

## Factors influencing green purchase intention in fashion: Environmental knowledge, green marketing, social influence, and eWOM

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**Abstract:** Understanding the key drivers of environmentally friendly purchasing decisions among younger generations in specific cultural contexts remains limited. In Indonesia, Gen Z represents a big customer segment for sustainable products, but the influence of knowledge, marketing, and social factors on their green purchase intentions is not well established. This study explores how environmental knowledge, green marketing, social influence, and electronic Word-of-Mouth (eWOM) affect Gen Z Indonesian workers' intentions to purchase eco-friendly fashion products. The aim is to identify which factors hold the strongest influence in shaping purchasing behavior within this demographic. A cross-sectional quantitative method was used, collecting data from 425 Gen Z Indonesian workers aged 15 to 24 through an online survey. The data were analyzed using structural model validation via SmartPLS-4 software. Results show that environmental knowledge and green marketing do not strongly influence green purchase intention. In contrast, social influence and eWOM have a significant positive impact. These findings indicate that interpersonal and digital social dynamics play a greater role than individual knowledge or marketing efforts in driving green consumer behavior among Gen Z Indonesians. From a practical standpoint, sustainable fashion brands targeting this demographic should prioritize influencer marketing, peer-to-peer engagement, and community-driven campaigns over purely informational or traditional marketing approaches. However, the study is limited to a single demographic segment within Indonesia. Therefore, future studies are encouraged to explore these areas further.

**Keywords:** *Electronic word-of-mouth, Environmental knowledge, Fashion industry, Generation Z, Green marketing, Green purchase intention, Social influence.*

### 1. Introduction

As global emissions continue to rise, sustainability has become an increasing priority for modern consumers, particularly Generation Z (Gen Z). It is known for Gen Z to have a stronger commitment to sustainability compared to previous generations [1-3]. They believe that sustainability is a shared responsibility and that they should support it through participation in community and leverage social media to raise awareness. They help educate and inspire people around them, such as parents, family members, and friends, to care more about environmental issues and to take action in protecting the environment [2].

Fashion industry is famous for being the most environmentally damaging sector. Around 8-10% global CO<sub>2</sub> emissions come from this industry. It consumes 79 trillion liters of water annually and causes 20% of industrial water pollution due to textile processing and dyeing activities. It is also responsible for 35% of the microplastic pollution found in the oceans and produces more than 92 million tons of textile waste annually, most of which ends up in landfills or is burned [4]. The industry's rapid clothing production, exacerbated by low-cost replication of luxury designs and frequent collection updates has led to an increased consumption and shorter product life cycles [4,

5]. Consumers are easily influenced by trends and fear of missing out will purchase more frequently. The problem is they will buy cheaper products with low quality that can be easily disposable once the trend changes [6, 7].

Regarding this matter, environmental knowledge can enhance consumer's awareness of sustainability and influence their purchase choices as it is the main driver in shaping consumer attitudes and behaviors towards eco-friendly products [8]. The more consumers have environmental knowledge, the better they recognize the positive side of green products, which will strengthen the intention in purchasing sustainable products [9]. Moreover, environmental issues can improve consumer's perception about green marketing, which will influence their buying behavior [10]. Consumers with greater knowledge of sustainability tend to buy green products. Exposure to effective marketing strategies can reinforce green purchase intentions [11]. In addition, if the consumer can easily acquire information related to the environment, they can engage more in green purchase behavior [12].

The main issue regarding green marketing efforts in the fashion industry is the perception of greenwashing. Fast fashion brands often follow the market trend, which includes sustainability. They promote eco-friendly materials like recycled polyester and organic cotton, yet they continue to use unsustainable production methods [13]. This kind of practice lowers consumer trust, and it makes consumers begin to question the credibility of sustainability claims in the fashion industry [14]. It is true that materials such as recycled polyester (rPET) can reduce CO<sub>2</sub> emissions. However, the materials still contribute to plastic pollution through microplastics. Based on this, businesses that are engaging in green marketing must ensure their sustainability efforts to be genuinely true. It must be done to maintain credibility and consumer trust towards the green claims made by fashion companies.

Social influence strongly shapes consumer interest in eco-friendly products, with people more likely to make sustainable purchases when they are influenced by those around them, including family, friends, and broader social expectations [15, 16]. Given the strong influence of social norms and collective values, peer pressure is seen as a key factor in predicting sustainable consumer behavior [17]. However, while research on social influence exists in certain contexts, its specific role in promoting green consumerism remains an area requiring further investigation [17, 18].

As of early 2025, approximately 5.56 billion people worldwide are internet users. This represents 67.9 percent of the global population. It means most of the people in the world are already using the internet and integrating it into their daily lives [19]. With the growth of the internet, the way people share information has changed. Instead of talking to friends, people are now sharing their opinions and experiences online through digital platforms. This is called electronic Word-of-Mouth or eWOM. It includes online reviews and opinions from consumers about products or services, based on their personal experiences and usually shared on social media platforms or websites. It helps consumers gain information about certain products and services [20]. The positive or negative reviews by consumers significantly affects brand images [21]. It can influence the effect of attitudes and consumer's purchase intention [22].

Existing research on environmental knowledge, green marketing, social influence, eWOM in sustainable consumption has primarily focused on university students and general consumers, often overlooking working Indonesian Gen Zs, who have greater financial independence and distinct purchasing behaviors. Vicente-Molina, et al. [23] studied how environmental knowledge relates to pro-environmental actions among students, but did not explore how working adults may respond differently to green marketing and social influence. Simanjuntak, et al. [10] also analyzed green marketing in Indonesia but did not specifically assess its impact on fashion consumption, a sector often linked to greenwashing concerns.

