INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 16, Issue 11, (2026) E-ISSN: 2222-6990

From Visual Elements to Emotions and Trust: The Impact of Green Instagram Advertisements on Purchase Intention

Ling Ling Tan*

Tunku Abdul Rahman University of Management and Technology, Jalan Genting Kelang, Kuala Lumpur, Malaysia

*Corresponding Author Email: tanll@tarc.edu.my

DOI Link: http://dx.doi.org/10.6007/IJARBSS/v16-i11/29480

Published Date: 22 November 2026

Abstract

Purpose: This study examines the influence of visual elements of green advertisements on young adults' emotional value, green trust, and subsequently purchase intention. It focuses on four visual elements commonly found in Instagram advertisements: colour, design, typography, and visual effects. **Design/methodology/approach:** This study adopted a quantitative research design using an online survey distributed to young adults aged 18–25. Purposive sampling was employed to recruit participants who actively use Instagram, as this demographic frequently consumes visual digital content. A total of 163 valid responses were collected. **Findings:** Colour did not influence both the emotional value and green trust. Both design and typography were positively associated with emotional value and green trust. Effect did not influence emotional value and was only positively associated with green trust. In addition, emotional value and green trust were positively associated with purchase intention. **Practical implications:** Consumers interpret and evaluate messages in green Instagram advertisements based on visual elements, shaping their emotions, trust, and purchase decisions toward green products. This study highlights the practical importance of visual design and typography in effectively communicating sustainability messages. **Originality/value:** While prior research has examined green advertising and consumer attitudes, little attention has been given to how specific visual elements shape young adults' emotions and trust within Instagram. As image-based communication becomes central to digital marketing, its impact on consumer perception remains a critical concern for both theory and practice, underscoring the need to examine how visual strategies in green advertising operate in social media contexts, particularly Instagram.

Keywords: Colour, Design, Typography, Emotional Value, Green Trust

Introduction

The primary goal of advertising is to attract viewers' attention and transform passive audiences into active consumers. Advertisements are created to persuade consumers to

purchase the promoted products. Social media has become an essential part of daily leisure and communication, significantly transforming the way brands and consumers engage with one another. Social media environments provide extensive opportunities for interaction and content sharing, fostering stronger relational connections between consumers and brands while reinforcing consumers' active role in the co-creation of brand meaning (Barreda et al., 2020; Haddad, 2025). Among these platforms, Instagram (IG) plays a particularly important role because brand communication is largely visual and rich in cues (Hsu, Chen and Huang, 2026). As Instagram's scale and commercial importance continue to grow, brands increasingly compete not only through the content they post, but also through how their overall presence is perceived as a cohesive and continuous experience over time. In general, the appeal of visual and textual elements to consumers is influenced by several factors, including display position and individual differences (Choi et al., 2019; Jin and Villegas, 2007; Yuhao, 2023).

Consumers increasingly rely on visual cues to interpret and assess content in digital environments saturated with information (Pieters and Wedel, 2004). Platforms like Instagram have accelerated the move toward image-centric marketing, positioning visuals as key carriers of meaning that communicate events, brand personality, and values (Perez-Vega et al., 2021; Phillips and McQuarrie, 2004). On Instagram, consumers rarely form perceptions of a brand based on a single post alone. Instead, they interpret a brand's identity, quality, and values through visually coherent environments—recurring patterns of images, colours, text, and creative direction that guide attention and create stable interpretations across the feed, grid, and repeated exposures (Hsu et al., 2026).

Visual elements on social media develop a complex environment in which consumers rapidly interpret content. Design features such as typography, colours, imagery, and other visual cues can communicate environmental meanings and sustainability-related messages, potentially enhancing consumers' perceptions of a brand's environmental credibility. With over 80% of users following at least one brand and more than 70% of firms maintaining active Instagram presences (Statista, 2025), visual expression has become a key mechanism for shaping consumer perceptions and engagement (Perez-Vega et al., 2021).

When consumers encounter a new green product, they may doubt its actual performance or suspect it of being "greenwashed," which can reduce their perception of its value (Hou and Sarigollu, 2022). Visual elements serve as important communication tools that shape how consumers interpret brand messages and values. When sustainability-related visual cues effectively communicate a brand's environmental commitment, they can strengthen consumers' psychological connection with the brand and enhance positive perceptions of green products. Since consumers' responses to green advertising are shaped by how they interpret and process advertising information, visual elements may play an important role in this process.

