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# Sustainable Style: How Environmental Knowledge And Environmental Concern Influence Gen-Z's Fashion Choices

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**ABSTRACT**
This study investigates the factors influencing sustainable fashion behavior among Indonesian Gen Z, focusing on the roles of environmental knowledge (EK), environmental concern (EC), and attitude toward sustainabe fashion (ATT). The popularity of thrifting among Gen Z has risen, particularly in Indonesia. Thrifting offers a unique shopping experience that evokes various feelings, seen as a cost-effective solution by purchasing second-hand items that are still in good condition. Given the gap in global literature, the author selects Gen Z as the research context and subject of study. Through a comprehensive examination of sustainable fashion, this research aims to clarify the relationship between knowledge, concern, and attitude between Gen Z toward sustainable fashion. This study integrates quantitative methods, where a questionnaire survey will be distribute to respondents to gain deeper understandi ng of these issues. The results of this study indicate that both knowledge and concern jointly influence Gen Z's attitude towards sustainable fashion. Additionally, further path analysis shows that environmental concern fully mediates the relationship between knowledge and attitude. The results of data analysis reveal that environmental knowledge influences attitude toward sustainable fashion ($R^2$=3.72) and environmental knowledge influences environmental concern ($R^2$=0.319).The study confirms that environmental knowledge and attitudes play crucial roles in shaping sustainable fashion behaviors among Indonesian Gen Z. Enhancing environmental education and promoting sustainable fashion practices can positively influence purchase intentions and behaviors. These findings have important implications for policy makers, educators, and the fashion industry, highlighting the need for integrated efforts to foster sustainable consumption patterns.

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## INTRODUCTION

Fast fashion is a phenomenon that began with the industrial revolution. This phenomenon has a negative impact on the environment and climate change, because large-scale production uses materials that are not environmentally friendly and high demand in a consumerist society (Asy'ari & Amalia, 2022). To address the need for rapid production of

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fashionable clothing, the fashion sector is responsible for approximately 8-10% of worldwide carbon emissions and nearly 20% of water wastage (Shukla, 2022). Moreover, significant quantities of chemical pollutants, carbon dioxide, and other detrimental substances are discharged into the environment—water, soil, and atmosphere—during garment manufacturing processes (Rukhaya et al., 2021).

Gen Z exhibits a strong preference for expressive clothing, aiming to stand out rather than conform, and their style is frequently evolving. Their penchant for chasing trends is facilitated by fast-fashion retailers, who provide accessible options for frequent wardrobe changes. This inclination may appear to conflict with their professed values of sustainability. Gen Z has a strong affinity for thrifting and vintage fashion, which aligns more closely with their advocacy for circular fashion. Purchasing second-hand clothes (thrifting), is one of the methods to support sustainability. Second-hand products are those that are no longer required by their original owners, regardless of their previous usage. Therefore, although their initial owners no longer need them, these items still possess value and can be utilized by others (Febriasari et al., 2024; Moon, 2024). However, the rapid pace of trend shifts and their desire for a unique style can sometimes outweigh their environmental concerns. Despite the stereotypes associated with purchasing and using second-hand clothing, its consumption helps mitigate the environmental and social impacts of the fashion industry (Mazanec & Harantová, 2024; Oscario, 2023; Turunen & Gossen, 2024)

Thrifting, increasingly favored by younger generations, entails purchasing second-hand clothing as a conscientious practice aligned with sustainable fashion principles. This includes the practice of selecting and using used clothing instead of buying new ones as an alternative to reducing environmental impact (Zahro & Dhona, 2023). This thrifting behavior has become popular among the public, especially Gen Z, because the products sold are still in good condition and suitable for use, and there are several branded products sold at affordable prices. On the other hand, thrifting activities have also become a trend among Gen Z because many are targeting old school products or clothing so that they give a "vintage" impression when worn. For Generation Z, sustainable fashion is not merely a trend but represents a fundamental shift in mindset. Their approach to sustainable fashion reflects a broader commitment to environmental stewardship and social justice (Dewi & Syauki, 2023; Nuh et al., 2023; Syauqina et al., 2022). As more members of Generation Z enter the consumer market, their preference for ethical and sustainable practices is likely to become commonplace in society (Pandey & Yadav, 2023).