Previous research showed conflicting findings regarding the impact of social influence on green purchasing behavior. Varshneya, et al. [24] found that social influence had no significant impact on the purchase of organic clothing in India, whereas Clark, et al. [25] showed that Chinese consumers

are highly susceptible to social norms in green purchasing. Lee [17] also identified peer influence as the strongest predictor of green purchase behavior among Hong Kong adolescents, indicating the varying impact of social influence across different cultural contexts. Borah, et al. [26] found that green consumer knowledge influences Gen Z's green purchasing behavior in footwear, but its impact depends on factors such as social responsibility, green advertising, and trust. Many studies on electronic Word-of-Mouth (eWOM) focus on brand perception and purchase intention but are limited by narrow regional and demographic scope [10, 27]. Therefore, they often overlook actual consumer behavior and fail to consider cultural and lifestyle factors that influence decision-making [28]. Additionally, the role of eWOM in sustainable consumption, particularly across different cultural and industry contexts, remains insufficiently explored [29, 30].

These inconsistencies need to be examined on whether social influence plays a stronger role among working Indonesian Gen Zs who are actively engaged in social and professional groups. Additionally, most of current studies focus on brand-driven sustainability efforts [31] and limited research on how consumers make green purchasing decisions in markets prone to greenwashing.

This research addresses the gap by focusing on working Indonesian Gen Zs. While previous research examined green marketing in general, this research specifically explores green marketing influence on fashion consumption [10]. It also investigates whether social influence plays a significant role in working Indonesian Gen Zs' green purchase intentions. This will show how peers affect Gen Zs' purchase decisions [17, 25]. Through shifting the focus from brand's sustainability efforts [31] to consumer purchasing behavior, this study provides a deeper understanding of how young individuals engage with sustainable fashion. Therefore, this research will explore how social influence bridges the gap between green purchase intention and actual consumer behavior [26].

The purpose of this research is to examine the factors that influence working Indonesian Gen Zs' green purchase intentions in the fashion industry. It is to look into the four key variables, which are Environmental Knowledge (EK), Green Marketing (GM), Social Influence (SI), and electronic Word-of-Mouth (eWOM) in relation to Green Purchase Intention (GPI). The main research questions are what are the effects of Environmental Knowledge (EK), Green Marketing (GM), Social Influence (SI), and electronic Word-of-Mouth (eWOM) on the Green Purchase Intention (GPI) of working Indonesian Gen Z consumers in the fashion industry?

## 2. Literature Review

### 2.1. Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) [32] is a framework used to look at the factors that can affect green purchase intentions in the fashion industry. According to TPB, three main factors that can affect purchase decisions consist of attitudes, subjective norms, and perceived behavioral control. Attitudes means an individual's reaction towards green purchasing. It is influenced by environmental awareness and green marketing. Subjective norms involve the social pressure and peer expectations. Perceived behavioral control means the individual's effort in making green purchases. Costs and accessibility of sustainable products usually take part in influencing the individual's decision. As TPB can give guidance about consumer behavior, its implementation of can help business owners and policymakers develop better strategies to encourage sustainable consumption in the fashion industry.

### 2.2. Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA) [33] is a simplified version of the Theory of Planned Behavior (TPB). It also focuses on the direct relationship between an individual's intention and an individual's actual behavior. According to TRA, there are two main factors that influence an individual's intention, which are attitudes and subjective norms. Similar to the TPB, attitudes is an individual's positive or negative evaluation towards green purchasing, while subjective norms are more about social pressure. If the individual believes that green purchasing can help the

environment, then they will tend to consider green purchasing more. As for working Indonesian Gen Z, the opinions of individuals around them and social media influence their purchase decisions. Due to this, social pressure can have a significant role in driving their green purchase behaviors. When businesses implement TRA theory, they can promote more sustainable purchasing behavior in Indonesia's fashion industry through leveraging social influence.

### *2.3. Environmental Knowledge*

Environmental knowledge refers to people's understanding and awareness of how to protect the environment. It is about identifying the sources and consequences of pollution such as global warming, plastic waste, and vehicle emissions. Also, it is related to the effective ways to reduce environmental harm [34]. In summary, it emphasizes the information people possess about the environmental effects of their behavior, which can affect the choices they make as consumers.

### *2.4. Green Marketing*

Green marketing means the company's action in contributing to the environment through various ways such as sustainable design, price, promotion, and distribution of products [35]. It considers the environmental impact in implementing the marketing strategies and highlights it in the marketing channel. The products they offer are eco-friendly, produced, or packaged using environmentally friendly methods [36]. In business, green marketing is often used to meet consumer's demands and stay ahead of the curve. This is done to have competitive advantage so the business revenue can also increase [37]. In summary, green marketing refers to the display of the company's sustainability contribution efforts to attract customers and improve business performance.

### *2.5. Electronic Word-of-Mouth*

Electronic Word-of-Mouth (eWOM) means the sharing of positive or negative opinions about a certain product through internet platforms [38]. It is a powerful marketing tool that plays a key role in influencing consumer's purchase decisions. It influences them through the insights and reviews [39]. It is due to the other consumer's advice and experiences in digital channels [38]. In summary, eWOM is a type of online interaction that provides consumers with information related to products or services.

