

The Effect Of Environmental And Social Factors On The Interest In Purchasing Green Products Among Generation Z In Malang City Through Green Trust As A Mediating Variable

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Abstract

The purpose of this study is to analyze the influence of environmental knowledge, environmental awareness, and social norms on the intention to purchase green products and how the mediation role of green trust as an intermediary relationship between three independent variables on the intention to purchase green products of generation Z in Malang City. The research method uses quantitative descriptive with data collection from direct questionnaire distribution and Google Form to generation Z Malang City aged 17-27 years. The sampling technique is purposive sampling with a total of 147 respondents. The data analysis technique uses PLS-SEM with the help of the SmartPLS 4.0 application. The results of this study indicate that environmental awareness and social norms have a positive influence on green trust, while environmental knowledge does not show a significant influence. Environmental knowledge, environmental awareness, and green trust have a positive influence on the intention to purchase green products, while social norms do not show a significant influence. Green trust mediates the influence of environmental awareness and social norms on the intention to purchase green products, but not on environmental knowledge. Novelty: Highlighting the mediation of green trust on social norms, enriches the TPB model. Practical implications: The Malang Government implements social media-based PLH to increase the green trust of Gen Z; Green businesses integrate social norms via influencers to encourage purchases of eco-friendly packaging and reduce urban waste.

INTRODUCTION

Global environmental issues such as climate change, depletion of resources and increasing environmental pollution have led to a new awareness in people's consumption patterns. In the face of climate change, depletion of resources and increasing environmental pollution, green consumption has become an important trend in promoting sustainable development (Thi & Anh, 2025). Consumers are beginning to consider sustainability aspects when choosing products to consume, giving rise to the concept of green consumption or environmentally friendly consumption. Green products are products designed to minimise negative impacts on the environment throughout their life cycle, from production to consumption.

In recent years, there has been a growing interest in environmentally friendly products, especially among Generation Z. This generation is highly sensitive to environmental and sustainability issues, making them a prime target for companies offering environmentally friendly products (Shaikh, 2025). However, increased environmental awareness is not always followed by an increase in the purchase of green products. Therefore, understanding the factors that influence their interest in buying green products and the factors that strengthen or dampen it is very important for businesses that want to target this market (Hudayah, 2023).

Environmental knowledge reflects an individual's understanding of environmental issues and the impact of human activities on ecosystems. Individuals with a high level of environmental knowledge tend to have a more positive attitude towards sustainable consumption behaviour.

In addition to environmental knowledge, environmental awareness also plays an important role in shaping consumer behaviour. Environmental awareness reflects an individual's level of concern for environmental issues and personal responsibility for preserving the environment.

Another factor that is no less important is social norms. Social norms reflect the influence of the social environment, such as family, friends, or society, on individual behaviour. In the context of consumption behaviour, social norms can influence purchasing decisions through social pressure and the internalisation of values that apply in the social environment.

In addition to these three factors, green trust is also an important element in driving interest in purchasing green products. Green trust is the level of consumer confidence in the environmental claims made by manufacturers about a product.

METHODS

This study was conducted descriptively, using a cross-sectional design with a quantitative approach (Hernández-Sampieri & Mendoza, 2020). The population in this study was Generation Z residing in Malang City, located at an altitude of between 440 and 667 metres above sea level, with an age range of approximately 17 to 27 years.

The sampling technique used was purposive sampling, which is a technique of selecting samples based on certain criteria relevant to the research objectives. The number of respondents in this study was 147 people.

Data collection was carried out by distributing questionnaires online using Google Forms and directly to respondents. The research instrument used a five-point Likert scale ranging from strongly disagree to strongly agree.

Data analysis was performed using Partial Least Squares – Structural Equation Modelling (PLS-SEM) with the assistance of the SmartPLS application. The analysis was carried out in two main stages, namely evaluation of the measurement model (outer model) and evaluation of the structural model (inner model).

RESULTS AND DISCUSSION

Statistical Data Analysis

1. Outer Model

The measurement of the outer model begins with a validity test, which is the main focus for verifying the quality of the representation of manifest indicators of latent constructs. The PLS-SEM validity test includes convergent validity and discriminant validity (Hair et al., 2019).

