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Cosmetic Product Packaging Return Program As A Strategy To Improve Gen-Z Consumers' Purchase Intention in Indonesia

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Abstract: This study aims to analyze the influence of packaging return programs using the Theory of Planned Behavior approach—comprising attitude, subjective norm, and perceived behavioral control—on Gen Z consumers' purchase intention toward cosmetic products. A quantitative research design was employed, using an online questionnaire to collect data from 300 Gen Z respondents across various regions in Indonesia. All participants had experience purchasing cosmetic products and were aware of packaging return programs. The data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. This study evaluates the impact of a cosmetic packaging return program on Generation Z's purchase intention in Indonesia, employing a Theory of Planned Behavior (TPB). Survey results from 300 respondents indicate that perceived behavioral control (PBC) is the strongest predictor of purchase intention (β=0.47), followed by subjective norms (β=0.45) and attitude (β=0.21) affects purchase intention for cosmetics with packaging return programs. The model's strong explanatory power is confirmed by an R^2 value of 0.607 for purchase intention. These findings emphasize that marketing strategies for Indonesia's cosmetic industry must align with sustainability issues by leveraging psychological and social approaches to foster responsible consumer behavior among Gen Z. The study provides practical implications for the industry to design eco-friendly initiatives that resonate with the values and lifestyles of younger generations.

Keywords: Theory Of Planned Behavior, Gen Z, Cosmetic Products, Packaging Return Program, Purchase Intention.

INTRODUCTION

Environmental and sustainability issues have become increasingly pressing global concerns. The worsening environmental conditions have raised public awareness of the importance of sustainable consumption and environmental justice (Seyfang & Paavola, 2007). Eurostat data (2023) shows that in 2021, the European Union produced around 84 million tonnes of packaging waste or equivalent to 188.7 kg per capita, a significant increase compared to the previous year. Plastic waste increased by 26.7% between 2011 and 2021. In Indonesia,

the National Waste Management Information System (SIPSN-KLH/BPLH, 2024) noted that throughout 2024 there were 27.28 million tonnes of waste generated, of which 19.8% was plastic waste. Of this amount, around 54.58% came from households or domestic activities. The amount of cosmetic packaging waste is estimated to contribute around 10% of total plastic waste (Waste4Change, 2022), or around 0.54 million tons per year. This waste, especially bottles and containers of cosmetic product packaging, has the potential to cause serious environmental impacts because it still contains residual active ingredients and has not been managed as hazardous and toxic waste or B3 (Sari et al., 2022). Ideally, waste containing B3 is processed separately from ordinary domestic waste.

The Indonesian cosmetics industry is growing rapidly and is projected to enter the top five globally in the next decade. However, the Ministry of Cooperatives and SMEs noted a slowdown in the growth of the national cosmetics industry. One of the inhibiting factors is the entry of imported products into the domestic market, which has caused local production to drop drastically from 80% to 40% in the 2022–2023 period (Nabila, 2023). Other factors include market saturation, a shift in consumer preferences towards natural products, and the influence of the economy on spending on consumer goods. Indonesian consumers are increasingly interested in beauty and personal care products that prioritize natural and sustainable components, reflecting an awareness of environmental and health issues. This shift is especially evident in the younger demographic who are more exposed to health trends and social media (Statista, 2025). The majority of local manufacturers still focus on product and formulation excellence, without a marketing strategy that emphasizes environmental aspects (Ferdinand & Ciptono, 2022). One potential marketing strategy to be developed by cosmetic manufacturers is a packaging return program. Cosmetic product packaging return initiatives not only reduce waste but also build consumer loyalty, encourage sustainable consumption behavior, and are in line with circular economy principles (Zhong & Huang, 2016). In this context, “zero waste buying” behavior is increasingly relevant, especially among young consumers such as Generation Z (Prakash et al., 2024).

