Exploring the Mediating Effect of Social Media Perception on Green Beauty Products Purchase Intention: The Evidence from Indonesia

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ABSTRACT: Amidst the growing beauty industry in Indonesia, several local beauty brands have embraced the theme of sustainable beauty or produced environmentally friendly beauty products to reduce pollution impact and pay closer attention to the ingredients used. This research aims to analyze the factors influencing consumers to purchase environmentally friendly beauty products. Based on quantitative data processing using SMART PLS, it was found that there are two main factors that influence consumers' considerations to purchase environmentally friendly beauty products, namely green product knowledge and green perceived value. Furthermore, the perception of social media also mediates the relationship between green product knowledge and green perceived quality towards green beauty products purchase intention. Thus, eco-friendly beauty companies can effectively communicate their environmentally friendly attributes and product value propositions, thereby shaping consumer behavior towards more sustainable choices.

KEYWORDS: sustainable beauty, environmentally friendly beauty products, green product knowledge, perception of social media

INTRODUCTION
The beauty industry has experienced rapid growth in the past few decades, creating new trends, advanced technology and ever-changing beauty standards. Innovations in product formulation, such as the use of natural and environmentally friendly ingredients, as well as technological discoveries such as artificial intelligence and stem cell technology, have opened the door to more effective and responsible products. Additionally, social media's role in expanding the reach of beauty brands, introducing beauty influencers, and enabling consumers to share experiences and recommendations has been a major force behind the growth of the industry. With growing consumer awareness of the importance of environmentally friendly and ethical products, as well as the demand for diversity and inclusivity, the beauty industry continues to move forward in creating products and experiences that appeal to everyone.

Therefore, using environmentally friendly beauty products is important because they have a positive impact on the environment and overall human health. Conventional beauty products often contain dangerous chemicals and microplastics which can pollute water, soil and damage marine ecosystems. Apart from that, production processes that are not environmentally friendly can also cause air pollution and greenhouse gases. By switching to environmentally friendly beauty products, we can reduce our carbon footprint, support sustainable farming practices, and support companies that prioritize ethics and animal welfare in their product development. Thus, the use of environmentally friendly beauty products is not only beneficial for the environment, but also for the health and well-being of humans and other creatures on this planet. Currently, business in the beauty sector is increasing from year to year. According to sources written by Nielsen and Euromonitor, the graph of interest in beauty products has increased significantly since 2017 and reached 11.99 percent with an amount of IDR 19 trillion. Meanwhile, in 2021, the development of the beauty industry continued to increase by 6.46 percent. So the beauty industry is predicted to continue to increase along with the latest beauty product trends.
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The development of the cosmetics industry in Indonesia is currently relatively good. People, especially women, are increasingly aware of the importance of cosmetics as a daily necessity. The growing trend of using cosmetics, as well as the demand for someone to look attractive in front of the general public, is one of the reasons the cosmetics industry is developing well in Indonesia. With market demand for cosmetics continuing to increase, it causes cosmetics manufacturers to compete fiercely with each other to create and offer products that are able to meet the expectations of potential buyers. Progress in the beauty industry in Indonesia is currently showing an increase. Based on data from the Ministry of Industry (2016), this industrial market growth averaged 9.67% per year in the last six years (2009-2015).

Based on data from the Central Statistics Agency and the Indonesian Plastic Industry Association (INAPLAS), plastic waste in Indonesia reaches 64 million tons per year, and as much as 3.2 million ends up in the sea. In 2019, Indonesia was the second country contributing the most plastic waste, namely 3.21 million metric tons per year, as reported by the Ministry of Maritime Affairs and Fisheries. Plastic skincare container waste is also included in this figure. In addition, there is still a lack of public awareness and policies related to waste problems are less clear. If plastic waste used for skincare and cosmetics is not handled properly, it can pollute the environment. It’s not just about the packaging, but also the content of skincare ingredients that are still left in the container. Used plastic skincare bottles will continue to pile up if they are not accompanied by plastic recycling and other handling solutions. Meanwhile, skincare remains that are still stuck in the container contain chemicals that can pollute soil and water. Therefore, proper handling of skincare waste is needed.

