

Building Trust or Fueling Uncertainty: The Effects of Information Clarity and Ambiguity on Sustainable Fashion Decisions

Shengjie Shui^{1,2}, Menghan Wang¹, Miaomiao Sheng¹*

¹School of Fashion, Henan University of Engineering, Zhengzhou, China

²Zhongyuan Clothing Culture and Product Innovation Design Research Centre, Henan University of Engineering, Zhengzhou, China

*Corresponding Author. Email: ShengJ_Shui@163.com

Abstract. Amidst escalating environmental concerns within the fashion industry, a prevalent "attitude-behavior gap" exists among consumers, where pro-environmental attitudes often fail to translate into actual purchasing behavior. This discrepancy is closely linked to ambiguous and often misleading communication strategies employed by brands. To investigate this phenomenon, the present study draws upon the Stimulus-Organism-Response (S-O-R) framework to develop a theoretical model that elucidates the influence of brand information presentation on consumer purchase intention. The empirical analysis reveals that information clarity significantly enhances perceived credibility, which in turn positively influences purchase intention. Conversely, information ambiguity heightens perceived uncertainty, subsequently suppressing purchase intention. These findings suggest that establishing consumer trust through clear and transparent communication is a critical mechanism for bridging the consumer attitude-behavior gap and effectively fostering sustainable consumption.

Keywords: Sustainable Fashion, Information Clarity, Information Ambiguity, Purchase Intention

1. Introduction

As an integral component of the global economy, the fashion industry is characterized by an increasingly conspicuous adverse environmental impact. The industry is responsible for approximately 10% of global carbon emissions and 20% of wastewater, making it one of the world's most polluting sectors. Propelled by a general rise in environmental awareness, particularly among younger consumer cohorts such as Generations Y and Z, the demand for sustainable fashion is steadily growing [1]. Nevertheless, a significant "attitude-behavior gap" persists, wherein consumers' pro-environmental attitudes do not consistently translate into actual purchasing behavior. A substantial body of literature indicates that although consumers generally hold positive sustainability beliefs, these are not effectively converted into consistent purchasing actions [2].

To cater to these pro-environmental consumer preferences, many firms have adopted green marketing strategies. However, this has given rise to the pervasive issue of "greenwashing" [3]. This practice involves the use of ambiguous or even fallacious claims to curate a pro-environmental corporate image, which is not only deceptive but also exerts a negative influence on the market. It can induce consumer confusion, heighten their perceived risk, and ultimately erode trust in the brand [4].

In summary, while existing research has identified numerous factors influencing sustainable consumption, there remains a lack of in-depth investigation into how the *presentation format* of brand information itself systematically affects consumers' internal psychological decision-making processes. To address this research gap, the present study will leverage the Stimulus-Organism-Response (S-O-R) theoretical framework to construct a model. This model aims to explore how the clarity and ambiguity of sustainable information (the Stimulus, S) respectively influence purchase intention (the Response, R) by affecting consumers' perceived credibility and perceived uncertainty (the Organism, O). Through empirical analysis, this research aspires to provide a theoretical foundation and practical guidance for fashion brands on how to bridge the "attitude-behavior gap" through effective information communication strategies.

2. Literature review and research hypotheses

2.1. The S-O-R theory and sustainable consumption

The Stimulus-Organism-Response (S-O-R) model provides a foundational theoretical framework for explaining consumer behavior. The model posits that external environmental stimuli (S) are processed by an individual's internal cognitive and affective systems—the organism (O)—which ultimately elicits a behavioral response (R). This framework has been widely applied in consumption-related fields, including fashion, to analyze the drivers of consumer behavior.

