Green beauty care choices: Mediating effects of self-generated word of mouth on Gen Z buying behavior

Ita Athia¹*, Muh. Sirojuddin Amin²*, Muhammad Zulfaris Mohd Salleh³

¹ Department of Management, Faculty of Economics and Business, University of Islam Malang, Malang, Indonesia
² Department of Management, Faculty of Economics and Business, University of Islam Malang, Malang, Indonesia
³ Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Bachok, Malaysia

*Corresponding Author(s) Email: itaathia@unisma.ac.id, aminsirojuddin@unisma.ac.id

ABSTRACT

With growing concern about environmental issues, purchasing behavior has significantly changed, especially among women. They now seek extensive information about environmentally friendly beauty care brands, often relying on word of mouth to guide their decisions. Existing studies on word of mouth largely focus on the receiver perspective. However, there is a notable gap in studies examining the impact of word of mouth on the senders themselves. Motivated by addressing this significant gap in the literature, we dedicate this exploratory study to investigating sender outcomes, such as purchase decisions. To gather relevant data, we used purposive and snowball sampling methods, specifically targeting Indonesian Gen Z women who are aware of environmental issues and use beauty care products. Results from PROCESS Macro Model 4, based on responses from 253 respondents, show that the high perception of environmentally friendly beauty care product quality significantly affects both word of mouth and repurchase intention, both directly and indirectly. While an environmentally friendly brand image directly impacts repurchase intention, it does not influence WOM. This suggests that Gen Z is more likely to tell and share their experiences about the benefits and effectiveness of high-quality, natural ingredient beauty care products rather than the brand’s environmental commitments and activities.

Keywords: Purchase Decision; Word of Mouth; Product Quality; Brand Image; Generation Z; Green Behavior

JEL Code: D91, L67, M31, Q56

DOI: 10.31106/jema.v21i1.21697

Article History:
Received 2024-03-01
Reviewed 2024-03-25
Revised 2024-04-15
Accepted 2024-04-22

Licensed: CC-BY

How to Cite:
Green beauty care choices: Mediating effects of self-generated word of mouth on Gen Z buying behavior by Ita Athia, Muh. Sirojuddin Amin, Muhammad Zulfaris Mohd Salleh

Introduction

The increasing awareness of environmental issues and health-conscious choices has spurred the popularity of environmentally friendly products, including cosmetics with natural ingredients (Sreen et al., 2021; Zollo et al., 2021). These products are seen as promoting a healthier lifestyle and embodying a "greener" or natural and safer alternative to conventional options, as consumers increasingly seek to avoid specific compounds like parabens and fragrances in their purchases (Hansen et al., 2012). In general, green beauty care products are valued for their perceived purity (Moscato & Machin, 2018), encompassing natural and organic cosmetics such as skincare, body care, hair care, oral care, color cosmetics, and toiletries. These items prioritize natural and organic ingredients and refrain from synthetic chemicals in their formulations, often packaged in reusable materials (Amberg & Fogarassy, 2019; Sadiq et al., 2021). However, the absence of a universally agreed legal definition for "natural" poses challenges for product labeling in this sector (Chambers & Castro, 2018).

There are products marketed with labels claiming they are devoid of these substances, including preservatives, PEG emulsifiers, paraffin, mineral oil, silicon, or microplastic materials. This labeling leads consumers to assume these personal care items contain fewer potentially harmful chemicals despite their limited understanding of these ingredients' specific properties and concentrations (Klaschka, 2016b).

The growing awareness of environmentally friendly green beauty care products is driving global beauty care companies to expand their product lines with more natural ingredients and formulations (Kumar et al., 2021; Zollo et al., 2021). To maintain consumer trust and preference, they must transparently communicate product attributes and uphold brand integrity, as emphasized by Cindy and Zai (2024). As an outlook, the global market for natural skincare products soared to USD 13.87 billion in 2024 and is projected to maintain a robust compound annual growth rate (CAGR) of 6.75% from 2025 to 2030. In Asia, the natural cosmetics market is set to hit USD 6.77 billion by 2024, with an impressive annual growth projection of 7.38% from 2024 to 2028 (CAGR 2024-2028), highlighting its increasing prominence in the region (Statista, 2024).

Indonesia's cosmetics and personal care market is experiencing rapid growth, being one of Asia's fastest-growing consumer goods segments (Nurhayati-Wolff, 2023; Ardhia & Mayangsari, 2020). In 2023 alone, it surged by five percent and is projected for an even more impressive nine percent growth by 2026 (Aziz, 2024). The rapid growth in Indonesia's beauty care sector is fueled by its expanding middle-class and generation Z cohort, projected to swell
from 54 million in 2023 to an estimated 135 million by 2030 (Aziz, 2024; Nurhayati-Wolff, 2023). Skincare products with a brightening effect remain popular among Generation Z women in Indonesia, with 77.4 percent seeking these benefits (Nurhayati-Wolff, 2023). Simultaneously, there is also a burgeoning demand for skincare solutions that offer UV protection, acne scar treatment, hydration, and blackhead removal, indicating an immense growth potential for the emergence of new product clusters within the beauty care market. This trend is complemented by a growing preference among Gen Z consumers for "clean and natural" beauty products, which prioritize natural ingredients and avoid synthetic additives, reflecting a broader shift towards sustainable and health-conscious choices (Young, 2023).

