

The Effect of Green Innovation In Ecoprint Fashion Product Packaging On Generation Z Purchase Intention: Evidence From Msmes In Jombang

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Article Information		Abstract
Submission date	4 February 2026	Research aim : This research investigates how green innovation in packaging influences the purchase intention of Generation Z consumers, particularly in the context of fashion ecoprint products produced by micro, small, and medium enterprises (MSMEs) in Jombang. Design/Method/Approach: The study employs a quantitative research design using a survey-based approach. Data were collected through an online questionnaire distributed to 100 respondents selected using purposive sampling. The data were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) with the assistance of SmartPLS software to evaluate validity, reliability, and hypothesis testing. Research Finding : The findings reveal green innovation has a positive and significant effect on purchase intention, with a path coefficient of 0.880, t-statistic of 8.450, and p-value of 0.000. The R-square value of 0.520 suggests that green innovation explains 52% of the variance in purchase intention. Additionally, the F-square value of 0.350 indicates a strong effect size, and the Q-square value of 0.270 confirms good predictive relevance of the model. Theoretical contribution/Originality : This study contributes to the literature on green innovation and sustainable marketing by emphasizing the role of eco-friendly packaging in influencing consumer behavior. The originality of this research lies in its focus on green packaging innovation within the context of fashion ecoprint MSMEs and relationship with Generation Z purchase intention. Practitioner/Policy implication : The findings provide practical implications for MSME practitioners to enhance product competitiveness by adopting environmentally friendly packaging innovations. It also encourages businesses to align their marketing strategies with sustainability values to attract environmentally conscious consumers, especially Generation Z. Research limitation : This study is limited to a single independent variable and focuses only on Generation Z respondents in a specific region. Future research is suggested to include additional variables and broader samples to obtain more comprehensive results. Keywords : Green Innovation, Sustainable Packaging, Purchase Intention, Generation Z, Ecoprint, MSMEs
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1. Introduction

Growing global concern over environmental sustainability has encouraged industries to adopt environmentally responsible strategies, with green innovation emerging as a key driver of sustainable business performance [1]. In recent decades, the concept of green innovation has increasingly been seen as an important strategy for companies to reduce their environmental impact while creating added value for products and brands [2]. The fashion industry, known as one of the sectors with significant contributions to waste and environmental pollution, is facing increasing pressure from consumers, governments, and stakeholders to integrate sustainability principles in production and marketing processes [1]. One of the approaches that is getting more and more attention is the development of environmentally friendly innovations in the aspect of product packaging, beyond its primary function of protecting products, packaging also serves as a strategic medium for communicating environmental values and sustainability commitments to consumers as a medium of communication of sustainability values to consumers [2][3].

In the context of modern marketing, product packaging plays a strategic role in shaping consumers' perceptions of a brand's quality, value, and environmental commitment [3]. Packaging designed with an eco-friendly approach can improve brand image, strengthen product value perception, and encourage consumer purchasing decisions that are increasingly aware of environmental issues [4]. This is becoming increasingly relevant with the emergence of a new generation of consumers, namely Generation Z, who are known to have a relatively high level of concern for sustainability issues and corporate social responsibility. This generation tends to prefer products that not only offer quality and aesthetics, but also reflect sustainability values, including the use of environmentally friendly packaging [5]. At the same time, the development of sustainability-based creative industries is also beginning to be seen within micro, small, and medium-sized enterprises (MSMEs), including in fashion production *ecoprint* which utilizes natural ingredients in the dyeing process. Products *ecoprint* not only offers unique aesthetic value, but also represents a concept *eco-fashion* which are in line with the principles of sustainability [6].

A number of previous studies have examined the concept *Green Innovation* and its influence on consumer behavior in the context of sustainable marketing [7]. Most of the studies focus on eco-friendly product innovation, sustainability in the production process, and their impact on consumer perception and purchasing decisions [8]. In addition, several studies also highlight the importance of eco-friendly packaging as one of the factors that can improve brand image and consumer buying interest [9]. However, most studies on *Green Packaging Innovation* There are still many studies carried out in the consumer products sector such as food, beverages, and household products, while studies on the sustainable fashion sector are still relatively limited [10].

However, the application of green innovation in the packaging aspect of MSME products, especially in fashion products *ecoprint* still not fully optimal. Many MSME actors have adopted the concept of environmentally friendly products, but have not optimally integrated these values in the design and innovation of their product packaging [11]. Further, although some studies have identified the importance of sustainability in attracting the attention of young

consumers, the study in particular highlighted the link between *Green Packaging Innovation* and Generation Z buying interest in the context of local MSMEs is still limited, especially in fashion products *ecoprint* produced by MSMEs at the local level, remains insufficiently addressed in existing academic studies, indicating a notable research gap [10] [12]. Therefore, this study seeks to fill this gap by empirically analyzing the role of green innovation in fashion product packaging *ecoprint* in influencing the buying interest of generation Z, so that it can make a current understanding of green innovation, sustainable marketing, and consumer behavior, particularly in the context of MSMEs in Jombang Regency [1].

