

## Green marketing mix and eco-label consumer behavior: the role of environmental knowledge

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### Abstract

Environmental degradation has been identified as a contributing factor to natural disasters, while public awareness toward environmental sustainability in Indonesia remains relatively low. In response, businesses have begun adopting environmentally oriented marketing strategies, particularly the green marketing mix, which includes green products, green promotion, and green people. As consumers acquire greater environmental knowledge, they develop a better understanding of the value and quality of eco-friendly products, which in turn influences their purchasing behavior. This study aims to examine the factors influencing consumer behavior toward eco-labeled products. A quantitative approach was employed using purposive sampling, involving 200 respondents. Primary data were collected through structured questionnaires distributed based on predetermined criteria. The data were analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS 3.3 software. The findings are expected to provide both theoretical contributions and practical insights, particularly for firms producing eco-friendly products in designing effective marketing strategies. Specifically, this study highlights the role of green promotion as an important driver of environmental knowledge, which subsequently shapes consumer behavior toward eco-labeled products.

**Keywords:** *green product, green promotion, green people, environmental knowledge, green consumer behaviour.*

### Introduction

The issues of global warming, energy independence, and green movements have become social movements in today's society. The globalization generation has changed from traditional to modern with technological advances. Global warming is a hot topic of debate. Problems such as water pollution, air pollution, and other waste issues are increasing every 12 months. As time goes by and technology develops, it can have a positive impact, namely helping living creatures, and a negative effect, namely harming the environment. People are aware of the dangers to the environment and health, so they are starting to think about starting a better life in the future. With several new products being launched in line with market trends, this encourages groups to innovate and attract buyers. Companies realize that it is difficult to eliminate the negative impact of technological advances and human activities when utilizing natural resources, but at least they can reduce the damage. This phenomenon is ultimately called green consumerism (Jannah et al., 2023).

Green consumerism extends the global consumerism trend that started as consumers became more aware of their rights to access products that are safe, ethical, and environmentally sustainable. Moreover, the preferred products are not necessarily genuinely "green," but instead those that diminish the extent of harm inflicted (Rahmawati

& Nurhasan, 2021). The United Nations (UN) has established a strong foundation for sustainable development by setting a series of objectives that will encourage initiatives during the next 15 years in sectors that are essential for life, specifically the economy, society, and the environment, or the triple bottom line idea made famous by John Elkington (1998) in the research by Sandy et al. (2022). Social (people) refers to the community as stakeholders located around the business location or who contribute significantly to the running of a business, so that entrepreneurs should give back to the surrounding community. Marketing methods are marketing mindsets used to achieve advertising and marketing objectives. Business organizations have recognized the role of green marketing in gaining a competitive advantage over competitors (Julia & Masyuroh, 2022). Green marketing involves promoting products deemed to be eco-friendly (Rosyada & Dwijayanti, 2023). Implementing environmentally friendly marketing into marketing strategies and corporate social responsibility programs brings positive value to the company's environmentally friendly image and provides very important benefits to society.

Green supply chain management entails a strategy for overseeing the movement of goods and services from production's initial phases to disposal, emphasizing the reduction of environmental impact and the enhancement of sustainability. Collaboration with suppliers and other stakeholders is also an important aspect in promoting the use of sustainable materials, reducing waste, and improving energy efficiency. In addition, collaboration with suppliers and other stakeholders is also an important aspect in promoting the use of sustainable materials, reducing waste, and improving energy efficiency. As public awareness of the environment increases, green product consumption is beginning to emerge in the social lives of consumers and communities. Green marketing is the right marketing method to use in the modern era because environmental issues can help consumers make purchase decisions. This assertion is backed by studies carried out by Rayon & Widagda (2021) which indicates that eco-friendly marketing positively and significantly influences buying choices. A green marketing mix focuses on developing products that tackle environmental concerns through the raw materials utilized in manufacturing and the marketing strategy. Green marketing includes several components of a green marketing mix. These include: 1) Green Product, 2) Green Price, and 3) Green People.

Eco-friendly products or green products are defined as items that are safe for use and do not adversely affect the environment. According to (Putra & Prasetyawati, 2021), green products refer to goods that are safe for both consumers and the environment, utilize resources efficiently, and minimize harmful waste throughout their lifecycle. These products are typically developed using recyclable materials, including environmentally friendly packaging, and are designed to reduce environmental damage and non-recyclable waste.