However, according to GfK Roper Consulting [1] the surge in environmentally conscious messaging has resulted in the positive establishment of consumer brands. However, there is a growing sense of doubt among consumers regarding the environmental assertions put forth by certain companies. The presence of doubt among consumers, along with its consequences and the perception of dishonesty, has adversely affected the credibility of organizations and how the company’s performance is perceived [2]. Moreover, makers of "organic" beauty products are criticized for unclear labeling, leaving 76% of consumers feeling misled. The Soil Association warns that the industry emphasizes marketing "green" products rather than investing in truly environmentally friendly, toxin-free formulations safe for the skin. Additionally, there are no legal standards for using terms like "organic" or "natural" on beauty products, allowing any brand to use these labels even if the product lacks organic or natural ingredients [3]. Therefore, this research aims to identify the key factors and considerations influencing customers in their decision to purchase green beauty products. Additionally, it seeks to assess the impact of social media marketing on the consumer perception and uptake of environmentally friendly beauty offerings.

LITERATURE REVIEW

Khan & Salim [4] states that green beauty products have several characteristics, such as vegan, organic and cruelty free. Vegan means that the composition of green beauty products does not derived from animal substances, such as gelatin, cholesterol, or collagen. Furthermore, organic means the green beauty products free of chemical toxins like parabens, SLS, synthetic fragrances and artificial color. Meanwhile, cruelty free are products whose production does not harm animals. There are several international brands that produce green beauty products such as REN, Aveda, Lush, Herbivore, L’Occitane, The Body Shop, Burt’s Bees and UpCircle Beauty. Meanwhile in Indonesia, there are several eco-friendly cosmetics brands such as Sensatia Botanicals, SASC and Mineral Botanica.

Green Perceived Value

Chen & Chang [5] stated that green perceived value is characterized as the comprehensive evaluation by consumers of the net advantages derived from products or services, considering consumer expectations for a sustainable environment and ecological requirements. Koller et al. [6] also mentions that green perceived value is important criteria among consumers. This is roved by the crucial role of green perceived values in the ecological era. Environmentally friendly products offer higher quality and performance compared to non-green products, reinforcing environmental values and increasing sales. Customers purchase environmentally friendly products when they perceive a higher environmental value in those products [7]. In the realm of green beauty products, there are several key elements contribute to the perceived value of green beauty products, such as sustainability and environmental impact, which means consumers often evaluate the ecological footprint of green beauty products, considering factors such as eco-friendly packaging, cruelty-free practices, and the use of sustainable sourcing. Natural and organic ingredients that incorporation of natural
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and organic components in green beauty products is a significant factor. Consumers perceive higher value when products prioritize wholesome, non-toxic ingredients [8].

Green Product Knowledge

Green product knowledge refers to consumers' awareness and understanding of environmentally friendly attributes and practices associated with a product. Understanding a product, including green product knowledge, is pivotal in influencing every stage of the consumer decision-making process, as emphasized by Bettman & Park [9]. Consumers who possess a deeper understanding of green products are more likely to exhibit heightened environmental awareness than those with less knowledge. Additionally, their enhanced cognitive abilities in recalling, recognizing, analyzing, and considering product quality stem from their appreciation of the significance of product information. Consumers with higher green product knowledge are more likely to be environmentally conscious. In the context of green beauty products, this translates to an increased awareness and consideration of the ecological impact of beauty and cosmetic items.

Social Media Green Marketing

Green marketing is defined as all activities designed to fulfill human needs or desires, so that the satisfaction of those desires occurs, by reducing detrimental impacts on the natural environment due to increased awareness about the implications of global warming, non-degradable solid waste, and the dangerous impacts of pollutants [10]. Green marketing develops four elements of the marketing mix in 4P, namely: product, price, promotion, and place. According to Esmaili & Fazeli [11], the dimensions of green marketing are firstly is green product which means a product that has potential benefits for the environment because it is made from environmentally friendly resources, has resource conservation potential, can be recycled and has the least environmental impact at all stages of its life cycle. Second is green price, namely the price determined through company policy related to environmental impact considerations imposed by company rules and instructions. Third is green promotions, namely company advertising that explicitly or implicitly discusses the product's relationship with the environment, promoting an environmentally friendly lifestyle with or without highlighting the product, showing the company's environmentally responsible activities. Lastly is green place or distribution, namely managing logistics to reduce transportation emissions with the aim of reducing the carbon footprint on earth which can worsen the environment.