In the context of sustainable consumption research, the S-O-R model systematically elucidates the formation pathway of consumers' green behaviors. First, the Stimulus (S) encompasses all external factors capable of triggering a consumer's sustainability awareness. These factors are wide-ranging, including not only direct marketing elements such as sustainable packaging, product attributes, and brand information [5] but also behaviors like engaging with pro-environmental activities on social media [6]. Subsequently, the Organism (O), serving as the critical bridge connecting stimuli and behavior, represents the internal psychological states that arise after an individual receives external information. Research has demonstrated that external sustainability knowledge influences consumption intentions through environmental affect [7]. Concurrently, these stimuli can foster the formation of deeper psychological states, building upon an individual's pre-existing environmental awareness and sense of responsibility to establish an emotional attachment that translates ideals into tangible consumption behavior [8]. Finally, following this internal processing by the organism, consumers generate a series of Responses (R), which manifest as their ultimate sustainable consumption behaviors or intentions.

In summary, although the S-O-R model clearly defines the complete pathway wherein external stimuli influence internal states to trigger behavior, existing research has largely overlooked the critical distinction in the presentation format of informational stimuli. Specifically, the core mechanism that directs consumers down divergent psychological paths—how clear information builds trust, while ambiguous information exacerbates uncertainty—has yet to be fully elucidated. Therefore, this study will focus on information clarity and ambiguity as two opposing forms of stimuli. It aims to reveal the mechanisms through which they influence consumers' internal perceptions and final decisions, thereby providing a novel theoretical perspective for bridging the "attitude-behavior gap" in sustainable consumption.

2.2. The influence of information in sustainable consumption

Within the domain of sustainable consumption, consumers commonly face an "attitude-behavior gap," wherein positive environmental attitudes are seldom translated into actual purchasing behaviors [9]. Although numerous factors contribute to this gap, a growing body of research indicates that information barriers are a core reason why consumers hesitate, withdraw, or ultimately abandon their original intentions at the point of decision-making. Consumers often struggle during the stages of information acquisition, processing, and evaluation when attempting to practice sustainable consumption, constituting a critical chasm that separates attitude from behavior [10].

This chasm is manifested at two extremes of the information environment. On one hand, the pervasive information ambiguity in the marketplace creates a formidable barrier to consumption. Corporate communications are replete with ill-defined marketing buzzwords such as "green," "eco-friendly," and "sustainable," while a lack of uniform and credible certification standards results in severe information asymmetry [11]. Such ambiguous, contradictory, or even overwhelming information significantly increases consumers' cognitive load, making it difficult for them to discern the authenticity of product claims. In such contexts, consumers naturally develop perceived uncertainty, which attenuates their purchase motivation and causes them to revert to simpler, more tangible decision-making heuristics, such as price or brand familiarity, thereby interrupting the conversion pathway from attitude to behavior.

On the other hand, information clarity is pivotal to bridging this chasm. When sustainable information is presented in a manner that is transparent, verifiable, and easily comprehensible, it can effectively reduce consumers' cognitive load and decision-making risk. This serves as the cornerstone for establishing consumers' perceived credibility.

2.3. Research model

Based on the preceding literature review and theoretical foundation, this study adopts the classic Stimulus-Organism-Response (S-O-R) framework to construct a theoretical model aimed at investigating the influence of sustainable information on consumer purchase intention. The model focuses on the critical link of information communication, positing two opposing presentation formats of sustainable information—"information clarity" and "information ambiguity"—as the core external stimuli (S). The model further proposes that these two forms of stimuli will respectively influence consumers' internal psychological states, namely "perceived credibility" and "perceived uncertainty" (O), which in turn ultimately exert significant positive or negative effects on consumer "purchase intention" (R).