In addition to product attributes, green promotion plays a crucial role in the green marketing mix. Green promotion refers to communication strategies that emphasize environmental benefits, sustainability values, and ecological responsibility in order to influence consumer perceptions and behavior. Through various channels such as advertising, digital media, and eco-label communication, green promotion serves as an important source of environmental information for consumers. As a result, it enhances consumers' environmental knowledge and awareness, enabling them to better evaluate eco-

friendly products and make informed purchasing decisions. Prior studies indicate that effective green promotion significantly influences consumers' environmental knowledge and positively affects their behavior toward eco-labeled products (Leonidou et al., 2017). Furthermore, green promotional activities not only communicate product attributes but also build credibility and trust by educating consumers about environmental impacts. This aligns with findings that information-based marketing strategies, including eco-labeling and sustainability campaigns, strengthen consumers' understanding and encourage pro-environmental purchasing behavior (Joshi & Rahman, 2016). Therefore, integrating green promotion within the green marketing mix is essential in shaping environmentally responsible consumer behavior, particularly in the context of eco-labeled products.

Important factors that determine the people aspect are employee appearance, employee friendliness, employee politeness, and employee skills. Green people include consumers and employees who work in an environmentally friendly company. In this case, green people can be defined as any individual or group that communicates about sales or marketing activities to a group or individual. In this case, green people are useful for educating consumers about environmental conservation. Green People are employees who work in customer-facing roles and are key to delivering service excellence and competitive advantage, thereby influencing consumer perceptions (Febriani, 2019). Green individuals can play a vital part in green marketing by informing consumers about the significance of using eco-friendly products. Green people are persons or collectives that convey information regarding sales or marketing efforts to a group or person. In this situation, eco-friendly individuals help inform consumers about preserving the environment (Caroline et al., 2021). Environmental awareness includes a person's comprehension of ecological aspects related to their surroundings. Environmental knowledge pertains to a comprehensive grasp of information, ideas, and connections concerning the natural environment and its ecosystems. This understanding encompasses a person's perception of the surroundings and the mutual connections that lead to environmental effects (Yaqub et al., 2023). Environmental knowledge includes a person's comprehension of environmental challenges and concerns. In today's information age, the mass media plays a major role in disseminating information related to environmental issues. Numerous research efforts have examined how environmental awareness and concern affect the intention to buy eco-friendly products. A study conducted in Denpasar showed that awareness of environmental issues has a positive and significant impact on the intention to buy green products, while environmental concern similarly affects the intent to purchase green products positively and significantly (Silalahi & Kosasi, 2024).

General purchasing behavior is driven by the advantages and expenditures linked to individual consumers' behavior. Green consumers are more internally controlled because they are effective in protecting the environment. According to Ayu & Damayanti, (2016), consumer behavior is the process that occurs when consumers decide what to buy, where, when, and how to buy it. Kotler dan Keller (2017) define consumer behavior is the examination of how individuals, groups, and organizations choose, buy, use, and discard goods, services, ideas, or experiences to fulfill their needs and wants, whereby cultural, social, and personal factors affect consumer purchasing behavior. Green consumers are identified as individuals whose actions are shaped by their environmental concerns, reflected in how they seek, buy, use, assess, and dispose of products. Eco-labels are

increasingly being used by marketers to identify green products. The form of eco-labeling using the “Easy Green” The label signifies that the eco-friendly product utilizes minimal or no plastic, is biodegradable, renewable, and contributes little to the greenhouse effect. An effective eco-label program will evaluate the complete product life cycle, encompassing production, distribution, usage, and disposal. Eco-labels have been found to affect consumer choices regarding a product, particularly when environmental concerns are significant for consumers (Muslim & Indriani, 2018).

This study is grounded in the Theory of Planned Behavior (TPB), which posits that behavior is shaped by attitude, subjective norms, and perceived behavioral control. In this context, green product and green price contribute to the formation of favorable attitudes toward eco-friendly purchasing by enhancing perceived value and environmental benefits. Green people influence subjective norms through social interaction and communication that encourage environmentally responsible behavior. Meanwhile, environmental knowledge strengthens perceived behavioral control by increasing consumers’ ability to recognize and evaluate green products. These factors collectively drive consumers’ purchase decisions, extending TPB beyond intention to actual behavior in the context of green consumption. Previous studies on green marketing have shown the idea of a green marketing mix has been shown to effectively impact decisions regarding the purchase of green products. This is backed by earlier studies carried out by (Hanifah et al., 2016), which shows that the influence of the Green Marketing mix, consisting of the 4P variables, namely product, price, place, and promotion, has a significant combined effect on purchasing decisions. Likewise, the findings from the study conducted by Gunarso & Kusumawati, (2017) demonstrate that the factors Environmental Awareness (X1), Green Product Attributes (X2), Green Product Cost (X3), and Green Product Advertising (X4) collectively exert a considerable influence on Purchase Decisions (Y).