Greater understanding is needed of how such visual elements are interpreted. Accordingly, this study aims to examine the relationships between four key visual elements—colour, design, typography, and visual effects—as sustainability cues, and their influence on emotional value and green trust. Furthermore, this study investigates the effects of emotional value and green trust on consumers' purchase intentions.

This research is significant both conceptually and practically. Much of the existing literature treats trust primarily as a cognitive construct—centered on perceptions of credibility and reliability—and often highlights green trust or skepticism as the significant pathway. However, this perspective tends to overlook the affective dimension, particularly in the realm of social media, where judgments are typically rapid and driven by emotions (Hussain and Ehsan, 2026). When individuals encounter visual elements, they process the information both rationally and emotionally, which in turn guides their buying choices. This study incorporates emotional value, emphasising how affective responses enrich the understanding of decision-making in digital environments.

The study is grounded on the stimulus-organism-response (S-O-R) framework, which explains how visual elements (stimuli) influence consumers' emotional states and green trust (organism), subsequently shaping their purchase intention (response). It broadens the scope of the stimulus–organism–response (S–O–R) framework within the context of green Instagram advertising by deepening insights into consumers' affective responses (emotional value and green trust) to the visual elements of Instagram advertisements. For brands promoting environmentally friendly products, emotional value and green trust act as key psychological drivers that shape purchase intentions within this framework.

From a practical standpoint, this study provides guidance for brands on designing genuine, emotionally engaging digital green campaigns that build trust and encourage sustainable purchasing. By concentrating on younger, socially active audiences, it addresses a demographic central to advancing sustainable consumption, ensuring relevance in today's digital marketplace.

Literature Review

Underpinning Theory

This study is based on the stimulus–organism–response (S–O–R) framework developed by Mehrabian and Russell (1974), which describes how visual elements (stimuli) influence consumers' emotional value and green trust (organism), subsequently shaping their purchase intention (response). Sustainability is considered a latent attribute that consumers cannot directly verify, resulting in a perception gap between a product's actual sustainability performance and how sustainable it is perceived to be (Hallez et al., 2024). Consequently, consumers rely on extrinsic cues as signals to assess sustainability. Visual design elements act as external stimuli that affect consumers' cognitive judgments and emotional reactions, which in turn influence behavioural outcomes such as purchase intention.

Visual elements are central to making advertisements engaging and persuasive, as they capture attention and evoke emotional responses. In this context, emotional value reflects the satisfaction and enjoyment consumers derive, while environmental value highlights efforts to reduce pollution and minimise resource waste within the ecosystem (Li et al., 2021; Suphasomboon and Vassanadumrongdee, 2022). Elements such as striking images and energetic layouts can create feelings of excitement and interest, encouraging viewers to engage more deeply with the advertisement and improving its overall impact.

Research Hypotheses

Relationship of Colour and Emotional Value

Colour plays a pivotal role in shaping perception, emotions, and behaviour within digital contexts (Labrecque and Milne, 2012). The careful selection of colours can trigger specific emotions and associations, shaping how consumers perceive and respond to the promoted product or brand. Since colours carry distinct emotional associations that differ across cultures, successful branding depends on palettes that reinforce identity and emotional connection (Schmitt, 2012). It also fosters emotional balance by eliciting stable affective responses and aesthetic comfort (Valdez and Mehrabian, 1994), while enhancing brand recognition through recurring colour cues (Keller, 1993; Henderson et al., 2003). Ultimately, colour simplicity facilitates processing fluency and engagement, strengthening brand identity in visually saturated social media environments (Reber et al., 2004; Hollebeek et al., 2014). Hence, the following hypothesis is developed:

H1: Colour is positively associated with emotional value.

Relationship of Colour and Green Trust

A simplified palette improves perceptual clarity, minimises clutter, and directs attention (Pieters et al., 2010). Colours help establish a trustworthy brand image, influencing consumers' attitudes and increasing their willingness to engage with the advertised product or service Through a smoother and more visually coherent experience, colour simplicity is expected to lessen cognitive effort, enhance evaluative reactions, and ultimately increase consumers' cognitive, emotional, and behavioural engagement with the brand (Hollebeek et al., 2014). The strategic use of colour in advertising can contribute to the development of consumer trust by communicating specific psychological meanings and associations. Hence, the following hypothesis is developed:

H2: Colour is positively associated with green trust.

