

Understanding generation Z's intentions to adopt green products: The influence of perceived effectiveness, environmental awareness, and social norms



Irena Larashati^a  | Senen Machmud^a   | Iwan Sidharta^a  | Ashila Dwiyanisa^a 

^aSekolah Tinggi Ilmu Ekonomi Pasundan, Bandung, Indonesia.

Abstract Growing concerns about environmental issues have increasingly influenced consumer decision-making, particularly in relation to the adoption of environmentally friendly products. The urgency of sustainability and the demand for eco-friendly alternatives underscore the need to understand the drivers of green consumption better. This study aims to investigate how environmental concern, perceived effectiveness of green products, and subjective norms influence consumer attitudes and intentions to use green products. A quantitative survey was conducted with 366 university students in Bandung, Indonesia. The data were analyzed using a structural equation modeling approach to assess the relationships between variables and to validate the measurement model. The results reveal that environmental concern and subjective norms have a significant influence on perceptions of green product effectiveness, which in turn shape consumer attitudes and behavioral intentions toward the use of green products. These findings demonstrate that social influence and personal environmental awareness play a crucial role in strengthening positive attitudes toward eco-friendly behavior. The study contributes by providing evidence from a student population in an emerging market context, offering unique insights into the psychological and social mechanisms underlying sustainable consumption. From a practical perspective, the results suggest that policymakers, educators, and marketers can promote the adoption of green products by emphasizing their functional effectiveness and leveraging social norms to reinforce sustainable behavior. Nevertheless, the study acknowledges limitations, including the specific demographic focus on university students, the cross-sectional nature of the data, and the exclusion of economic factors such as price and availability. Future research is recommended to incorporate these dimensions and apply longitudinal designs for a more comprehensive understanding of consumer behavior toward green products.

Keywords: sustainability, eco-friendly behavior, consumer attitudes, social influence, behavioral intention

1. Introduction

Recently, awareness of environmental issues and their effects on the planet has increased. This has significantly shaped people's environmental concerns, influencing their buying choices, especially in favor of green products. These products, which are designed to be eco-friendly, sustainable, and resource efficient, are increasingly popular among consumers who value environmental sustainability. This trend supports findings from Mady et al. (2022), who emphasized the influence of institutional pressure on ecoinnovation, and Saari et al. (2021), who demonstrated that consumers' environmental knowledge and their perception of risk significantly influence their environmental concerns as well as their intentions to engage in sustainable behaviors. This research highlights the importance of understanding how well-informed individuals are about environmental issues and how they perceive potential risks. These factors play crucial roles in shaping their worries about environmental problems and their willingness to adopt practices that are more sustainable.

Individuals who possess a strong sense of environmental awareness tend to prioritize sustainability in their everyday actions. They actively look for eco-friendly products motivated by a desire to minimize their ecological impact and help protect the environment. Their decisions are often influenced by a strong sense of environmental responsibility, leading them to choose products that are seen as being more sustainable and less damaging to the Earth. Thøgersen (2021) emphasized the importance of consumer engagement in climate change initiatives, whereas Hosta and Zabkar (2021) identified key elements of socially responsible consumer behavior. Furthermore, Sharma et al. (2023) discuss the factors influencing green purchasing, highlighting the complexity behind consumer motivations in sustainable choices.

The perception of the effectiveness of green products is vital for their adoption and ongoing use. Consumers must trust that these products not only align with their environmental values but also perform well and provide the expected benefits.



Understanding these perceptions is crucial for manufacturers and marketers, as it guides the development of better products, more persuasive marketing strategies, and ultimately increasing adoption rates. Joshi et al. (2021) emphasize the importance of both economic and emotional values in shaping green purchase intentions. Moreover, Riva et al. (2022) investigated the impact of perceived green value on consumers' intentions to return to sustainable restaurants. Their research revealed that when consumers recognize and appreciate the environmental benefits associated with these establishments, they are more inclined to revisit them. This perception of green value not only enhances customer satisfaction but also fosters loyalty toward restaurants that prioritize sustainability.

For example, if a green cleaning product is seen as less effective than a traditional one, even eco-conscious consumers might hesitate to switch. (Mady et al., 2022) Thus, it is crucial to correct any misconceptions about the effectiveness of green products and ensure that they fulfill consumer expectations for broader acceptance.