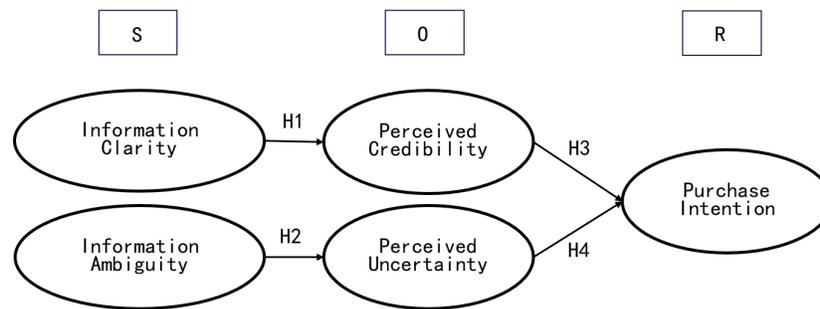


Figure 1. Research model

2.4. Research hypotheses

2.4.1. The relationship between external stimuli (S) and internal states (O)

Clear and unambiguous information serves as the foundation for building trust. When a brand communicates its sustainability practices in a transparent and comprehensible manner, consumers can reduce the cognitive cost of information processing and are more inclined to perceive the brand as honest and reliable. Conversely, ambiguous and generic claims increase consumers' cognitive load, preventing them from forming a definitive judgment and thereby engendering a sense of uncertainty. Therefore, the following hypotheses are proposed:

H1: Brand information clarity (S+) has a significant positive effect on consumers' perceived credibility (O+).

H2: Brand information ambiguity (S-) has a significant positive effect on consumers' perceived uncertainty (O-).

2.4.2. The relationship between internal states (O) and purchase intention (R)

The consumer's internal psychological state is the critical link connecting external information with the final decision. Perceived credibility, as a positive psychological evaluation, signifies that the consumer has formed favorable beliefs about the brand and its products, which directly translates into a propensity to purchase. Conversely, perceived uncertainty, as a negative psychological state, triggers risk-aversion motives, thereby inhibiting purchase behavior. Therefore, the following hypotheses are proposed:

H3: Consumers' perceived credibility (O+) has a significant positive effect on purchase intention (R).

H4: Consumers' perceived uncertainty (O-) has a significant negative effect on purchase intention (R).

3. Methodology

3.1. Questionnaire design

This study employed a questionnaire survey method to collect data. Drawing upon established and validated scales from prior literature, the questionnaire was adapted and developed to suit the specific context of the present study. The main body of the instrument covers all the core constructs of the research model, including the independent variables (brand information clarity, brand information ambiguity), mediating variables (perceived credibility, perceived uncertainty), and the dependent variable (purchase intention). All measurement items were rated on a five-point Likert scale (ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree"). Additionally, the final section of the questionnaire collected respondents' demographic information, including gender, age, educational attainment, and monthly income.

3.2. Data collection and analytical methods

The data collection for this study was conducted from August 3, 2025, to August 12, 2025. The survey was administered primarily via an online questionnaire targeting consumers in Henan Province. During this period, a total of 329 questionnaires were distributed and collected. Following a data screening process, 6 invalid questionnaires were excluded due to excessively short completion times, obvious response patterns, or a high number of missing values. This process yielded a final valid sample of 323 responses, representing an effective response rate of 98.2%.

The valid data will be processed and analyzed using the statistical software SPSS 27.0. The analysis will proceed as follows: first, reliability and validity tests will be conducted to ensure the quality of the measurement instrument. Second, a correlation

analysis will be performed to preliminarily explore the relationships among the variables. Finally, linear regression analysis will be employed to test the theoretical model and the hypotheses proposed in this study.

4. Empirical analysis

4.1. Demographic profile of respondents

To profile the characteristics of the respondents, a frequency analysis was conducted on the 323 valid questionnaires. In terms of gender composition, female respondents constituted the majority, with 191 participants accounting for 59.13% of the sample. Regarding age distribution, the 30-40 age bracket was the primary group in this survey, forming the largest segment of the sample (N=143, 44.27%). In terms of educational background, the sample was, on the whole, highly educated; respondents holding a bachelor's degree (N=135, 41.79%) and those with a master's degree or higher (N=105, 32.51%) collectively comprised over 70% of the sample. With respect to income level, over 60% of the respondents reported a monthly income exceeding 5000 RMB (N=198, 61.30%).

4.2. Reliability and validity tests

To ensure the reliability and validity of the measurement instrument, reliability and validity analyses were performed on the questionnaire scales prior to hypothesis testing.