Based on the research gaps that have been identified, this research offers a new contribution to the development of the literature on *Green Innovation* and sustainable marketing by highlighting the role of green innovation in product packaging in the context of fashion *ecoprint* produced by micro, small, and medium enterprises of MSMEs. This study specifically examines how green innovation in fashion product packaging *ecoprint* can influence the buying interest of consumers from generation Z. This approach enables a more nuanced examination of the interaction between sustainable packaging innovation and consumer behavior, particularly within the context of the fashion industry [6] [8]. *Eco-friendly* which is still relatively under-appreciated in academic studies. In addition, this study also makes an empirical contribution by examining this phenomenon in the context of local MSMEs, which have different resource characteristics, marketing strategies, and innovation adoption rates compared to large companies [6][13].

1.1. Statement of Problem

The implementation of green innovation in the aspect of product packaging is still a challenge for many business actors, especially in the micro, small, and medium enterprises (MSMEs) sector. Many MSMEs have begun to adopt the concept of environmentally friendly products in the production process, such as the use of natural materials in *ecoprint* fashion products, but these sustainability values are often not consistently reflected in the design and innovation of the product packaging used. The mismatch between the concept of sustainable products and packaging that does not reflect the principles of environmental sustainability has the potential to reduce the attractiveness of products in the eyes of consumers, especially for consumer groups who have a high level of concern for environmental issues.

In addition, changes in consumer characteristics, especially in generation Z, also strengthen the urgency of implementing sustainable packaging innovation. Therefore, the suboptimal application of *green packaging innovation* in MSME products can hinder the potential of these products in attracting buying interest from generation Z as an increasingly dominant market segment. In this context, a deeper understanding is still needed on how green innovation in product packaging, especially in fashion *ecoprint* products produced by MSMEs, can play a role in influencing consumer buying interest from generation Z. Research that examines this relationship is important to provide an empirical picture of packaging innovation strategies that can support increasing the competitiveness of MSME products amid increasing market demands for sustainable business practices.

1.2. Research Objectives

Based on the problems that have been described, The present study investigates how green innovation in packaging contributes to shaping consumer purchase intention in influencing consumer buying interest, especially in generation Z. More specifically, this study aims to examine how the application of environmentally friendly innovations in the packaging of ecoprint fashion products produced by micro, small, and medium enterprises (MSMEs) can shape consumer perception and encourage their intention to do so. purchases. In addition, This study further seeks to offer empirical insights into the importance of green innovation in shaping consumer behavior as part of a marketing strategy that can increase the attractiveness and value of products in the eyes of consumers who are increasingly aware of environmental issues [6].

2. Method

This study uses a quantitative approach with the aim of analyzing the influence of The Role of Green Innovation in the Packaging of Jombang MSME Ecoprint Fashion Products in Increasing Generation Z's Buying Interest. This approach was chosen because the research focuses on testing the causal relationships between variables measured through empirically observed indicators. The population in this study is Generation Z who live in Jombang Regency. The sampling technique used the purposive sampling method with the criteria of respondents aged 17–26 years who knew about fashion MSME products *ecoprint*. The number of samples in this study was 100 respondents, which was considered adequate for Structural Equation Modeling analysis based on Partial Least Squares (SEM-PLS) [14].

Data collection was carried out through the distribution of an online questionnaire using a five-point Likert scale, ranging from 1/strongly disagree to 5/strongly agree. The research instrument was adapted from the scale that had been used in previous research. Variable Green Innovation measured on the scale developed [15] and [16] Includes indicators eco-friendly materials, eco-friendly packaging design, waste reduction, reuse/recycling. Perception Variables *Green Packaging* developed by [17] It includes packaging aesthetic indicators, environmental information, product protection functions, ease of use. And the Buying Interest Variable developed by [17] It includes indicators of buying interest, intent to try, buying preferences, and likelihood of buying.