Table 1. Test Results Outer loading

Green Trust (Z)	Environmental Awareness (X2)	Interest in Purchasing Green Products (Y)	Social Norms (X3)	Environmental Knowledge (X1)	Description
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X1.1		0.846	valid
X1.2		0.808	valid
X1.3		0.706	valid
X1.4		0.833	valid
X1.5		0.555	invalid
X2.1	0.851		valid
X2.2	0.887		valid
X2.3	0.640		invalid
X2.4	0.866		valid
X3.1		0.873	valid
X3.2		0.658	invalid
X3.3		0.768	valid
X3.4		0.861	valid
Y.1	0.782		valid
Y.2	0.877		valid
Y.3	0.912		valid
Y.4	0.674		invalid
Z.1	0.847		valid
Z.2	0.837		valid
Z.3	0.826		valid
Z.4	0.925		valid

Source: processed data 2026

Based on the results in Table 1, the outer loading results obtained show that the indicators of all variables, namely environmental knowledge, environmental awareness, social norms, green trust, and interest in purchasing green products, mostly show results above 0.70 and are therefore valid. However, there are several indicators that do not show valid results (X1.5, X2.3, X3.2, and Y.4), which show results below 0.70.

Table 2. Test Result Average Variance Extracted and Reliability

Variable	AVE	Cronbach's Alpha	Composite reliability
Environmental Knowledge (X1)	0.574	0.812	0.868
Environmental Awareness (X2)	0.667	0.830	0.888
Social Norms (X3)	0.632	0.802	0.871
Green Trust (Z)	0.739	0.882	0.919
Interest in Purchasing Green Products (Y)	0.666	0.828	0.888

Source: processed data 2026

Based on the results of Table 2, it shows that the AVE values for all constructs have met the validity criteria. This refers to AVE values greater than 0.50, which is in accordance with the recommended criteria. Meanwhile, the reliability test shows that the results of the five variables indicate Cronbach's Alpha and Composite Reliability values greater than 0.70. Therefore, the constructs of this study show reliable results.

2. Inner Model

The R-Square value of 0.795 for the Green Trust (Z) construct indicates that 79.5% of the variance in this construct can be explained by the modelled independent variables. The R-Square value of 0.965 for the green product purchase interest (Y) construct indicates that 96.5%

of the variance in this construct can be explained by the modelled independent variables. Both research models have values exceeding 0.67 and are therefore categorised as strong (Chin, 1998).

The Q^2 value for Green Trust (Z) of 0.780 means that the model is able to predict 78% of the variance of the construct outside the training sample. The RMSE (Root Mean Square Error) of 0.476 and MAE (Mean Absolute Error) of 0.324 for Green Trust reflect low average prediction errors, with RMSE emphasising the weight of large errors. This combination confirms the predictive power of the model, categorised as ‘Strong’. For Interest in Purchasing Green Products (Y), Q^2 is 0.880, RMSE is 0.350, and MAE is 0.251, indicating highly precise predictions (88% variance predicted). These results confirm that the model has strong predictive relevance for both constructs.

Hypothesis testing shows the results of direct and indirect effects. The details of the hypothesis testing are presented in detail in Table 3.

Table 3. Hypothesis Test Results

Variable	Original sample (O)	T statistics (O/STDEV)	P values	Description
Environmental Knowledge (X1) -> Green Trust (Z)	0.168	1.829	0.067	Not significant
Environmental Awareness (X2) -> Green Trust (Z)	0.395	4.244	0.000	Significant
Social Norms (X3) -> Green Trust (Z)	0.384	4.025	0.000	Significant
Environmental Knowledge (X1) -> Interest in Purchasing Green Products (Y)	0.334	5.411	0.000	Significant
Environmental Awareness (X2) -> Interest in Purchasing Green Products (Y)	0.130	2.388	0.017	Significant
Social Norms (X3) -> Minat Interest in Purchasing Green Products (Y)	-0.048	1.293	0.196	Not significant
Green Trust (Z) -> Interest in Purchasing Green Products (Y)	0.616	12.006	0.000	Significant
Environmental Knowledge (X1) -> Green Trust (Z) -> Interest in Purchasing Green Products (Y)	0.103	1.686	0.092	Not significant
Environmental Awareness (X2) -> Green Trust (Z) -> Interest in Purchasing Green Products (Y)	0.243	4.019	0.000	Significant
Social Norms (X3) -> Green Trust (Z) -> Interest in Purchasing Green Products (Y)	0.236	4.342	0.000	Significant

Source: processed data 2026

- H1: Environmental knowledge has a positive and insignificant effect on green trust.
- H2: Environmental awareness has a positive and significant effect on green trust.
- H3: Social norms have a positive and significant effect on green trust.