A product refers to an item that can be offered to the market to generate interest, acquisition, use, or consumption that satisfies a need or desire. As per Kotler, (2017), A product refers to any item offered in a market to satisfy a need or want. Green products refer to goods that are safe for consumers and the environment, preserve resources, and reduce waste, ensuring they are not harmful to individuals or nature. The categorization of environmentally friendly products involves aspects of production, distribution, consumption, and production processes designed to reduce negative impacts on environmental pollution. Green products ensure and maintain the balance of nature while keeping energy consumption at the lowest possible level and discouraging single-use production. According to Hernizar et al., (2020), A product can be deemed a green product if it utilizes eco-friendly materials, is energy-efficient, and incorporates materials from renewable sources. Based on earlier studies conducted by Gunarso & Kusumawati, (2017) The findings of this research indicate that green advertising, eco-friendly brands, and green trust collectively have a noteworthy impact on buying choices. The t-test findings indicate that the green advertising variable significantly influences purchasing decisions, the eco brand variable significantly impacts purchasing decisions, and the green trust variable significantly affects purchasing decisions.

*H1: Green products have a positive and significant effect on consumer behavior toward eco-labeled products.*

Promotion is a crucial element of marketing strategy, particularly in influencing consumer perceptions and decision-making processes. When consumers are exposed to clear, credible, and persuasive information, they are more likely to recognize the value and benefits of a product. According to P. Kotler & Keller, (2022), promotion refers to activities that communicate product value and persuade target customers to purchase. In the context of green marketing, green promotion highlights environmental benefits, sustainability attributes, and ecological responsibility through various communication channels, including advertising, social media, and eco-label communication. Green promotion functions not only as a persuasive tool but also as an informational mechanism that enhances consumers' environmental knowledge. By delivering transparent and relevant environmental information, companies can reduce information asymmetry and improve consumers' ability to evaluate eco-friendly products. This process strengthens consumers' understanding and increases their likelihood of engaging in environmentally responsible purchasing behavior. Empirical studies have shown that green promotional activities significantly influence consumer awareness and knowledge, which in turn shape pro-environmental behavior (Rahbar & Wahid, 2016). Furthermore, effective green promotion enhances the credibility of eco-labels and strengthens consumer trust in environmentally friendly claims. Informational cues conveyed through sustainability campaigns and eco-label communication play a key role in guiding consumer decisions and encouraging the adoption of green products (Nguyen et al., 2025). Therefore, green promotion represents a critical component of the green marketing mix, as it not only communicates product value but also builds environmental knowledge and drives consumer behavior toward eco-labeled products.

*H2: Green promotion has a positive and significant effect on consumer behavior toward eco-labeled products.*

Regarding service marketing, individuals acting as service providers significantly impact the quality of services delivered to consumers who have completed a service transaction. People greatly influence the success of a service sold to consumers because they are the capital that provides the service. The people element includes company employees, consumers, and targeted potential consumers. According to Janah & SN, (2024), to promote the organization's dedication to the green marketing ideology, firms should equip administrative personnel and employees with technical skills and a deep commitment to environmental preservation. Green people educate employees to preserve the environment and be environmentally friendly. Green people usually exhibit behavior consistent with their identity, such as buying organic products, reducing the use of single-use plastics, and choosing environmentally friendly transportation. Marketers can leverage eco-labeling, value-based campaigns, and consumer trust building (green trust) to attract green consumers. From an organizational perspective, human resource management also needs to implement green people management to foster a work culture that supports sustainability (Ahmed et al., 2025). According to previous research by Nguyen et al., (2025), this study analyzes the impact of the 7Ps of green marketing mix on customer loyalty and their readiness to pay more for eco-friendly products, emphasizing the importance of green brand loyalty, related associations, and perceived quality.

*H3: Green people have a positive and significant effect on consumer behavior toward eco-*

*labeled products.*

According to Suryani & Sigarlaki, (2025), Environmental Knowledge refers to the overall understanding of facts, concepts, and connections regarding the natural environment and its ecosystems. Consequently, in this research, environmental awareness refers to individuals' understanding of the environment and the primary connections that result in environmental effects or perceived environmental knowledge. The term knowledge related to consumer behavior is linked to factors that influence the decision-making process at all levels of purchasing behavior. Specifically, it is an important construct that influences consumers' collection and organization of evidence, use of information in decision-making, and evaluation of the services and products they wish to purchase. The more consumers know about environmental issues, the greater the chances are that they will buy eco-friendly products. Environmental awareness serves a multifaceted function in driving individual behavior; understanding and knowledge about products' environmental impact significantly increases consumers' favorable perceptions of eco-friendly products. Prior studies have demonstrated that environmental understanding positively influences environmental attitudes (Arini et al., 2025).

