Environmental concern as a green stimulus: An S-O-R approach to sustainable fashion purchase intention in Indonesia

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ABSTRACT

Despite the increasing global awareness, sustainable fashion consumption remains inconsistent. This study applies the stimulus-organism-response (S-O-R) model to examine the process through which environmental concern acts as a green stimulus influencing consumers' internal psychological activation and purchase intention. Using data from Indonesian consumers analyzed through structural equation Modeling based on Partial Least Squares (PLS-SEM), incorporating 5,000 bootstrap resamples, the findings indicate that environmental concern has a statistically significant positive effect on purchase intention ($\beta = 0.738$; $t = 18.756$; $p < 0.001$; $R^2 = 0.545$; $f^2 = 1.196$; SRMR = 0.067). All reliability and validity criteria were met ($\alpha > 0.80$, CR > 0.85, and AVE > 0.56). The findings confirm that environmental concerns function as psychological and emotional stimuli that shape sustainable purchase behavior. This study broadens the application of the S-O-R framework in sustainability research and offers practical guidance for eco-fashion marketers to design emotionally engaging green messages targeting emerging market consumers.

Keywords: Stimulus-Organism-Response; Environmental Concern; Sustainable Fashion; Purchase Intention; PLS-SEM; Indonesia

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RESEARCH & PUBLISHING

1. INTRODUCTION

1.1. Background

Environmental sustainability has become an increasingly urgent issue as contemporary production and consumption patterns intensify ecological degradation. Global assessments indicate that unsustainable consumption contributes substantially to carbon emissions, resource depletion and environmental imbalance (IPCC, 2023). Within this context, the fashion industry has attracted particular scrutiny because of its resource-intensive production processes and significant environmental footprint.

The fast fashion model, which prioritizes rapid production cycles, low prices, and high consumption volumes, is a primary driver of these environmental pressures. This model accelerates material extraction, increases water and energy use, and generates large quantities of textile waste, positioning the fashion industry as one of the major contributors to global environmental pollution (Bick et al., 2018; Niinimäki et al., 2020; Shirvanimoghaddam et al., 2020). Despite growing awareness of these impacts, the global fashion market continues to expand, creating persistent tension between economic growth and environmental responsibility (Schiaroli et al., 2024).

These challenges are evident in emerging economies such as Indonesia. Rapid urbanization, digital commerce expansion, and rising disposable income have driven significant growth in fashion consumption, while environmental pressures have intensified. Textile waste in Indonesia is estimated at approximately 2.3 million tons annually, underscoring the environmental consequences of expanding consumption and positioning Indonesia as a relevant context for examining sustainable fashion behavior (Schiaroli et al., 2024).

In response, sustainable fashion has emerged as an alternative approach, emphasizing environmentally responsible materials, ethical production, and more conscious consumption patterns (Henninger et al., 2016). Although sustainability discourse has gained visibility and consumer interest has increased, sustainable fashion products remain a niche choice. Fast fashion continues to dominate because of its affordability and accessibility, indicating that heightened awareness does not consistently translate into sustainable purchasing behavior (Rausch & Kopplin, 2021).

This gap highlights the importance of understanding the psychological factors that drive sustainable consumption. Environmental concern, defined as individuals' awareness of environmental problems and their motivation to reduce ecological harm through personal choices, has consistently been identified as a key antecedent of pro-environmental behavior (Lee, 2008; Yadav et al., 2024). Consumers with higher levels of environmental concern tend to evaluate products based on both functional and environmental considerations, increasing their intention to purchase sustainable products, although this relationship may vary across contexts (Dangelico et al., 2022; Pandey & Yadav, 2023).

To explain how environmental awareness translates into behavioral intention, this study adopts the Stimulus-Organism-Response (S-O-R) framework (Mehrabian & Russell, 1974). Within this framework, environmental concerns function as psychological stimuli that activate internal cognitive and affective states, which subsequently shape behavioral responses in the form of purchase intentions. While prior studies have applied the S-O-R framework to sustainable consumer behavior, its application within the sustainable fashion context, particularly in emerging markets, remains limited (Jaiswal & Kant, 2018; Wang et al., 2023).

Drawing on theoretical reasoning and empirical support, the following hypothesis is proposed:
H1: Environmental concern positively and significantly influences consumers' purchase intentions toward sustainable fashion products.