Publications related to consumer behavior emphasize the importance of managing the "sustainability" trend in various sectors, including cosmetics. Modern consumers are increasingly aware of the need for environmentally friendly products, where ethical and environmental considerations are dominant in determining purchasing decisions (Liobikienė & Bernatonienė, 2017). Several studies have shown that so far surveys and Focus Group Discussions have been the main methods for analyzing sustainable consumer behavior (Green Purchase Behavior/GPB) in cosmetic products. In analyzing consumer purchasing behavior for cosmetic products, previous studies used the Theory of Planned Behavior (TPB) (Askadilla & Krisjanti, 2017) and the Pro-Environmental Reasoned Action (PERA) model (Chin et al., 2018) which is a derivative of the Theory of Reasoned Action (TRA), as well as the Value-Belief-Norm Theory (VBN) ((Kim & Chung, 2011; Quoquab et al., 2020; Zahid et al., 2018)

Facing the challenges of the Indonesian cosmetic market, it is necessary to develop marketing methods that emphasize environmental issues as an essential parameter to attract the interest of “Generation Z” as the main target market in the coming decade. Generation Z (born between 1997–2012) is a consumer group with environmentally conscious characteristics, but remains sensitive to price and purchase incentives such as discounts and gifts (Song et al., 2020). Socially, sustainable practices are a symbol of status and responsibility, while economically, the increasing availability of environmentally friendly products makes them more affordable for Gen Z (Tilaar et al., 2023). In examining Gen Z's behavior towards purchasing environmentally friendly cosmetic products, the Theory of Planned Behavior (TPB) approach is a relevant theoretical framework. The TPB model explains that a person's intention to take action is influenced by three main factors: attitude toward behavior, subjective norms, and perceived behavioral control (Bravo & Vieira, 2024).

Gen Z's attitude towards packaging return programs is influenced by their environmental knowledge, social norms from the surrounding environment and digital media, and their perception of ease of access and participation in the program. Considering the complexity of factors that influence the intention and behavior of purchasing eco-friendly cosmetic products, this study aims to examine how cosmetic product packaging return programs can increase purchase intentions among Gen Z Indonesia. The findings of this study are expected to provide practical insights for local cosmetic industry players in designing effective and sustainable sustainability-based marketing strategies. Two main methods in sustainable cosmetic packaging that support the circular economy are: (i) design strategy and (ii) material selection. Eco-design can utilize materials with minimal ecological impact (Sahota, 2013). The main challenge in managing sustainability issues for cosmetic packaging involves various stakeholders in the supply chain to encourage innovation that considers economic, environmental, and social aspects. Cosmetic packaging has complexity in the selection of materials that are associated with certain functions to maintain product benefits. This limits the ability to recycle and use environmentally friendly materials for cosmetic product packaging.

Considering the long-term environmental pollution risks of cosmetic materials and packaging, one of the best efforts to maintain environmental quality is to hold cosmetic manufacturers accountable for managing their product packaging waste. Furthermore, manufacturers need to collaborate with packaging manufacturing partners to create recyclable packaging or ensure safe disposal after processing. This approach ensures controlled product life cycle management, from material sourcing to final disposal (Tong et al., 2024).

Environmentally Friendly Marketing Program

As an effort to increase market penetration while maintaining loyalty from existing consumers, marketing strategies that prioritize environmental and sustainability issues have been implemented in various forms, including:

Points Reward System (PRS) is a point-based incentive mechanism given to consumers after taking certain actions, such as purchasing a product or participating in a recycling program. These points can be exchanged for prizes, discounts, or additional services, which ultimately increase consumer loyalty and participation (Geyer et al., 2017; Zhong & Huang, 2016). In an environmental context, PRS has been shown to encourage waste management, such as e-waste, and build long-term relationships between consumers and producers (Dick & Basu, 1994).

Deposit Return Scheme (DRS) requires consumers to pay a deposit when purchasing a product, which is then returned when the packaging is returned to the manufacturer for recycling (Ramasubramanian et al., 2023). This system has proven effective in countries such as Germany and Norway, which have achieved packaging return rates of up to 98% and 95% (Laubinger et al., 2022; Rhein & Sträter, 2021). Unlike PRS which emphasizes loyalty, DRS focuses on packaging return incentives.

Packaging Return System, is a system for returning used packaging to manufacturers or retailers for recycling or reuse. This system encourages the reduction of packaging waste, facilitates a circular economy, and reduces environmental impact (Ghisellini et al., 2016). Incentives such as discounts or loyalty points are often used to increase consumer participation. Unlike PRS which targets brand loyalty, this system emphasizes environmental responsibility through packaging return practices.