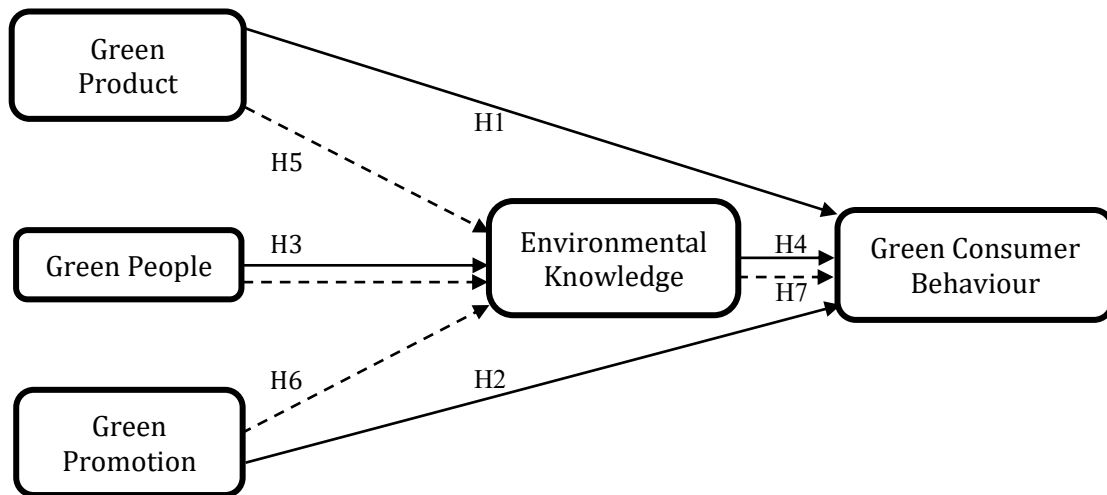
*H4: Environmental awareness has a positive and significant effect on consumer behavior toward eco-labeled products.*

According to Fahmi, (2024), consumer knowledge about the environment can help consumers in their thought processes, forming the basis for expressing their attitudes toward the environment. Knowledge and awareness of environmental protection have become key factors influencing consumer perceptions regarding eco-friendly products. The greater the awareness consumers have about eco-friendly issues, the higher the chances they will buy eco-friendly products. Environmental awareness serves a multifaceted function in encouraging individual behavior; understanding and knowledge about products' environmental impact significantly increases consumers' positive attitudes toward environmentally friendly products. In a summary of previous research conducted by Rizkiatami, Azura; Masnita, (2022) stated that consumer knowledge about the environment, Environmental consciousness and social standards positively influence environmental attitudes and overall well-being, which in turn influence their purchasing behavior. According to the study, the results show that there is a gap in providing evidence that environmentally conscious people and environmentally friendly physical evidence contribute significantly to all dimensions of green brand equity mentioned above, while green processes have a more limited impact only on green brand associations (Chang & Lin, 2022). Many consumers believe that eco-friendly products possess worth and advantages for themselves and the environment, because they are made from natural materials and do not harm the environment. For this reason, consumers consider that the money they spend is commensurate with the benefits they receive when buying green products (Rahayu et al., 2017). Previous studies performed by Dewi et al., (2020) consistently shows that eco-friendly products significantly and positively influence purchasing intentions. Consumers usually exhibit a greater intention to purchase eco-friendly products as they view it as a responsible action for the planet.

*H5: Green products have a positive and significant effect on consumer behavior toward eco-labeled products through environmental knowledge.*

*H6: Green promotion has a positive and significant effect on consumer behavior toward eco-labeled products through environmental knowledge.*

*H7: Green people have a positive and significant effect on consumer behavior toward eco-labeled products through environmental knowledge.*



**Figure 1. Conceptual Framework**

**Methods**

The approach employed in this research is quantitative research, which is research that presents a more advanced stage of observation. The sample for this research includes individuals who already use digital payment technology, especially fintech applications, and have experience in transacting on E-Commerce, E-Wallet, E-Money, and other applications in the city of Medan. There are four the variables in this research include three independent variables: Green Product (X1), Green Promotion (X2), and Green People (X3), along with one dependent variable consisting of Green Consumer Behavior (Y), and one intervening or mediating variable, namely Environmental Knowledge, with a total of 200 respondents participating in the study. The method of sampling employed was purposive sampling, which involves specific criteria for selection. Data assessment was performed utilizing a Partial Least Squares (PLS) approach within a Structural Equation Modeling (SEM) context, adhering to the analytical procedures outlined Hair et al., (2019), including assessments of both the inner and outer model and the inspection of path coefficients, to guarantee the accuracy and dependability of the research results.