4.2.1. Reliability test

This study employed the Cronbach's alpha (α) coefficient to assess the internal consistency reliability of the scales. As shown in Table 1, the Cronbach's α coefficients for all variables ranged from 0.732 to 0.894. All these values exceeded the commonly accepted academic threshold of 0.60, indicating that the scales utilized in this study possess good reliability and that the measurement results are stable and dependable.

Table 1. Reliability results for each factor

Element	Cronbach's α
Information Clarity	0.851
Information Ambiguity	0.732
Perceived Credibility	0.758
Perceived Uncertainty	0.875
Purchase Intention	0.894

4.2.2. Validity test

This study employed the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity to evaluate the construct validity of the scales. As presented in Table 2, the KMO measure was 0.918, exceeding the recommended threshold of 0.60. This indicates that the data have adequate common variance and are suitable for factor analysis. Furthermore, the result of Bartlett's Test of Sphericity was also significant, thus rejecting the null hypothesis that the variables are uncorrelated and further confirming the suitability of the data for factor analysis. Taken together, these results demonstrate that the questionnaire utilized in this study possesses good construct validity.

Table 2. KMO test and Bartlett's test

	Kaiser-Meyer-Olkin	0.918
Bartlett Test	Approx. Chi-Square	3300.834
	df	105
	P value	0.000***

Note *** $p < 0.001$.

4.3. Correlation analysis

This study employed Pearson correlation analysis to examine the relationships among the variables, with the results presented in Table 3. Specifically, information clarity was significantly and positively correlated with perceived credibility ($r = 0.403$, $p < 0.001$); information ambiguity was significantly and positively correlated with perceived uncertainty ($r = 0.580$, $p < 0.001$); and perceived credibility was significantly and positively correlated with purchase intention ($r = 0.751$, $p < 0.001$). Meanwhile, perceived uncertainty was also found to be significantly and positively correlated with purchase intention ($r = 0.389$, $p < 0.001$). The true nature of the relationship between these latter two variables requires a more precise examination through subsequent multiple regression analysis. The presence of statistically significant correlations among all core variables indicates that the model possesses a sound internal structure and is suitable for subsequent hypothesis testing.

Table 3. Correlation analysis

	Information Clarity	Information Ambiguity	Perceived Credibility	Perceived Uncertainty	Purchase Intention
Information Clarity	1(0.000***)				
Information Ambiguity	0.763(0.000***)	1(0.000***)			
Perceived Credibility	0.403(0.000***)	0.499(0.000***)	1(0.000***)		
Perceived Uncertainty	0.363(0.000***)	0.58(0.000***)	0.619(0.000***)	1(0.000***)	
Purchase Intention	0.424(0.000***)	0.448(0.000***)	0.751(0.000***)	0.389(0.000***)	1(0.000***)

Note *** $p < 0.001$.

4.4. Hypothesis testing

To test the effect of brand information clarity on consumers' perceived credibility (H1), a linear regression analysis was conducted. The results, presented in Table 4, show that the overall model was statistically significant ($F = 62.373$, $p < 0.001$). The analysis revealed that information clarity had a significant positive effect on perceived credibility ($\beta = 0.403$, $t = 7.898$, $p < 0.001$). This finding indicates that the clearer the sustainability information provided by a brand, the higher the consumer's level of trust in it. Furthermore, information clarity explained 16.3% of the variance in perceived credibility (Adjusted $R^2 = 0.160$). Therefore, hypothesis H1 was supported by the data.

Table 4. Verification of hypothesis 1

	Unstandardized Coefficients		Standardized Coefficients	t	P	VI F	R ²	Adjusted R ²	F
	B	Std. Error	Beta						
Constant	2.179	0.214	-	10.186	0.000** *	-	0.16	0.16	F=62.373 P=0.000***
Information Clarity	0.425	0.054	0.403	7.898	0.000** *	1	0.16	0.16	

Dependent: Perceived Credibility

Note *** $p < 0.001$.

