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MORALITY BEFORE KNOWLEDGE

The decision architecture of sustainable fashion: Evaluating green knowledge as a mediator in generation Z purchase intentions

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ABSTRACT

Background: Indonesia's textile and apparel industry, while being a major economic contributor due to fast fashion growth, faces criticism for its environmental impact, prompting brands like UNIQLO to adopt sustainable marketing practices. This study aimed to examine how green marketing tools specifically eco-labels, eco-brands, and environmental advertisements affect green purchase intention among Generation Z in Yogyakarta, with green knowledge assessed as a mediating factor. **Method:** Employing a quantitative method and purposive sampling of 250 respondents, the research applied Structural Equation Modeling (SEM) using SMART PLS 3.0 to analyze the data. **Finding:** The results demonstrated that eco-labels and environmental advertisements significantly enhance green purchase intention through the mediation of green knowledge, while eco-brands showed a positive but insignificant effect. The structural model achieved an R-square value of 0.620, confirming that the integrated variables explain 62% of the variance in green purchase intention, with environmental advertising identified as the most dominant predictor (F^2 = 0.388). **Conclusion**: The study concludes that strengthening eco-labeling and environmental advertising, alongside effective education, can significantly promote sustainable purchasing behavior among young consumers. However, the findings are limited to Generation Z in a single region, suggesting that future studies should incorporate broader demographics, geographic diversity, and additional influencing variables for wider applicability. **Novelty/Originality of this article:** This research contributes a localized structural model that evaluates the psychological mechanism of green knowledge as a mediator within the Indonesian fast-fashion industry.

KEYWORDS: green marketing tools, eco-label, eco-brand, environmental advertisement, green purchase intention, green knowledge.

1. Introduction

The ready-to-wear clothing industry continues to grow every year. Based on data from bps.go.id, the manufacturing sector was the third largest contributor to GDP in the third quarter of 2023 with IDR 637.6 trillion, followed by the ready-to-wear clothing industry with IDR 34.58 trillion. This contribution is supported by high export growth, which gives the textile industry in Indonesia a unique role in driving macroeconomic growth. This has led to a fast cycle in the apparel industry, with various styles being produced every season and even every month. This phenomenon of fast fashion is known as fast fashion. The characteristics of fast fashion are assessed based on low prices, the emergence of new styles,

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global supply chains, and a decline in quality that drives increased consumption (Allwood et al, 2006). Various fashion brands have implemented fast fashion strategies aimed at attracting a wider market share (Peters et al., 2021). Some examples of world-famous fast fashion brands are UNIQLO, ZARA, H&M, MANGO, PULL&BEAR, Stradivarius, and FOREVER 21 (Sukmawati, 2021).

The phenomenon of the fast fashion industry has a positive impact on the country, such as contributing significantly to the global GDP economy. Another positive impact of fast fashion is that the clothing products sold are affordable for all segments of society. Fast fashion products are affordable compared to products from high-end brands, making them suitable for the purchasing power and lifestyle of the Millennial generation (Lam et al, 2016). In addition to having positive impacts and various other benefits, the fast fashion industry is also considered to have various negative and detrimental impacts, especially on global social and environmental issues. This is because the clothing industry has become the world's second largest source of waste pollution after the oil industry. Furthermore, the adverse effects of the global fast fashion industry on the environment include water pollution, textile waste that is difficult to recycle, excessive use of natural resources, and greenhouse gas emissions (Bailey et al., 2022).

Indonesia’s textile and apparel industry has experienced significant growth in recent years, driven by increasing consumer demand and the rapid expansion of fast fashion, which emphasizes high production speed and short product life cycles. While the industry plays a crucial role in economic development and employment, its production processes—particularly dyeing and finishing—generate substantial environmental pollution. Large volumes of wastewater containing synthetic dyes, chemicals, and heavy metals are often discharged into water bodies, contributing to ecosystem degradation and posing risks to human health (Castillo-Suárez et al., 2023). In addition, the widespread use of synthetic fibers has intensified solid waste generation and microplastic pollution, further exacerbating environmental challenges. These environmental consequences have heightened public awareness and pressure on fashion brands to adopt sustainable practices and promote environmentally responsible consumption patterns (Niinimäki, 2020).

Therefore, several companies have developed strategies that focus on designing environmentally friendly products that address environmental issues (Testa et al., 2021). Product marketing strategies that have an impact on the environment lead to sustainable consumption, which first emerged as "ecological marketing" or known as the term "green marketing" (Kumar et al., 2021). In general, ecological marketing is defined as the positive and negative aspects of marketing activities on pollution, energy depletion, and non-energy resource depletion. This relates to all marketing activities that help environmental issues and can provide solutions to environmental problems.