According to the IDN Research Institute's 2022 Indonesia Gen Z report, 66% of Gen Z are willing to invest more in sustainable products, underscoring their commitment to environmental responsibility (Dianawanti, 2022). Similarly, studies from Tseng and Hung (2013) and Chen (2008) indicate that consumers are willing to pay more for environmentally friendly products because they perceive them as contributing positively to sustainability efforts and reducing ecological footprints. Also, green products are often seen as higher quality or more innovative, which justifies their higher price points (Marcon et al., 2022; Chekima et al., 2016).

In the beauty care industry, consumer decision-making is profoundly influenced by perceptions of product quality and brand image. As highlighted by Mohammed et al. (2021), consumers prioritize high-quality cosmetics for their perceived ability to enhance overall appearance. Handriana et al. (2021) also found that innovative cosmetic formulations can deliver lasting improvements in features that consumers seek to change. Additionally, halal certification and natural ingredients, considered safer and environmentally friendly, further boosts consumer perceptions of product quality (Suphasomboon & Vassanadumrongdee, 2022). Faisal-E-Alam (2020) notes that international brands are often perceived as higher in quality and preferred for prestige. In contrast, local brands struggle with perceptions of inferior quality, which affects consumer choices.

Establishing a positive brand image is crucial for cosmetics companies seeking to influence consumer purchasing decisions through differentiation and reputation. Research by Majeed et al. (2023) highlights the significant impact of a positive brand image on consumer behavior, showing its ability to positively sway purchasing decisions. However, Lu and Chen (2017) argue that brand image may not consistently foster consumer loyalty, especially in saturated markets with varying pricing strategies that diminish brand influence. The inconsistent findings from previous studies regarding the influence of brand image on buying
behavior present a compelling reason for this study to explore brand image as a crucial factor in purchasing behavior.

This study emphasizes Generation Z as the focal group for examination. Studying their preferences in the beauty care category is essential due to several highlighted factors in recent research. Firstly, this generation demonstrates a high level of understanding regarding safe skincare practices, positioning them as knowledgeable consumers (Paramita et al., 2022; Klaschka, 2016a; Klaschka, 2016b). Furthermore, their purchasing decisions are heavily influenced by social factors (Kalsi, 2023; Lee et al., 2023; Gebashe et al., 2022) and reputation (Hsu et al., 2017; Al Mamun et al., 2023; Huong et al., 2024). Additionally, their strong awareness of environmental issues motivates a growing demand for eco-friendly skincare products driven by values of altruism and safety (Suphasompoon & Vassanadumrongdee, 2022; Tsaabitah, 2022; Kumar et al., 2021; Hsu et al., 2017; Zulfikar, & Mayvita, 2019). Nguyen-Viet and Nguyen (2024) note that while green consumer behavior has been extensively studied in Western and selected Asian countries like China, Thailand, and India, there remain insufficient studies concerning green behaviors in Indonesia. This gap is significant given Indonesia's severe environmental challenges stemming from rapid economic growth and unsustainable consumption behaviors. Therefore, this study delves into the perceptions of Generation Z women in Indonesia regarding their repurchasing intentions related to environmentally friendly beauty care products.

Lastly, significant gaps remain despite some studies examining how word of mouth affects those who spread it (Berger & Milkman, 2012; Chawdhary & Dall’Olmo Riley, 2015; Chen & Gao, 2019). This study investigates how consumers' word-of-mouth activities influence their attitudes and behaviors toward specific environmentally friendly beauty care brands. Our study considers self-generated word of mouth as an internal validation mechanism used by them to evaluate the quality and image of these brands rather than as an external influence on their behavioral outcomes. A comprehensive understanding of the broader impacts of participating in word of mouth is crucial for fully comprehending its effects.

**Literature Review**

**Green Product Quality and Brand Image**

Green consumers are individuals dedicated to environmental stewardship, conscientiously adapting their consumption behaviors (Afridi et al., 2021). According to Georgantzis Garcia et al. (2021), these individuals actively participate in pro-environmental
actions such as recycling and reducing household waste, driven primarily by environmental motivations. They recognize their role in advancing environmental sustainability through their purchasing choices, opting for products that minimize environmental impact across their lifecycle (Zaremohzzabieh et al., 2021). Additionally, green consumerism has profoundly influenced the strategic decisions of businesses (Maniatis, 2016), prompting many to adapt their manufacturing processes and operational practices accordingly (D'Souza & Taghian, 2005). However, the eco-friendly nature of products alone does not guarantee exceptional sales in the green era (Chen & Chang, 2012). Therefore, marketers must strive to understand the factors influencing consumers’ intentions to purchase green products (Paul et al., 2016), as these intentions are often predictive of actual consumer behavior.