Green marketing as a form of marketing strategy that highlights sustainability and minimal environmental impact. This strategy includes green products, green prices, green distribution, and green promotions (Kardos et al., 2019; Majeed et al., 2022). The success of green marketing depends on the authenticity of the message and the company's real actions towards the environment, not just its image. Several global companies have implemented this

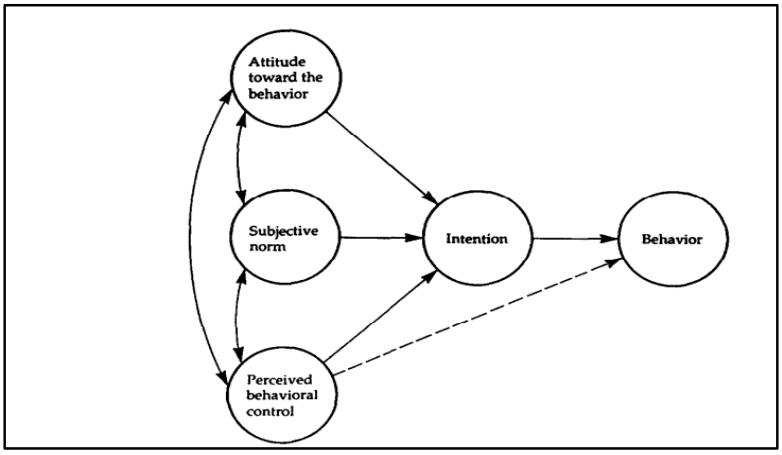
strategy, such as: IKEA with the use of recycled materials and renewable energy (Yurt & Deniz, 2021), Starbucks with waste reduction campaigns and the use of recycled packaging (Gede et al., 2022), Patagonia through educational campaigns such as "Don't Buy This Jacket" (Chouinard et al., 2011), The Body Shop which rejects animal testing and promotes natural ingredients (Febriane, 2022), Toyota with hybrid vehicles such as the environmentally friendly Prius (Toyota Astra, 2024). Green marketing has proven effective in building a responsible brand image and attracting environmentally conscious consumers (Paul et al., 2016).

The 3R (Reduce, Reuse, Recycle) waste management program may be the least attractive marketing program. Because it emphasizes consumer participation and responsibility in managing their waste, without being given certain incentives from producers. The 3R concept aims to reduce the volume of waste through reduction, reuse, and recycling strategies. This strategy is important for achieving a circular economy and reducing pressure on natural resources (Mahartin, 2023). Modern waste management emphasizes prevention at the source, sorting, and reprocessing of waste (Das et al., 2019). The 3R hierarchy places reduce as the most sustainable strategy, followed by reuse and recycle. Implementation of this principle requires infrastructure support and active participation of the community and government. This strategy also contributes to reducing greenhouse gas emissions and increasing the economic value of recycled waste (Samitthiwetcharong et al., 2024).

Theory of Planned Behavior

TPB was developed by Ajzen (1985) as a social psychology framework that aims to predict and explain individual behavior in certain contexts. TPB is a development of the Theory of Reasoned Action (TRA) and is designed to explain behavior that is not fully under the control of the individual. In this theory, it is assumed that individuals act rationally by considering the implications of the actions to be taken (Ajzen, 2020). TPB has been widely applied in various research fields such as traffic safety, pro-environmental behavior, to actions in the health sector, to explain the factors that motivate deliberate behavior (Ajzen, 1991). This theory identifies three main factors that shape behavioral intentions, namely attitudes towards behavior, subjective norms, and perceived behavioral control.

First, attitude refers to an individual's evaluation of a behavior, where a positive attitude will increase the tendency to perform the behavior. Second, subjective norms reflect an individual's perception of social pressure from people close to them such as family, friends, or coworkers regarding whether or not they should perform a certain behavior. Third, perceived behavioral control refers to an individual's perception of the ease or difficulty of performing a behavior, which is influenced by external constraints and resource availability. These three components together are strong predictors of an individual's intentions and actual behavior in a variety of situations.