The degree of environmental awareness among people significantly influences their choices regarding green products. Those with greater environmental consciousness tend to prioritize sustainability and actively look for eco-friendly options. Understanding how green products are viewed in terms of effectiveness is essential, as it influences their adoption and use. By addressing these perceptions and ensuring that green products align with consumer expectations, we can promote a more sustainable and environmentally responsible consumer culture.

The theory of planned behavior (TPB) is a key framework for understanding how individual intentions influence behaviors, especially in the context of green product consumption. According to Ajzen (1991), the TPB states that an individual's actions are influenced primarily by their behavioral intentions, which are affected by three main factors: the person's attitudes toward the behavior, the subjective norms surrounding that behavior, and their perceived control over the behavior. In the context of green consumption, various studies have emphasized the importance of these factors in shaping consumers' intentions to buy environmentally friendly products. Researchers have consistently reported that elements such as perceived effectiveness, environmental concern, and social norms play significant roles in shaping consumer behavior. Individuals recognize the benefits of green products, feel a sense of responsibility toward the environment, and are more likely to express intentions to buy. Additionally, social influences can further motivate consumers to choose sustainable options. For example, Yadav and Pathak (2016) expanded the TPB to examine young consumers' intentions toward green products in a developing country, showing that positive attitudes and perceived consumer effectiveness play crucial roles in the intention to buy green products. The TPB can help explain how consumers' intentions to buy green products are influenced by their beliefs about benefits, social pressures, and confidence in their ability to make eco-friendly choices.

Furthermore, Kamalanon et al. (2022) extended the theory of planned behavior (TPB) by incorporating additional factors linked to consumers' environmental concerns and the perceptions of companies offering eco-friendly products. The TPB can be adapted effectively to capture the complexities of green purchasing behavior, emphasizing the need to consider not only rational thought but also emotional and perceptual influences on consumer decisions. Conversely, behavioral reasoning theory (BRT) offers an alternative view by integrating both logical reasoning and intuitive processes that shape decisions regarding green product consumption. Sreen et al. (2023) contend that although the advantages of green products are well supported by rational arguments, intuitive elements—such as emotional reactions and gut feelings—are also vital in decision-making. BRT suggests that consumers assess their reasons for and against a particular behavior, which in turn affects their intentions and actions. For example, Chatterjee et al. (2022) showed that both green consumption values and specific contextual reasons influence green purchase intentions, illustrating the dual nature of reasoning.

Wang et al. (2021) noted the "attitude–intention gap" in green consumption, indicating that even if consumers have positive attitudes toward eco-friendly products, their actual buying behavior might not match these intentions due to various obstacles. This underscores the need for a nuanced understanding of green consumption that includes both rational analysis from the theory of planned behavior (TPB) and intuitive feelings captured by behavioral reasoning theory (BRT). This study employs both theories to better understand the diverse factors influencing green product purchasing. The study utilizes both theories to gain a deeper understanding of the various factors that affect consumers' decisions to purchase green products, integrating insights from the TPB and other relevant frameworks, and researchers can explore how attitudes, social influences, and perceived control interact to shape purchasing intentions. By combining rational and intuitive insights, marketers and policymakers can design more effective strategies to encourage green consumption and support sustainability objectives.

Although awareness of environmental issues is increasing, consumer adoption and use of green products vary widely. This finding indicates that factors beyond environmental concerns significantly impact behavior. Notably, perceptions of a product's effectiveness and the effect of subjective norms—social pressures to behave in certain ways—are important but not thoroughly studied factors. Gaining insight into how these elements interact to affect green product use is vital for creating effective strategies to increase adoption and encourage sustainable consumer behavior.

This research explores how green product effectiveness, environmental concerns, and subjective norms influence green product usage. This study aims to provide detailed insights into the factors promoting sustainable consumption, helping to develop more targeted strategies for encouraging green product adoption.

2. Methods

This study adopts a quantitative approach to examine how green product effectiveness, environmental concerns, and subjective norms influence the use of green products. Empirical data were collected through a survey, enabling statistical analysis of the relationships between these variables. The sample includes 366 university students from higher education institutions in Bandung, chosen because they are likely aware of environmental issues and green products. Data collection was carried out via a structured questionnaire distributed online via Google Forms, which allowed easy access and wide reach within the target population.

This study included 366 respondents, all Generation Z students living in Bandung city. They were chosen because they are youthful, engaged groups that are attentive to sustainability issues, with the potential to influence future consumption trends, especially with respect to green products. The demographic distribution of respondents is presented in Table 1.