Guided by the theoretical framework and stated hypotheses, the conceptual model of this study is presented in Figure 1.

Stimulus (S)	Organism (O)	Response (R)
Enviromental Concern	Emotional & Cognitive Activation	Purchase Intention
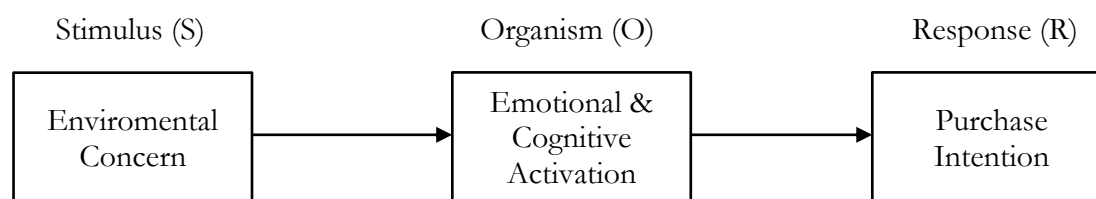
Figure 1. Conceptual Framework

Source: Processed from primary data (2025)

1.2. Research GAP and Contribution

Although sustainable fashion has attracted growing scholarly attention, several gaps still remain. First, most empirical studies examining the effect of environmental concern on sustainable purchase intention are concentrated in developed countries (Rausch and Kopplin, 2021). This creates a contextual gap, as consumer behavior in emerging markets such as Indonesia may differ because of variations in income levels, consumption priorities, and environmental awareness. Consequently, empirical evidence on whether environmental concerns effectively translate into sustainable fashion purchase intentions in the Indonesian context remains limited (Dangelico et al., 2022).

Second, from a theoretical perspective, although environmental concern is widely recognized as a determinant of pro-environmental behavior (Lee, 2008; Yadav et al., 2024), its application within the Stimulus-Organism-Response (S-O-R) framework in sustainable fashion research remains underexplored. Prior applications of the S-O-R model have predominantly focused on general green consumption or service settings, leaving a limited understanding of how environmental concern functions as a psychological stimulus in sustainable fashion decision-making (Jaiswal & Kant, 2018; Wang et al., 2023).

Third, existing empirical findings on the relationship between environmental concerns and purchase intentions are inconsistent. While some studies report a positive effect (Bhatia & Jain, 2023), others suggest that environmental concerns alone may be insufficient to influence consumer behavior in markets dominated by fast fashion practices (Schiaroli et al., 2024). This inconsistency highlights the need for further empirical validation in diverse socioeconomic contexts.

To address these gaps, this study provides empirical evidence from Indonesia, an underrepresented emerging market, and extends the application of the S-O-R framework to sustainable fashion consumption. By positioning environmental concern as a key psychological stimulus, this study clarifies the boundary conditions under which environmental awareness can be translated into sustainable fashion purchase intention, thereby strengthening both theoretical understanding and practical insights into sustainable consumption behavior in emerging economies.

2. RESEARCH METHOD

2.1. Research Design

This study employs a quantitative, cross-sectional approach to investigate the relationship between environmental concern and purchase intention through the S-O-R framework. The model was tested using Partial Least Squares Structural Equation Modelling (PLS-SEM), an appropriate technique for predictive and theory-driven research with latent variables (Hair et al., 2021; Henseler et al., 2016). The approach aligns with contemporary sustainability and consumer behaviour studies that employ PLS-SEM to analyse causal relationships and psychological mechanisms (Yadav et al., 2024)

2.2. Sampling and Respondents

Data were collected from Indonesian consumers familiar with sustainable or eco-friendly fashion using an online self-administered questionnaire. The unit of analysis in this study was an individual consumer. The target population comprised Indonesian social media users familiar with sustainability-related fashion products and content. A non-probability purposive sampling method was employed to

ensure that respondents possessed sufficient awareness of sustainability issues, consistent with established behavioral research practices in emerging markets (Patel et al., 2020).

To enhance data relevance and validity, respondents were required to meet the following inclusion criteria: (1) Indonesian citizens aged 18 years or older, (2) active users of social media platforms, and (3) familiarity with sustainable or eco-friendly fashion products. Responses that were incomplete, inconsistent, or failed screening checks were excluded from the final dataset.