**Result and Discussions**

Table 1 shows that the respondents are relatively balanced in gender, with a slight majority of males (54%). The sample is predominantly composed of individuals aged 26–35 years, followed by those aged 36–45 and 46–55, indicating that most respondents are within productive and economically active age groups. In terms of occupation, private sector employees represent the largest group, followed by state-owned enterprise employees and entrepreneurs, reflecting diverse professional backgrounds. Regarding educational attainment, the majority hold a bachelor’s degree, followed by high school and master’s degrees, suggesting a relatively well-educated sample. Overall, the demographic profile indicates that the data were collected from a heterogeneous and predominantly productive

population, supporting the relevance and credibility of the study in the field of management and business.

**Table 1. Respondent Demographics**

	Unit	%
<i>Gender</i>		
Male	108	54%
Female	92	46%
<i>Age</i>		
≤ 25	15	15.5%
26 – 35	88	29 %
36 – 45	55	22.5%
46 – 55	42	21.5%
≥ 56	23	11.5%
<i>Job</i>		
Students	28	14 %
Entrepreneurs	37	18.5%
Private sector	59	29.5%
State-owned enterprises	45	22.5%
Civil servants	31	15.5%
<i>Last Education</i>		
High School/Vocational School	53	26,5%
D-3	32	16 %
S-1	75	37.5%
S-2	40	20 %

This research employed partial least squares structural equation modeling (PLS-SEM) to explore the relationships among variables. Measures of reliability and validity were employed to evaluate the measurement model. Convergent and discriminant validity were used to assess construct validity. As stated by Hair et al., (2019), The results of the model are deemed valid when the loading factor and average variance extracted (AVE) reach at least a minimum value of 0.50. According to Table 2, the instrument's reliability was assessed using the standards of Cronbach alpha (CA) and composite reliability (CR), confirming the significance of each variable's reliability with CA and CR values surpassing 0.7 (Sugiono, 2018).

According to the results presented in Table 2, the model is deemed valid since both the loading factor and average variance extracted (AVE) are above 0.5 for each variable. Simultaneously, this research model has met the benchmarks for Cronbach's alpha (CA) and composite reliability (CR) of > 0.7, suggesting that all variables in this study are dependable. Next, based on the numbers listed on the connecting line between the manifest and latent constructs in Figure 2, which show the factor loadings, it is known that each item measuring each latent construct has a factor loading of more than 0.7, so all items are valid.

**Table 2. Factor Loadings**

Item	Loading Factor	CR	CA	AVE
Environmental Knowledge1 (EK1)	0,778	0.844	0.755	0.575
Environmental Knowledge2 (EK2)	0,722			
Environmental Knowledge3 (EK3)	0,732			
Environmental Knowledge4 (EK4)	0,798			
Green Consumer Behaviour1 (GC1)	0,901	0.916	0.861	0.785
Green Consumer Behaviour2 (GC2)	0,931			
Green Consumer Behaviour3 (GC3)	0,823			
Green Product1 (P1)	0,860	0.910	0.853	0.772
Green Product 2 (P2)	0,911			
Green Product 3 (P3)	0,864			
Green People1 (PP1)	0,865	0.913	0.873	0.725
Green People 2 (PP2)	0,854			
Green People 3 (PP3)	0,813			
Green People 4 (PP4)	0,872			
Green Promotion1 (PR1)	0,805	0.851	0.766	0.589
Green Promotion 2 (PR2)	0,782			
Green Promotion 3 (PR3)	0,707			
Green Promotion 4 (PR4)	0,773			

Table 3 The Fornell-Larcker criterion states that discriminant validity is achieved when the square root of the Average Variance Extracted (AVE) for each construct is greater than the correlation of that construct with other constructs. The results of the Fornell-Larcker Criterion discriminant validity assessment are displayed:

**Table 3. Fornell-Larcker**

	EK	GC	PP	PR	P
Environmental Knowledge (EK)	0,758				
Green Consumer Behaviour (GC)	0,837	0,886			
People (PP)	0,724	0,500	0,851		
Promotion (PR)	0,866	0,738	0,717	0,768	
Product (P)	0,792	0,607	0,539	0,619	0,879

According to the findings in Table 3 above, it is evident that the model meets the Fornell-Larcker discriminant validity criteria, since the values on each diagonal are greater than those beneath them (Ghozali, 2018). Each construct satisfies the Fornell-Larcker discriminant validity requirements, as the square root of the AVE for every construct is greater than the correlation of that construct with the other constructs. This indicates that the constructs in this study demonstrate robust discriminant validity, signifying that each construct is separate from the others regarding what it measures.