Table 1 Profile of the respondents.

Personal Information	Category	Percentage (%)
Gender	Male	44.30
	Female	55.70
Age	18-20 yo	36.50
	21-23 yo	45.90
	24-25 yo	15.60
Education Level	Bachelors Degree	88.50
	Diploma	7.40
	Postgraduate	4.10
Domicile	Bandung City	100
Frequency of Green Products Usage	Frequently	25.70
	Occasionally	54.10
	Rarely	20.20

The gender distribution of the respondents revealed a slightly greater number of females than males, indicating a balanced gender perspective in the study. Most respondents (45.9%) were aged 21–23 years, a key segment within Gen Z known for their strong awareness of and adaptability to sustainability issues. The majority (88.5%) pursue a bachelor’s degree, reflecting significant academic exposure and understanding of sustainability concepts, which may shape their attitudes toward green product adoption. Focusing solely on respondents from Bandung ensures that local cultural and socioeconomic factors are relevant for analyzing consumer behaviors related to green products. The participants were also asked how often they use green products daily. The results show that most (54.1%) use them occasionally or situationally, whereas a notable 25.7% practice conscious, sustainable consumption habits—an important factor for green marketing strategies. Overall, the data indicate promising yet still developing awareness among young people, highlighting opportunities for further engagement and education on sustainability.

The structured questionnaire comprises the following instruments: Environmental Concern, which is based on the scale by Kamalanon et al. (2022), and Ogiemwonyi (2022), which assesses perceptions of environmental preservation and protection through six statements. Subjective norms, adapted from Ajzen (1991), measure the perceived influence of close individuals on the use of green products with three statements. Green product effectiveness, derived from Kamalanon et al. (2022), evaluates perceptions of how green products contribute to the environmental protection, societal impact, resource management, and corporate treatment of employees via four statements.

Intention to use green products: This tool modifies Siyal et al. (2021) scale, which assesses perceptions of the environmental concerns, benefits, and eco-friendliness of green products through five statements. The Green Product Attitude instrument adapts Wang et al. (2021) scale, which evaluates attitudes toward green product consumption, including perceptions of meaningfulness, validity, pleasantness, benefits, and environmental impact, via six statements.

Researchers have analyzed the collected data via covariance-based structural equation modeling (CB-SEM), a reliable statistical approach for testing complex links between observed and hidden variables. The author applied confirmatory factor analysis (CFA) to evaluate the measurement model, ensuring the validity and reliability of the constructs. CFA evaluates the overall fit of their proposed model and determines the strength and significance of the paths connecting different constructs. CFA demonstrates that the data align well with the proposed measurement model. Once the measurement model was validated, the structural model was examined to explore the connections among green product effectiveness, environmental concerns, subjective norms, and green product usage. The analysis was performed via LISREL software, which is capable of conducting CB-SEM and CFA.

3. Results and Discussion

The results shown in Table 2 and Table 3 demonstrate no evidence of common method bias. The inner VIF values, ranging from 1.000–2.234, are all below the threshold of 5, confirming this. Furthermore, discriminant validity is confirmed

because the square root of the AVE for each variable exceeds its correlations with other variables. This finding indicates that the constructs are unique and unaffected by common method bias.

The results shown in Table 3 demonstrate no evidence of common method bias.

Table 2 Confirmatory factor analysis (CFA) test results.