### *2.6. Social Influence*

Social influence refers to an individual's behavior that is being affected by the people or environment around them Turner [40]. Individuals may adjust their thoughts and actions to align their behavior with the people around them Chen-Yu and Seock [41]. It is considered a significant factor that can influence consumer decision-making [42]. In summary, social influence can shape the way individuals think and behave. Therefore, it can influence their purchasing behavior.

### *2.7. Green Purchase Intention*

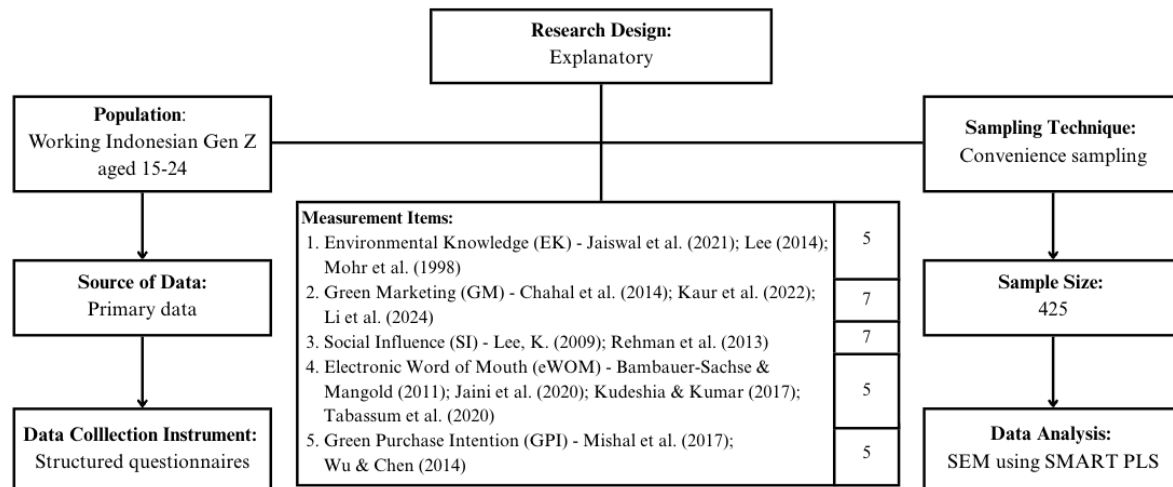
Green purchase intention is a consumer's choice to purchase environmentally friendly products [43]. It shows consumers' intention to support sustainability through green consumption [44] and willingness to purchase certain eco-friendly products or services [45]. Even though there are other options that are cheaper with shorter life span products, they still choose the more expensive with longer life span products. In summary, green purchase intention means the consumer's decision to support the environment by purchasing products that contribute positively to the environment.

## **3. Materials and Methods**

This research implements a quantitative research design to investigate the effect of

environmental knowledge, green marketing, social influence, and eWOM on the green purchase intentions of working Indonesian Gen Zs in the fashion industry. This research uses surveys to collect the data. The data itself will be analyzed using SmartPLS-4 software.

### 3.1. Data Collection and Research Method



**Figure 1.**  
Research Design Table.

**Source:** Jaiswal, et al. [46], Lee [47], Mohr, et al. [48], Chahal, et al. [49], Kaur, et al. [50], Li, et al. [51], Lee [52], Rehman and Dost [53], Bambauer-Sachse and Mangold [54], Jaini, et al. [55], Kudeshia and Kumar [56], Tabassum, et al. [57], Mishal, et al. [58] and Wu and Chen [59].

As seen in Figure 1, this study focuses on working Indonesian Gen Z consumers (aged 15–24) who have been exposed to green marketing strategies in the fashion industry and who exhibit varying levels of environmental knowledge, social influence, green purchase intention, and electronic Word-of-Mouth (eWOM). Although Gen Z includes individuals born between 1997 and 2012 Gomes, et al. [1], making them 13–28 years old in 2025, this study focuses specifically on the 15–24 age group to align with Indonesia's official labor force categorization.

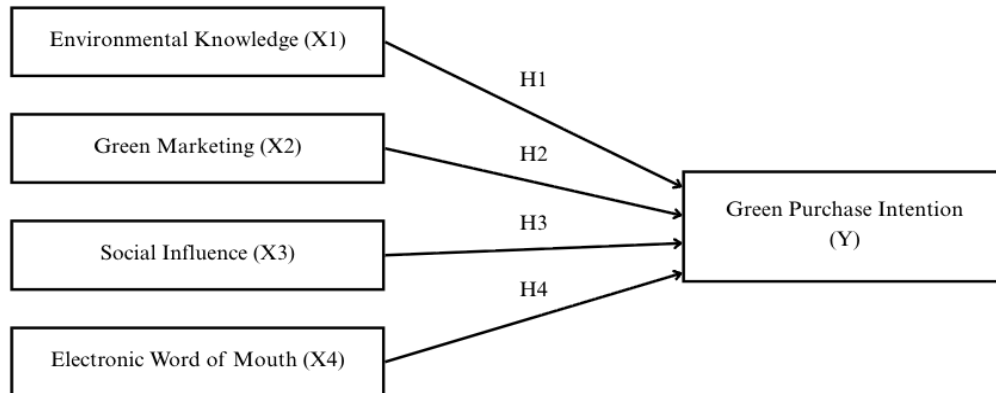
A convenience sampling method is used by selecting participants who are available and willing to take part in this research. While this method allows for efficient data collection, it may introduce selection bias. To mitigate this, data will be collected using an online questionnaire that is shared on different social media platforms and communities relevant to fashion consumers. Participants will be informed of the study's objectives, told that their answers will remain confidential, and given the option to withdraw from the study whenever they choose.