According to Schermelleh-Engel et al., (2003), the SRMR (Standardized Root Mean Square) value between 0.08 and 0.10 is obtained from comparing the proposed model to a particular independent model. SRMR serves as an indicator of how well the model fits or is appropriate. According to Table 4 above, an SRMR value of 0.10 indicates that the model demonstrates a good or acceptable fit.

**Table 4. Model Fit (SRMR)**

	Saturated Model	Estimated Model
SRMR	0.10	0.10
d_ULS	0.989	0.990

The R<sup>2</sup> value can be used to assess the influence of certain endogenous variables and exogenous variables to determine whether they have a substantive influence (Ghozali, 2018). The outcomes of the determination coefficient (R-Square) can be seen in table 5 below:

**Table 5. R-Square**

	R-Square	R Square Adjusted
EK	0.864	0.862
GC	0.737	0.731

The R Square statistic indicates the degree of variation in the endogenous variable that can be accounted for by other exogenous or endogenous variables in the model. As per (Ghozali, 2018), The qualitative interpretation of R Square values indicates 0.19 (low impact), 0.33 (moderate impact), and 0.66 (high impact). According to Table 5, the R Square value for the Environmental knowledge variable is 0.864, indicating that 86.4% of the variation or change is affected by Green Product, Green Promotion, and Green People, whereas the rest 13.6% is accounted for by other factors causes. Thus, it can be said that the R Square for the Environmental knowledge variable is Good. For the variables that influence green consumer behavior, the value obtained is 0.737, that suggests the variables Eco-Friendly Product, Eco-Friendly Price, and Green People influence the variable green consumer behavior by 73.7%. Therefore, it can be said that the R Square for the variable green consumer behavior is Good. which means that 76.6% of the variation or change in lifestyle is influenced by influencers and E-WOM, while the remaining 23.4% is explained by other causes.

**Table 6. F-Square**

	EK	GC	PP	PR	P
Environmental Knowledge (EK)		0.569			
Green Consumer Behaviour (GC)					
People (PP)	0.064	0.107			
Promotion (PR)	0.827	0.009			
Product (P)	0.682	0.032			

According to Table 6 above, the subsequent conclusions can be made: the impact of Green Product on Environmental knowledge is valued at 0.682 (high), the impact of Green Product on Consumer Behavior has a value of 0.032 (low), whereas the impact of Green Promotion on Environmental Knowledge is valued at 0.827 (high), the impact of Green Promotion on Consumer Behavior is assessed at 0.009 (low), the impact of Green People on Environmental Knowledge is noted at 0.064 (low), and the impact of Green People on Consumer Behavior is at 0.107 (low), and the influence of Environmental Knowledge on Consumer Behavior is rated at 0.569 (high).

**Table 7. Hypothesis Test**

Hypothesis	Item	Original Sample (O)	T Statistics ( O/STDEV )	P Values
H1	P → GC	-0.153	1.521	0.129
H2	PR → GC	0.105	1.040	0.299
H3	PP → GC	-0.252	2.731	0.007
H4	EK → GC	1.050	8.464	0.000
H5	P → EK → GC	0.413	4.983	0.000
H6	PR → EK → GC	0.550	5.999	0.000
H7	PP → EK → GC	0.143	1.936	0.053

Table 7 presents the hypothesis testing conducted in this research. The connection between Green Product and Green Consumer Behavior shows a negative relationship, shown by a path coefficient value of -0.153. The P value of 0.129, being greater than 0.05 at a 5% significance level, suggests it lacks strong significance. This indicates that there is no positive growth in the impact of Green Product, and it does not significantly influence green consumer behavior, resulting in the rejection of H1. The link between Green Promotion and Green Consumer Behavior demonstrates a positive correlation, marked by a path coefficient of 0.105. The P value of 0.299 exceeds 0.05 at a 5% significance level suggests that it lacks strong significance. This indicates that there is a favorable rise in Green Promotion but it does not have a significant value affecting Green Consumer Behavior, so H2 is rejected. The connection between Green People and Green Consumer Behavior shows a negative relationship with a path coefficient of -0.252. The P value of 0.007 being less than 0.05 at a 5% significance level indicates considerable significance. This shows that there is no positive increase in Green People but has a considerable impact on Green Consumer Behavior, leading to the rejection of H3. The connection between Environmental Knowledge and Green Consumer Behavior shows a positive correlation with a path coefficient of 1.050. The P value of 0.000 being less than 0.05 at a 5% significance level shows a highly significant result. This indicates a positive rise and holds substantial importance that affects Green Consumer Behavior, so H4 is accepted.