Product quality and brand image represent critical factors influencing green purchase decisions. The perception of product quality is inherently subjective, as Yao et al. (2022) and De Silva and Herath (2019) underscored. They emphasize that a product's perceived superiority is relative and shaped by individual preferences and expectations. Product quality can be broadly categorized into two dimensions: objective quality, which includes technical attributes, appearance, and durability (Wang et al., 2020), and perceived quality, which reflects customers' overall subjective assessment relative to their expectations (Chen et al., 2023; De Silva & Herath, 2019; Huang, 2022). According to Wang et al. (2020), the criteria for assessing product quality include ease of use, functionality, performance, durability, serviceability, and prestige. While consumers prioritize eco-friendly attributes, such as minimal environmental impact and sustainable practices, the perceived quality of products and the reputation of brands play pivotal roles (Suttikun & Meeprom, 2021; Yan et al., 2019). These factors enhance consumer trust and satisfaction and contribute significantly to their willingness to choose environmentally responsible products over conventional alternatives (Kurniawan & Indriani, 2018; Upamanyu et al., 2021). Positive product quality experiences often prompt customers to leave favorable reviews or recommend the product to others, influencing word-of-mouth communication. Conversely, when product quality fails to meet expectations, it typically leads to negative reviews and may deter potential customers from purchasing the product. Additionally, the following hypotheses are proposed:

H1: Perceptions of environmentally friendly beauty care product quality directly influence self-generated word of mouth.

H2: Perceptions of environmentally friendly beauty care product quality directly influence their intention to make repurchases.
Brand image is a consumer's perception of a brand formed through experience, information, and interaction with the brand. Huang (2022). In the context of environmentally friendly skincare products, the brand image includes perceptions about using natural ingredients, sustainable production processes, and commitment to environmental sustainability (Maniatis, 2016). A strong and positive brand image can encourage consumers to engage in self-generated WOM. Majeed et al. (2023) found that a positive brand image influences consumer purchasing decisions in the cosmetics industry, including skin care. Consumers with positive perceptions of brands tend to be more confident and motivated to share their experiences. In addition, research from Lee et al. (2019) shows that authentic communication in cosmetic product packaging can increase consumer engagement and encourage them to share their experiences voluntarily.

Self-generated word-of-mouth (WOM) refers to consumers voluntarily sharing their experiences, information, or opinions about a product or brand without external incentives. According to Sofiane (2019), WOM based on consumer brand equity significantly impacts consumer behavior, including purchasing decisions and loyalty. Self-generated WOM often plays a crucial role in forming and strengthening a brand's image by sharing positive experiences voluntarily, which can build trust and loyalty among other consumers (Huang, 2022). Lu and Chen (2017) added that consumers' knowledge and openness to new experiences influence their involvement in WOM. Additionally, Kuppelwieser et al. (2022) found that positive customer experiences increase perceived value and encourage positive WOM. In Indonesia, Gen Z tends to seek specific benefits from skincare products, such as natural and environmentally friendly ingredients (Nurhayati-Wolff, 2023). They are more likely to share their experiences if the product meets their expectations for quality and environmental sustainability.

H3: Self-generated word of mouth is directly influenced by perceptions of environmentally friendly beauty care brand image.

On the other hand, repurchase intention is the consumer's desire to buy products or services from the same brand again (Valentio, 2024). He also noted that past positive experiences, customer satisfaction, and strong brand perceptions often shape this desire. Cuong (2022) also confirmed the link between brand image and repurchase intention. Similarly, Lu & Chen (2017) showed that consumers' knowledge and openness to new experiences affect their participation in word-of-mouth, which in turn influences their intention to repurchase.
H4: Perceptions of environmentally friendly beauty care brand image directly influence their intention to make repurchases.

**Mediation Effect of Self-Generated Word of Mouth**

Word-of-mouth has traditionally involved direct communication between peers discussing brands or products without commercial intent (Indrawati et al., 2022). As the internet rapidly expanded, traditional word-of-mouth transformed into Electronic Word-of-Mouth (eWOM), spreading across platforms like social media, weblogs, forums, reviews, and e-commerce (Cheung & Lee, 2012). While traditional word-of-mouth remains informal and person-to-person (Guo et al., 2022), eWOM dynamically exchanges continuous information about brands, products, companies, or services across blogs, social media, forums, and reviews, reaching a vast audience (Ismagilova et al., 2017). This evolution broadened eWOM to encompass both positive and negative feedback on brands, products, or services shared by past, current, and potential consumers, accessible to anyone online (Sulthana & Vasantha, 2019). Wang et al. (2021) added that negative word of mouth tends to exert more influence than positive word of mouth, as negative information tends to be more memorable and can provoke stronger emotional responses. Interestingly, people often view negative opinions as more credible and informative, as they highlight potential risks or problems.

A significant research on word of mouth has focused on identifying its antecedents. Quality is a critical factor influencing customer post-consumption evaluations, such as satisfaction, value, trust, and loyalty (Suttikun & Meeprom, 2021). Consumer trust is believed to be directly linked to the perceived quality of a product or brand, which serves as a primary indicator among consumers (Yan et al., 2019). Product quality, encompassing attributes that shape consumer perceptions, can enhance positive word-of-mouth effects, reduce customer management costs, support premium pricing, and increase purchase frequency (Kurniawan & Indriani, 2018). Pham et al. (2018) define perceived value as a concept where customers evaluate the utility received relative to what is given.