Gambar 1. Theory of planned behavior (Ajzen, 1991)

The TPB model states that behavior is the result of intention and perceived behavioral control (Ajzen, 1991). In order for behavioral predictions to be accurate, there needs to be a match between intention, perceived control, and the specific behavior being measured (Kaiser et al., 2007). In addition, intention and behavioral control must be stable over a period of time, and the individual's perceived control must be realistic to actual conditions (Ajzen, 1991). When individual control is high, intention becomes the main predictor of behavior. However, if control decreases, perceived behavioral control also determines actual behavior.

In this study, the TPB framework was used to measure purchase intention for cosmetic products that have a packaging return program using several indicators: Attitude toward behavior, Subjective Norm, and Perceived Behavioral Control in influencing Purchase Intention. Several hypotheses formulated in this study include:

- H1: Consumer attitudes toward packaging return programs have a positive effect on purchase intentions for cosmetic products that have packaging return programs.
- H2: Subjective norms have a positive effect on increasing the purchase intention of cosmetic products that have a packaging return program.
- H3: Behavioral Control has a positive effect on the purchase intention of cosmetic products that have a Packaging Return program.

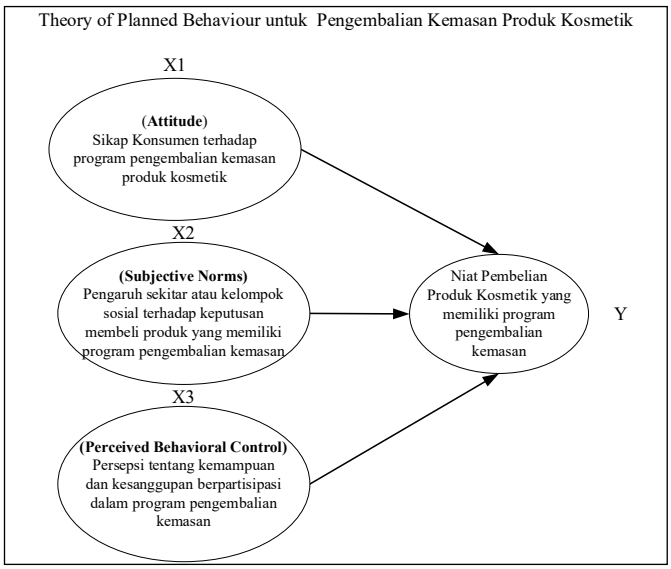


Figure 3. Theoretical Model Based on TPB for Cosmetic Product Packaging Return Program Research

METHOD

The study was conducted in several cities in Indonesia targeting individuals included in the Generation Z category, namely those aged between 18 and 25 years and who have experience in purchasing cosmetic products regularly. The target respondents focused on consumers who use cosmetic products from local Indonesian brands, including local brands that carry out production processes abroad. There were no restrictions on specific cosmetic brands set in this study, as long as the products were categorized as local cosmetics by the respondents. The sample used was 300 respondents with a convenience sampling technique. Respondents were selected based on ease of access and availability to participate in the study through online forms or face-to-face meetings. This technique allows researchers to reach participants efficiently, although it does not fully represent the population as a whole (Etikan, 2016). Respondents must meet the established sample criteria. The research questionnaire used a 5 (five) Likert scale in the form of a checklist.

The study took place from February to April 2025 and did not categorize respondents based on educational background, environmental insight, employment situation, income level, or financial spending preferences. The data analysis technique used was Partial Least Squares - Structural Equation Modeling (PLS-SEM), which aims to analyze the relationship between latent variables in the path model. PLS-SEM is also known as a second-generation multivariate analysis method (Ghozali, 2013), and allows testing of measurement models and structural models simultaneously.