Environmental knowledge encompasses the understanding individuals possess regarding the interdependent relationship between humans and the environment, which motivates them to act responsibly towards it. This knowledge plays a multifaceted role in shaping behavior.  observed that environmental knowledge specifically related to clothing did not significantly Influence sustainable apparel purchase intentions (Putri & Yeshika, 2024). Conversely, shifts in consumer attitudes, beliefs, and environmental awareness have spurred an increased demand for sustainable clothing. Improving consumer education on environmental sustainability has the potential to significantly promote the growth of slow fashion and encourage sustainable consumption behaviors in fashion. Nevertheless, despite

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the increasing popularity of the green clothing industry, it still represents less than 10% of the overall clothing market (Khare & Sadachar, 2017).

Behavioral aspects also influence consumers' consumption of used clothing. It is known that many factors such as concern for the environment, problems related to clothing accumulation and storage, and other factors play a role in this behavior. When discussing clothing disposition, tendencies to engage in charity, donating, recycling, or exchanging clothing for other items such as steel kitchen utensils were identified. Consumers who are willing to consume sustainably tend to lean more towards the circular economy and slow fashion. They want to use clothes as optimally as possible. Instead of throwing clothes that are no longer worn or rarely worn into the landfill, it is better to extend the use of these clothes. This can ultimately reduce pollution to the greatest extent possible. Rapid technological progress, the role of clothing in expressing oneself, prosperity and lower prices will contribute to sustainable consumption (Paço et al., 2021).

Based on several empirical evidence, the growing trend of thrifting in Indonesia has led to a significant shift in consumer attitudes. People are becoming more aware of and critical towards the practices of fast fashion. Therefore, it is essential to further examine the factors that drive Gen Z's attitudes and behaviours regarding fast fashion and the popularity of thrifting in Indonesia. Given the identified gaps in global literature, such as the insufficient research on developing nations, and considering Indonesia's prominent role in the global textile supply chain, the authors selected Indonesia and Gen Z as the research contexts and subjects for this study.

## RESEARCH METHODS

This research was structured based on an explanatory design that explains the causal relationship between variables, namely environmental knowledge, environmental concern, and attitude toward ethical fashion. Data were collected with purposive sampling methods. The required characteristics to become respondents for this study are Indonesian Gen Z (17-26 years old). According to Hair et al. (2019), the minimum sample size should be 10 times the highest number of arrows pointing to any latent variable in the PLS path model. With the proposed research model and a margin of error of 5%, the minimum sample size required is 240 respondents. Quantitative data was collected from Juni 23 to June 24, 2024.

The primary data collected was then analyzed using the PLS-SEM technique with the help of an application Smart PLS 4. PLS-SEM analysis technique consists of two sub models (outer model and inner model). The outer model is related to testing the validity and reliability of the research instrument. Testing convergent validity and discriminant validity of research indicators to evaluate measurement models with reflective indicators. Convergent validity which is classified as good is shown by the loading factor and AVE values of the results of all constructs which have values greater than 0.5. After the validity test, in the outer model there is also a reliability test. The reliability test is evaluated from the Cronbach's Alpha and Composite Reliability values where the value for each construct variable is greater than 0.70 so it can be stated that there is consistency in the measurement of the instrument (Hair et al., 2019).

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After testing the outer model, it is necessary to test the inner model to determine the research hypothesis decision. There are several stages used in evaluating the structural model, including measuring the coefficient of determination ($R^2$). The range of $R^2$ values is from 0 to 1, with 0 indicating no relationship and 1 indicating a perfect relationship. The $R^2$ value is 0.75, it can be concluded that the model is strong, 0.50 is medium, and 0.25 is weak. The next stage is measuring the path coefficient which shows the direction of the hypothesized relationship between variables. Hypothesis testing is carried out by looking at the significance value. The significance value is seen to determine the influence between variables through a bootstrapping procedure. When the t value (t-statistics) is greater than the critical value t (t table), it can be concluded that the coefficient is statistically significant at a certain error probability. The influence between variables can be said to be significant if the p-value is smaller than the significance level. In this study, the significance level used is 0.05 (5%) and using the p value (p-value) to see significance, it can be said to be significant if the p-value (p-value) is below 0.05 (< 5%) (Hair et al., 2019)

## RESULTS AND DISCUSSION

### Respondent Profile

From distributing the questionnaire, 240 responses were obtained, where this number met the minimum sample criteria required for SEM-PLS analysis. Based on the data collected, information was obtained regarding the respondent's profile as shown in Table 1. Based on the results of data processing, it can be seen that the respondents for this study were dominated by participants aged between 17 and 21 years with a percentage of 69.17% or 166 people from the total respondents. The research respondents were dominated by Gen Z who were female with a percentage of 80% of the total respondents. Based on their region of origin, 55% of respondents are from Java island.

