norms in buying environmentally friendly cosmetic items. Men and women may have different motivations and priorities regarding sustainability and personal norms. For example, women may be more likely to integrate sustainability values into their personal norms regarding beauty and self-care.

Perceptions of responsibility for sustainability and environmental impact can be influenced by gender stereotypes or traditional roles. This may moderate the extent to which pro-environmental beliefs shape personal norms in purchasing eco-friendly cosmetics. Emotional engagement with environmental and beauty issues may vary between men and women. The level of emotional involvement may moderate the extent to which pro-environmental beliefs shape personal norms in purchasing environmentally friendly cosmetic products.

Women and men may view their personal norms in different contexts of social interaction. Peer influences or the social environment may play a role in the extent to which pro-environmental beliefs contribute to personal norms. Men and women may respond differently to advertising or media messages that highlight sustainability in the context of beauty. Media influence and promotion of environmentally friendly cosmetic products can moderate the relationship between personal beliefs and norms. The findings of this study differ from those of the study carried out by (Tam & Milfont, 2020); (Baruk & Goliszek, 2023); (Sarango-Lalangui et al., 2023) which states that compared to women, men tend to be more autonomous and courageous.

### **The Role of Gender in Moderating the Influence of Personal Norms on Green Purchase Behavior**

The association between individual norms and green purchasing behavior cannot be moderated by gender. It's possible that men and women have distinct goals and values regarding sustainability and eco-

friendly cosmetic products. Their perceptions of personal norms and the extent to which they influence purchasing behavior may be influenced by these differences. Perceptions of social responsibility regarding sustainable purchasing may differ between men and women. Gender may moderate the extent to which personal norms motivate sustainable purchasing behavior, especially when it comes to beauty products.

Gender norms in beauty consumption may play a role in moderating the relationship between personal norms and purchasing behavior. Perceptions of what is considered "normal" or "appropriate" in the context of beauty can differ between men and women. The influence of peers and social groups can moderate the impact of individual standards on environmentally friendly shopping practices. Women may be more open to the influence of their social group in terms of purchasing decisions for environmentally friendly cosmetic products. Personal norms in protecting the environment are closely related to the beliefs a person holds regarding the causes and consequences of every action they take. The beliefs that a person holds will greatly influence his decision to purchase environmentally friendly products. When doing something, both men and women will of course think carefully about the causes and effects of each decision they choose. This suggests that the influence of personal norms on green purchasing behavior is not significantly influenced by gender. The findings of this study are consistent with those of the study carried out by (Witek & Kuźniar, 2021) found no evidence of a substantial relationship between environmentally friendly shopping behavior and sociodemographic factors such as gender, income, age, or education.

## **CONCLUSION**

According to the study, hedonic and altruistic values can positively impact adolescents' pro-environmental beliefs. Additionally, it suggests that a strong belief in environmental protection leads teenagers to adopt a personal norm, guiding them to view acquiring eco-friendly makeup as the correct decision. The relationship between altruistic ideals and pro-environmental beliefs, as well as the relationship between pro-environmental beliefs and personal norms, is found to be significantly moderated by gender. Nevertheless, neither the impact of personal norms on green purchasing behavior nor the influence of hedonic values on pro-environmental sentiments are moderated by gender.

The results of this research can provide theoretical contributions, especially to the Theory of Value-Belief-Norm (VBN) theory. The results of this research discuss green cosmetics products. Value-Belief-Norms (VBN) theory discusses the influences that influence a person's behavioral values in an environmental context. Of course, as a consumer, when buying cosmetic products, you have to think about things that support your decision to buy a product, such as products that are safe for your health and the environment. Apart from that,

companies must also know the things that must be considered to improve green cosmetics products so that they can protect the environment. Therefore, the determining factors for green cosmetics products are very important for companies and consumers to know.

This research has limitations in the population and the sample used is teenagers. Future research can be carried out by expanding the population and sample so that purchase behavior towards green products can be studied more deeply in the community. Additionally, this study is restricted to cosmetic items, further research can examine other green products besides cosmetics which of course also have broader studies related to environmentally friendly products.