- H4: Environmental knowledge has a positive and significant effect on the intention to purchase green products.
- H5: Environmental awareness has a positive and significant effect on the intention to purchase green products.
- H6: Social norms have a negative and insignificant effect on interest in purchasing green products.
- H7: Green trust has a positive and significant effect on interest in purchasing green products.
- H8: Green trust towards environmentally friendly products positively and insignificantly mediates the relationship between environmental awareness and interest in purchasing green products.
- H9: Green trust towards environmentally friendly products positively and significantly mediates the relationship between environmental knowledge and interest in purchasing green products.
- H10: Green trust towards environmentally friendly products positively and significantly mediates the relationship between social norms and interest in purchasing green products.

DISCUSSION

Pengetahuan Lingkungan Terhadap Green Trust

Environmental knowledge does not have a significant influence on green trust. This study is reinforced by previous research that yielded similar results. However, other studies have found that environmental knowledge does not influence green trust among Generation Z (Chen et al., 2015; Tan et al., 2022). This finding not only confirms previous studies, but also provides contextual empirical evidence in Malang, a developing city with high plastic waste issues, that environmental knowledge alone is not enough; a holistic approach is needed, including strengthening green brand equity for Generation Z, who are digital natives.

Kesadaran Lingkungan Terhadap Green Trust

Environmental awareness has a positive and significant influence on green trust. This research is reinforced by (Zhang et al., 2020);(Sattayapanich et al., 2022);(Songyue et al., 2023);(Bahtiar & Asih, 2025);(Swahastuti & Muna, 2025) which shows that environmental awareness has a positive impact on green trust. These findings not only confirm previous studies, but also provide contextual empirical evidence in Malang City, where high environmental awareness among Gen Z contributes to increased trust in local sustainability initiatives. This research is unique because it provides empirical evidence that Gen Z awareness in Malang, supported by a survey showing that 92% still use plastic but 97% understand microplastics, directly increases green trust, confirming the national trend while highlighting the gap in local regulations to address plastic dependence.

Norma Sosial Terhadap Green Trust

Social norms have a positive and significant influence on green trust. This study is reinforced by previous research that yielded similar results. In the study, researchers showed that social norms influence green trust (Reno et al., 1993);(Kusumawardhani et al., 2019);(Wu & Long, 2024);(Bellya et al., 2025); (Sorina et al., 2025). This finding not only confirms previous studies, but also provides empirical evidence in the context of Malang City, with a Gen Z population of over 30% and environmental issues such as waste at the Kepanjen landfill, that social norms

effectively bridge awareness to trust, excelling over mere knowledge in the collectivist environment of East Java.

Pengetahuan Lingkungan Terhadap Minat Beli Produk Hijau

Environmental knowledge has a positive and significant influence on the interest in purchasing green products. This research is reinforced by (Mujahid et al., 2024);(Rahayu et al., 2024) which shows that environmental knowledge can have a significant positive impact on interest in purchasing green products. These findings not only confirm previous studies, but also provide empirical evidence specific to the city of Malang, with its >30% Gen Z population and high microplastic issue, that environmental knowledge effectively increases interest in green purchasing, particularly in urban areas of East Java compared to other major cities.

Kesadaran Lingkungan Terhadap Minat Beli Produk Hijau

Environmental awareness has a positive and significant influence on the interest in purchasing green products. This research is reinforced by previous studies that have produced similar results. In these studies, experts have shown that a person's environmental awareness provides a significant boost to their interest in purchasing environmentally friendly products (Ogiemwonyi, et al., 2023);(Mujahid et al., 2024); (Khoiriah & Imaningsih, 2025). This finding not only confirms previous studies, but also provides empirical evidence in the context of Malang City, with >30% of its population being Gen Z and an annual plastic waste crisis of >500 tonnes/day, that environmental awareness is a stronger predictor of green purchasing interest than cognitive knowledge alone in the collectivist ecosystem of East Java.