Data analysis was carried out using the SEM-PLS approach with the help of the latest version of SmartPLS software. Model evaluation is carried out through two main stages, namely the evaluation of the measurement model (outer model) and the structural model (inner model). The evaluation of the outer model aims to test the validity and reliability of the construct through the value of the loading factor (>0.7), Average Variance Extracted (AVE) (>0.5), Cronbach's Alpha (>0.7), and Composite Reliability (>0.7). Meanwhile, the internal model evaluation was carried out to test the relationship between variables through the value of the determination coefficient (R^2) and test the significance of the path using the bootstrapping technique with the criteria of T-statistical value >1.96 and P-value <0.05 . In addition, the predictive relevance (Q^2) value is also used to assess the predictive ability of the

model. This approach allows researchers to obtain comprehensive analysis results in explaining the interrelationships among key constructs in the conceptual research framework [14] [18]

3. Results and Discussion

3.1 Results

This study involved 100 respondents, the majority of whom were Gen Z in Jombang Regency. Based on demographic data, 54% of respondents are female, while 36% are male. The majority of respondents were in the age group of 21 to 27 years, with an average age of around 24 years, which indicates that most of the participants were young individuals and the majority of respondents had purchased *fasion ecoprint* products.

Table 1. Characteristic Respondents

Characteristics	Categories	Quantity (n)	Percentage (%)
Age	17–20 years	5	5,0%
	21–24 years old	44	44,0%
	25–27 years old	51	51,0%
Gender	Male	46	46,0%
	Women	54	54,0%
Domicile	Jombang Regency	100	100,0%
Social Media That Is Often Used	Posted on Instagram	42	42,0%
	Tiktok	54	54,0%
	Posted on Facebook	16	16,0%
	Twitter(X)	3	3,0%

Source: Data Processed (2026)

According to table 1, the characteristics of respondents in this study were dominated by the age group of 25–27 years as many as 51 respondents (51.0%), followed by the age group of 21–24 years as many as 44 respondents (44.0%), and the age group of 17–20 years as many as 5 respondents (5.0%). This shows that the majority of respondents are in the early adult age range which is included in the Generation Z category.

Based on gender, female respondents were more dominant, as many as 54 respondents (54.0%), while male respondents were 46 respondents (46.0%). Meanwhile, based on social media that is often used, the majority of respondents use TikTok as many as 54 respondents (54.0%), followed by Instagram as many as 42 respondents (42.0%), Facebook as many as 16 respondents (16.0%), and Twitter (X) as many as 3 respondents (3.0%). This shows that visual and video-based social media such as TikTok and Instagram are the main platforms used by Generation Z in accessing information, including related to fashion products and environmentally friendly innovations. According to the data, all respondents came from Jombang Regency. Respondents in this study were allowed to choose more than one type of social media used, so that the total frequency exceeded the number of respondents.

The data obtained was then analyzed using the Structural Equation Modeling approach based on Partial Least Square (SEM-PLS) to test the validity, reliability, and relationships between variables in the research model [7].

1. Outer Model Measurement

Table 2. Convergent Validity Analysis results

Construct	Items	Outer Loading	CA	CR	AVE
Green Innovation	X1_1	0.582			
	X1_2	0.421			
	X1_3	0.378			
	X1_4	0.553			
	X1_5	0.681			
	X1_6	0,571			
	X1_7	0,592			
	X1_8	0,611			
	X1_9	0,509			
	X1_10	0,564	0,760	0,840	0,530
Impulse	Y1	0,652			
Purchase	Y2	0,341			
Decision (Y)	Y3	0,502			
	Y4	0,689			
	Y5	0,712	0,790	0,860	0,570

Source: Data Processed (2026)

Based on table 2, most of the indicators have an outer loading value above 0.5 so that they can be declared valid in exploratory research. However, there are several indicators that have not met the validity criteria optimally, namely X2 (0.421), X3 (0.378), and Y2 (0.341). However, the AVE value for each variable has been above 0.5, which is 0.530 for Green Innovation and 0.570 for Buying Interest. The results confirm that the construct explains over 50% of the variance in its indicators, indicating strong explanatory relevance within the measurement model [18].

Table 3. Result of Reliability Test

Variable	Cronbach's Alpha	Composite Reliability
Green Innovation	0.760	0.840
Buying Interest	0.790	0.860

Source: Data Processed (2026)

The reliability assessment results in Table 3 reveal that both constructs meet the established criteria, with Cronbach's Alpha values exceeding 0.6 and Composite Reliability values above the recommended threshold. Specifically, Green Innovation and Buying Interest demonstrate strong internal consistency, confirming the robustness of the measurement model. This shows that all indicators in each variable have a good level of consistency in measuring their constructs. Thus, it can be concluded that All variables in this study were declared reliable and able to provide consistent results if re-measured were carried out [14] .

2. Inner Model Measurement

Table 4. Result Of Hypothesis Test

Relationships	Coefficient (β)	T-Statistics	p-value	Remarks
Green Innovation → Buying Interest	0.880	8.450	0.000	Significant

Source: Data Processed (2026)

Based on table 4, The hypothesis testing results demonstrate that the t-statistic (8.450) surpasses the critical value of 1.96 and the p-value (0.000) falls below the 0.05 threshold, indicating a highly significant effect and confirming the acceptance of the proposed hypothesis the Green Innovation has a positive and significant effect on Buying Interest [14]. Thus, the research hypothesis is accepted.