Variables	Item	Standard loading	Standard loading ²	Measurement error (1-Standard loading ²)	Const Reliability	Variance Extracted
Environmental Concern	Ec1	0,8342	0,6959	0,304	0,9431	0,7344
	Ec2	0,89	0,7921	0,2079		
	Ec3	0,8661	0,7501	0,2498		
	Ec4	0,8641	0,7467	0,2533		
	Ec5	0,8299	0,6887	0,3112		
	Ec6	0,856	0,7327	0,2672		
	Σ	5,1403	4,4063	1,5934		
	Σ ²	26,4227				
Subjective Norms	Sn1	0,8543	0,7298	0,2701	0,9149	0,7820
	Sn2	0,8863	0,7855	0,2144		
	Sn3	0,9113	0,8305	0,1696		
	Σ	2,6519	2,3458	0,6541		
	Σ ²	7,0326				
Green Product Effectiveness	Ef1	0,7623	0,5811	0,4189	0,8866	0,6620
	Ef2	0,8111	0,6579	0,3421		
	Ef3	0,8775	0,7700	0,2301		
	Ef4	0,7995	0,6392	0,3607		
	Σ	3,2504	2,6482	1,3518		
	Σ ²	10,5651				
Green Product Attitude	Att1	0,7657	0,5863	0,4186	0,91544	0,6437
	Att2	0,7806	0,6093	0,3907		
	Att3	0,8452	0,7144	0,2857		
	Att4	0,8107	0,6572	0,3427		
	Att5	0,8135	0,6618	0,3383		
	Att6	0,7976	0,6362	0,3639		
	Σ	4,8133	3,8652	2,1399		
	Σ ²	23,1679				
Intention to use Green Product	Gi1	0,818	0,6691	0,3308	0,9283	0,7217
	Gi2	0,8093	0,6550	0,345		
	Gi3	0,8782	0,7712	0,2287		
	Gi4	0,8746	0,7649	0,2351		
	Gi5	0,865	0,7482	0,2517		
	Σ	4,2451	3,6085	1,3913		
	Σ ²	18,0209				

This study utilizes CFA and CB-SEM with the robust maximum likelihood method to ensure precise and dependable results. This analytical approach allows them to test whether the data fit the proposed theoretical framework, confirming that the relationships between variables align with expectations. Through CFA, researchers can assess the reliability and validity of the measurement instruments used in a study. This process not only strengthens the overall findings but also provides confidence that the observed variables genuinely capture the intended constructs, enhancing the robustness of the research outcomes. Moreover, CB-SEM allows for a comprehensive analysis of the relationships among these constructs. CFA assesses the validity and reliability of the measurement model, with standard loadings exceeding 0.5 and Cronbach's alpha (CR) values over 0.7, following Fornell and Larcker's (1981) standards. The findings show that CFA produced positive results in terms of validity and reliability, supported by average variance extracted (AVE) values above 0.5 and construct reliability above 0.7, which signifies that the constructs measured are both valid and dependable. These metrics confirm that the model accurately captures the intended dimensions of the data. Additionally, Figure 1 visually represents the model, providing a clear illustration of the relationships among the constructs analyzed in the study.



Table 3 Discriminant validity and collinearity inner (VIF) test results.

	Discriminant Validity				
	Environmental concern	Green Product Attitude	Green Product Effectiveness	Intention to Use Green Products	Subjective Norms
Environmental concern	0.832				
Green Product Attitude	0.731	0.918			
Green Product Effectiveness	0.767	0.655	0.858		
Intention to Use Green Products	0.785	0.695	0.705	0.823	
Subjective Norms	0.780	0.679	0.731	0.678	0.903
Collinearity Inner (VIF)					
Environmental concern -> Green Product Effectiveness					2.234
Green Product Attitude -> Intention to Use Green Products					1.000
Green Product Effectiveness -> Green Product Attitude					1.000
Subjective Norms -> Green Product Effectiveness					2.234

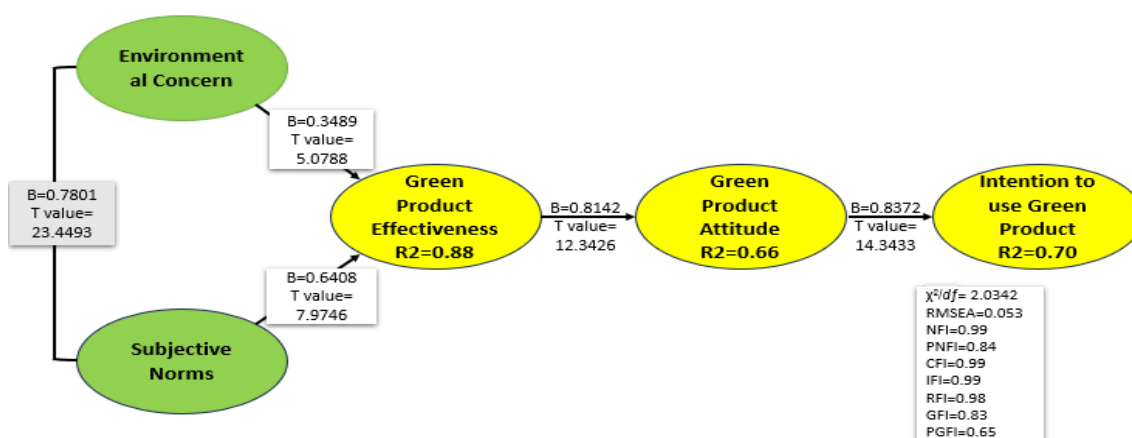


Figure 1 Results of the intention to use green products, green product effectiveness, environmental concern, and subjective norms.