One of the Japanese fashion brands that markets its products in Indonesia is UNIQLO. UNIQLO is one of the brands that has implemented a green marketing strategy in its products. So far, the UNIQLO brand has implemented 26 green marketing strategies. UNIQLO's implementation of green marketing strategies includes changing products to fluffy fleece material recycled from used PET bottles, recycling clothing, replacing the use of plastic, campaigning for recycling activities, reducing the use of microfiber materials, repairing and remaking clothing, ensuring that raw materials are obtained ethically, changing the logo color to green, and collaborating with social organizations. In addition, UNIQLO also uses the slogan "THE POWER OF CLOTHING," which aims to encourage people to make the world a better place by continuing to shop for environmentally friendly products. UNIQLO then collaborated with a green Doraemon named "Doraemon Sustainability Mode" as the icon for UNIQLO Sustainability products. Along with the launch of Doraemon, UNIQLO also changed its logo color from red to green. Through this change, UNIQLO wants to emphasize the company's determination and efforts to accelerate environmental balance by providing environmentally friendly clothing. Martins (2021) states that the reason UNIQLO uses a green marketing strategy is to increase the perception of profitability and green purchases.

To maximize the green marketing strategy, green marketing tools are needed. Green marketing tools consist of eco-labels, eco-brands, and environmental advertising. According tothe use of these green marketing tools is to make it easier for consumers to distinguish between environmentally friendly products and non- environmentally friendly products. Eco-labels are a very appropriate promotional technique for promoting environmentally friendly products, because by using this tool, companies can inform consumers about the environmentally friendly description of the quality and components of their products. The purpose of using eco-labels in green marketing is to encourage industrial innovation through the application of ecologically-based sustainable products and to build consumer awareness of environmentally- friendly products.

Eco-brand is an element of green marketing tools that serves to differentiate green products from other non-green products (Nurhayati, 2016). A company must be able to create the uniqueness of the brand it wants to build in such a way that is ecologically based so that consumers can accept what is conveyed from the brand's objectives. Environmental advertising, also known as green advertising, is information about environmentally friendly products or services. The use of environmental advertising is an effective tool to promote products, services, ideas, and company goals in showing the company's concern and initiative to protect and preserve the environment.

Green knowledge is a person's awareness and knowledge of environmental phenomena and issues. People who have green knowledge will develop an attitude of concern for the environment (Ryantari, 2020). Green knowledge needs to be further introduced to the public in relation to environmentally friendly products in order to have a reciprocal impact on the environment by educating the public about the phenomena and issues that are occurring around them, as well as the benefits of using eco-branded or eco-labeled products (Hanjani & Widodo, 2019). Green purchase intention is a form of consumer behavior in choosing a product based on knowledge and experience before purchasing the product as a form of support for the environment (Junaedi, 2015). The intention to purchase environmentally friendly products encourages individuals to be responsible for the environment, and the decision to purchase green products is a social contribution to the environment.

This study extends previous research on green marketing tools and green purchase intention by integrating the variables into a single analytical framework. Ali & Ahmad (2012) reported a direct effect of green marketing tools on green purchase intention; however, subsequent studies present inconsistent findings. The environmental advertisement, as one indicator of green marketing tools, did not positively influence green purchase intention, while Fahyat (2025) revealed that green knowledge was not positively associated with green purchase intention. These mixed results indicate a clear research gap regarding the role of green knowledge in the relationship between green marketing tools and green purchase intention. Therefore, this study aims to examine whether green marketing tools, mediated by green knowledge, significantly influence green purchase intention. This research is particularly relevant in the context of Generation Z, a consumer group recognized for its heightened awareness and active engagement with social and environmental issues, especially in apparel purchasing decisions

Furthermore, based on data from the Central Statistics Agency/*Badan Pusat Statistik* (BPS), the population of Generation Z in 2023 will reach 27.94% or 74.93 million people in Indonesia. Generation Z is a generation born between 1997 and 2012. Generation Z is considered to have distinctive fashion preferences and high turnover in the use of brands, especially in the fast fashion industry, taking into account current trends (Djafarova & Bowes, 2021). Therefore, the fast fashion industry that implements green marketing in its products will target the younger generation, as young generation are typically more motivated to purchase environmentally friendly products because they have received education on environmental issues and information through media about social behaviors that impact the environment (Sandoval et al., 2022). Generation Z is the 14th generation considered capable of facing future environmental changes and demands. Therefore, with

the many environmental problems and issues in Indonesia, how does Generation Z consumer behavior influence the selection of environmentally friendly products?

2. Methods

2.1 Research design

This study uses a quantitative approach. A quantitative approach is a research method based on positivism (concrete data), where research data consists of numbers that are measured using statistics as a calculation tool, related to the problem being studied to produce a conclusion (Sugiyono, 2018). Research design is the plan of action for collecting, measuring, and analyzing data from the research findings (Sekaran & Bougie, 2019). This research is a causal study because it aims to determine the relationship between two or more variables (Sekaran & Bougie, 2019).