RESULTS AND DISCUSSION

Table 1. Results of Validity Test and Reliability Test

Statement Items	Corrected Item-Total Correlation	Note	Cronbach's Alpha	Note
Attitude toward behavior				
ATB1: The packaging return program is easy to follow and hassle-free..	0,508	valid	0,921	reliabel
ATB2: I realize that waste from cosmetic product packaging must be managed specially so as not to pollute the environment.	0,340	valid	0,924	reliabel
ATB3: In my opinion, returning used cosmetic packaging is a very beneficial action for the environment.	0,423	valid	0,923	reliabel
ATB4: I believe that the act of returning cosmetic product packaging is a good habit.	0,483	valid	0,921	reliabel
Subjective norms				
SN1: Someone important to me, felt I needed to purchase cosmetic products that had a packaging return program.	0,622	valid	0,919	reliabel
SN2: I feel that people around me (family, friends, colleagues) will judge me negatively if I don't buy cosmetic products that have a packaging return program.	0,457	valid	0,924	reliabel
SN3: Someone whose opinion I respect wants me to buy a cosmetic product with a packaging return program.	0,559	valid	0,920	reliabel
SN4: Environmentally conscious communities on social media inspire me to prefer cosmetic products that have packaging return programs.	0,695	valid	0,917	reliabel
Perceived behavioral control				
PBC1: I find it easy to access the cosmetic product packaging return location.	0,598	valid	0,920	reliabel
PBC2: I am confident that I can return the cosmetic product packaging without any difficulty.	0,659	valid	0,918	reliabel
PBC3: I believe in using certain cosmetic products that have a long-term packaging return program.	0,637	valid	0,918	reliabel
PBC4: I am confident that I will have a commitment to always return the packaging of cosmetic products that have been used.	0,679	valid	0,917	reliabel
Purchase intention				
NP1: I intend to purchase a cosmetic product that offers a packaging return program.	0,724	valid	0,917	reliabel
NP2: I am willing to choose cosmetic products with a packaging return program over products without such a program.	0,656	valid	0,918	reliabel

Statement Items	Corrected Item-Total Correlation	Note	Cronbach's Alpha	Note
NP3: I will most likely purchase cosmetic products that have a packaging return program in the near future.	0,663	valid	0,918	reliabel
NP4: I have planned to purchase cosmetic products with a packaging return program.	0,703	valid	0,917	reliabel

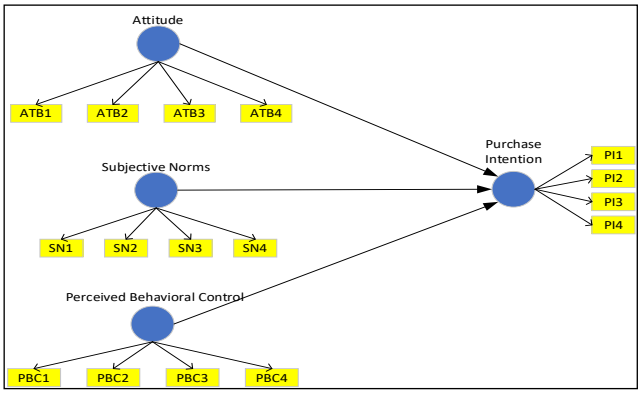


Figure 4. Initial PLS Model

Validity and Reliability Test

In research based on Partial Least Squares Structural Equation Modeling (PLS-SEM), validity and reliability tests are critical stages to ensure the accuracy and consistency of the measurement instrument before the structural model analysis is carried out. Convergent and discriminant validity and construct reliability are evaluated to verify that the indicators used truly represent the intended latent construct, without overlapping with other constructs. Through analysis of outer loading, Average Variance Extracted (AVE), Heterotrait-MonotraitRatio (HTMT), and Composite Reliability and Cronbach's Alpha, researchers ensure that each construct has strong measuring power, is internally consistent, and is clearly different from other constructs in the model. This process is the basis for validating the measurement structure before testing the relationship between constructs, so that the research results can be scientifically accounted for and free from measurement bias.

Table 2. Outer Loading Values

Variabel	Indikator	*Outer Loading*	Information
Attitude Toward Behavior	ATB 1	0,797	*Valid*
	ATB 2	0,746	*Valid*
	ATB 3	0,782	*Valid*
	ATB 4	0,808	*Valid*
Subjective Norms	SN 1	0,748	*Valid*
	SN 2	0,702	*Valid*
	SN 3	0,756	*Valid*
	SN 4	0,806	*Valid*
Perceived Behavior Control	PBC 1	0,820	*Valid*
	PBC 2	0,855	*Valid*
	PBC 3	0,763	*Valid*
	PBC 4	0,806	*Valid*
Niat Pembelian	NP 1	0,858	*Valid*
	NP 2	0,791	*Valid*
	NP 3	0,840	*Valid*
	NP 4	0,815	*Valid*