Based on data from Badan Pusat Statistik [60], the total population within the 15–24 age group in Indonesia amounts to approximately 44.4 million individuals, comprising 22,116,400 individuals aged 15–19 years and 22,287,500 individuals aged 20–24 years. Following Morse [61] a minimum sample of 400 respondents is appropriate for populations exceeding 100,000 to ensure a  $\pm 5\%$  margin of error. This study aims to collect a minimum of 400 responses to ensure adequate statistical power and generalizability. Items that will be used for measurement are shown in Table 1.

**Table 1.**  
Questionnaire.

Variable	Item	Questionnaire	Source
Environmental Knowledge	EK1	I can identify green or environmentally friendly fashion products	Jaiswal, et al. [46]; Lee [47] and Mohr, et al. [48]
	EK2	I know how to reduce fashion-related waste, for example, by upcycling (transforming old clothes into more useful and valuable products) or buying second-hand items	
	EK3	I am confident in my knowledge about environmental issues relevant to the fashion industry	
	EK4	I know environmental terms such as “greenhouse gases”, “climate change”, and “global warming”	
	EK5	I know that green fashion products cause less environmental damage than conventional ones	
Green Marketing	GM1	Fashion brands are making great progress by using eco-friendly packaging, like replacing plastic with paper bags	Chahal, et al. [49]; Kaur, et al. [50] and Li, et al. [51]
	GM2	I tend to pay attention to fashion advertisements that highlight environmental or sustainability issues	
	GM3	Environmental messages in fashion advertisements help me make informed eco-friendly purchasing decisions	
	GM4	I believe fashion brands are making efforts to ensure their environmental claims in advertisements are credible and trustworthy	
	GM5	Green marketing by fashion brands increases my positive perception of the brand	
	GM6	Green marketing by fashion brands makes me more aware of the environmental benefits of their products, such as reducing carbon emissions and waste	
	GM7	Green marketing by fashion brands helps me understand the eco-friendly materials used in their products, like organic cotton and recycled polyester	
Social Influence	SI1	I learn about eco-friendly fashion products from my friends	Lee [52] and Rehman and Dost [53]
	SI2	I learn about environmental issues related to fashion from my friends	
	SI3	I often discuss eco-friendly clothing brands or products with my friends	
	SI4	I often talk about sustainability in fashion with my friends	
	SI5	I often buy eco-friendly fashion items together with my friends	
	SI6	I often share information about sustainable fashion products with my friends	
	SI7	My friends often recommend eco-friendly fashion items or brands to me	
Electronic Word-of-Mouth	eWOM1	I find online reviews about eco-friendly fashion products to be reliable and persuasive	Bambauer-Sachse and Mangold [54]; Jaini, et al. [55]; Kudeshia and Kumar [56] and Tabassum, et al. [57]
	eWOM2	Online reviews often support or reinforce my impression of eco-friendly fashion brands	
	eWOM3	I often read online reviews to identify which eco-friendly fashion brands are reputable	
	eWOM4	I read online reviews to help me choose the right sustainable fashion products	
	eWOM5	I feel more confident in my decision to buy eco-friendly clothing after reading online reviews	
Green Purchase Intention	GPI1	I intend to purchase eco-friendly clothing	Mishal, et al. [58] and Wu and Chen [59]
	GPI2	I would consider switching from regular fashion brands to eco-friendly ones for environmental reasons	
	GPI3	I plan to buy sustainable fashion products in the future	
	GPI4	I am willing to continue buying eco-friendly clothing even if it is more expensive	
	GPI5	I would recommend others to buy eco-friendly fashion products	

#### 4. Hypotheses Development



**Figure 2.**  
Framework Model.

##### 4.1. The Effect of Environmental Knowledge on the Green Purchase Intentions of Working Indonesian Gen Z Consumers in the Fashion Industry

Environmental knowledge plays an important role in influencing Gen Z's green purchase intention, especially in the fashion industry. According to research conducted by Vicente-Molina, et al. [23] and Borah, et al. [26], individuals with higher awareness of environmental issues are more likely to choose sustainable products, as they care about the environment. This is supported by Simanjuntak, et al. [10], environmental knowledge not only affects green purchase intention, but also strengthens the individual to care more about the environment. Moreover, Moslehpour, et al. [62] found that if the individual had an experience in purchasing green products, it can enhance consumer's environmental knowledge. Therefore, their intention to make sustainable purchases can also be strengthened. Based on this, we propose the following hypothesis:

*H<sub>1</sub>: Environmental knowledge has a significant positive influence on the green purchase intentions of working Indonesian Gen Z consumers in the fashion industry.*

##### 4.2. The Effect of Green Marketing on the Green Purchase Intentions of Working Indonesian Gen Z Consumers in the Fashion Industry

Green marketing plays a significant role in shaping consumers' purchase intentions in the fashion industry. According to Simanjuntak, et al. [10], promotions that emphasize eco-friendly by highlighting sustainable materials, environmentally friendly manufacturing process, and recycling can motivate Gen Z to choose for environmentally friendly fashion. In addition, Moslehpour, et al. [62] highlights that clear and consistent communication of fashion brand's sustainability practices helps build trust among consumers. Therefore, it can improve the green products, especially in the eyes of those consumers who uphold environmental values. Based on this, we propose following hypothesis:

*H<sub>2</sub>: Green marketing has a significant positive influence on the green purchase intentions of working Indonesian Gen Z consumers in the fashion industry.*

##### 4.3. The Effect of Social Influence on the Green Purchase Intentions of Working Indonesian Gen Z Consumers in the Fashion Industry

Social influence plays an important role in encouraging green purchasing behavior, as consumers tend to adopt eco-friendly habits when they observe that such behaviors are valued and supported



by peers, family, or society. Social norms, peer pressure, and collective awareness of environmental issues are key factors that guide consumer decisions, establishing social influence as a strong predictor of green purchase intention Lin and Niu [63]. Clark, et al. [25] emphasizes that both normative pressures (conforming to others' expectations) and informational influences (learning from others) contribute to sustainable buying behavior. Among Generation Z, social influence significantly shapes preferences for sustainable fashion, with eco-conscious social norms increasing the likelihood of choosing green products. Lee [17] showed that Gen Z tends to be more interested in ethically produced fashion when it is encouraged by peers, promoted on social media, or endorsed by public figures. As sustainable fashion gains traction as a social trend, people are more likely to follow with the expectations of their social circles, which further encourages more environmentally responsible consumption. Based on this, we propose the following hypothesis:

*H<sub>3</sub>: Social influence has a significant positive influence on the green purchase intentions of working Indonesian Gen Z consumers in the fashion industry.*

#### *4.4. The Effect of Electronic Word-of-Mouth on the Green Purchase Intentions of Working Indonesian Gen Z Consumers in the Fashion Industry*

In the current digital era, electronic Word-of-Mouth (eWOM) has a strong influence on consumer behavior. It affects Gen Zs who are skilled in technology and rely heavily on online information when making purchasing decisions. eWOM refers to both positive and negative feedback from real customers about products or brands, shared across digital platforms and accessible to a broad audience [39]. Many research papers have found that eWOM significantly shapes consumers' brand perceptions, strengthens brand image, builds trust, and enhances purchasing intentions [27, 30]. However, Simanjuntak, et al. [10] found that eWOM did not directly influence environmental care attitudes, although it remains an important external factor in driving consumer interest in green products.

Additionally, Baena [31] highlighted that digital platform, including social networks and brand websites, are critical in conveying sustainability messages. For brands like ZARA, eWOM is instrumental in communicating ethical initiatives and building consumer trust—particularly when aligned with Stakeholder Theory, which asserts that transparent and proactive communication fosters consumer loyalty and ethical engagement. Based on this, we propose the following hypothesis:

*H<sub>4</sub>: Electronic Word-of-Mouth has a significant positive influence on the green purchase intentions of working Indonesian Gen Z consumers in the fashion industry.*

## **5. Research Results**

### *5.1. Respondent Attributes*

The respondent data collected in the survey was 425. The characteristics of respondents were divided into several classifications, it consists of gender, age, occupation, and monthly income. There were 315 female respondents and 110 male respondents. The majority of the respondents were 22 years old and were interns with the monthly income of around Rp1.000.000–Rp5.000.000. There were no 15- and 16-years old respondents that filled in the survey. In addition, there was only 1 respondent that was an investor. The respondents' characteristics detail can be found in Table 2.



**Table 2.**  
Characteristics of respondents.

Category	Classification	No. Sample	Percentage (%)
Gender	Male	110	25.9
	Female	315	74.1
Age	15	0	0
	16	0	0
	17	1	0.2
	18	2	0.5
	19	13	3.1
	20	57	13.4
	21	97	22.8
	22	175	41.2
	23	55	12.9
	24	25	5.9
Occupation	Entrepreneur	57	13.4
	Freelancer	64	15.1
	Employee	78	18.4
	Part-time worker	67	15.8
	Intern	158	37.2
	Investor	1	0.1
Montly Income	<Rp1.000.000	63	14.8
	Rp1.000.000-5.000.000	267	62.8
	Rp5.000.000-10.000.000	71	16.7
	Rp10.000.000-15.000.000	13	3.1
	>Rp15.000.000	11	2.6
Total		425	100

### 5.2. Validity and Reliability Analysis

Validity test is used to investigate the accuracy of the items in measuring the concept, while the reliability test is conducted to determine the items consistency as the measurement. Results of validity tests can be found in Table 3 and Table 4. In addition, results of reliability tests can be found in Table 5.

**Table 3.**  
Convergent validity test result.

Item	Outer Loadings	AVE	Results
EK1	0.745	0.557	Valid
EK2	0.713		Valid
EK3	0.775		Valid
EK4	0.736		Valid
EK5	0.761		Valid
GM1	0.726	0.572	Valid
GM2	0.761		Valid
GM3	0.772		Valid
GM4	0.769		Valid
GM5	0.756		Valid
GM6	0.751		Valid
GM7	0.761		Valid
SI1	0.806	0.651	Valid
SI2	0.803		Valid
SI3	0.813		Valid
SI4	0.770		Valid
SI5	0.806		Valid
SI6	0.831		Valid
SI7	0.815		Valid
eWOM1	0.783	0.636	Valid
eWOM2	0.785		Valid
eWOM3	0.813		Valid
eWOM4	0.804		Valid
eWOM5	0.801		Valid
GPI1	0.751	0.556	Valid
GPI2	0.751		Valid
GPI3	0.757		Valid
GPI4	0.708		Valid
GPI5	0.758		Valid