Green Beauty Products Purchased Intention

Purchase intention or buying interest, according to Kamins and Assael [12] is the consumer's inclination to buy a brand or take actions related to the purchase, measured by the likelihood of the consumer making a purchase. Furthermore, according to Kotler in 2003, purchase intention is a pre-existing inclination within an individual before making a purchase, and it is influenced by the individual's prior experience with the product. This intention can stem from an evaluation of the product's performance, reliability, and satisfaction derived from past use. Additionally, purchase intention can also be shaped by an assessment of external factors that exert influence on the consumer's decision-making process. These external factors may include recommendations from peers, online reviews, or marketing strategies employed by the brand. In essence, Kotler underscores the multifaceted nature of purchase intention, emphasizing the interplay of personal experiences and external influences in shaping a consumer's decision to make a purchase.

HYPOTHESIS DEVELOPMENT

Due to consumer assessments often relying on incomplete information, the perceived value of a product, seen as a signal to them, will have a positive impact on their purchase intentions [17]. Moreover, according to Sweeney & Soutar [14] perceived value encompasses a multitude of attributes intricately tied to how a consumer perceives the inherent worth of a product. It goes beyond the tangible features and incorporates subjective elements that contribute to the overall value perception. This nuanced perspective not only influences the individual's view of the product but also plays a pivotal role in cultivating a positive word-of-mouth effect. As consumers share their favorable experiences and perceptions, a ripple effect is set in motion, creating a network of positive influence that can significantly impact the purchasing intentions of others. Perceived value will eventually shape the assessment of a product's quality in the eyes of consumers. The perceived value of a green product arises from the belief that the product is manufactured with high-quality materials, thereby not adversely affecting health and being environmentally friendly. Ultimately, this perception is believed to influence purchasing decisions regarding a product. Therefore, the first hypothesis is formulated as follows:

H1: Green perceived value has positive effect on green beauty products purchase intention.
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Knowledge about environmentally friendly products provides consumers with information about the unique attributes of a product's brand and its overall benefits for the environment. In this context, product knowledge comprises two essential components: brand awareness and brand image, as outlined by Keller [15]. Brand awareness is the strength of the brand node in the consumer's memory, representing the degree to which consumers can recognize or recall the brand. On the other hand, brand image pertains to the strong, distinctive, and favorable associations that a brand holds in the consumer's memory. Conveying knowledge about environmentally friendly products is a crucial aspect that companies should prioritize. It is imperative for businesses to educate consumers about the merits of their eco-friendly products. Furthermore, environmentally friendly products offer an added value to companies compared to conventional ones. Research conducted by Huang et al. [16] suggests that consumers with a high level of environmental awareness exhibit significantly more favorable environmental attitudes and a stronger intent to purchase green products. Hence, the second hypothesis is formulated as follows:

H₂: Green product knowledge has a positive effect on green beauty products purchase intention.

Consumers' choice to buy eco-friendly products is a selfless gesture with the explicit or implicit goal of safeguarding the environment and promoting sustainable progress [17]. Prior to make decision to buy a green beauty product, consumers will consider the blend of the product's features, environmental advantages, and associated costs. Therefore, this effect can be higher by communicating the value of green beauty products by utilizing social media. In the realm of marketing, there are many companies that are utilizing social media to market their products. The widespread use of social media by Indonesian people has created a phenomenon in the world of beauty. Various kinds of makeup tutorial videos and review images of beauty products fill the timelines on various social media platforms. This causes demand for various cosmetic products in Indonesia to increase. This momentum is used by companies to utilize social media for environmentally friendly marketing efforts, the company is aware of the target audience. It was found that social media marketing exerts a substantial and advantageous impact on customers' intentions to engage in environmentally friendly activities, as highlighted by Hynes & Wilson [18]. Furthermore, de Lenne & Vandenbosch [19] argues that sellers of eco-friendly products often share favorable environmental messages about green products on social media platforms to enhance the perceived environmental value for users, consequently fostering a positive impact on individual green purchasing behavior. Thus, the third hypothesis is formulated as follows:

H₃: Social media green marketing is able to mediate the relationship between green perceived value and green beauty products purchase decision.