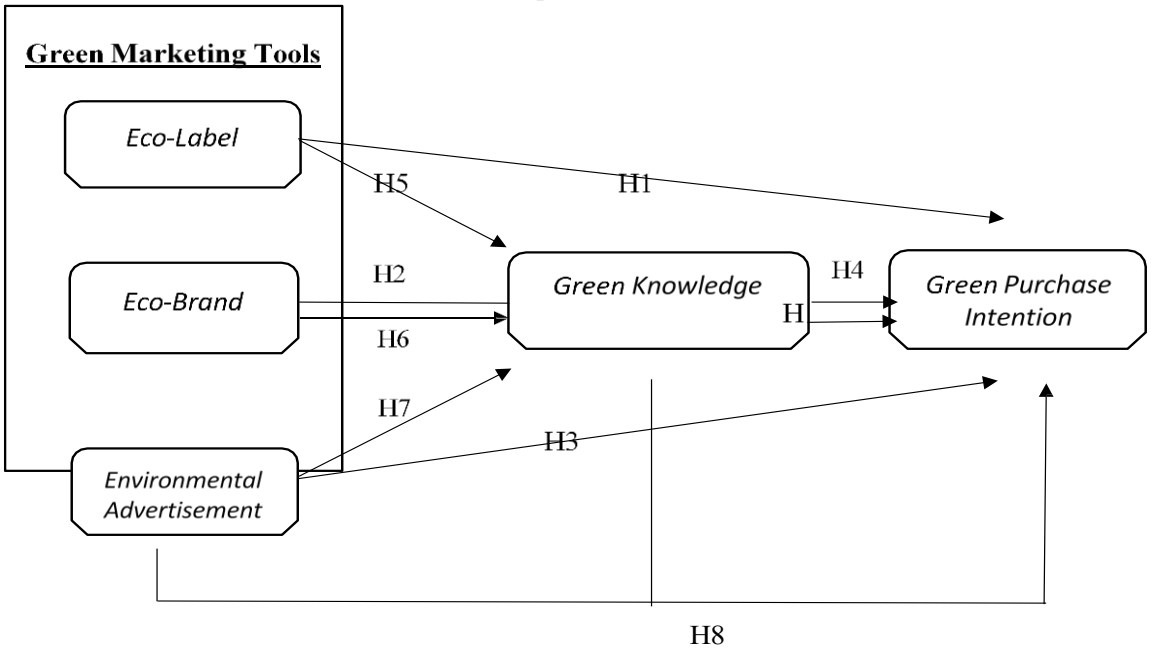

Fig. 1. Conceptual framework

2.2 Population, sample, and analysis

Furthermore, this study uses a survey research design because the data sources are obtained from a sample taken from a population. This study adopts a quantitative approach to examine consumer behavior at a macro level within a defined geographic area, namely the Province of Yogyakarta. According to Sugiyono (2018), a population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by the researcher to study and then draw conclusions. The population used in this study is the entire Generation Z in the province of DIY. The sample in this study is Generation Z living in DIY who have environmental knowledge, totaling 250 people. This study uses the structure equation modeling (SEM) method in hypothesis testing. The analysis used is through measurement model testing (outer model) and structural model testing (inner model), as well as hypothesis testing using bootstrapping. The tool used in this study is SmartPLS 3.0 software.

3. Results and Discussion

3.1 Descriptive analysis and measurement model test (outer model)

The purpose of the descriptive analysis of variables was to determine the respondents' assessments of the questions in the questionnaire. Based on the questionnaire tabulation results, it can be seen that the respondents had good responses to each indicator compiled in this study. Following the descriptive analysis of the variables, the research model was subsequently tested for measurement accuracy. As part of this outer model evaluation, the factor loadings depicted in the diagram facilitate an initial assessment of the convergent validity for each defined construct (see Fig. 2).