**Table 1** Respondent Profile

| Respondent Characteristics | | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | Male | 48 | 20.00 |
| | Female | 192 | 80.00 |
| Age | 17 – 21 years old | 166 | 69.17 |
| | 22 – 26 years old | 74 | 30.83 |
| Origin | Kalimantan | 53 | 22.08 |
| | Java | 132 | 55.00 |
| | Sulawesi | 20 | 8.33 |
| | Sumatera | 25 | 10.42 |
| | NTT | 10 | 4.17 |

Source: Data processing results (2024)

### Outer Model Evaluation

Evaluation of measurement models using reflective construct items consists of convergent validity, discriminant validity and composite reliability. Convergent validity testing can be seen from factor loadings which should be more than 0.7 and AVE values of more than 0.5. Based on the results of the convergent validity test, the AVE value of each variable after

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improving the model is more than 0.5, so it can be concluded that the variables in the research model have met convergent validity criteria. The results of convergent validity testing can be seen in Table 2.

**Table 2** Convergent Validity Test Results

| Variable | Number of Items | Convergent Validity | |
|---|---|---|---|
| | | Factor Loadings | AVE value |
| Attitude Toward Ethical fashion | 3 | 0.771 – 0.837 | 0.636 |
| Environment Concern | 3 | 0.851 – 0.863 | 0.724 |
| Environmental Knowledge | 4 | 0.703 – 0.842 | 0.622 |

Source: Data processing results (2024)

Discriminant validity relates to the principle that measures of different constructs should not be highly correlated. The discriminant validity value is determined based on the Fornell-Larcker criteria by looking at the AVE square root value of a variable, where discriminant validity is fulfilled if the AVE square root value is higher than other variables. The results of discriminant validity testing can be seen in Table 3 which explains that all variables have met the assumptions of discriminant validity, because the value in the diagonal table shows a number that is higher than the square root value of the other variables listed in the Table 3.

**Table 3** Discriminant Validity Test Results

| | ATT | EC | EK |
|---|---|---|---|
| Attitude Toward Ethical Fashion (ATT) | 0.797 | | |
| Environmental Concern (EC) | 0.520 | 0.851 | |
| Environmental Knowledge (EK) | 0.557 | 0.565 | 0.788 |

Source: Data processing results (2024)

Reliability testing in SEM-PLS is carried out by looking at the composite reliability value, where the criteria for a variable to meet reliability if the value is greater than 0.7. The test results show that all variables have a composite reliability value higher than 0.7 and Cronbach's Alpha is more than 0.6, so it can be concluded that all variables are reliable. The results of reliability testing can be seen in Table 4.

**Table 4** Reliability Test Results

| | Cronbach's Alpha | Composite Reliability | Decision |
|---|---|---|---|
| Attitude Toward Ethical Fashion | 0.809 | 0.874 | Reliable |
| Environment Concern | 0.811 | 0.887 | Reliable |
| Environmental knowledge | 0.695 | 0.831 | Reliable |

Source: Data processing results (2024)

**Evaluation of the inner model**

Evaluation of the outer model can be seen from the coefficient of determination ($R^2$) and path coefficient. The coefficient of determination is used to identify how large the proportion of the independent variable is in explaining the dependent variable. The independent variable in this research is environmental knowledge, with the dependent variable consisting of environmental concern and attitude toward ethical fashion. The coefficient of determination value in behavioral research is divided into 3 categories, namely 0.75, 0.50 and 0.25, which

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respectively indicate that the model is strong, medium and weak. The results of testing the coefficient of determination can be seen in Table 5.