The mediation path between Green Product and Green Consumer Behavior through Environmental knowledge has high significance with a path coefficient of 0.413. The P value of  $0.000 < 0.05$  at a 5% significance level shows extremely strong significance. This indicates that the mediating role of Environmental knowledge in the connection between Green Product and Green Consumer Behavior is both positive and significant, thus H5 is accepted. The significant mediating effect of Environmental Knowledge on the connection between Green Promotion and Green Consumer Behavior is notable, with a path coefficient of 0.550. The P-value of 0.000, being below 0.05 at a 5% significance threshold, indicates very strong significance. This suggests that the connection between Green Promotion and Green Consumer Behavior via Environmental Knowledge in Generation Z is notable, H6 is confirmed, and the mediation pathway between Green People and Green Consumer Behavior through Environmental Knowledge displays a positive relationship with a path coefficient of 0.143. The P-value of 0.053, exceeding 0.05 at a 5% significance level, does not indicate considerable significance. This indicates that the mediating role of Environmental Knowledge in the relationship between Green People and Green Consumer Behavior is positive but not significant, resulting in the dismissal of H7.

The findings indicate an absence of a notable and meaningful relationship between eco-

friendly products and environmentally conscious consumer behavior, indicated by a path coefficient of -0.153 and a p-value of 0.129, which exceeds the 0.05 threshold at a 5% significance level. The p-value of 0.129 highlights that the green product variable lacks strong significance in this relationship, thereby not supporting Hypothesis 1 (H1). These results suggest that there is no positive growth and no significant factor affecting green consumer behavior. Products are one of the variables in marketing strategy that play a vital role in attracting potential buyers to purchase the products offered by companies. Companies can provide support in the form of policies that demonstrate environmental awareness, such as participating in social activities, using environmentally friendly materials in product manufacturing, and so on (Persada et al., 2015). The better the support provided by companies producing Green Products, the more it will encourage consumers to participate in environmentally conscious activities. Therefore, every a company must consistently innovate in product development to enhance its marketing strategies.

According to the results of the second hypothesis testing regarding the effect of green promotion on consumer behavior, the original sample value is 0.105 with a p-value of 0.299. This indicates that green promotion has a positive but not statistically significant effect on consumer behavior toward eco-labeled products. The p-value greater than 0.05 confirms that the relationship is not significant; therefore, Hypothesis 2 (H2) is not supported. These findings suggest that although green promotion contributes positively, its direct influence on consumer behavior remains limited. One possible explanation is that green promotional activities primarily function as informational and educational tools rather than direct drivers of behavior. Consumers may require sufficient environmental knowledge to interpret and internalize promotional messages before translating them into purchasing actions. Without adequate knowledge, promotional efforts may not effectively influence decision-making.

This finding is consistent with recent studies indicating that green promotion and eco-label communication tend to influence consumer behavior indirectly through cognitive mechanisms such as environmental knowledge and trust. For instance, a study by Cavusoglu, (2026) shows that eco-label-related communication significantly enhances environmental knowledge, which subsequently leads to stronger green purchasing behavior. Similarly, research by Houf et al., (2024) demonstrates that sustainability-oriented promotional elements, such as eco-label displays, increase consumer awareness and influence product selection decisions by improving understanding of environmental attributes .

Furthermore, recent empirical evidence highlights that green advertising and promotional strategies play a crucial role in increasing consumer awareness and knowledge, which in turn shapes environmentally responsible behavior rather than directly influencing purchase decisions (Li, 2025). In the context of emerging markets such as Indonesia, environmental knowledge has been identified as a key factor that strengthens the effectiveness of green marketing strategies in influencing consumer behavior (Vironika & Maulida, 2025). Therefore, the insignificant direct effect of green promotion found in this study suggests that its role is more appropriately positioned as an antecedent of environmental knowledge, which subsequently drives consumer behavior toward eco-labeled products.