Relationship of Design and Emotional Value

On visually oriented platforms such as Instagram, images are a primary means through which consumers interpret and construct brand meaning (Djafarova and Bowes, 2021). When visual content is perceived as relevant and consistent with a brand's identity, offering and communicated messages, it enhances clarity, coherence, and consumers' understanding of the information being conveyed (Pieters and Wedel, 2004). By communicating brand values and identity via congruent visual elements (Schmitt, 2012), such content can strengthen consumers' psychological connection with the brand. Thus, when interpretive clarity and emotional alignment are heightened, they are likely to foster stronger cognitive involvement, deeper emotional resonance, and more active behavioural participation (Hollebeek et al., 2014). Hence, the following hypothesis is developed:

H3: Design is positively associated with emotional value.

Relationship of Design and Green Trust

Design cues influence how consumers categorise products and form expectations, thereby affecting their evaluations (Bitner, 1992). Holistic style design is important because it influences consumers at both psychological and behavioural levels (Hsu et al., 2026). Visual

cues embedded within a design can activate consumers' memories, associations, and expectations, thereby enhancing recall and shaping how product-related information is interpreted. Relevant visual cues also attract attention, encourage deeper information processing, and improve memory retention (Pieters et al., 2010).

When new products incorporate design characteristics that are consistent with familiar attributes, they communicate meaningful signals, facilitate consumer interaction, and enhance recall. In the context of green products, design aesthetics may communicate sustainability-related meanings and environmental values. Therefore, the design establishes a direct and immediate semantic link to the intended message. By shaping consumers' perceptions and evaluations of a product's environmental friendliness, the visual element design can positively influence trust. Hence, the following hypothesis is developed:

H4: Design is positively associated with green trust.

Relationship of Typography and Emotional Value

Semantic association theory provides a valuable lens for examining how typographic styles shape consumer perceptions and evaluations of brands (Xu et al., 2026). By embedding meaning into visual form, typography enhances emotional resonance within brand communication. Prior research indicates that incorporating traditional cultural elements into design can significantly affect consumers' perceptions, emotional responses, and behavioural outcomes (Shi and Jiang, 2023). Moreover, brand-related design elements can activate semantic associations that shape brand perceptions (Childers and Jass, 2002). Building on this evidence, typographic choices—such as bold sans-serif fonts that convey modernity and confidence or handwritten styles that evoke warmth and sincerity—carry distinct emotional value. Hence, the following hypothesis is developed:

H5: Typography is positively associated with emotional value.

Relationship of Typography and Green Trust

According to semantic association theory, typography can influence meaning in two distinct ways. First, the inherent attributes of a typeface generate associations that shape how consumers perceive a brand. Second, the meanings linked to a typeface can interact with the content of the accompanying text, shaping overall interpretation (McCarthy and Mothersbaugh, 2002). For instance, handwritten fonts are frequently associated with product environmental friendliness, which can increase consumers' willingness to pay for a product (Tok et al., 2024). Similarly, vintage-style typography tends to evoke thoughts of the past, which may strengthen perceptions of product safety among consumers (Kulczynski and Hook, 2024). In this way, typographic choices operate as powerful semiotic devices that not only convey brand identity but also shape consumer trust. Hence, the following hypothesis is developed:

H6: Typography is positively associated with green trust.

Relationship of Effect and Emotional Value

Visual stimuli can evoke multidimensional mental imagery, enabling better understanding (Vazquez et al., 2023). Advances in immersive technologies, including virtual reality (VR) and

augmented reality (AR), have further strengthened consumers' learning experiences and emotional engagement, particularly within tourism settings (Li et al., 2023; Shen, 2023). These findings suggest that visual effects play an important role in shaping how consumer process and evaluate information across different contexts. By using compelling visual effects, brands can enhance understanding and foster emotional involvement, which in turn promotes favourable emotions toward green products. Hence, the following hypothesis is developed:

H7: Effect is positively associated with emotional value.

Relationship of Effect and Green Trust

As consumers have become increasingly cautious about greenwashing, many now question the authenticity of companies' environmental claims. This has made believability a central issue in research on green advertising (White et al., 2019; Kim et al., 2022). To strengthen persuasion and encourage adoption, firms often incorporate eco-labels and environmental certifications into their advertisements (Cian et al., 2020; Lima et al., 2023; Rathee and Milfeld, 2023). Eco-labels and environmental certifications serve as trusted credibility markers in sustainable advertising, and when combined with compelling visual effects, they create a powerful synergy that strengthens persuasion and builds consumer trust. Hence, the following hypothesis is developed:

H8: Effect is positively associated with green trust.