The fit indices are crucial indicators in structural equation modeling, showing how well the proposed model matches the observed data. In this study, Figure 1 shows excellent goodness of fit, highlighted by several key metrics, and the analysis reveals several key fit indices that demonstrate the model's effectiveness. The root mean square error of approximation (RMSEA) is 0.053, which is below the recommended threshold of 0.08, indicating that the model fits the data well. Additionally, the normed fit index (NFI) stands at 0.99, reflecting an exceptional level of agreement between the hypothesized model and the actual observed data. Both the Comparative Fit Index (CFI) and the Incremental Fit Index (IFI) are also impressive at 0.99, surpassing the 0.95 benchmark that signifies an excellent fit. Furthermore, the chi-square to degrees of freedom ratio (χ^2/df) is 2.0342, which falls within the acceptable range of less than 3.0, further confirming that the model is a suitable representation of the data. The goodness-of-fit index (GFI) is 0.83, reflecting an adequate fit, which is slightly below the ideal value of 0.90 but still acceptable. The relative fit index (RFI) and parsimony normed fit index (PNFI) are 0.98 and 0.84, respectively, confirming the model's robustness and parsimony.

On the basis of these indices, and according to standard references (Iacobucci, 2010), the CFA model used here is clearly both robust and reliable for measuring model evaluation in this context.

Analyzing path coefficients offers a clear view of the strength and direction of relationships among the studied constructs. Environmental concern is key in influencing how consumers perceive the effectiveness of green products. The results show that greater awareness of environmental issues leads to more positive perceptions of green product effectiveness. This emphasizes the role of environmental sensitivity in boosting product acceptance, supporting previous research findings that heightened concern leads to greater appreciation for the benefits these products offer and reinforcing the idea that consumers who prioritize environmental issues are more likely to recognize and value the effectiveness of sustainable options. Consequently, fostering environmental awareness among consumers can significantly enhance their perceptions and acceptance of green products.

Similarly, subjective norms heavily impact how consumers perceive the effectiveness of green products. The data reveal a strong positive link, suggesting that social influences can significantly increase consumers' confidence in these products. Positive reinforcement from social circles helps increase their belief in the efficacy of green products.



Furthermore, consumer attitudes toward green products are heavily influenced by how effective they are perceived to be. Studies show a strong link, implying that when consumers see green products as effective, they tend to hold more positive views about them. Therefore, perceived effectiveness plays a crucial role in forming consumer opinions. When individuals believe that green products deliver tangible benefits and perform well, they are more likely to develop positive attitudes toward them. Individuals' perception of effectiveness not only enhances their overall satisfaction but also encourages consumers to choose these sustainable options over conventional alternatives. Understanding and communicating the effectiveness of green products becomes essential for marketers aiming to foster favorable consumer attitudes and promote environmentally friendly choices.

Finally, having a positive attitude toward green products increases the likelihood that consumers intend to use them; when individuals hold favorable views of these environmentally friendly options, they are more inclined to consider incorporating them into their purchasing decisions. This result suggests that cultivating positive perceptions of green products can effectively motivate consumers to choose sustainable alternatives by businesses and that marketers should focus on enhancing consumer attitudes to drive the intention to adopt green products in everyday life. The strong connection between these factors confirms that when consumers view green products favorably, they are more likely to plan to use them. This clearly shows the relationship between attitudes and consumer behavior intentions.

This study's findings offer valuable insights into the complex factors affecting the adoption and use of green products. Specifically, they show that Environmental Concern and Subjective Norms heavily influence perceptions of Green Product Effectiveness. In turn, these perceptions significantly impact attitudes toward green products and the intention to use them. This discussion examines these relationships and their wider implications for encouraging sustainable consumer behavior.