Green product knowledge is regarded as the accumulation of information that consumers possess regarding environmentally friendly products and the pertinent details that influence their behavioral choices [20]. Enhanced consumer knowledge about a product facilitates a more comprehensive assessment of its quality, aiding informed purchasing decisions. This principle extends to environmentally friendly products, where heightened product awareness correlates with an increased likelihood of purchase. Knowledge stands out as a crucial factor contributing to the effective execution of the product purchasing process [21]. To increase the product knowledge, the majority of firms try to advertise their product by using social media. Social media is deemed a valuable advertising platform due to its role in enabling communication, interpersonal connections, and electronic interactions that gradually develop through word of mouth [22]. Furthermore, Dewarain et al., [23] mentioned that engagement on social media has the potential to impact consumers' choices when it comes to purchasing environmentally friendly products, as consumers perceive information from social platforms as credible and dependable. Therefore, social media advertising plays a crucial role in enhancing consumer awareness of eco-friendly products, ultimately boosting their inclination to purchase such items [24]. Thus, the fourth hypothesis is formulated as follows:

H₄: Social media green marketing is able to mediate the relationship between green product knowledge and green beauty products purchase decision.

RESEARCH FRAMEWORK

This study will systematically examine the effect of green perceived value and green product knowledge on green beauty product purchase intention, with green social media marketing as a mediating variable. The research model developed can be seen in the following chart:
RESEARCH FINDING AND DISCUSSIONS

In this research, the researcher performed a reliability assessment to ascertain if the employed indicators could be consistently responded to by participants. The criteria to measure the reliability is the Cronbach’s Alpha larger than 0.7.

Table 1: Reliability Test

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Cronbach’s Alpha</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1.00</td>
<td>Reliable</td>
</tr>
<tr>
<td>Gender</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Green Beauty Products Purchase Intention</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>Green Perceived Value</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Green Product Knowledge</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>Perception of Social Media Green Advertising</td>
<td>0.86</td>
<td></td>
</tr>
</tbody>
</table>

Based on the results from Table 1, it can be concluded that all variables meet the criteria and all are reliable.

In this study, the researcher examined the linear correlation among independent variables. The criteria for assessing the presence of multicollinearity is a Variance Inflation Factor (VIF). Variance Inflation Factor (VIF) should be lower than 5 [25]. The Table 2 study does not exhibit multicollinearity concerns since the Variance Inflation Factor (VIF) values listed in the table 2 are all below.

Table 2: Multicollinearity Test

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Green Beauty Products Purchase Intention</th>
<th>Green Perceived Value</th>
<th>Green Product Knowledge</th>
<th>Perception of Social Media Green Advertising</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1.322</td>
<td></td>
<td></td>
<td></td>
<td>No Multicollinearity</td>
</tr>
<tr>
<td>Gender</td>
<td>1.015</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>1.336</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Beauty Products Purchase Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Perceived Value</td>
<td>2.078</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Product Knowledge</td>
<td>1.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of Social Media Green Advertising</td>
<td>2.44</td>
<td></td>
<td></td>
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</tbody>
</table>
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The R Square value reflects the extent to which independent and mediating variables influence the dependent variable. This relationship is evident in the provided Table 3, which indicates that the Adjusted R Square value for the effect of independent variables on the dependent variable is 0.64. This suggests that the independent variables collectively explain approximately 64% of the variance in the dependent variable. Additionally, the coefficient for the effect of independent variables on mediating variables is 0.58, indicating that the independent variables account for approximately 58% of the variance in the mediating variables.

Table 3: R Square

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Beauty Products Purchase Intention</td>
<td>0.653</td>
<td>0.644</td>
</tr>
<tr>
<td>Perception of Social Media Green Advertising</td>
<td>0.586</td>
<td>0.582</td>
</tr>
</tbody>
</table>

Based on the results of Table 4 from the Path Coefficients table, researchers can assess each pathway using the provided results. All effects of independent and mediating variables on dependent variables indicate significance (P-value < 0.05), and positive coefficients in the Original Sample signify a positive influence of these variables on the dependent variable.