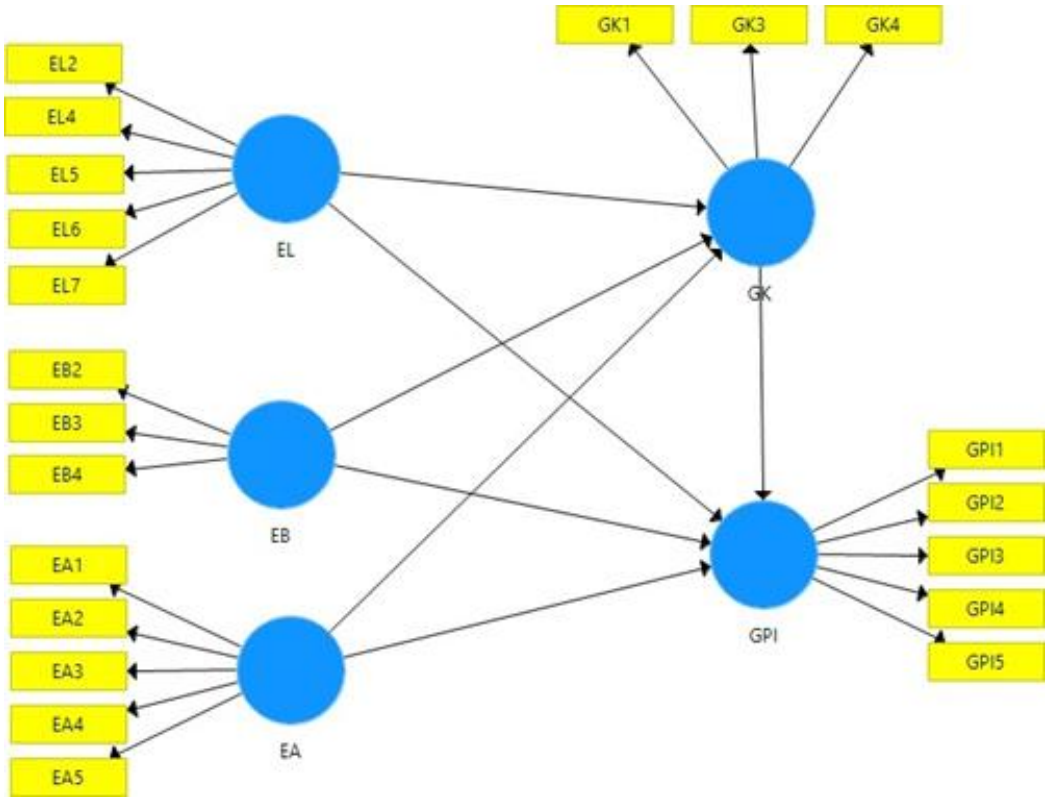

Fig. 2. Research model (convergent validity factor loading)

Convergent validity was assessed using outer loading values. Indicators within loading values above 0.70 were retained, indicating satisfactory convergent validity. One indicator (GPI1) with a loading value slightly below the recommended threshold was retained, as values above 0.60 are considered acceptable in exploratory research. Based on these established thresholds, the specific convergent validity results for each variable and its corresponding indicators are presented in Table 1.

Table 1. Convergent validity (outer loading)

Variable	Indicators	Convergent validity (outer loading)
Eco-label	EL2	0.782
	EL4	0.815
	EL5	0.813
	EL6	0.785
	EL7	0.772
Eco-brand	EB2	0.816
	EB3	0.811
	EB4	0.823

Environmental advertisement	EA1	0.711
	EA2	0.794
	EA3	0.757
	EA4	0.800
	EA5	0.796
Green knowledge	GK1	0.768
	GK3	0.839
	GK4	0.738
Green purchase intention	GPI1	0.670
	GPI2	0.822
	GPI3	0.836
	GPI4	0.842
	GPI5	0.834

3.2 Average variance extracted and discriminant validity

The average variance extracted (AVE) test has a criterion that if the AVE value of each variable is > 0.5, it can be declared valid (reliable). Based on Table 3, it can be seen that the convergent validity AVE test results show that each variable has an AVE value > 0.5. Therefore, it can be confirmed that all variables in this study meet the convergent validity test standards.

Table 2. Convergent validity (Average Variance Extracted (AVE))

Variable	Average variance	Extracted (AVE)
Eco-label	0.629	Valid
Eco-brand	0.667	Valid
Environmental advertisement	0.596	Valid
Green knowledge	0.613	Valid
Green purchase intention	0.646	Valid

Based on Table 3, each variable in this study has met the discriminant validity requirements by having a cross loading value > 0.7 and there is a margin of error in the GPI1 indicator > 0.6. Thus, it can be interpreted that the correlation value of each indicator to its variable is greate compared to the correlations values of each indicator with other variables. To further clarify these findings, Table 3 presents a detailed cross-loadings matrix, which confirms that these indicators have the strongest correlations with the intended constructs.

Table 3. Discriminant validity (cross loading)

	Variable EA	Variable EB	Variable EL	Variable GK	Variable GPI
EA1	0.711	0.392	0.475	0.449	0.469
EA2	0.794	0.546	0.523	0.578	0.584
EA3	0.757	0.455	0.424	0.396	0.460
EA4	0.800	0.515	0.537	0.488	0.616
EA5	0.796	0.592	0.515	0.538	0.559
EB2	0.554	0.816	0.625	0.467	0.505
EB3	0.522	0.811	0.608	0.487	0.491
EB4	0.525	0.823	0.660	0.477	0.516
EL2	0.499	0.611	0.782	0.488	0.492
EL4	0.575	0.678	0.815	0.485	0.583
EL5	0.487	0.602	0.813	0.457	0.553
EL6	0.529	0.577	0.785	0.519	0.540
EL7	0.461	0.596	0.772	0.481	0.507
GK1	0.446	0.447	0.539	0.768	0.514
GK3	0.564	0.495	0.499	0.839	0.593

GK4	0.492	0.428	0.398	0.738	0.469
GPI1	0.534	0.441	0.428	0.495	0.670
GPI2	0.635	0.505	0.611	0.560	0.822
GPI3	0.553	0.512	0.587	0.589	0.836
GPI4	0.544	0.505	0.498	0.510	0.842
GPI5	0.547	0.513	0.567	0.547	0.834

3.3 Fornell lacker criterion and reliability

The measurement method used to assess discriminant validity is the Fornell Larcker Criterion. This method involves the correlation between the value of a variable and the value of that variable itself. The correlation value between a variable and that variable itself must not be greater than the correlation value between that variable and other variables (Hair et al., 2021). Table 4., above shows that the correlation value of variable X3 or EA is 0.772, which is greater than the correlation value of variable X2 or EB at 0.654, variable X1 or EL at 0.644, variable Y or GPI at 0.703, and variable Z or GK at 0.641.