Additionally, Kuppelwieser et al. (2022), Ali and Bashin (2019), and van Tonder et al. (2018) underscore how perceived value across utilitarian, hedonic, and social dimensions not only influences consumer behavioral intentions but also shapes their word-of-mouth behavior. Thus, a more positive perceived value of product quality increases the likelihood of individuals engaging in word-of-mouth activities. Conversely, Upamannyu et al. (2021) reveal that corporate and brand image significantly impact word of mouth for both high-
priced and low-priced products. Huang (2022) further emphasizes that brand image and reputation are critical in linking marketing strategies with word-of-mouth outcomes.

Existing research on the consequences of online word of mouth largely focuses on the receiver perspective (Wang, 2011; Lin & Kalwani, 2018). However, there is a notable gap in studies examining the impact of word of mouth on the senders themselves. Motivated by addressing this significant gap in the literature, we dedicate this exploratory study to investigating sender outcomes, such as purchase decisions (Chawdhary & Dall’Olmo Riley, 2015; Cowley, 2014), resulting from word-of-mouth participation. In our study, we defined self-generated word of mouth as informal conversations among individuals discussing a product, service, or brand, usually initiated by the individuals rather than being part of any marketing campaigns. It includes personal recommendations, opinions, or experiences shared willingly by consumers with their friends or peers, whether face-to-face or through online platforms like social media, forums, blogs, or review sites.

Our study differs significantly from Berger and Milkman (2012) in its focus on consumers' word-of-mouth activities specifically related to environmentally friendly beauty care brands rather than examining viral marketing content. Similarly, compared to Chen and Gao (2019), who explore how senders feel about posting their self-generated online marketing content, our study extends beyond emotional responses to examine the broader temporal outcome of online word of mouth on senders. While they explore how senders feel about posting their self-generated online marketing content and its immediate and delayed impacts, our research specifically focuses on the influence of consumers' word-of-mouth activities on their perceptions of environmentally friendly beauty care brands. We investigate how these activities serve as internal validations that affect their (senders) brand assessments and purchase decisions rather than solely examining the emotional and trust-related outcomes experienced by senders of online marketing content. Furthermore, significant mediation of word-of-mouth on buying behavior has been identified in studies such as Tien et al. (2018), which demonstrated that the mediating effects of word of mouth adoption on the influences of product usefulness and credibility on purchase intention are all substantial.

H5: Self-generated word of mouth mediates the relationship between consumers' perceptions of environmentally friendly beauty care product quality and their repurchase intentions.

H6: Self-generated word of mouth mediates how consumers perceive the image of environmentally friendly beauty care brands and their intention to make repurchases.
Methods

Figure 1. Framework

![Framework Diagram]

The study aims to assess how perceived product quality and brand image influence the repurchase intention of green beauty care products, while also exploring the potential mediating effect of self-generated word of mouth. To achieve these objectives, quantitative data collection methods were employed to predict how variables in the research framework interact and affect consumer buying behavior in the context of environmentally friendly beauty products. Figure 1 illustrates the conceptual framework depicting these relationships.

Respondents were gathered using purposive and snowball methods. The study focuses on Indonesian women belonging to Generation Z, as they demonstrate a high level of knowledge about healthy skincare products and treatments (Paramita et al., 2022; Klaschka, 2016a; Klaschka, 2016b) and exhibit strong awareness of environmental issues (Suphasomboon & Vassanadumrongdee, 2022; Tsaabitah, 2022; Kumar et al., 2021; Hsu et al., 2017). Furthermore, this study focuses on respondents from Indonesia due to findings by Ferdinand and Ciptono (2022), who cited a 2019 report from the Indonesian French Chamber of Commerce and Industry. The report underscores Indonesia's thriving cosmetic industry, projected to grow at a CAGR of approximately 7.5% from 2021 to 2027, marking it the fastest-growing market in Asia.

The study excluded individuals who had never purchased a skincare product, first-time skincare product customers, purchasers under 17 years old or over 27 years old (outside the Generation Z cohort), and those who were unable to answer survey questions, provided incomplete survey responses, or declined to participate. Additionally, individuals who had never purchased skincare products, lacked general environmental awareness or concerns, and were not engaged in simple green behaviors (such as separating organic and non-organic waste or purchasing environmentally friendly products) were also excluded. An online field study was conducted from August 1 to September 28, 2023, using a snowball sampling method to test the hypotheses and research framework. Snowball sampling was chosen due to
the challenge of identifying respondents directly, relying instead on referrals from initial respondents (Damanik, 2019). The survey was made accessible to respondents based on their preferences, with an anonymous URL created using Google Forms distributed through WhatsApp. Respondents who completed the survey were encouraged to voluntarily share the survey URL with their social circles to enhance distribution and response rates. After reviewing the 317 survey responses received, 64 responses were deemed ineligible for analysis. Following data analysis, 253 surveys were deemed usable, resulting in a response rate of 79.8%, surpassing the typical 50–90% response rates reported in previous studies (e.g., Bryce et al., 2015; Meeprom & Silanoi, 2020). Therefore, non-response bias was not a concern in this study.