A total of 161 valid responses were retained after data screening, exceeding the minimum sample size threshold based on the ten-times rule for PLS-SEM sample adequacy (Hair et al., 2021). The demographic profile of the respondents indicated a relatively balanced gender distribution and a predominance of millennial participants, aligning with prior evidence that this cohort represents one of the most sustainability-oriented segments in fashion consumption (Schiaroli et al., 2024).

2.3. Measurement Instrument

The measurement instrument consisted of two constructs: Environmental Concern (EC) and Purchase Intention (PI), both reflective in nature. Each construct was measured using three indicators derived from measurement scales validated in prior research. The items were rephrased to fit the sustainable fashion context in Indonesia and further refined through expert evaluation to enhance conceptual clarity. See Table 1

Table 1. Measurement Instrument and Construct Indicators

Construct	Indicator	Source
Environmental Concern (EC)	EC1. I am conscious of the environmental footprint created by fashion consumption.	(Dangelico et al., 2022; Rasheed et al., 2024)
	EC2. I deliberately support fashion companies that engage in environmentally responsible production.	
	EC3. I believe that my personal fashion choices can help sustain ecological balance.	
Purchase Intention (PI)	PI1. I intend to prioritize sustainable fashion when making future purchases.	(Wijaya & Paramita, 2021)
	PI2. I would rather buy eco-conscious fashion products than conventional ones.	
	PI3. I am confident about turning my intention to buy sustainable fashion into actual behavior soon.	

Source: Processed from primary data (2025)

All measurement items were assessed using a five-point Likert scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The scale anchors were consistent across constructs to maintain response comparability (Hair et al., 2021). The instrument underwent a pre-test with ten respondents to confirm item clarity and cultural appropriateness before full data collection.

Authors must include the following standardized declarations in the manuscript prior to submission. Each section must be filled accurately and consistently.

2.4. Data Collection Procedure and Timeline

Data were collected in an online research setting using a structured questionnaire administered through Google Forms. The survey was distributed via social media platforms between March and April 2025 and remained open for approximately four weeks. This approach allowed respondents to complete the questionnaire voluntarily and anonymously at their convenience.

2.5. Data Analysis and Ethical Procedures

Data were analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS version 4.0, following the two-stage procedure recommended by Hair et al. (2021). In the initial stage, the measurement model was evaluated to confirm indicator reliability, internal consistency, and construct validity. Subsequently, the structural model was examined to test the hypothesized relationship between environmental concern and purchase intention. Bootstrapping with 5,000 resamples was conducted to assess the significance and robustness of the path coefficients. The model's adequacy was evaluated through several criteria: Cronbach's alpha (α) > 0.70, Composite Reliability (CR) > 0.80, Average Variance Extracted (AVE) > 0.50, and Standardized Root Mean Square Residual (SRMR) < 0.08 (Henseler et al., 2016).

All participants were informed of the study's objectives, guaranteed anonymity, and took part on a voluntary basis. Informed consent was obtained from all respondents prior to data collection. The study adhered to internationally recognized ethical research standards, and the research protocol received approval from an institutional ethics committee in line with the Declaration of Helsinki and established academic guidelines for research involving human participants.

To minimize potential sources of bias, several procedural remedies were implemented. Respondent anonymity and confidentiality were emphasized to reduce evaluation apprehension and social desirability bias. Participants were informed that there were no right or wrong answers, encouraging honest responses. In addition, a pre-test was conducted to ensure item clarity and reduce ambiguity, while measurement items were structured to conceptually separate predictor and outcome constructs. These procedures align with recommended practices for mitigating common method bias in survey-based research (Podsakoff et al., 2012).

3. RESULT AND DISCUSSION

3.1. Measurement Model

Construct reliability and validity were examined prior to hypothesis testing the hypothesized relationship. Cronbach's alpha and composite reliability values exceeded 0.80, while the average variance extracted (AVE) values were above 0.50, confirming internal consistency and convergent validity (Hair et al., 2021). Discriminant validity was also established, as the HTMT ratio between environmental concern and purchase intention was below 0.90 (Henseler et al., 2015). See Table 2

Table 2. Construct Reliability and Validity

Construct	Cronbach's α	CR	AVE
Environmental Concern	0.87	0.91	0.66
Purchase Intention	0.81	0.86	0.56

Source: Processed from primary data (2025)

All indicator loadings were significant ($p < 0.001$) and exceeded 0.70, indicating satisfactory indicator reliability. These results confirm that the instrument effectively captured both constructs' underlying dimensions related to sustainability attitudes and behavioral intention.