Table 3. Table of Average Variance Extracted

Variable	AVE
Attitude (X_1)	0,614
Subjective Norms (X_2)	0,568
Perceived Behavior Control (X3)	0,659
Niat Pembelian (Y)	0,683

Table 4. Heterotrait – Monotrait Ratio (HTMT)

	Attitude	**Niat Purchase Intent**	***Perceived Behavior Control***	***Subjective Norms***
	ATB	NP	PBC	SN
Attitude	0,784			
Purchase Intent	0,472	0,826		
Perceived Behavior Control	0,330	0,719	0,812	
Subjective Norms	0,415	0,668	0,701	0,754

Table 5. Composite Reliability and Croncbach's Alpha

Variabel	***Composite Reliability***	***Cronbach's Alpha***
Attitude (X_1)	0,864	0,792
Subjective Norms (X_2)	0,840	0,752
Perceived Behavior Control	0,885	0,827
Purchase Intent	0,896	0,845

The results of the validity and reliability analysis indicate that all constructs in the measurement model meet the required criteria. Based on Table 2, the outer loading values of all indicators in each variable are above 0.7, indicating that all indicators (such as ATB1, SN2, PBC1, and so on) significantly contribute to representing their latent constructs. Table 3 confirms convergent validity through the Average Variance Extracted (AVE), where all variables have AVE values above 0.5. Although Subjective Norms (X2) has the lowest AVE (0.568), this value still meets the minimum requirements, while Purchase Intention (Y) records the highest AVE (0.683), indicating that this construct is measured with very good precision. Table 4 (Heterotrait-Monotrait Ratio/HTMT) tests discriminant validity, and all HTMT ratios between constructs are below the threshold of 0.9. The highest value is between Perceived Behavior Control (PBC) and Purchase Intention (NP) of 0.719, which still indicates that each construct is unique and does not overlap. In addition, the results in Table 5 strengthen the reliability of the model with Composite Reliability and Cronbach's Alpha values above 0.6 for all variables.

Overall, the results of this analysis prove that the research instrument has adequate validity (both convergent and discriminant) and reliability. Thus, the constructs in this study are worthy of being used as a basis for further analysis, such as hypothesis testing or structural modeling, because they have ensured the accuracy and consistency of the measurement.

Table 6. Outer Model Evaluation Results

No.	Model Analysis	Model Acceptance Criteria	Hasil Test Results	Interpretasi
1.	*Outer loading*	Valid $\geq$ 0,7	All data > 0,7	Konvergen indikator valid
2.	*AVE (Average Variance Extracted)*	Valid $\geq$ 0,5	All data > 0,5	Convergent validity is adequate
3.	*Heterotrait – Monotrait Ratio* (HTMT)	Valid $\leq$ 0,9	All data < 0,9	The discriminant validity between the two measured constructs has been met.
4.	*Composite reliability*	Reliabel $\geq$ 0,6	All data > 0,6	

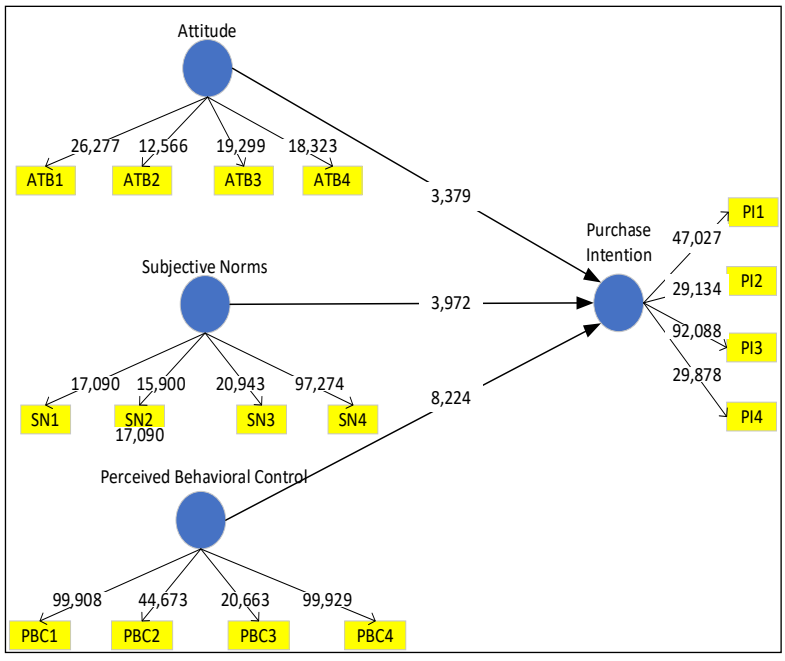
No.	Model Analysis	Model Acceptance Criteria	Hasil Test Results	Interpretasi
5.	*Cronbach's alpha*	Reliabel ≥ 0,6	All data > 0,6	The variables or indicators in the study have very good reliability.