Table 4. Discriminant validity (fornell lacker criterion)

	Variable EA	Variable EB	Variable EL	Variable GK	Variable GPI
EA	0.772				
EB	0.654	0.816			
EL	0.644	0.773	0.793		
GK	0.641	0.585	0.613	0.783	
GPI	0.703	0.617	0.675	0.674	0.804

Based on the reliability test of the table above, it can be seen that composite reliability values > 0.7 have high reliability, and the Cronbach's alpha value requirement exceeds > 0.6 for all constructs. It can be concluded that each variable has good reliability. The Cronbach's alpha coefficients and composite reliability values for each construct, along with their respective factor loadings, are summarized in Table 5.

Table 5. Reliability

Item	Factor loading	Cronbach alpha	Composite reliability	AVE
EL2	0.782			
EL4	0.815			
EL5	0.813	0.853	0.895	0.629
EL6	0.785			
EL7	0.772			
EB2	0.816			
EB3	0.811	0.750	0.857	0.667
EB4	0.823			
EA1	0.711			
EA2	0.794			
EA3	0.757	0.831	0.881	0.596
EA4	0.800			
EA5	0.796			
GK1	0.768			
GK3	0.839	0.684	0.826	0.613
GK4	0.738			
GPI1	0.670			
GPI2	0.822			
GPI3	0.836	0.861	0.901	0.646
GPI4	0.842			
GPI5	0.834			

Note: EL = Eco Label, EB = Eco Brand, EA = Environmental Advertisement, GK = Green Knowledge, GPI = Green Purchase Intention

3.4 Structural model test (inner model) r-square

From Table 6 below, it can be seen that the R-Square value for the latent variable Green Knowledge as a mediating variable is influenced by Green Marketing Tools (Eco- Label, Eco-Brand, and Environmental Advertisement) with an R-Square value of 0.458. These results explain that Green Marketing Tools have a significant influence on Green Purchase Intention with Green Knowledge as a mediating variable and attempt to influence it. In other words, there are factors outside this research model that can influence GMT. Furthermore, the R-Square value for Green Purchase Intention is 0.620, which explains that 62% of the change in GPI is influenced by GK (Green Knowledge).

Table 6. R-square

Construct (latent variable)	R-square
Green knowledge	0.485
Green purchase intention	0.620

3.5 Predictive relevance power

Table 7 presents the predictive relevance assessment of the strength of the causal relationship of the assumed hypothesis. R square has a relevance from 0 to 1. In this method, the R-square value of GK is 0.485, indicating that 48.5% of the change in GK is influenced by EL, EB, and EA. Then, the R square value of GPI is 0.621 or 62.1%, which is influenced by Green Marketing Tools (GMT), while the remaining 27.9% is influenced by variables not included in this research model.

Table 7. Explanatory and predictive power (R^2 and F^2)

Predictor(s)	Outcome(s)	R-Square	F-Square
EL	GK	0.485	0.267
EB			0.125
EA			0.388
EL	GPI	0.621	0.265
EB			0.032
EA			0.331
GMT	GPI	0.620	0.755

Then, the F square effect shows the contribution of predictor variables to the R square of the observed variables. The structural assessment of the F square variable is categorized into 3 categories, namely > 0.35 high, > 0.15 moderate, and < 0.02 low (Cohen, 2013). In this model, the GK value is influenced by EL, EB, and EA with an R square of 0.485. The F square values for EL and EA are 0.267 and 0.388, respectively, indicating a large influence, while EB is categorized as moderate.

3.6 Mediation test

Table 8 shows that EL has a significant total effect on GPI (β = 0.265***; t-value = 3.179; p < 0.001) with the mediating variable GK having a significant direct effect of EL on GPI (β = 0.267***; t-value = 3.290; p < 0.001). Then, through the indirect effect of EL on GPI, the results are significant (β = 0 .074***; t-value = 2.644; p < 0.001) so that GK is able to partially mediate the relationship between EL and GPI. However, EB produced a total that was not significant to GPI (β = 0.032; t-value = 3.179; p > 0.05) with the mediating variable GK also having no direct impact on EB to GPI that was not significant (β = 0.125; t-value = 1.344; p > 0.05), so that GK is unable to mediate the relationship between EB and GPI.