**Table 4.**  
Discriminant validity – Heterotrait-monotrait ratio (HTMT) test result.

	EK	GM	SI	eWOM	GPI
EK					
GM	0.869				
SI	0.324	0.369			
eWOM	0.774	0.816	0.326		
GPI	0.532	0.584	0.510	0.696	

The validity test evaluated construct validity, which includes both convergent and discriminant validity. Convergent validity was used to evaluate whether the items are truly related to the construct they are intended to measure. This was assessed using outer loadings and Average Variance Extracted (AVE), where outer loadings should be greater than 0.70 [64] and AVE should be above 0.50 [65]. Discriminant validity, on the other hand, examines whether each construct is distinct from others, and it was tested using the Heterotrait-Monotrait Ratio (HTMT), with the acceptable threshold being below 0.90 [66, 67]. The results confirmed that all indicators were valid. Although the values for EK-GM and eWOM-GM were slightly below the 0.90 threshold, they remained distinct. All outer loadings were greater than 0.70 and all AVE values were over 0.50, confirming strong convergent validity. Overall, all HTMT values being below 0.90 verified strong discriminant validity. These findings confirm that all items were properly associated with their constructs and that each construct was clearly differentiated from the others.

**Table 5.**

Reliability test result.

Item	Cronbach's Alpha	Composite Reliability (rho_c)
EK	0.801	0.863
GM	0.876	0.904
SI	0.911	0.929
eWOM	0.857	0.897
GPI	0.800	0.862

As for the reliability test, two tools were used: Cronbach's Alpha and Composite Reliability. Both tools applied to evaluate the internal consistency of the items. While Cronbach's Alpha was used for surveys and questionnaires, Cronbach's values from the range of 0.80-0.90 are considered good to reliable [68]. Composite Reliability was used for PLS-SEM models. Value in the range of 0.70-0.90 is considered satisfactory to good [69]. The results showed that all items ranged between 0.80 and 0.90, indicating high reliability.

**Table 6.**

Hypothesis test result.

	Original sample (o)	Sample mean (M)	Standard deviation (STDEV)	T statistics (Io/STDEVI)	P values
EK->GPI	0.013	0.012	0.077	0.170	0.865
GM->GPI	0.088	0.096	0.091	0.960	0.337
SI->GPI	0.281	0.282	0.052	5.338	0.000
eWOM->GPI	0.426	0.423	0.080	5.336	0.000

As shown in Table 6, the original sample presents the main coefficient values from the model and reveals the direct relationship between the variables studied. The sample mean is the average of all values in a sample. To test the consistency of these relationships, the sample mean which is calculated through repeated resampling or bootstrapping, was compared to the original sample value. When the sample mean is close to the original sample, the relationship is considered consistent and reliable [70]. In this study, the relationships EK->GPI, SI->GPI, and eWOM->GPI showed strong consistency, with sample means nearly identical to the original sample. This indicates high reliability and minimal random variation. However, GM->GPI had a slightly greater difference of about 0.008 between the original sample and the sample mean. Although this difference is small, it suggests a weaker or less stable relationship than the others.

The standard deviation values from the bootstrapping process were assessed to see how much the coefficients varied from the mean [71]. A low standard deviation value shows more accurate and dependable estimates. In this study, all standard deviation values fell within 0.05 and 0.09 which is generally considered acceptable. Therefore, the results are stable and consistent when applied across different datasets.

The significance of the relationships was determined using T-statistics. A T-statistic value above 1.96 indicates statistical significance, while a value below 1.96 indicates non-significance [64]. The results showed that the relationships from EK->GPI and GM->GPI were not significant, meaning weak effects with low confidence levels. On the other hand, the SI->GPI and eWOM->GPI relationships were significant and also showed strong and higher confidence levels, with values above 1.96.

P-values were used to determine whether the observed relationships were statistically significant or possibly due to random chance. A P-value below 0.05 is considered significant and has meaningful relationship between the variables [72]. This study found that the relationships from SI->GPI and eWOM->GPI had P-values below 0.05, meaning they were statistically significant. However, the EK->GPI and GM->GPI relationships had P-values above 0.05, indicating they were

not statistically significant and may have occurred by chance. This does not mean those relationships do not exist, but it shows the evidence is not strong enough to be certain based on the data.

In summary, the results from the hypothesis testing indicate that most of the relationships in the model are dependable and consistent, especially those with close sample means, low standard deviations, and significant P-values. However, relationships with larger mean gaps or non-significant P-values may require further investigation or refinement in future studies.

**Table 7.**  
R-Squared test result.

	<b>R-Squared</b>	<b>Adjusted R-Squared</b>
GPI	0.418	0.413

R-Squared is a value that shows how much independent variable (exogenous variable) influences dependent variable (endogenous variable). There are three categories of R-Squared, which are strong, moderate, and weak. A value of  $>0.75$  is regarded as strong,  $>0.50$  is considered moderate, and  $>0.25$  is viewed as weak [73]. Adjusted R-Squared should be close to R-Squared, with minimal difference, to confirm that predictors meaningfully improve the model [74]. In this study, the R-squared value of 0.418 shows that 41.8% of the variance in the dependent variable is explained by the independent variables. The adjusted R-Squared of 0.413 differs by only 0.005, confirming that the model contains no unnecessary predictors and has meaningful predictive power. According to Hair, et al. [73], this is a moderate level of explanation.