Table 4: Path Coefficients

| Effect of Variables                                      | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values | Description        |
|----------------------------------------------------------|---------------------|----------------|---------------------------|----------------|----------|--------------------|
| Green Perceived Value → Green Beauty Products Purchase Intention | 0.402               | 0.407          | 0.069                     | 5.822          | 0 < 0.05 | Supported          |
| Green Perceived Value → Perception of Social Media Green Advertising | 0.471               | 0.467          | 0.056                     | 8.45           | 0 < 0.05 | Supported          |
| Green Product Knowledge → Green Beauty Products Purchase Intention | 0.161               | 0.154          | 0.071                     | 2.283          | 0.023 < 0.05 | Supported        |
| Green Product Knowledge → Perception of Social Media Green Advertising | 0.392               | 0.397          | 0.061                     | 6.375          | 0 < 0.05 | Supported          |
| Perception of Social Media Green Advertising → Green Beauty Products Purchase Intention | 0.331               | 0.335          | 0.077                     | 4.309          | 0 < 0.05 | Supported          |

Based on the results of the mediating variable testing on Table 5, the findings demonstrate significant effects of perception of social media green advertising (p-values < 0.05). This suggests that perception of social media green advertising mediates the impact of green perceived value and green product knowledge on purchase intentions for green beauty products. Given the significant effects of both independent and mediating variables, it is concluded that the mediating variable acts partially. Therefore, perception of social media green advertising partially mediates the relationship between green perceived value, green product knowledge, and purchase intentions for green beauty products.
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Table 5: Mediating Effects

| Effect of Mediating Variables | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values | Description |
|-------------------------------|---------------------|----------------|---------------------------|--------------------------|----------|-------------|
| Green Perceived Value -> Perception of Social Media | 0.156 | 0.157 | 0.043 | 3.644 | 0 < 0.05 | Supported |
| Green Advertising -> Green Beauty Products Purchase Intention | 0.129 | 0.134 | 0.04 | 3.223 | 0.001 < 0.05 | Supported |

CONCLUSION, LIMITATION AND SUGGESTIONS

The cosmetics and beauty industry in Indonesia experiencing unprecedented growth, with companies competing fiercely for consumer attention through diverse marketing strategies and product presentations. Based on the findings of this study, there are two fundamental factors that affect consumer purchasing decisions. First is the green perceived value which consumers meticulously evaluate the value proposition of a product, considering its benefits, ingredients, and pricing to ascertain its desirability. Second is green product knowledge which refers to the effectiveness of companies in imparting information about beauty products, including their features and benefits, significantly influences consumer preferences.

Based on the findings of this research, it is evident that two critical factors influence consumer purchase intentions of green beauty products: perceived product value and the availability of comprehensive product information that shapes consumer knowledge. Additionally, leveraging social media effectively, particularly through green marketing campaigns, is essential for promoting the value and benefits of green beauty products. To capitalize on these insights, companies can employ various marketing and advertising strategies to effectively market their green beauty products on social media platforms. Embracing User Generated Content (UGC) such as product reviews, testimonials, and firsthand experiences can foster trust and authenticity among potential customers. Encouraging previous customers to share their testimonials can provide valuable insights into the benefits and efficacy of
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green beauty products, aiding new or prospective customers in understanding their value. Furthermore, collaborating with previous customers who have encountered skin problems or possess diverse skin types can be advantageous. By showcasing real-life examples of individuals with various skin concerns benefiting from green beauty products, companies can reinforce the safety and efficacy of their products for a diverse range of consumers.

One limitation of this study is the limited number of male respondents, which affects the effectiveness of the control variables. Therefore, future research is expected to achieve a balanced number of respondents between males and females. Ensuring a more equitable representation of both males and females in future research would improve the validity and generalizability of the findings. Additionally, future research could consider incorporating other factors such as occupation, level of education, and geographical origin. This broader approach would offer a more comprehensive understanding of consumer behavior and preferences. Moreover, conducting the study in different regions or countries is encouraged, as this study solely relies on data from Indonesian consumers. Conducting research in different regions or countries would provide insights into how cultural and contextual differences may influence the relationships studied.

REFERENCES

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