Relationship of Emotional Value and Purchase Intention

Emotions play a crucial role in consumers' product evaluations and subsequently influence their purchasing decisions (Hoyer and Stokburger-Sauer, 2012). Consequently, the careful selection of aesthetic and visual design elements can enhance the effectiveness of marketing communications by generating favourable emotional responses among consumers. Supporting this view, Khan et al. (2025) found that visibility, emotional appeal, and workability significantly affected purchase intentions for female beauty products in the Omani market. Extending these findings, visual elements may also influence green purchase intentions by evoking positive emotions and shaping perceptions of environmental friendliness, thereby encouraging consumers to choose sustainable products. Hence, the following hypothesis is developed:

H9: Emotional value is positively associated with purchase intention.

Relationship of Green Trust and Purchase Intention

Green trust refers to consumers' confidence in a product's environmental attributes and a brand's commitment to environmental sustainability (Li and Shan, 2025). Previous studies have shown that green advertising can strengthen purchase behaviour by enhancing consumers' green trust in a brand (Wei et al., 2017; de Sio et al., 2022). Consumers who trust the environmental claims communicated through green advertising are more likely to transfer that trust to the associated brand and product, which can strengthen their intention to purchase. Furthermore, green trust helps alleviate uncertainty in the decision-making process, particularly when consumers are considering premium-priced or complex organic products (Shah et al., 2023; Asif et al., 2023; Xu et al., 2022). Hence, the following hypothesis is developed:

H10: Green trust is positively associated with purchase intention.

Based on the above hypotheses, the following conceptual framework is developed:

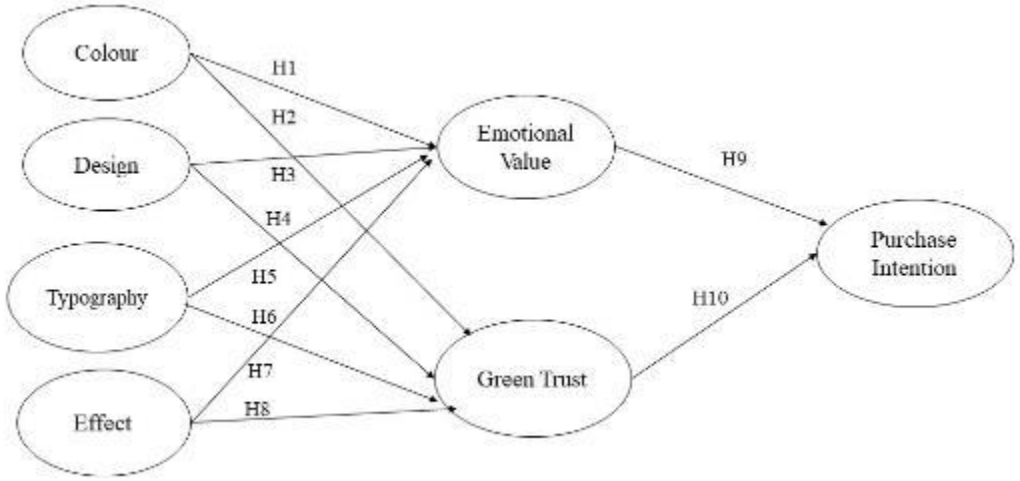


Figure 1: Conceptual Framework

Method

Data Collection

This study investigated the relationship between visual elements and emotional value and green trust. Subsequently, it investigated the relationship between emotional value and purchase intention as well as green trust and purchase intention. The target population of this study comprised young adults aged 18 to 25 years old. They have an Instagram account and are exposed to green advertisements. The sample of this study was chosen based on a purposive sampling method as there was no access to the sampling frame. Data were gathered through an online questionnaire, which provided a practical solution to constraints related to time, cost, and geographical coverage when surveying a large population, as suggested by Fowler (2014).

The survey questionnaire was distributed online. A total of 163 valid questionnaires were collected and were used for further analysis. The number of valid responses obtained was considered adequate, as an a priori power analysis conducted with G*Power indicated that a minimum sample size of 98 participants was required for the study. This calculation was based on four predictor variables, a medium effect size (0.15), a statistical power of 0.80, and a significance level of 0.05 (Gefen et al., 2011).