## REFERENCES

- Aasen, M., & Vatn, A. (2018). Public Attitudes Toward Climate Policies: The Effect of Institutional Contexts and Political Values. *Ecological Economics*, 146(1), 106–114.
- Ahmed, E. R., Idres, N. F. M., Shaharudin, M. S., Suparman, S., & Kamal, A. (2021). Theory of Planned Behavior Environmental Management towards Environmental Behavior: A Mediating Effect of Islamic Knowledge and a Moderating Effect of Islamic Upbringing. *Kresna Social Science and Humanities Research*, 1(1), 1–8.
- Akram, U., Ansari, A. R., Ulhaq, I., & Yan, C. (2023). Cosmetics makers have always sold ‘hope in a jar’! Understanding the cosmetics purchase intention in the Chinese mobile commerce environment. *Journal of Retailing and Consumer Services*, 73(September 2022), 103337.
- Alam, M. N., Ogiemwonyi, O., Alshareef, R., Alsolamy, M., Mat, N., & Azizan, N. A. (2023). Do social media influence altruistic and egoistic motivation and green purchase intention towards green products? An experimental investigation. *Cleaner Engineering and Technology*, 15(April), 100669.
- Alshali, N. M., Hamood Alhattali, N., & Ries Ahmed, E. (2021). Behavior of Consumers and Green Product: A Study in Oman. *International Journal of Business and Management Invention*, 10(1), 40–51.
- Alyahya, M., Agag, G., Aliedan, M., & Abdelmoety, Z. H. (2023). Understanding the factors affecting consumers’ behaviour when purchasing refurbished products: A chaordic perspective. *Journal of Retailing and Consumer Services*, 75(April), 103492.
- Atulkar, S., & Kesari, B. (2017). Satisfaction, loyalty and repatronage intentions: Role of hedonic shopping values. *Journal of Retailing and Consumer Services*, 39(1), 23–34.
- Baruk, A. I., & Goliszek, A. (2023). The ways of interpreting green energy by young Polish individual recipients vs. their gender. *Energy Strategy Reviews*, 50(September), 101212.
- de Groot, J. I. M., Bondy, K., & Schuitema, G. (2021). Listen to others or yourself? The role of personal norms on the effectiveness of social norm interventions to change pro-environmental behavior.

- Journal of Environmental Psychology*, 78(September), 101688.
- Duong, C. D., Nguyen, T. H., & Nguyen, H. L. (2023). How green intrinsic and extrinsic motivations interact, balance and imbalance with each other to trigger green purchase intention and behavior: A polynomial regression with response surface analysis. *Heliyon*, 9(10), e20886.
- Garcia-Vazquez, E., Garcia-Ael, C., Ardura, A., Rodriguez, N., & Dopico, E. (2023). Towards a plastic-less planet. Gender and individual responsibility predict the effect of imagery nudges about marine (micro)plastic pollution on R-behavior intentions. *Marine Pollution Bulletin*, 193(April), 115157.
- Giacalone, D., Llobell, F., & Jaeger, S. R. (2022). “Beyond liking” measures in food-related consumer research supplement hedonic responses and improve ability to predict consumption. *Food Quality and Preference*, 97(May 2021), 104459.
- Gundala, R. R., Nawaz, N., R M, H., Boobalan, K., & Gajenderan, V. K. (2022). Does gender moderate the purchase intention of organic foods? Theory of reasoned action. *Heliyon*, 8(9), e10478.
- Hair, J. F., Black, Jr, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis*. New York: Pearson New International Edition.
- Hwang, J., & Choi, J. K. (2018). An investigation of passengers’ psychological benefits from green brands in an environmentally friendly airline context: The moderating role of gender. *Sustainability (Switzerland)*, 10(1), 1–10.
- Jaini, A., Quoquab, F., Mohammad, J., & Hussin, N. (2020). Antecedents of green purchase behavior of cosmetics products: An empirical investigation among Malaysian consumers. *International Journal of Ethics and Systems*, 36(2), 185–203.
- Kim, J., Kim, S. (Sam), Jhang, J., Doust, N. A. S., Chan, R. Y. K., & Badu-Baiden, F. (2023). Preference for utilitarian or hedonic value options during a pandemic crisis: The moderation effects of childhood socioeconomic status and sensation-seeking. *International Journal of Hospitality Management*, 110(December 2022), 103427.
- Koller, K., Pankowska, P. K., & Brick, C. (2023). Identifying bias in self-reported pro-environmental behavior. *Current Research in Ecological and Social Psychology*, 4(December 2022), 100087.
- Nekmahmud, M., & Fekete-Farkas, M. (2020). Why not green marketing? Determinates of consumers’ intention to green purchase decision in a new developing nation. *Sustainability (Switzerland)*, 12(19), 1–31.
- Pegan, G., Del Missier, F., & De Luca, P. (2023). Antecedents of green purchase choices: Towards a value-oriented model. *Journal of Cleaner Production*, 399(January), 136633.
- Qian, X. (2023). Why foreclosed housing devalues in China? An evaluation based on property-rights risks through hedonic pricing model. *Ain Shams Engineering Journal*, 15(3), 102499.