Table 8. Mediation analysis results

Path	Direct Effect		Specific Indirect Effect			Conclusion
	β	t-value	Med	β	t-value	
EL → GPI	0.265***	3.179	GK	0.074	2.644	Partial mediation
EB → GPI	0.032	0.415		0.035	1.237	Fully mediated
EA → GPI	0.331***	4.407		0.108	2.599	Partial mediation
GMT → GPI	0.552***	7.379		0.204**	3.801	Partial mediation

Note 1: EL = Eco-Label, EB = Eco-Brand, EA = Environmental Advertisement, GK = Green Knowledge, GPI = Green Purchase Intention. Note 2: *** = p < 0.001; ** p < 0.010: * = p < 0.50.

Through the indirect effect of EB on GPI, the results are significant (β = 0.035; t-value = 1.237; p = 0.010). Thus, GK acts as a fully mediator between EB and GPI. Furthermore, EA has a significant total effect on GPI (β = 0.331***; t- value = 4.407; p < 0.001) with the GK variable having a significant direct effect of EA on GPI (β = 0.388***; t-value = 4.245; p < 0.001). Then, through the indirect effect of EA on GPI, there is a significant result (β = 0.108; t-value = 2.599; p < 0.001) so that GK is able to partially mediate the relationship between EA and GPI. Furthermore, cumulatively, the independent variables become GMT by making GK a mediating variable for GPI, which has a significant effect (β = 0.677***; t-value = 13.420; p < 0.001). Thus, GK is able to partially mediate the relationship between GMT and GPI.

3.7 Hypothesis testing

Table 9 presents the hypotheses tested in this study using Partial Least Square (SmartPLS) software version 3.0. This assessment is based on the Rules of thumb, namely T- statistic with a value > 1.96 with a significance level of p-value < 0.05, which is considered significant. Thus, based on the results of hypothesis 1, hypothesis 3, hypothesis 4, and hypothesis 8, eco-labels, environmental advertisements, green knowledge, and green marketing tools have a positive and significant effect on green purchase intention.

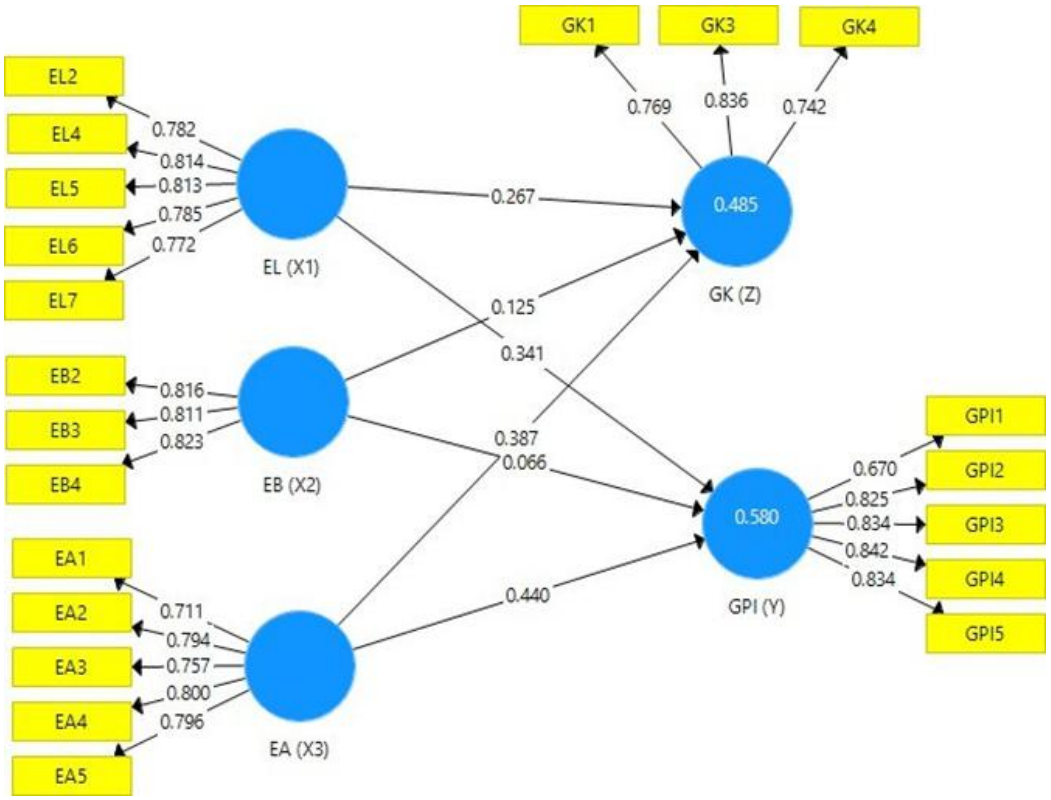

Fig. 3. Outer loadings bootstrapping

Furthermore, hypothesis 5 and hypothesis 7 show that eco-labels and environmental advertisements have a positive and significant effect on green knowledge. Thus, hypothesis 2 and hypothesis 6 are rejected because eco-brands do not have a significant effect on green purchase intention and green knowledge. A comprehensive breakdown of the path coefficients (β), T-values, and p-values for all tested hypotheses is summarized in Table 9.