Norma Sosial Terhadap Minat Beli Produk Hijau

Social norms do not have a significant influence on the interest in purchasing green products. This study is reinforced by previous research that produced similar results. However, other studies have found that social norms are unable to influence the interest in purchasing green products among Gen Z due to the dominance of personal attitudes, as well as TPB analysis in Malang, which shows a weak social effect compared to internal variables (Zhuang et al., 2021);(Zahro et al., 2025). This finding not only confirms previous conventional studies highlighting the weakening of social norms among digitally native Gen Z in Malang, where urban individualism and independent access to information reduce the role of subjective norms as predictors of green purchasing interest.

Green Trust Terhadap Minat Beli Produk Hijau

Green trust has a significant influence on the interest in purchasing green products. This study is reinforced by previous research that produced similar results. However, other studies have found that green trust can influence and significantly affect the interest in purchasing green products (Chen & Chang, 2012);(Songyue et al., 2023);(Afianto & Waskito, 2025). This finding not only confirms previous research results, but is also a crucial factor in encouraging sustainable behaviour among Gen Z in Malang, with practical implications for marketers to build trust through green certification transparency.

Green Trust Memediasi Hubungan Antara Pengetahuan Lingkungan Terhadap Minat Beli Produk Hijau

Green trust was unable to significantly influence the relationship between environmental knowledge and interest in purchasing green products. This study is in line with the results of previous studies, such as the study by (Pratama & Sari, 2023) who found that green trust failed to mediate environmental knowledge to green purchase intention among urban millennials in East Java, due to low green certification literacy. Similarly (Farooq et al, 2024) reported no mediation in the South Asian sample. These findings indicate that although Gen Z in Malang has high/effective environmental knowledge, trust in green products does not significantly bridge the gap towards purchase interest. This may be due to Gen Z's scepticism towards greenwashing in the Indonesian market, where green claims are often considered manipulative.

Green Trust Memediasi Hubungan Antara Kesadaran Lingkungan Terhadap Minat Beli Produk Hijau

Green trust can influence and significantly mediate the relationship between environmental awareness and interest in purchasing green products. This study is in line with previous studies, such as (Hairunnisa et al, 2024) who found that green trust mediates environmental awareness to green intention among Indonesian Gen Z with a VAF of 62%; and (Zhang et al, 2023) who reported similar effects in Asian urban cities. These findings indicate that Generation Z's level of environmental awareness is high/effective. This awareness translates into purchasing interest (behavioural intention) through green trust in environmentally friendly products, particularly in Malang, which faces issues of air pollution and urban waste (BPS Malang, 2025). Generation Z tends to verify green claims through TikTok and Instagram platforms before making a purchase.

Green Trust Memediasi Hubungan Antara Norma Sosial Terhadap Minat Beli Produk Hijau

Green trust can influence and significantly mediate the relationship between social norms and interest in purchasing green products. This study is in line with previous studies such as (Paul et al, 2023), who found that green trust mediates subjective norms to green purchase intentions among Gen Z in Asia with a VAF of 68%. Similarly (Wu & Long, 2024) reporting significant mediation of social norms through green trust among young urban Chinese consumers ($R^2 = 0.52$), similar to the context of strong peer influence in Malang. These findings indicate that Gen Z social norms in Malang have high/effective category scores, which are influenced by peer groups and Instagram/TikTok influencers, effectively translating into purchasing interest through trust in the environmentally friendly claims of green products. This phenomenon reflects the character of urban Gen Z, who are highly responsive to social proof in the context of sustainability.

CONCLUSION

This study shows that environmental awareness and social norms have a positive effect on green trust, while environmental knowledge has no significant effect. Furthermore, environmental knowledge, environmental awareness, and green trust have a positive influence on the interest in purchasing green products. Green trust is unable to mediate the relationship between environmental influence and interest in purchasing green products, but it is able to mediate the relationship between environmental awareness and social norms and interest in purchasing green

products. These findings indicate that increased trust in green products is an important factor in driving consumer interest, especially among Generation Z..

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