**Table 8.**  
Effect size (F-Squared test result).

	<b>EK</b>	<b>GM</b>	<b>SI</b>	<b>eWOM</b>	<b>GPI</b>
EK					0.000
GM					0.005
SI					0.119
eWOM					0.144
GPI					

According to Cohen [75] the suggested F-Squared is  $>0.02$  with the classification of small,  $>0.15$  with the classification of moderate, and  $>0.35$  with the classification of large effect in the structural level. This measure evaluates each predictor's contribution to the model. The results show that EK and GM have small effects on the endogenous variable, while SI and eWOM have a slightly larger effects, though still below the moderate threshold.

**Table 9.**  
Predictive relevance (Q-Squared) latent variable test result.

	<b>Q<sup>2</sup> predict</b>	<b>RMSE</b>	<b>MAE</b>
GPI	0.388	0.789	0.570

Q-Squared latent variable measures how well the model is at predicting new data. If the Q-Squared value is higher than 0, it means the model has good predictive power. But if the Q-Squared value is lower than 0, then the model lacks predictive relevance [76, 77]. In this study, the Q-Squared value was 0.388, which is above 0. Along with the low RMSE and MAE values, this indicates that the model has strong predictive relevance.

**Table 10.**  
Predictive relevance (Q-Squared) manifest variable test result.

	<b>Q<sup>2</sup> predict</b>	<b>PLS-SEM_RMSE</b>	<b>PLS-SEM_MAE</b>	<b>LM_RMSE</b>	<b>LM_MAE</b>	<b>IA_RMSE</b>	<b>IA_MAE</b>
GPI1	0.213	0.874	0.676	0.911	0.713	0.985	0.709
GPI2	0.215	0.916	0.735	0.949	0.763	1.034	0.814
GPI3	0.201	0.892	0.701	0.921	0.727	0.998	0.742
GPI4	0.208	1.084	0.840	1.106	0.846	1.218	0.999
GPI5	0.235	0.974	0.754	1.020	0.796	1.113	0.886

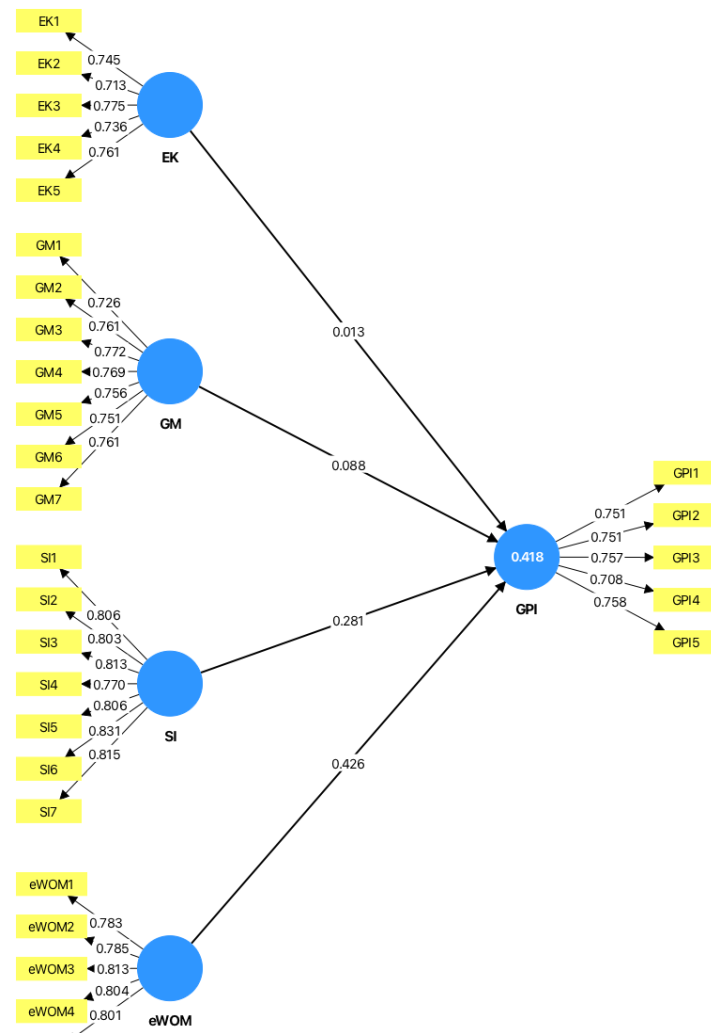
Q-Squared manifest variable measures how well each indicator can be predicted by the PLS-SEM model. A Q-Squared value greater than 0 means the model predicts the indicator well, while a value of 0 or below shows poor predictive ability [76, 78]. Higher Q-Squared values indicate stronger predictive relevance.

If the RMSE/MAE of the PLS model is lower than that of the linear model (LM), it shows that the PLS model has strong predictive relevance. However, if the RMSE/MAE is higher, the predictive relevance is weak, even if the model is still valid [79]. The RMSE/MAE results clearly show that all GPI items have strong predictive relevance, as all Q-Squared values exceed 0, and the PLS-SEM model consistently surpasses the LM across most indicators.