This study examined seven constructs, with measurement items sourced from established studies in the literature. The visual elements constructs consisting of Colour, Design, Typography and Effects were each measured using three items, which were adapted from the work of Sueur et al. (2024). The four items used to assess Emotional Value were adapted from Zhang et al. (2024). Additionally, Green Trust was measured using five items, adapted from Aji and Sutikno (2015). Finally, the four items for Purchase Intention were adapted from Li and Shan (2025).

All constructs were measured using a five-point Likert scale ranging from (1) Strongly Disagree to (5) Strongly Agree. To ensure clarity, a pre-test was conducted with two academicians and two professionals, followed by a pilot test with 30 randomly selected respondents to validate the instrument. Reliability checks confirmed that all measurement items achieved scores above 0.70, establishing the reliability of the constructs.

Data was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS version 4.1.1.8 (Ringle et al., 2024). The results of Mardia's tests for multivariate skewness and kurtosis indicated that multivariate normality has been compromised (skewness: $\beta = 21.478$, $p < 0.001$; kurtosis: $\beta = 109.332$, $p < 0.001$). Given that the assumption of multivariate normality was violated, PLS-SEM was deemed the most appropriate analytical approach for this study.

Profile of Respondents

The sample consisted of 30.7% male respondents, 67.5% female respondents and 1.8% did not disclose their gender. Of the sample, 30.7% were 21 years old; 23.3% were 22; 20.9% were 23; 6.1% were 20 years old; 4.9% were 19 years old and 3.7% were 18 years old. Those aged 24 and 25 made up 5.5% and 4.9% of the sample. Regarding ethnicity, majority of the respondents were Chinese (84%); followed by Malay (11%) and Indian (5%). Of the sample, 81% had undergone a bachelor's degree; 8.6% a diploma; 6.7% a master's degree; 1.9% a foundation certificate and 1.8% an SPM certificate. In addition, 89% of the respondents were students; 7% worked in the private sector, 2% were professionals and 2% owned a business. Finally, nearly half of the respondents (44.8%) had a monthly income of RM1,001 and above with the majority earning between RM1,001 to RM1,500 (27.6%); RM1,501 – RM3,000 (4.3%); RM3,001 to RM5,000 (9.2%); above RM5,000 (1.2%) and no fixed income (2.5%).

Findings

Measurement Model

Based on Table 1: Measurement Model, the reliability of the measurement model was confirmed through internal consistency checks. Both the composite reliability (CR) and Cronbach's Alpha values exceeded the recommended threshold of 0.70 (Hair et al., 2018). Following this, convergent validity was assessed using standardised factor loadings and the average variance extracted (AVE). All external factor loadings met the minimum requirement of 0.70, thereby supporting convergent validity. However, one item under the construct Effect was removed due to low loading. Since all AVE values were greater than the 0.50 benchmark (Hair et al., 2018), convergent validity was successfully established.

Table 1

Measurement Model

Construct	Item	Loadings	AVE	CR	Cronbach's Alpha
Colour (CO)	CO1: Colours are an important design element for me when I see green advertisements.	0.808	0.645	0.845	0.730
	CO2: Green and natural tones (e.g., green, brown, blue) in green advertisements have a major role in my purchase decision.	0.799			
	CO3: Green and natural tones stimulate my interest in green advertisements.	0.804			
Design (DE)	DE1: Humorous design of green advertisements increases my desire to buy the product.	0.835	0.696	0.873	0.782
	DE2: Innovative design ideas in green advertisements attract me.	0.848			
	DE3: Originality in green advertisements attracts my attention.	0.821			
Typography (TY)	TY1: I am drawn towards the big font of green advertisements.	0.863	0.692	0.871	0.777
	TY2: Traditional fonts deliver a sense of trust in green advertisements. (examples of traditional fonts include Times New Roman, Arial etc.)	0.797			
	TY3: Unstructured fonts in green advertisements attract my attention.	0.834			
Effect (EF)	EF1: I am drawn towards nature's sound effects or music in green advertisements.	0.824	0.705	0.877	0.792