To examine the influence of brand information ambiguity on consumers' perceived uncertainty (H2), a linear regression analysis was employed. As detailed in Table 5, the overall model was highly significant ($F = 163.073$, $p < 0.001$). The analysis indicated that information ambiguity had a significant positive influence on perceived uncertainty ($\beta = 0.580$, $t = 12.77$, $p < 0.001$). This result confirms that the more ambiguous and generic a brand's information is, the stronger the consumer's sense of uncertainty becomes. The variable of information ambiguity accounted for 33.7% of the variance in perceived uncertainty (Adjusted $R^2 = 0.335$). Thus, hypothesis H2 received strong support from the data.

Table 5. Verification of hypothesis 2

	Unstandardized Coefficients		Standardized Coefficients	t	P	VI F	R ²	Adjusted R ²	F
	B	Std. Error	B						
Constant	1.705	0.169	-	10.09	0.000**	-	0.33	0.335	F=163.073 P=0.000***
Information Ambiguity	0.54	0.042	0.58	12.77	0.000**	1	7		

Dependent: Perceived Uncertainty

Note *** p < 0.001.

To concurrently examine the effects of consumers' perceived credibility (H3) and perceived uncertainty (H4) on their final purchase intention, a multiple linear regression analysis was conducted. As shown in Table 6, the overall model demonstrated good explanatory power (F = 215.438, p < 0.001), with the two independent variables collectively explaining 57.4% of the variance in purchase intention (Adjusted R² = 0.571).

Perceived credibility had a highly significant positive effect on purchase intention ($\beta = 0.827$, t = 17.808, p < 0.001). This indicates that consumer trust is a core positive driver of their purchase intention. Thus, hypothesis H3 was supported. Perceived uncertainty had a significant negative effect on purchase intention ($\beta = -0.122$, t = -2.634, p = 0.009). This suggests that consumer doubt inhibits their purchasing behavior. Therefore, hypothesis H4 was also supported.

Table 6. Verification of hypothesis 3

	Unstandardized Coefficients		Standardized Coefficients	t	P	VIF	R ²	Adjusted R ²	F
	B	Std. Error	B						
Constant	0.641	0.18	-	3.551	0.000**	-		0.571	F=215.438 P=0.000***
Perceived Credibility	0.957	0.054	0.827	17.80	0.000**	1.6	0.57		
Perceived Uncertainty	-0.132	0.05	-0.122	-2.63	0.009**	1.6	2		

Dependent: Purchase Intention

Note *** p < 0.001.

5. Conclusion and implications

Based on the Stimulus-Organism-Response (S-O-R) framework, this study investigated the impact of sustainable fashion brands' information presentation on consumer behavior. The empirical analysis, based on survey data, confirmed all research hypotheses. The findings first established that information clarity is foundational to building trust, demonstrating a significant positive effect on perceived credibility. Conversely, information ambiguity serves as a breeding ground for skepticism, showing a significant and positive correlation with perceived uncertainty. In the final stage of consumer decision-making, perceived credibility acts as a core engine driving purchase intention, exhibiting a very strong positive predictive effect. Meanwhile, perceived uncertainty acted as a potent inhibitor, exerting a significant negative influence on purchase intention. Notably, the positive impact of establishing trust far outweighs the negative impact of uncertainty, which highlights the paramount importance of proactively cultivating credibility. Theoretically, these findings offer a novel perspective on the "attitude-behavior gap" in sustainable consumption by delineating two opposing psychological pathways within the S-O-R model. The research underscores that the method of information presentation is a key antecedent that shapes consumers' internal states and leads to divergent behavioral outcomes.

Drawing from these conclusions, several practical implications are proposed for sustainable fashion brands. Brands should abandon ambiguous marketing and instead embrace radical transparency by providing specific, quantifiable data to build trust. Marketing communications should be centered on establishing credibility—achievable through verifiable third-party certifications and transparent reporting—as this is the most potent driver of purchase. Finally, to reduce consumer decision-

making costs and uncertainty, brands should streamline information access through clear labeling and digital tools, such as QR codes, thereby paving the way for purchase.