Inter-Model Relationship Test (Structural Model Analysis)

After ensuring the validity and reliability of the constructs through the evaluation of the measurement model, the next stage in the PLS-SEM analysis is to test the relationship between variables in the structural model. This test involves path coefficient analysis to assess the significance and strength of the hypothesized relationship between constructs, as well as the coefficient of determination (R^2) to measure the extent to which the independent variables explain the variance in the dependent variable. In addition, the f-square value (effect size) is used to determine the relative contribution of each independent variable in influencing the dependent variable, while cross-validated redundancy (Q^2) through the Stone-Geisser test is applied to evaluate the predictive ability of the model. By combining these four analyses, researchers can not only confirm the theoretical relationship between constructs but also ensure that the model built has strong explanatory power and predictive relevance in the research context.

Table 7. Inner Variance Inflation Factor

Variabel	Purchase Intent (Y)
Attitude (X_1)	1,213
Subjective Norm (X_2)	2,128
Perceived Behaviour Control	1,975



Gambar 2. Pengujian Path Coefficients

Tabel 1. *Path Table 8. Path Coefficients*

Influence	Koefisien
Attitude (X_1) → Purchase Intent (Y)	0,21
Subjective Norms (X_2) → Purchase Intent (Y)	0,45
Perceived Behavior Control (X_3) → Purchase Intent (Y)	0,47

Tabel 2. *Coefficient of Determination*

Variabel Terikat	Nilai R Square
Attitude	0,203
Purchase Intent	0,607

Tabel 3. Nilai F *Square*

Variabel	*purchase value* (Y)
Attitude (X_1)	0,095
Subjective Norm (X_2)	0,072
Perceived Behavior Control	0,292

Tabel 4. Nilai *Cross-Validated Redundancy*

Variabel	Q^2
Attitude	0,110
purchase intention	0,406

Based on the structural model analysis, it can be concluded that all independent variables (Attitude, Subjective Norms, and Perceived Behavior Control) have a significant influence on the dependent variable in the model. The Inner VIF value in Table 7 shows that there is no multicollinearity problem (all values <5), so the assumption of independence between predictors is met. From Table 8 (Path Coefficients), Perceived Behavior Control (X3) has the strongest influence on Purchase Intention (Y) (β = 0.47), followed by Subjective Norms (β = 0.45) and Attitude (β = 0.21). The R^2 value in Table 9 indicates that 60.7% of the variance in Purchase Intention (Y) can be explained by the three independent variables. The f-square analysis (Table 10) confirms that Perceived Behavior Control contributes the largest effect on Purchase Intention (f^2 = 0.292). Furthermore, the Q^2 values in Table 11 (0.406 for Purchase Intention and 0.110 for Attitude) confirm that the model has good predictive relevance (Q^2 > 0), especially for the Purchase Intention construct. Overall, this model not only meets the statistical feasibility criteria but also has strong explanatory and predictive power, with Perceived Behavior Control as a key factor driving Purchase Intention.