The study questionnaire is structured into three sections. The first section gathers demographic information, including age and frequency of beauty care product use (daily, weekly, monthly). The second section explores respondents' environmental awareness or concerns and their engagement in simple green behaviors (such as waste separation and environmentally friendly product purchases). The final section focuses on perceptions of environmentally friendly beauty care product quality, evaluation of the brand image, self-generated word of mouth, and intention to repurchase environmentally friendly beauty care brands. To evaluate these variables, the 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5) was conducted. We measured perceived product quality in our study using a set of four items proposed by Lee et al. (2019). Next is a brand image, with four items adapted from dynamism, usefulness, reliability, and effectiveness, as defined by Michaelidou et al. (2015). Additionally, repurchase intention was evaluated using a scale adapted from Wang et al. (2019), comprising four items. Self-generated word of mouth was gauged using a measurement scale derived from Chawdhary and Dall'Olmo Riley (2015) and Chen and Gao (2019), which encompassed four items.

Table 1 presents the results of reliability and correlation analyses for four key variables in the study: Perceived Product Quality (QUAL), Brand Image (IMG), Self-Generated Word of Mouth (WOM), and Repurchase Intention (INT). The QUAL variable demonstrates high reliability with a Cronbach’s alpha of 0.881, exceeding the threshold of 0.60, and strong Pearson correlations ranging from 0.806 to 0.890, indicating consistent perceptions of product quality despite environmental friendliness. Similarly, IMG exhibits strong internal consistency (α = 0.875) and significant correlations (ranging from 0.799 to 0.893), suggesting favorable perceptions of brand innovation, trustworthiness, and environmental commitment. WOM shows moderate reliability (α = 0.745) with correlations ranging from 0.725 to 0.789,
Table 1. Pearson Correlation and Cronbach’s Alpha

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Product Quality (QUAL)</td>
<td>Despite being environmentally friendly, this beauty care product maintains consistent quality</td>
<td>0.890</td>
</tr>
<tr>
<td></td>
<td>Despite being environmentally friendly, this beauty care product meets an acceptable standard of quality</td>
<td>0.881</td>
</tr>
<tr>
<td>$\alpha = 0.881$</td>
<td>Despite being environmentally friendly, this beauty care product is well-made</td>
<td>0.806</td>
</tr>
<tr>
<td></td>
<td>Although environmentally friendly, this beauty care product offers competitive quality</td>
<td>0.858</td>
</tr>
<tr>
<td>Brand Image (IMG) $\alpha = 0.875$</td>
<td>The brand that shows environmental concern is innovative</td>
<td>0.893</td>
</tr>
<tr>
<td></td>
<td>The brand is considered trustworthy when it demonstrates environmental awareness</td>
<td>0.888</td>
</tr>
<tr>
<td></td>
<td>The brand is viewed favorably when it demonstrates environmental consciousness</td>
<td>0.799</td>
</tr>
<tr>
<td></td>
<td>Only reputable brand that actively promotes environmental sustainability</td>
<td>0.828</td>
</tr>
<tr>
<td>Self-Generated Word of Mouth (WOM) $\alpha = 0.745$</td>
<td>I will recommend others to use only environmentally friendly beauty care products</td>
<td>0.780</td>
</tr>
<tr>
<td></td>
<td>I will encourage others to buy environmentally friendly beauty care products</td>
<td>0.789</td>
</tr>
<tr>
<td></td>
<td>I will show others the benefits of using environmentally friendly beauty care products</td>
<td>0.725</td>
</tr>
<tr>
<td></td>
<td>I will recommend environmentally friendly beauty care products to those seeking my beauty advice</td>
<td>0.785</td>
</tr>
<tr>
<td>Repurchase Intention (INT) $\alpha = 0.679$</td>
<td>I will continue to use environmentally friendly beauty care brands in the future</td>
<td>0.666</td>
</tr>
<tr>
<td></td>
<td>I will only buy beauty care brands that offer environmentally friendly products</td>
<td>0.750</td>
</tr>
<tr>
<td></td>
<td>I will reuse environmentally friendly beauty care products</td>
<td>0.700</td>
</tr>
<tr>
<td></td>
<td>I will rebuy beauty care brands that have natural ingredients</td>
<td>0.805</td>
</tr>
</tbody>
</table>
indicating varying intentions to recommend and promote environmentally friendly products through word of mouth. INT displays acceptable reliability ($\alpha = 0.679$) and correlations (0.666 to 0.805), reflecting positive intentions to continue purchasing and using environmentally friendly beauty care products. Lastly, the study concluded by investigating how self-generated word of mouth (WOM) acts as a mediator between perceived product quality (QUAL) and brand image (IMG) on repurchase intention (INT), employing bootstrap estimates from 5000 samples. Hypotheses 5 and 6 were tested using model 4 in the PROCESS Macro for SPSS, focusing on the confidence intervals (CI) derived from bootstrap analysis. Significant mediation effects were determined if the CI did not include zero, as outlined by Hayes and Rockwood (2017). Additionally, direct effects were considered significant if p-values were below 0.05 (Hayes, 2017).