Environmental concern has become a key predictor of how effectively green products are perceived to be. This aligns with earlier studies showing that individuals who are more aware of environmental issues tend to see green products as better solutions to those problems (Kamalanon et al., 2022). When people are more environmentally concerned, they value the benefits of green products more, which increases their perceived effectiveness. This highlights the need to promote environmental awareness and education among consumers to improve their perception of the efficacy of green products. Research by Casalegno et al. (2022) indicates that people with strong environmental concerns are more likely to buy sustainable products across generations. Wijekoon and Sabri (2021) noted that increasing environmental concern encourages consumers to adopt sustainable habits, increasing the acceptance and effectiveness of green products. Sarkar et al. (2022) show how innovative green products from remanufacturing can support environmental sustainability. Tan et al. (2022) reported that environmentally conscious consumers respond well to green marketing, which further enhances the success of green products. Overall, these studies confirm that environmental concern is not just personal value but also a critical factor in boosting the success of green products. As awareness increases, consumer demand for sustainable options increases, ultimately leading to greater market success for green initiatives.

Subjective norms also play a significant role in the effectiveness of green products. This finding indicates that the social environment and perceived social pressures are crucial in shaping how individuals view green products. When important others—such as family, friends, and peers—support green products, people are more likely to view these products as beneficial and worth considering. Numerous studies highlight how subjective norms influence perceptions of green products, demonstrating that social expectations impact consumer behavior toward sustainability. Xu et al. (2022) reported that subjective norms and environmental factors strongly influence green purchasing decisions. Roh et al. (2022) confirmed that subjective norms significantly affect consumers' intentions to buy organic products. Van Tonder et al. (2023) highlight that subjective norms, alongside internal values and attitudes, encourage broader participation in sustainable practices, indicating a collective move toward eco-conscious consumerism. Li et al. (2023) show that subjective norms affect how construction companies engage in green development, suggesting that organizations are more inclined to adopt sustainable practices when they sense strong social expectations, strengthening the case in which subjective norms can enhance the success of eco-friendly initiatives.

The study revealed that environmental concern and subjective norms indirectly shape attitudes toward green products and the intention to use them, primarily through their influence on the perceived effectiveness of these products. When individuals perceive green products as effective, they tend to develop more positive attitudes and are more likely to intend to use them. This finding highlights how these factors are interconnected and emphasizes the importance of a comprehensive strategy to promote green products.

Green Product Attitude: Consumers are more likely to develop positive views of green products if they believe these products are effective. Such positive perceptions increase the chances of consumers adopting and using green products. This study indicates that increasing the perceived effectiveness of green products can significantly improve consumer attitudes and encourage adoption. Research has shown that the effectiveness of green products positively affects attitudes toward them. Chaihanchai and Anantachart (2023) explore how factors such as green value and environmental knowledge influence green purchasing behavior. When consumers see green products as effective and valuable, they become more willing to buy eco-friendly options. Kamalanon et al. (2022) further explain that perceived effectiveness shapes consumer attitudes, which

then influence purchase intentions. Recognizing that green products effectively address environmental issues strengthens positive attitudes and promotes more sustainable buying habits.

Mehta and Chahal (2021) emphasized that recognizing green consumer profiles shows that those who believe that green products are effective tend to have more positive attitudes toward them. Ahmed et al. (2023) provide strong evidence that when consumers see green marketing strategies as effective in promoting sustainable products, their attitudes become more positive. This finding indicates that perceived product effectiveness not only boosts purchase intentions but also enhances overall attitudes toward green products. As consumers increasingly realize how well these products address environmental concerns, their attitudes improve, leading to greater acceptance and higher purchase intentions for eco-friendly options.

The intention to use green products is directly shaped by consumers' attitudes toward them. By improving perceptions of their effectiveness through targeted messaging and education, marketers can increase consumers' willingness to adopt these products. This often results in higher actual usage. Consistent research shows that a positive view of green products strongly impacts the intention to use them. Chen et al. (2022) reported that favorable attitudes lead consumers to be more likely to express intentions to buy and use green products. This study suggests that positive perceptions of these environmentally friendly options significantly increase consumers' willingness to buy and use them, highlighting the importance of nurturing positive attitudes toward green products, as they play a crucial role in motivating consumers to make sustainable choices. Costa et al. (2021) also confirmed that positive attitudes are strong predictors of purchase intentions. Their research highlights that when individuals have a favorable view of a product, they are much more likely to consider buying it, highlighting the importance of cultivating positive perceptions among consumers, as these attitudes can greatly influence their purchasing decisions. By recognizing the strong link between positive attitudes and purchase intentions, businesses can develop effective marketing strategies that resonate with consumers and encourage sustainable buying behaviors. Similarly, Varah et al. (2021) focused on young consumers and reported that positive attitudes are vital in shaping their intentions to engage with green products. The study examined young consumers and revealed that fostering positive attitudes is crucial for influencing their willingness to engage with green products. Chaihanchai and Anantachart (2023) reported that when consumers hold positive attitudes and possess strong environmental knowledge, their intention to buy these products increases significantly.