**Table 5** Coefficient of Determination

| Dependent Variable | Independent Variable | R Square | Decision |
|---|---|---|---|
| Attitude Toward Ethical Fashion | Environmental Knowledge | 0.372 | medium |
| Environment Concern | Environmental Knowledge | 0.319 | medium |

Source: Data processing results (2024)

The value of the coefficient of determination on the relationship between environmental knowledge and attitude toward ethical fashion is 0,372 which can be interpreted as influence environmental knowledge to attitude toward ethical fashion is as big as 37.2% and fall into categories currently. Next, the coefficient of determination value for the relationship between environmental knowledge and environmental concerns is 0.319 which is included in the medium category.

The results of the bootstrapping test are used as a basis for deciding whether the proposed hypothesis is supported or not. From the results of hypothesis testing, all direct relationships between variables show a p-value of less than 0.05, which means that H1 and H2 are supported. Meanwhile, environmental concern is proven to fully mediate the relationship between environmental knowledge and attitude, with a p-value of 0,000. The bootstrapping test results for direct relationships and additional paths are shown in the Table 6 and the result of structural equation model can be seen in Figure 1.

**Table 6** Bootstrapping Test Results

| Hypothesis | Estimated Value | T Statistics | P-Values | Hypothetical Decisions |
|---|---|---|---|---|
| EK→EC | 0.571 | 12.420 | 0.000 | Supported |
| EC→ATT | 0.522 | 8.229 | 0.000 | Supported |

Source: Data processing results (2024)

**Hypothesis 1: Environmental knowledge influences environmental concern**

The relationship between environmental knowledge and environmental concern has a positive direction with an estimated value of 0.571 and a t-calculated value of 12.420. However, the direct influence of environmental knowledge on environmental concerns is included in the medium category as indicated by a significance value of 0.000. This finding is supported by previous research which states that the influence of environmental knowledge on attitude toward ethical fashion has a significant effect (Candrianto et al., 2023).

**Hypothesis 2: Environmental concern influences attitude toward sustainable fashion**

The relationship between environmental concern and attitude has a positive direction with an estimated value of 0.522 and a t-calculated value of 8.229. This finding is in line with the results of previous research which stated that the influence of environmental concerns on attitudes toward ethical fashion has a significant effect (Pandey & Yadav, 2023)

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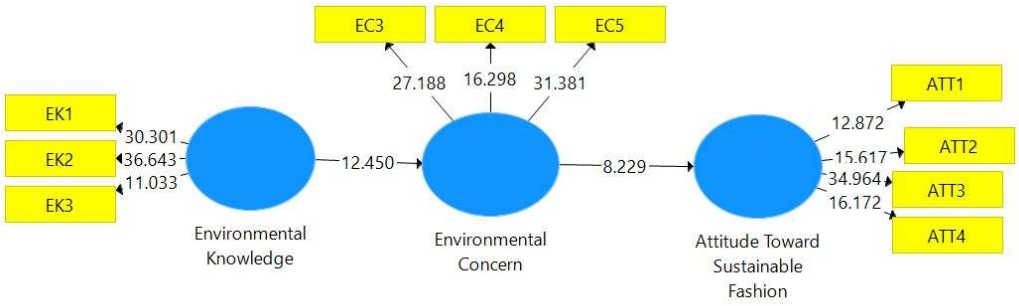


**Figure 1.** Results of structural equation model
Source: Data processing results (2024)

Based on the data analysis the impact of environmental knowledge on environmental concern is positive. This means that consumers who have environmental knowledge tend to have environmental concern. This finding is supported by Candrianto et al (2023), which states that the influence of environmental knowledge on attitude toward ethical fashion has a significant effect. The impact of environmental concern on attitude toward sustainable fashion is positive. This means that consumers with environmental concerns tend to have a positive attitude towards sustainable fashion. This finding is in line with the results of Pandei and Yadav (2023), which stated that the influence of environmental concerns on attitudes toward ethical fashion has a significant effect.

## CONCLUSION

This research examines the relationship between environmental knowledge (EK), environmental concern (EC) among Indonesia's Gen Z. The analysis results show that environmental knowledge and environmental concern contribute to attitute toward sustainable fashion, with practical experience playing an important role in changing attitudes. To encourage sustainable fashion behavior, environmental knowledge should be enhanced through practical experiences. Policymakers can support sustainable business practices, while fashion industry players need to communicate the environmental benefits of their products to influence Gen Z consumers. Future research could address social biases and improve the generalizability of findings through offline surveys, as well as explore ethical aspects in sustainable fashion purchasing decisions.

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