3.2. Structural Model

The structural analysis demonstrated that environmental concern exerts a strong and positive influence on purchase intention ($\beta = 0.738$; $t = 18.756$; $p < 0.001$). The model explained 54.5% ($R^2 = 0.545$) of the variance in purchase intention, indicating substantial explanatory power within a variance-based structural model (Hair et al., 2021). The effect size ($f^2 = 1.196$) further confirms that environmental concern has a large impact on purchase intention, underscoring its central role in shaping consumers' sustainable fashion choices (Table 3).

Table 3. Structural Model Results

Hypothesis	Path	β	t-value	p-value	f²	R²
H1	EC → PI	0.738	18.756	0.000	1.196	0.545

Source: Processed from primary data (2025)

These findings suggest that individuals who are environmentally conscious tend to translate their awareness into stronger purchasing intentions toward sustainable fashion. Within the S-O-R framework, environmental concern operates as a stimulus that activates internal cognitive and affective evaluations (organism), which in turn drive behavioral outcomes (response) such as the intention to buy eco-friendly products.

This strong relationship highlights how moral norms and ecological awareness act as psychological mechanisms bridging environmental cognition and consumer action. The large effect size also reflects the model's parsimony, as both constructs are conceptually proximal linking consumers' environmental values directly to their purchasing behavior.

Overall, the model demonstrates excellent explanatory power and statistical soundness. Environmental concern significantly predicts sustainable purchase intention, reinforcing prior findings by (Yadav et al., 2024). This evidence strengthens the argument that sustainability-oriented mindsets are key drivers of pro-environmental consumer behavior within the fashion sector.

4. CONCLUSION

This research examined the impact of environmental concern on purchase intention toward sustainable fashion through the Stimulus-Organism-Response (S-O-R) framework. Results show a strong positive influence, confirming that environmentally conscious consumers tend to translate ecological awareness into sustainable purchasing intentions.

Theoretically, the study strengthens the S-O-R framework by validating environmental concern as a key stimulus that activates cognitive–affective evaluations leading to pro-environmental behavior. Environmental concern thus represents not only an attitude but a psychological driver that connects moral awareness with behavioral intention.

Practically, fashion marketers should communicate authentic sustainability commitments and promote transparency in production to enhance consumer trust and moral identification. Broader educational initiatives can also nurture lasting pro-environmental behavior.

Although based on self-reported data within a single context, the model offers high predictive validity. Future research could test additional mediators such as green trust or perceived value across diverse cultural settings. Overall, environmental concern stands as a pivotal psychological force linking environmental cognition to sustainable fashion behavior.

Ethical Approval

This research was carried out in compliance with internationally recognized ethical standards, including the principles outlined in the Declaration of Helsinki. Ethical clearance was granted through the institutional review process at the LSPR Institute of Communication and Business, where the research protocol was evaluated to ensure adherence to ethical guidelines for studies involving human participants. All ethical principles concerning anonymity, confidentiality, and voluntary participation were fully respected throughout the research process.

Informed Consent Statement

Prior to data collection, all respondents were informed about the study's aims and procedures. Electronic informed consent was obtained before participants completed the questionnaire. Participation was entirely

voluntary, and respondents were assured that their identities would remain anonymous and that the collected data would be used exclusively for academic research purposes.

Authors' Contributions

FR was responsible for the conceptualization, methodology, validation, formal analysis, data curation, resource provision, original draft preparation, and manuscript review and editing. The author has reviewed and approved the final version of the manuscript.

Disclosure Statement

The author declares that there are no conflicts of interest related to the research, authorship, or publication of this study.

Data Availability Statement

The dataset supporting the findings of this study can be obtained from the corresponding author upon reasonable request. The data are not publicly accessible due to confidentiality and privacy considerations concerning the respondents.

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Notes on Contributors

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Fatullah Razi is a researcher affiliated with the Faculty of Global Business Communication Management at the LSPR Institute of Communication and Business, Jakarta, Indonesia. His academic background is in communication science, with research interests focusing on sustainability communication, consumer behavior, digital influence, and environmental psychology. His recent work applies quantitative approaches such as PLS-SEM to examine sustainable fashion consumption and pro-environmental behavioral intention in emerging markets. He is particularly interested in integrating communication theory with sustainability-driven marketing and social change.

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