**Result and Discussion**

Table 4 presents a breakdown of demographic profiles and behavioral characteristics among participants in the study. The age distribution reveals a predominant representation of young adults, with 61% of respondents aged between 20-23 years, 31% in the 17-19 age group, and 8% aged 24-27 years. This age distribution signifies a focus on Generation Z, known for their significant influence on consumer trends, particularly in environmentally conscious markets. Moreover, regarding beauty product usage frequency, a substantial majority (71%) of respondents use these products daily, with 15% using them weekly and 14% monthly. Regarding chemical awareness, 44% of respondents are familiar with substances like parabens, sodium sulfate, and formaldehyde, while another 56% have moderate awareness. This high familiarity suggests a discerning consumer base that values safety and sustainability in its beauty choices. Lastly, nearly half of the respondents (47%) engage in green behaviors regularly, with 53% doing so occasionally, demonstrating a proactive stance towards environmental responsibility.

Table 5 presents the PROCESS Macro Model 4 analysis results, which examined the study's hypotheses. From the analysis in Table 5, it's clear that Hypothesis 1 (H1), which tests the direct link between perceived product quality and self-generated word of mouth, is strongly supported (Coefficient = 0.895, $t = 7.778$, $p < 0.050$). This shows that when consumers believe environmentally friendly beauty products are of high quality, they're likely to share positive opinions about them with others. Similarly, Hypotheses 2 (H2) and 4 (H4) also show strong support with p-values < 0.050 ($t= 2.261$, $p=0.027$ and $t=7.815$, $p=0.000$). These results indicate that as consumers perceive better quality in environmentally friendly
beauty products and their brand image improves, they're more inclined to buy these products or brands again.

Hypothesis 3 (H3) was not supported, with a p-value greater than 0.050 (t=1.429, p=0.157). This result suggest that the image of beauty care brand does not always serve as a

**Table 4. Demographic Profiles**

<table>
<thead>
<tr>
<th>Profiles</th>
<th>Frequency</th>
<th>Percentages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 - 19 years old</td>
<td>79</td>
<td>31</td>
</tr>
<tr>
<td>20 – 23 years old</td>
<td>155</td>
<td>61</td>
</tr>
<tr>
<td>24 – 27 years old</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>How often do you use beauty products?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>179</td>
<td>71</td>
</tr>
<tr>
<td>Weekly</td>
<td>39</td>
<td>15</td>
</tr>
<tr>
<td>Monthly</td>
<td>35</td>
<td>14</td>
</tr>
<tr>
<td>Are you familiar with these chemicals: Parabens, Sodium</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>111</td>
<td>44</td>
</tr>
<tr>
<td>Moderate</td>
<td>142</td>
<td>56</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lauryl Sulfate, Triclosan, Microbeads, Formaldehyde, and Mineral Oil?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often do you engage with green behavior?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regularly</td>
<td>119</td>
<td>47</td>
</tr>
<tr>
<td>Occasionally</td>
<td>134</td>
<td>53</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Table 5. PROCESS Macro Model 4 Result**

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Coefficient</th>
<th>t-Value</th>
<th>p-Value</th>
<th>Decision</th>
<th>Effect</th>
<th>Boot-LLCI</th>
<th>Boot-ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: QUAL -&gt; WOM</td>
<td>0.895</td>
<td>7.778</td>
<td>0.000</td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2: QUAL -&gt; INT</td>
<td>0.420</td>
<td>2.261</td>
<td>0.027</td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3: IMG -&gt; WOM</td>
<td>0.152</td>
<td>1.429</td>
<td>0.157</td>
<td>Unsupported</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4: IMG -&gt; INT</td>
<td>0.597</td>
<td>7.815</td>
<td>0.000</td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5: QUAL -&gt; WOM -&gt; INT</td>
<td>0.292</td>
<td>0.085</td>
<td>0.264</td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6: IMG -&gt; WOM -&gt; INT</td>
<td>0.105</td>
<td>-0.032</td>
<td>0.036</td>
<td>Unsupported</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
basis for consumers to engage in word-of-mouth activity for environmentally friendly beauty care products. Additionally, mediation effects were measured in this study, specifically in Hypothesis 5 (H5) and Hypothesis 6 (H6). For Hypothesis 5 (H5), the range of Boot-LLCI=0.085 and Boot-ULCI=0.264 indicates that this range does not cross zero. According to Hayes & Rockwood (2017), this finding suggests that WOM mediates the relationship between perceived product quality and repurchase intention. On the other hand, Hypothesis 6 (H6) has a Boot-LLCI range of -0.032 and Boot-ULCI of 0.036, indicating that this range crosses zero. Therefore, this result shows that even with the support of WOM, brand image does not influence repurchase intention.