The results show no positive relationship but a significant value between green people

and green consumer behavior, having a path coefficient of -0.252 and a p-value of  $0.007 < 0.05$  at a 5% significance level. The p-value of 0.007 further confirms the strong significance of this relationship, thus confirming that an increase in green people negatively but significantly affects green consumer behavior, thereby rejecting Hypothesis 3 (H3). According to Rahman, Endi, et al (2024) in his research, The influence of the Green Marketing Mix on tourist satisfaction at the Whale Shark tourism site in Botubarani Village, located in Bone Bolango Regency, Gorontalo Province, reveals through analysis that the Green People variable positively and significantly impacts tourist satisfaction at this destination. The positive regression coefficient suggests that improved execution of the Green People concept leads to a more likely it is that tourist satisfaction will increase. This indicates that Green People, where the people in the tourist location play a role in preserving the environment, whether they are employees at the tourist site or visiting tourists, and the environmentally friendly services provided by the employees, contribute to increased tourist satisfaction.

The variable testing that has been conducted shows that the Environmental Knowledge variable exerts a favorable and notable impact on Consumer Behavior. This is demonstrated by citing the outcomes of the p-values testing that has been conducted. The test results obtained were 1.050 and p-values of 0.000 in the original sample. Thus, hypothesis H4, which indicates that the Environmental Knowledge variable positively and significantly influences consumer behavior, is proven to be true. By applying environmentally friendly concepts, it is clear that good Environmental Knowledge will result in a clean environment that is not polluted by production waste from company factories. Environmental Knowledge encompasses general understanding, including facts, concepts, and connections between ecosystems and the environment that directly affect them. The findings of this study are additionally backed by earlier research carried out by (Subagio, 2019), which found that the Environmental Knowledge variable has a positive and significant effect on the consumptive behavior of students.

The findings of hypothesis five indicate that the green product variable shows a positive value of 0.413 and significantly influences Green Consumer behavior via Environmental Knowledge, with a P-Value of 0.000. This result proves that the environmental knowledge variable as a mediating variable plays a crucial role in transforming green consumer behavior into real business growth, thus accepting H5. In the same vein, the findings from the testing of hypothesis six indicate that the green promotion variable possesses a positive value of 0.143, significantly influencing green consumer behavior via Environmental Knowledge with a P-value of 0.053, thereby supporting H6. The testing results for hypothesis six indicate that the green promotion variable holds a positive value of 0.143 and significantly influences green consumer behavior via Environmental Knowledge, with a P-value of 0.053, thus accepting H6. -Values of 0.053, thus accepting H6.

The outcomes of testing hypothesis seven indicate that the green people variable holds a positive value of 0.143 but does not significantly influence green consumer behavior via Environmental Knowledge shows a P-Value of 0.053, leading to the rejection of H7, indicating that the variable of green individuals affects green consumer behavior via environmental knowledge Ginting & Ni Wayan Ekawati, (2016) in her study entitled "The effect of environmental knowledge on the intention to purchase green products of the "attack" brand with environmental concern as a mediating variable". Testing the hypothesis

regarding the impact of environmental knowledge on environmental concern indicates that environmental knowledge significantly enhances environmental concern.

The findings of this research are backed by findings from Hidayana & Md Zaini, (2024) study entitled “Environmental sustainability: mediating effect of environmental knowledge for pro-environmental behavior”, which highlights the mediating role of environmental knowledge, implying that pro-environmental behavior can be promoted through both environmental connections and environmental knowledge. This shows that to ensure continued public awareness, knowledge must be shared and distributed widely. Consequently, the methods and tools used to convey messages are very important. This may be explained by public awareness and openness to discourse surrounding global warming. Many stakeholders, including parents, employees, government agencies, and others, are expected to support and engage in environmental behavior.

### Conclusion

This study demonstrates that environmental knowledge significantly mediates the relationship between the green marketing mix comprising green product, green promotion, and green-oriented people and eco-friendly purchasing behavior toward eco-labeled products. The findings reveal that green marketing elements do not automatically translate into sustainable consumer behavior unless supported by adequate environmental understanding. From a theoretical perspective, the study strengthens the role of cognitive factors in explaining sustainable consumption, emphasizing that environmental knowledge acts as a key mechanism linking marketing strategies to behavioral outcomes. Practically, the results suggest that firms, particularly SMEs, should complement green marketing initiatives with effective environmental education and clear eco-label communication to enhance consumer awareness and purchasing decisions. Future research should examine this model in different regional and industrial contexts to enrich the generalizability of findings within management and business studies.

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