Hypothesis Testing Hypothesis testing is conducted to determine whether the independent variables (attitude, subjective norms, and behavioral control) have a significant effect on purchase intention. The test is conducted by comparing the t-count value with the t-table (1.98) at a significance of 5%. If the t-count> 1.98 and the p-value <0.05, then the influence is considered significant, both directly and indirectly. The following are the results of the research hypothesis testing**:**

Table 11. Hypothesis Testing

Hipotesis	influence	Koefisien	t count	*p-value*	Note
H1	*Attitude* (X_1) → Purchase Intent (Y)	0,21	3.379	0,001	Signifikan
H2	*Subjective Norms* (X_2) → Purchase Intent (Y)	0,45	3.927	<0,001	Signifikan
H3	*Perceived Behaviour Control* (X_3) → Purchase Intent (Y)	0,47	8.224	<0,001	Signifikan

Based on Table 11, all hypotheses in this study are declared accepted because they meet the significance criteria (t-count > 1.98 and p-value < 0.05). Attitude (X1) has a significant effect on purchase intention (Y) with a coefficient of 0.21, indicating that consumers' positive views on the packaging return program encourage purchase intention, although its influence is the weakest. Subjective norm (X2) has a stronger influence with a coefficient of 0.45, indicating that social encouragement also strengthens purchase intention. Perceived behavioral

control (X3) is the variable with the strongest influence on purchase intention, with a coefficient of 0.47 and the highest t-count (8.224), indicating that consumers' belief in their ability to engage in the program greatly determines purchase intention. Thus, the most dominant variable in forming purchase intention is perceived behavioral control, followed by subjective norm and attitude.

CONCLUSION

Research on the Cosmetic Product Packaging Return Program as a Strategy to Increase Purchase Intentions of Gen Z Consumers in Indonesia shows that 300 respondents considered this program interesting and beneficial for the environment. Through the analysis of the Theory of Planned Behavior (TPB) model, several important findings were obtained. First, consumer attitudes (attitude toward behavior) have been shown to have a positive effect on the intention to purchase cosmetic products with a packaging return program. Second, subjective norms from the social environment also have a positive effect on this intention. Third, perceived behavioral control shows a positive effect and is the most dominant factor in forming purchase intentions.

From the analysis results, cosmetic companies in Indonesia have the opportunity to utilize the “packaging return program” as a marketing strategy. The focus of the marketing program is carried out by increasing perceived behavioral control by providing easily accessible information about the product and the mechanism of the packaging return program, simplifying procedures, and showing evidence that this program is easy to use. Subjective norms can be maximized through campaigns involving influencers or communities, and by utilizing customer testimonials as a form of social proof. To maintain a positive consumer attitude towards this program, manufacturers need to provide educational content that links environmental issues with the use of cosmetic product packaging, and explains the positive impact of the program on the environment. The development of marketing programs can be in the form of campaigns to increase environmental awareness, content on social media, and providing incentives for consumers who demonstrate environmentally conscious behavior, of course adjusted to market characteristics, especially the younger generation.

From an academic perspective, further research can test the mediating role of consumer attitudes in the relationship between environmental knowledge and purchase intention, by considering moderating variables such as age, gender, and education level. In addition, the scope of variables can be expanded to include other factors such as price, product quality, or brand loyalty. Research can also use longitudinal data to see changes in purchase intention over time. The TPB model can be developed with several other relevant variables and tested in other industrial sectors such as automotive, healthcare, or food and beverages to determine the validity and generalization of the model.

The results of this study strengthen the Theory of Planned Behavior (TPB), especially the dominant role of Perceived Behavior Control as the strongest predictor in the context of purchase intention, beating attitude and subjective norm. On the other hand, the results of the study contradict previous studies that predominantly place attitude as the main predictor of purchase intention. The dominance of perceived behavioral control in this context may be influenced by the characteristics of the product or the behavior of Gen Z consumers as the object of research (eg: online purchases that require confidence in using technology). These results suggest the need for integration of TPB with green consumer behavior theory, such as Value-Belief-Norm Theory. Environmental knowledge can be included as an additional construct in the TPB model for cases of sustainable or environmentally friendly products. So far, TPB has focused more on internal factors (personal beliefs) than cognitive factors such as knowledge. This finding supports the Knowledge-Attitude-Behavior (KAB) theory, which

states that knowledge influences attitudes, then behavior. The integration of KAB with TPB can be a hybrid theoretical model for further research.

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