**Table 11.**  
Path coefficients – PLS-SEM algorithm test result

	<b>EK</b>	<b>GM</b>	<b>SI</b>	<b>eWOM</b>	<b>GPI</b>
EK					0.013
GM					0.088
SI					0.281
eWOM					0.426
GPI					

Path coefficients represent the strength and direction of relationships between variables, which is usually between -1 and +1 [76]. A path coefficient value of >0.20 indicates a meaningful relationship; >0.5 means a strong relationship; and <0.10 is seen as a weak relationship [77]. The results showed that EK and GM had weak strength and direction, as their values were <0.10, while SI and eWOM had meaningful strength and direction, as their values were >0.20. All variables showed that the relationships are positive.



**Figure 3.**  
Hypothesis Testing.

## 6. Discussions

The section discusses the findings of this study by interpreting path coefficients and significance levels. It compares the results with previous literature and highlights practical and theoretical implications. The validity and reliability tests showed that all items are valid and the measurements were measuring the concept. The numbers were all within the range of acceptable threshold. Only EK & GM and eWOM & GM numbers were almost 0.90 in the HTMT.

Moving on to the hypothesis test, it showed that the EK->GPI, SI->GPI, and eWOM->GPI relationships were strong. The original sample and sample mean does not have huge differences. It is only around 0.001-0.003 difference between the two. There was only one which was GM->GPI that had slightly bigger differences. It had 0.008 difference. This means the correlation between those two was a bit weaker than the others. Moreover, the standard deviation results showed steady and consistent results across the datasets. It ranged between 0.05-0.09. The range is still within the categories of acceptable and still reliable. Therefore, the data was still trustworthy.

The T-statistics results showed that the relationships of EK->GPI and GM->GPI were not significant, as their values were below 1.96. However, the relationships of SI->GPI and eWOM->GPI

>GPI were greater than 1.96, so they were significant. These findings were further supported by the P-values. EK->GPI and GM->GPI relationships had P-values above 0.05, which were not significant. SI->GPI and eWOM->GPI relationships P-values below 0.05, showing that those relationships were indeed significant.

The results of this research aligned with Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA). According to TPB, people are influenced by three aspects, which consists of attitudes, subjective norms, and perceived behavioral control. According to TRA, people can be influenced by two aspects, which are attitudes and subjective norms. In this study, Environmental Knowledge (EK) and Green Marketing (GM) were expected to influence working Indonesian Gen Z's green purchase intention. However, it was found that the relationships were not significant as the T-statistics were below 1.96 and P-values higher than 0.05.

On the contrary, subjective norms showed strong influence. The relationships from SI->GPI and eWOM->GPI had T-statistics above 1.96 and P-values below 0.05, which indicates the relationships were significant. This fits well with both TPB and TRA, which focuses on how attitudes and social pressure shape intentions. For Indonesian Gen Z, who are very active online and influenced by friends, influencers, and social media, social pressure seems to matter more than just knowledge or ads. It is interesting that the social influence and eWOM are much more powerful in encouraging green buying behavior than environmental knowledge or marketing messages alone. This suggests that companies should focus more on using influencers, peer communities, and online reviews to promote sustainable fashion.

The hypotheses developed in this research were based on literature review and grounded theories such as TRA and TPB. However, the results did not fully align with these expectations. Variables that were predicted to have a significant influence, such as EK and GM, did not show a significant effect on green purchase intention. The gap between theory and reality may be explained by several reasons, such as too much exposure to green messages, skepticism toward advertising, and a lack of personal interest. More importantly, the findings highlight that social pressure and peer influence (subjective norms) appear to play a much stronger role for Gen Z in fashion decisions than knowledge or marketing efforts alone.

This research has certain limitations that can affect the accuracy of the findings. Firstly, the sample size was specific to a certain group and industry, which is Gen Z in Indonesia and the fashion industry. It clearly does not represent other age groups, cultural backgrounds, or industries. A larger and more varied sample could provide more balanced insights. Secondly, the model tested only direct relationships without considering indirect relationships between variables. This might explain the reason some hypothesis such as EK->GPI and GM->GPI were not supported. Lastly, the study did not consider other factors such as income level, environmental values, or brand equity. These variables may also influence green purchase intention but were not included in the model.

## 7. Conclusion

The results of the research found that Environmental Knowledge (EK) and Green Marketing (GM) did not strongly influence working Indonesian Gen Zs' Green Purchase Intentions (GPI). Meanwhile, Social Influence (SI) and electronic Word-of-Mouth (eWOM) had a strong influence on their GPI. This shows that Indonesian Gen Zs are more influenced by social factors such as peer pressure when buying green fashion products. Based on these findings, it is recommended for fashion businesses to consider these insights into their business marketing strategy. Fashion businesses can leverage influencers in selling their products as social influence plays a major role in Gen Zs' green purchase behavior. However, this research had several limitations. The sample size is considerably small, the respondents' demographic was limited to a specific group, and there were no indirect effects explored.

Future research can do several things to understand more about the relationships between the variables. Firstly, researchers can include moderating or mediating variables. It may explain the



reason EK and GM did not significantly affect GPI. Secondly, the research model can be tested in different populations or settings such as older generations, different countries, or different industries, to see whether the results hold across contexts. Lastly, researchers might improve the research model by expanding the weak variables. For instance, the role of GM can be separated into online vs. offline campaigns or focusing on message credibility.

### Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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### Data Access Statement:

The data used in this research were collected through a structured survey and are not publicly available due to confidentiality agreements with the participants. To ensure the privacy and ethical handling of respondent information, access to the dataset is limited. However, interested researchers may request access by contacting the corresponding author. Any data sharing will be considered under ethical review. This approach aligns with responsible data management practices, as recommended by Imperial College London [80]. You can access the data here.

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