**The direct effect of perceived environmentally friendly beauty care product quality on self-generated word of mouth and repurchase intention**

The results of this study show that perceptions of the quality of environmentally friendly beauty care products significantly influence self-generated word of mouth among Gen Z consumers. Gen Z consumers tend to be more vocal in sharing positive experiences about skincare products they consider to be high quality and environmentally friendly. Amberg and Fogarassy's (2019) research supports these findings, showing that consumers who care about the environment are more likely to share information about products that meet environmental standards. Cheung and Lee (2012) also stated that high product quality encourages consumers to spread word of mouth, especially on online consumer opinion platforms. Cowley (2014) also revealed that consumers tend to recount their positive experiences, especially if they feel the product is of high quality.

Faisal-E-Alam (2020) adds that high-quality perceptions influence purchase intentions, increasing consumers' likelihood to recommend products to others. Furthermore, Suphasomboon and Vassanadumrongdee (2022) showed that perceived value and ethical concerns play an important role in the sustainable consumption of green cosmetic products. This reinforces the finding that Gen Z is more motivated to share experiences about products they consider high quality and ethical. Van Tonder et al. (2018) also found that relationship quality and perceived value influence positive word-of-mouth intentions in the banking sector, which can be adapted to the beauty sector. These findings align with Young's (2023) report, highlighting how Gen Z is changing the beauty landscape with their preference for quality and environmentally friendly products.

Perceived product quality is crucial in driving repurchase intention among consumers in this research. Gen Z, in particular, tends to make repeat purchases because they trust the
quality of skincare products made from natural ingredients and free from chemicals, believing them to be safe for long-term use. These findings empirically demonstrate that perceptions of environmentally friendly beauty care product quality significantly shape the tendency of Gen Z consumers to repurchase products. Indirectly, perceived product quality influences consumer behavior, ultimately leading to repeat purchases (Teangsompong et al., 2024). Positive perceptions of product quality foster strong trust in a brand, and as consumer perceptions of quality increase, so does their confidence, encouraging repeat purchases.

Additionally, the impact of perceived product quality on repurchase intention is further reinforced by customer satisfaction. Wang and Lu (2014) found that the complexity of a product indirectly influences repurchase intentions by boosting customer satisfaction. When consumers perceive a product to have a high level of complexity, including adequate functionality and features without causing confusion or usability issues, they are more likely to be satisfied with the product. Furthermore, companies should focus on enhancing quality, cost, and packaging elements that align with consumer desires to provide a more satisfying experience (Sharif et al., 2024). This increases consumer satisfaction and loyalty and positively impacts the product's reputation, ultimately encouraging consumers to make repeat purchases.

**The direct effect of beauty care brand image evaluation on self-generated word of mouth and repurchase intention**

Previous research by Zhang (2015) indicated that a strong brand image can significantly influence consumer behavior, including word of mouth. However, this study found that this study shows that self-generated word of mouth is not influenced by perceptions of environmentally friendly skincare brand images among Gen Z. These findings suggest that campaigns aiming to propagate brands that have concerns about environmental issues are less popular with Gen Z respondents. Instead, they are more enthusiastic about sharing the advantages of brands based on the quality and effectiveness of skincare products. Sofiane (2019) emphasized the importance of consumer-based brand equity in driving word-of-mouth behavior. Still, this study found that brand equity based on environmental attributes was not strong enough to motivate Gen Z to share information.

Additionally, Huang (2022) showed that effective marketing strategies and strong value perceptions can influence word of mouth outcomes. However, in the context of Gen Z and environmentally friendly skincare products, aspects of product quality and effectiveness are more dominant. Research by Cowley (2014) and Cheung & Lee (2012) also highlights that
compelling consumption stories and positive experiences are key enablers of word-of-mouth. This is consistent with the finding that Gen Z is more likely to share when they experience direct benefits from product quality rather than just the environmentally friendly image.

Furthermore, the result of the study also show that the perception of an environmentally friendly beauty care brand image significantly influences the intention to repurchase among Indonesia Gen Z women. This is because they are interested in skincare products made from natural and chemical-free ingredients, which are believed to be good for long-term skin health. These findings align with Bhakuni et al. (2021), who demonstrated that a strong brand image can enhance repurchase intentions by strengthening the store's image. Research by Majeed et al. (2023) and Lucky et al. (2023) also confirmed that brand image plays a crucial role in purchasing decisions within the cosmetics industry. Similarly, Zollo et al. (2021) and Marcon et al. (2022) found that social trust in organic personal care products significantly influences consumer behavior and purchase intentions, highlighting the importance of brand image in buying decisions. Moreover, Gen Z's deep concern for environmental issues aligns with their strong purchase intentions for green skincare products (Tsaabitah, 2022). Screen et al. (2021) further noted that environmental considerations bolster affection for natural product brands, while Lu & Chen (2017) and Lee et al. (2019) highlighted the importance of consumer knowledge and authentic packaging in shaping the brand image and purchase intentions.