These studies confirm that having a positive view of green products directly increases the likelihood of consumers intending to use them. By shaping favorable perceptions and clarifying environmental advantages, companies can foster more sustainable buying habits and increase green product adoption. The findings highlight the complex links between consumer perceptions, social norms, attitudes, and intentions, offering practical guidance for marketers and policymakers to develop better strategies for encouraging sustainable consumer actions. Understanding these connections allows them to create more effective strategies aimed at promoting sustainable consumer behaviors. By recognizing how perceptions and social norms influence attitudes, marketers can tailor their messaging to resonate with target audiences. Policymakers can design initiatives that foster positive social norms around sustainability, encouraging individuals to adopt greener practices. This comprehensive understanding equips both marketers and policymakers with the tools needed to drive meaningful change and encourage environmentally responsible consumer actions.

This study's findings suggest that increasing environmental awareness through campaigns can increase the perceived efficacy of green products. To reinforce positive subjective norms around green product use, social influence should be leveraged by incorporating testimonials, endorsements from key figures, and community marketing efforts. Communication should highlight how green products effectively address environmental issues. Using clear, evidence-based messages can build trust and foster positive attitudes. Additionally, engaging consumers via interactive platforms where they can share their experiences and benefits from green products can strengthen subjective norms and improve perceived effectiveness. When individuals discuss their positive experiences, it creates a sense of community and reinforces the idea that using green products is a socially accepted behavior. This shared dialog not only validates the effectiveness of these products but also encourages others to consider making similar choices. By fostering such interactions, brands can build stronger connections with consumers, ultimately promoting a culture that values and prioritizes sustainable practices.

This study emphasizes the importance of environmental concerns and subjective norms in influencing how effectively people perceive green products to be. These perceptions affect consumer attitudes and their intentions to use such products. By understanding and applying these factors, policymakers and marketers can craft more effective strategies to encourage the adoption of green products. These findings offer valuable insights into the key drivers of sustainable consumer behavior, laying a foundation for future research and practical efforts in green marketing and environmental policy.

4. Conclusions

This study's findings suggest that campaigns that increase environmental concern can increase how effectively people see green products. The use of testimonials, endorsements from influential figures, and community-based marketing can strengthen positive social norms about green product use. Leveraging testimonials, endorsements from prominent figures, and community-based marketing can significantly enhance positive social norms surrounding the use of green products. When influential individuals advocate for these sustainable options, their support can inspire others to adopt similar behaviors.

Testimonials from satisfied customers also play a vital role, as they provide relatable experiences that encourage potential buyers to consider green products. Communication should highlight how green products address environmental issues. Providing clear, evidence-backed messages helps build trust and positive perceptions. Additionally, engaging consumers on interactive platforms to share their experiences with and benefits of green products can further reinforce social norms and perceived effectiveness. Community-based marketing fosters a sense of belonging and collective responsibility, motivating individuals to make environmentally friendly choices. By combining these strategies, businesses can effectively promote green products and create a culture that values sustainability within communities.

This research has several limitations. The results may not apply to a wider population because the sample included only university students from a specific area. This study used a cross-sectional design, and data were collected at a single time point. A longitudinal study would allow for exploring how relationships between variables evolve over time. Additionally, while the study examined the effects of green product effectiveness, environmental concern, and subjective norms, it did not consider other factors, such as price and convenience, that might also influence green product use. Future research incorporating these variables could offer a more complete view of the factors affecting green product adoption.

Ethical Considerations

The research process ensured that the confidentiality and privacy of the participants' data were rigorously protected. Prior to taking part in the study, all participants provided informed consent, confirming their willingness to contribute. Any personal information gathered during the study was anonymized to safeguard identities and was utilized exclusively for research purposes, adhering to established ethical guidelines. This commitment to ethical standards not only protects participants but also enhances the integrity of the research. By prioritizing privacy and obtaining consent, the study fosters trust and transparency between researchers and participants, which is essential for ethical research practices.

Conflict of Interest

The authors declare that they have no conflicts of interest.

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