Table 9. Mediation analysis results

Hypothesis	Path	β	T-Value	P Value	Conclusion
H1	E L → GPI	0.265	3.179	0.001	Supported
H2	EB → GPI	0.032	0.415	0.339	Not Supported
H3	EA → GPI	0.331	4.407	0.000	Supported
H4	GK →GPI	0.281	4.238	0.000	Supported
H5	EL → GK	0.267	3.290	0.001	Supported
H6	EB → GK	0.125	1.344	0.090	Not Supported
H7	EA → GK	0.388	4.245	0.000	Supported
H8	GMT→ GPI	0.552	7.379	0.000	Supported

3.8 The Effect of eco-labels (X1) on green purchase intention (Y)

Based on the results of hypothesis 1 testing, eco-labels have a positive and significant effect on green purchase intention partially. This is indicated by the significance value for the eco-label variable with a t-statistic value of 3.179 > 1.96 and a P-Value of 0.001 < 0.05, so the hypothesis can be accepted or is significant. This, the first research question in this study can be answered. This result is reinforced by the results of previous research by (Sabilla, 2022), which states that eco-label has a positive and significant effect on green purchase intention. From a theoretical perspective, these results support Green Theory, which emphasizes moral responsibility and ethical constraints on human consumption to preserve environmental sustainability. Eco-labels function as a moral and informational instrument that guides consumers toward environmentally responsible choices by limiting excessive materialism and encouraging sustainable consumption practices. In line with Green Theory, the presence of eco-labels enhances consumers' awareness of environmental consequences, thereby reinforcing pro-environmental purchasing behavior and aligning individual consumption decisions with broader ecological values.

3.9 The Effect of eco-brand (X2) on green purchase intention (Y)

Based on the results of hypothesis 2 testing, eco-brand has a positive and insignificant effect on green purchase intention partially. This is indicated by the significance value for the eco-brand variable with a t-statistic value of 0.415 < 1.96 and a p-value of 0.339 > 0.05, so this value does not meet the standard testing criteria. The second formulation in this study can be answered. However, the results of this study contradict the results of a previous study by (Chrysna et al., 2022), which stated that eco-brand has a significant effect on purchasing decisions. From a Green Theory perspective, this finding suggests that symbolic or superficial sustainability claims that are not supported by clear, transparent, and educational communication may fail to activate the moral and ethical considerations emphasized by the theory. Green Theory argues that environmental responsibility requires substantive commitments rather than symbolic representations (Yusran & Asnelly, 2017); therefore, eco-branding that lacks credibility or tangible environmental information may not effectively guide consumers toward sustainable consumption. In the context of UNIQLO, this implies that sustainability branding efforts need to be strengthened through clearer evidence of environmental impact and consumer education to align branding strategies with the moral imperatives of Green Theory.

3.10 The influence of environmental advertisement (X3) on green purchase intention (Y)

Based on the results of hypothesis 3 testing, environmental advertising has a positive and significant effect on green purchase intention partially. This is shown by the significance value for the eco-brand variable with a t-statistic value of 4.407 > 1.96 and a p-value of 0.000 < 0.05. The results of this study support previous research by Kusmartiyah & Dwi (2023), which states that environmental advertising has a positive and significant effect on green purchase intention. These results are supported of environmental advertising in every campaign and advertisement for environmentally friendly products can increase the public's intention to purchase green products.

From the perspective of Green Theory, environmental advertisements act as a normative communication mechanism that frames consumption choices within ethical and ecological boundaries (Ali & Ahmad, 2012). By highlighting environmental consequences and sustainability values, environmental advertisements encourage consumers to reconsider excessive consumption patterns and adopt purchasing behaviors that align with environmental preservation. Thus, this finding reinforces Green Theory's proposition that informed and morally guided consumption can contribute to addressing environmental degradation through individual behavioral change.

3.11 The influence of green knowledge (Z) on green purchase intention (Y)

Based on the results of hypothesis 4 testing, green knowledge has a positive and significant effect on green purchase intention partially. This is indicated by the significance value for the green knowledge variable with a t-statistic value of 4.238 > 1.96 with a p-value of 0.000 < 0.05. These research results are in line with previous research by (Ryantari., 2020), which states that green knowledge has a positive and significant effect on green purchase intention. From these results, it can be concluded that green knowledge is necessary for the community to be more responsible in their actions so as to have an impact on the environment through the use of environmentally friendly products. From the perspective of Green Theory, this result suggests that green knowledge functions as a moral and cognitive foundation that guides consumers toward environmentally responsible consumption (Joshi & Rahman, 2019). Increased green knowledge enhances consumers' awareness of the environmental consequences of their purchasing decisions, thereby strengthening green purchase intention and supporting sustainable consumption behavior.