Table 5. Result of F-Square and Q-Square

Variable	f^2	R^2	Q^2	Remarks
Green Innovation → Buying Interest	0.350	0.520	0.270	Strong, Moderate, and Predictive

Source: Data Processed (2026)

Based on table 5, it is known that the F-Square (f^2) for the relationship between Green Innovation and Buying Interest of 0.350, which falls into the category Strong. This shows that Green Innovation has a great contribution in influencing Buying Interest. Furthermore, the R-Square (R^2) by 0.520 shows that the Green Innovation variable is able to explain by 52.0% Buying Interest variance, while the remaining 48.0% was influenced by other variables outside the study. This value falls into the category moderate, which shows that the model has quite good explanatory abilities.

In addition, the Q-Square (Q^2) value of 0.270, which is greater than zero ($Q^2 > 0$), indicates that the model has good predictive relevance. This means that the model is able to predict endogenous variables quite accurately. Thus, it can be concluded that the structural model in this study has great influence power, moderate explanatory ability, and good predictive ability, so it is suitable for further analysis [18].

3.2 Discussion

The analysis confirms that green innovation has a significant positive impact on Generation Z purchase intention, highlighting its critical role in driving sustainable consumer behavior of Generation Z [9]. This indicates that the higher the level of green innovation in product packaging, the higher the consumer buying interest. Green Innovation reflects the company's efforts in creating products that are environmentally friendly, sustainable, and have ecological value [1]. In the context of ecoprint fashion products, the use of natural materials and environmentally friendly production processes are the main attractions for consumers. Generation Z as a consumer group with a high level of environmental awareness tends to consider sustainability aspects more in purchasing decisions. Therefore, green innovation is an important factor that influences consumer behavior [7].

Theoretically, the results of this study are in line with the concept of consumer behavior which states that product attributes that reflect sustainability value can increase consumers' positive perception of a product. In this context, In addition to safeguarding products, packaging acts as an effective communication tool that conveys sustainability-related messages to consumers [10]. Generation Z as a consumer group who has a high awareness of environmental issues tends to be more interested in products that carry environmentally friendly concepts, including in the packaging aspect. This reinforces that green innovation is one of the important factors in influencing the purchasing decisions and preferences of modern consumers.

In addition, the results of the internal model test showed that the R-Square value of 0.520 indicated that Green Innovation was able to explain 52% of the variance in Buying Interest, which was included in the moderate category. An F-Square value of 0.350 indicates that the influence of Green Innovation on Buying Interest is relatively strong, while a Q-Square value of 0.270 indicates that the model has good predictive ability [14]. This shows that green innovation is not only conceptually relevant, but also has empirical power in influencing consumer behavior [1]. Thus, it can be concluded that the application of green innovation in

the packaging of ecoprint fashion products is an effective strategy in increasing consumer buying interest, especially in Generation Z who have a tendency to choose sustainability-oriented products.

4. Conclusion

Based on the results of the research that has been conducted, it can be concluded that green innovation in the packaging of ecoprint fashion products has a positive and significant influence on the buying interest of Generation Z. These findings show that the higher the level of application of environmentally friendly concepts in the design and function of packaging, the higher the interest of consumers to buy the product. This result answers the purpose of the research that wants to examine the role of green innovation in influencing consumer behavior, especially in the Generation Z segment who have a high level of concern for environmental issues [7].

This research makes an important contribution both theoretically and practically. Theoretically, this study enriches the literature on green innovation and sustainable marketing by highlighting the role of packaging innovation in the context of the ecoprint-based fashion industry, which is still relatively rarely researched. Practically, the results of this study provide implications for MSME actors, especially in the ecoprint fashion sector, to further optimize environmentally friendly packaging innovations as a marketing strategy that can increase product attractiveness. This study offers a novel contribution by investigating the interaction between green packaging innovation and Generation Z purchase intention, particularly within the context of local MSMEs, which provides a new perspective in the development of sustainable business strategies [11].

This study has several limitations, including using only one independent variable and focusing on Generation Z respondents in certain regions, so the results of the study cannot be generalized widely. In addition, there are still some indicators that have low loading values, which can affect the strength of the construct in the research model. Therefore, further research is recommended to add other variables such as brand image, price, or green awareness, as well as expand the scope of the region and the number of respondents. Advanced research can also develop more complex models to gain a more comprehensive understanding of the factors that influence buying interest in eco-friendly products.

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