Funding

The authors disclosed receipt of the following support for the research, authorship, and publication of this article: Henan Province Philosophy and Social Science Planning Project (2023CYS044); Doctoral Cultivation Fund of Henan University of Engineering (D2024080); Research Cultivation Fund Project of the School of Fashion at Henan University of Engineering (FZPY202410);

References

- [1] Abdelmeguid A, Afy-Shararah M and Saloni K (2025) Exploring factors shaping consumer behaviour towards circular fashion: a focus on Generations Y and Z. *Front. Sustain.* 6: 1630453. doi: 10.3389/frsus.2025.1630453.
- [2] Louisa von der Assen, Luca Schellhaas; Sustainable fashion – modeling consumer perceptions and the relationship between attitudes and buying behaviors in Germany. *Journal of Responsible Production and Consumption* 15 December 2025; 2 (1): 400–423. <https://doi.org/10.1108/JRPC-08-2024-0046>.
- [3] Badhwar, A., Islam, S., Tan, C. S. L., Panwar, T., Wigley, S., & Nayak, R. (2024). Unraveling Green Marketing and Greenwashing: A Systematic Review in the Context of the Fashion and Textiles Industry. *Sustainability*, 16(7), 2738. <https://doi.org/10.3390/su16072738>.
- [4] Adamkiewicz, J., Kočańska, E., Adamkiewicz, I., & Łukasik, R. M. (2022). Greenwashing and sustainable fashion industry. *Current Opinion in Green and Sustainable Chemistry*, 38, 100710. <https://doi.org/10.1016/j.cogsc.2022.100710>.
- [5] Kıymahoğlu, A., Yetkiän Özbük, R. M., Aydın Ünal, D., Dirlik, O., & Akar, N. (2024). Unpacking Sustainable Packaging Through the Stimulus-Organism-Response Model: A Systematic Literature Review. *SAGE Open*, 14(3). <https://doi.org/10.1177/21582440241302320>.
- [6] Li, F. (2024). Effects of consumers' engagement in pro-environment activities on social media on green consumption behaviour. *Asia Pacific Journal of Marketing and Logistics*, 36(11), 32-50. <https://doi.org/10.1108/apjml-09-2023-0862>.
- [7] Khan, A. N., Alotaibi, H. S., & Raza, Z. A. (2024). Understanding the drivers of sustainable food consumption of Chinese university students: a moderated mediation model. *International Journal of Sustainability in Higher Education*, 25(9), 1-19. <https://doi.org/10.1108/ijshc-06-2023-0225>.
- [8] Anwar, M. S., Abbas, M., Osman, N. H. B., Tauheed, R., Razalli, M. R. B., Abdul Rahim, M. K. I., Kafi, M. A., & Allumi, N. A. (2024). Examining the mediating role of environmental attachment: Exploring the role of green environmental awareness and sense of responsibility in promoting sustainable product consumption among Pakistani consumers. *Journal of Infrastructure, Policy and Development*, 8(8), 4797. <https://doi.org/10.24294/jipd.v8i8.4797>
- [9] Liang, J. F., & Cheng, W. Y. (2020). Research status and dilemma analysis of sustainable clothing consumption behavior. *Journal of Silk*, 57(6), 18–25. <https://doi.org/10.3969/j.issn.1001-7003.2020.06.004>.
- [10] Zhan, L. Y., Ju, M. T., & Guan, Y. (2013). Status and Prospect of Sustainable Consumption in China: Based on Sustainable Consumption and Supply Survey in Tianjin. *Ecological Economy*, (1), 41–43, 46. <https://doi.org/10.3969/j.issn.1671-4407.2013.01.008>.
- [11] Zhang, F., Zhang, H. Q., & Wang, Y. (2022). Design of Sustainable Consumption Behavior for New Retail Based on Stage of Change Theory. *Packaging Engineering*, 43(14), 172–181. <https://doi.org/10.19554/j.cnki.1001-3563.2022.14.020>.