3.12 The effect of eco-label (X1) on green knowledge (Z)

Based on the results of hypothesis 5 testing, eco-label has a positive and significant effect on green knowledge. This is indicated by the significance value for the eco-label variable with a t-statistic value of 3.290 > 1.96 and a p-value of 0.001 < 0.05. This supports previous studies by (Fahyat, 2025) and (Mahmoud et al., 2017), which state that eco-labels have a positive and significant effect on green knowledge. According to (Panopoulos, 2022), environmental knowledge plays a role in identifying environmentally friendly products from the eco-label used. This means that the use of the eco-label from UNIQLO sustainability has been successful in providing environmental knowledge through the information provided to consumers.

3.13 The effect of eco-brand (X2) on green knowledge (Z)

Based on the results of hypothesis 6 testing, eco-brand has a positive but insignificant effect on green knowledge. This is shown by the significance value for the eco-brand variable with a t-statistic value of 1.344 < 1.96 and a p-value of 0.090 > 0.05, so this value does not meet the standard testing criteria. The conclude consumers' understanding of green

knowledge can be obtained from brands that position themselves as environmentally friendly through benefits and better content compared to non-sustainable products. In this case, it means that Generation Z in the DIY province has not fully obtained environmental literacy from the eco-brand promoted by UNIQLO.

3.14 The influence of environmental advertisement (X3) on green knowledge (Z)

Based on the results of hypothesis 7 testing, environmental advertising has a positive and significant effect on green knowledge partially. This is shown by the significance value for the environmental advertising variable with a t-statistic value of 4.245 > 1.96 and a p-value of 0.000 < 0.05. Then the results supports previous research by (Amallia et al., 2022), which states that green advertising has a positive effect on environmental knowledge attitudes. This means that the use of environmental advertising or eco-friendly advertising can increase environmental knowledge, literacy, and awareness of the messages conveyed by a brand. This means that the more often UNIQLO displays eco-friendly advertisements, the more it can influence Generation Z's knowledge in forming support for eco-friendly products.

3.15 The effect of green marketing tools on green purchase intention mediated by green knowledge

Based on the results of hypothesis 8 testing, green marketing tools have a positive and significant effect on green purchase intention, partially mediated by green knowledge. This is indicated by the significance value for the green marketing tools variable with a t-statistic value of 7.379 > 1.96 and a p-value of 0.000 < 0.05. These research results support the previous research results from (Fahyat, 2025), which stated that green knowledge partially succeeded in mediating the relationship between green marketing and green purchase intention, which had a positive and significant effect. This means that the green knowledge possessed by Generation Z in Yogyakarta can influence the green purchase intention of UNIQLO products from the green marketing tools dimension that has been formed by UNIQLO sustainability.

From the perspective of Green Theory, this result suggests that green marketing tools function as normative and informational mechanisms that shape consumers' environmental understanding and ethical awareness (Dangelico & Vocalelli, 2017). Through the enhancement of green knowledge, green marketing tools encourage Generation Z consumers in Yogyakarta to align their purchasing decisions with environmental responsibility, thereby translating sustainability messages into green purchase intention in accordance with the moral principles emphasized by Green Theory.

4. Conclusions

Based on data analysis and discussion, it can be concluded that green marketing tools have a direct, positive, and significant formative effect on green purchase intention, which is partially mediated by green knowledge. The dimensions of green marketing tools show that eco-labels have a positive and significant effect on green purchase intention, environmental advertisements have a positive and significant effect on green purchase intention, but the eco-brand dimension shows a positive but insignificant effect on green purchase intention. Then, through mediation, green knowledge directly has a positive and significant effect on green purchase intention. Furthermore, the eco-label dimension has a positive and significant effect on green knowledge, and environmental advertisement has a positive and significant effect on green knowledge. Eco-brand shows that the positive result is not significant on green knowledge. Therefore, the findings suggest that the sustainability

related eco branding implemented by UNIQLO may not yet be sufficiently strong to influence consumers' environmental knowledge and green purchase intention.

This study contributes to the literature on green marketing and sustainable consumption by integrating green marketing tools and green knowledge into a single analytical framework and by highlighting the mediating role of green knowledge in shaping green purchase intention among Generation Z consumers in the apparel industry. The findings provide practical implications for fashion brands, indicating that eco-labels and environmental advertisements are effective in enhancing consumers' environmental understanding and encouraging sustainable purchasing behavior, while sustainability branding alone may be insufficient without clear, transparent, and educational communication. Accordingly, brands such as UNIQLO are encouraged to strengthen their eco-brand strategies by aligning sustainability claims with credible practices and consumer education. Despite these contributions, this study is subject to several limitations, including its focus on a single geographic area (the Province of Yogyakarta), the exclusive examination of Generation Z consumers, and the use of self-reported survey data, which may limit the generalizability of the findings. Future research is therefore recommended to involve broader demographic groups, diverse regions, and alternative methodological approaches to enhance the robustness and applicability of the results.

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