The mediation role of self-generated word of mouth

The result of this study highlights the crucial role of word of mouth in connecting product quality with repurchase intention. Our respondents believe that beauty care products with natural ingredients are high quality and that chemical-free products are good for their skin. They firmly believe in the long-term benefits of chemical-free skincare. This belief in quality leads to positive word of mouth, where they eagerly share their good experiences, showing their intention to make repeat purchases. Positive word of mouth will only occur if consumers perceive the product's attributes (Chawdhary & Dall’Olmo Riley, 2015; Cowley, 2014). Therefore, beauty industry needs to adapt to these values, as Gen Z consumers also focus on environmentally friendly packaging, such as recyclable and organic materials (Mufashih et al., 2023). Satisfied consumers are more likely to share their positive experiences, with word of mouth acting as an amplifier that spreads positive information about product quality, thereby increasing the likelihood of repurchase intentions.
Interestingly, self-generated word of mouth did not mediate the relationship between brand image and repurchase intention in our study. While many studies, such as those by Lena Ellitan (2024) and Mufashih et al. (2023), found that word of mouth can boost their repurchase intentions by providing positive reviews and recommendations, other research, like that of Liu et al. (2021) and Troiville (2024), shows that word of mouth may not significantly influence the decision to repurchase. Our respondents' feedback indicates their commitment to sharing information is still low, particularly regarding the self-generated word of mouth about environmentally friendly beauty care brands. This study shows that although word of mouth is generally a strong factor in influencing purchasing decisions, it is not powerful enough to mediate the relationship between brand image and repurchase intention in the context of environmentally friendly skincare products. Yoo et al. (2013) explains that repurchase intentions are primarily driven by consumers' direct experiences with the brand. These experiences are shaped by a strong and consistent brand image, which directly influences consumer trust and loyalty. Consequently, the role of word of mouth as a mediator between brand image and repurchase intention becomes less important than the direct impact of brand image itself.

**Conclusion and Suggestion**

This study highlights perceived product quality, brand image, and self-generated word of mouth in influencing repurchase intentions. Perceived product quality is key in attracting consumers to beauty care products, shaping their perception of the product and the positive experiences they share with others. Brand image also significantly affects repurchase intentions, consumers' willingness to buy, and their loyalty to the brand based on their perceptions of the product and its function. Despite word of mouth being a powerful tool in purchasing decisions, it cannot mediate the relationship between brand image and repurchase intention in the context of environmentally friendly skincare. Our findings show that consumers in this sector are more motivated to share experiences about product benefits rather than the brand image.

Furthermore, this study emphasizes the need for beauty care campaigns to create positive experiences through environmentally friendly products to encourage self-generated word of mouth. They should actively ask consumers to share and discuss their experiences across various online and offline media. This approach increases the likelihood of repurchase intentions and influences other consumers through social factors. Additionally, they should prioritize product quality and authentic communication to build a strong brand image and
motivate consumers to share their experiences voluntarily. Further studies are needed to explore the cultural and psychographic factors that influence consumer engagement in word of mouth and identify marketing strategies to enhance self-generated word of mouth among environmentally conscious consumers.

References


Cindy, C., & Zai, I. (2024). Analysis of the influence of brand image, price, service quality on purchasing decisions by mediating customer satisfaction on drinks at coffee shops.
Green beauty care choices: Mediating effects of self-generated word of mouth on Gen Z buying behavior by Ita Athia, Muh. Sirojuddin Amin, Muhammad Zulfaris Mohd Salleh


Green beauty care choices: Mediating effects of self-generated word of mouth on Gen Z buying behavior by Ita Athia, Muh. Sirojuddin Amin, Muhammad Zulfaris Mohd Salleh


Green beauty care choices: Mediating effects of self-generated word of mouth on Gen Z buying behavior by Ita Athia, Muh. Sirojuddin Amin, Muhammad Zulfaris Mohd Salleh


Green beauty care choices: Mediating effects of self-generated word of mouth on Gen Z buying behavior by Ita Athia, Muh. Sirojuddin Amin, Muhammad Zulfaris Mohd Salleh

*Sociology and Social Policy, 44*(13/14), 16-48. https://doi.org/10.1108/IJSSP-09-2023-0220


Zulfikar, R., & Mayvita, P. A. (2019). Does Green Economy Video Really Work? The Effectiveness of Using Video Content Marketing in Forming MSMEs Perception and

**About the Authors**

**Ita Athia**, a lecturer in the Department of Management at the Faculty of Economics and Business, University of Islam Malang, Indonesia. She has extensive research experience in entrepreneurship, marketing management, and strategy. For this study, she was responsible for writing the original draft and developing the initial concept. She also played a crucial role in completing the analysis and discussion, and enhancing the overall writing based on the reviewers' feedback.

**Muh. Sirojuddin Amin**, a lecturer in the Department of Management at the Faculty of Economics and Business, University of Islam Malang, Indonesia. He holds a master's degree from Universitas Gadjah Mada and is currently pursuing his doctorate at the State University of Malang. His research centers on Human and Organizational Behavior. For this study, he played a key role by reviewing the existing literature, analyzing the data, and leading the discussions on the topic.

**Muhammad Zulfaris Mohd Salleh**, a lecturer in Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Malaysia. His contributions to this study include supervising substantial content to the manuscript, strengthening the novelty arguments, and providing essential study materials, instruments, samples, and computing resources. His expertise in behavior and business-Islamic related issues has been invaluable in shaping the research's direction and depth.