- Quoquab, F., Mohammad, J., & Shahrin, R. (2020). Pro-environmental behavior in nutricosmetics product purchase context: Scale development and validation. *International Journal of Pharmaceutical and Healthcare Marketing*, 14(2), 217–250.
- Roberts, J. A. (2019). Sex Differences In Socially Responsible Consumers' Behavior. *Journals.Sagepub*, 1(1), 1–10.
- Roos, D., & Hahn, R. (2017). Does shared consumption affect consumers' values, attitudes, and norms? A panel study. *Journal of Business Research*, 77(3), 1–10.
- Sarango-Lalangui, P., Castillo-Vergara, M., Carrasco-Carvajal, O., & Durendez, A. (2023). Impact of environmental sustainability on open innovation in SMEs: An empirical study considering the moderating effect of gender. *Heliyon*, 9(9), e20096.
- Sarwono, J. (2018). *Metodologi Penelitian Kuantitatif dan Kualitatif*. Yogyakarta: Suluh Media.
- Shanmugavel, N., Rajendran, R., & Micheal, M. (2022). An exploration on the influence of altruistic factors on voluntary vehicle scrapping to promote sustainable environment. *Cleaner Materials*, 4(March), 100081.
- Sreen, N., Purbey, S., & Sadarangani, P. (2018). Impact of culture, behavior and gender on green purchase intention. *Journal of Retailing and Consumer Services*, 41(1), 177–189.
- Stern, P. C. (2000). Toward a Coherent Theory of Environmentally Significant Behavior. *In Journal of Social Issues*, 56(3), 1–10.
- Sugiyono. (2019). *Metode Penelitian kuantitatif, kualitatif dan R & D*. Bandung: Alfabeta.
- Utama, I. G. N. R. (2018). *Statistik Penelitian Bisnis & Pariwisata*. Yogyakarta: Andi Offset.
- Wahyuni, N. W. S., & Darma, G. S. (2019). Mobile Advertising, Product Social Value dan Purchase Intention pada Instagram. *Jurnal Manajemen Bisnis*, 16(4), 1–10.
- Witek, L., & Kuźniar, W. (2021). Green purchase behavior: The effectiveness of sociodemographic variables for explaining green purchases in emerging market. *Sustainability (Switzerland)*, 13(1), 1–18.
- Wooliscroft, A. G., & Wooliscroft, B. (2022). A hierarchy of sustainable grocery shopping behaviours: Using Rasch modelling to explore adoption groups. *Journal of Consumer Behaviour*, 21(6), 1420–1439.
- Yuda Bakti, I. G. M., Rakhmawati, T., Sumaedi, S., Widiyanti, T., Yarmen, M., & Astrini, N. J. (2020). Public transport users' WOM: An integration model of the theory of planned behavior, customer satisfaction theory, and personal norm theory. *Transportation Research Procedia*, 48(2018), 3365–3379.
- Zhang, X., & Dong, F. (2020). Why do consumers make green purchase decisions? Insights from a systematic review. *International Journal of Environmental Research and Public Health*, 17(18), 1–25.