		0.853			
	EF2: I am drawn towards short-form videos in green advertisements.				
		0.840			
	EF3: I am more attracted to green advertisements with modified or edited sound effects than nature's sound effects or music.				
Emotional Value (EM)		0.869	0.758	0.926	0.894
	EM1: Choosing green products makes me feel like a better person.				
		0.883			
	EM2: Choosing green products makes me feel like doing the morally right thing.				
		0.872			
	EM3: Choosing green products makes me feel like making a contribution to society.				
		0.860			
	EM4: Choosing green products makes me feel like making a contribution to sustainable development.				
Green Trust (GT)		0.732	0.614	0.888	0.843
	GT1: Green products keep promises and commitment for environmental protection.				
		0.751			
	GT2: Green products' environmental concerns meet my expectations.				
		0.831			
	GT3: I feel that green products' environmental claims are generally trustworthy				
		0.780			
	GT4:. I feel that green products' environmental performance is generally dependable.				
	GT5: I feel that green products' environmental reputation is generally reliable.	0.820			

Purchase Intention (PI)	PI1: I am willing to buy the green products featured in green advertisements.	0.881	0.716	0.910	0.867
	PI2: I intend to purchase the green products featured in green advertisements.	0.876			
	PI3: I will prioritise purchasing the green products featured in green advertisements.	0.861			
	PI4: I would recommend the green products featured in advertisements to others.	0.762			

Note: AVE = average variance extracted; CR= composite reliability

Following that, discriminant validity was assessed using the Heterotrait-Monotrait Ratio (HTMT) ratio. Based on Henseler et al. (2015), HTMT below 0.85 is acceptable and Gold et al. (2001), HTMT below 0.90 is acceptable. Table 2: Discriminant Validity: HTMT showed that all the values were below 0.90. These results confirm the presence of discriminant validity, indicating that the construct items represent distinct concepts and are not interchangeable.

Table 2
Discriminant Validity: HTMT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Colour (1)							
Design (2)	0.860						
Effect (3)	0.896	0.841					
Emotional Value (4)	0.620	0.789	0.679				
Green Trust (5)	0.717	0.822	0.766	0.811			
Purchase Intention (6)	0.871	0.866	0.832	0.802	0.887		
Typography (7)	0.668	0.779	0.705	0.697	0.695	0.721	

Structural Model

Next, the variance inflation factor (VIF) was used to test multicollinearity. The results in Table 3: Assessment of Structural Model showed that all the values were between 1.715 and 2.346 (below the cut-off value of 3). Therefore, no multicollinearity problem was present as the VIFs were below 3.0 (Becker et al., 2015).

Table 3
Assessment of Structural Model

Hypothesis	Relationship	Std Beta	Std Error	t-value	p value	LL	UL	VIF	R^2	f^2
H1	CO -> EM	0.018	0.105	0.174	0.431	-0.147	0.203	2.144	0.506	0.000
H2	CO -> GT	0.113	0.094	1.203	0.115	-0.035	0.273	2.144	0.541	0.013
H3	DE -> EM	0.386	0.130	2.971	0.001	0.156	0.585	2.346		0.129
H4	DE -> GT	0.334	0.108	3.086	0.001	0.142	0.500	2.346		0.104
H5	TY -> EM	0.237	0.100	2.367	0.009	0.079	0.409	1.715		0.066
H6	TY -> GT	0.167	0.076	2.194	0.014	0.039	0.288	1.715		0.035
H7	EF -> EM	0.179	0.121	1.485	0.069	-0.019	0.375	2.254		0.029
H8	EF -> GT	0.245	0.102	2.397	0.008	0.060	0.400	2.254		0.058
H9	EM -> PI	0.336	0.079	4.267	0.000	0.200	0.459	1.984	0.640	0.158
H10	GT -> PI	0.527	0.078	6.786	0.000	0.394	0.648	1.984		0.389

The evaluation of the inner structural model was carried out using a bootstrapping procedure with 10,000 subsamples. The significance of the paths between latent constructs was determined by examining the t-values associated with the path coefficients.

As shown in Table 3: Assessment of Structural Model and Figure 2 Results of Structural Model, Colour did not influence both the Emotional Value (H1: β =0.018, t = 0.174) and Green Trust (H2: β =0.113, t = 1.203). Both Design (H3: β =0.386, t = 2.971; H4: β =0.334, t = 3.086) and Typography (H5: β =0.237, t = 2.367; H6: β =0.167, t = 2.194) were positively associated with Emotional Value and Green Trust. Effect did not influence Emotional Value (H7: β =0.179, t = 1.485) and was only positively associated with Green Trust (H8: β =0.245, t = 2.397). In addition, Emotional Value (H9: β =0.336, t = 4.267) and Green Trust (H10: β =0.527, t = 6.786) were positively associated with Purchase Intention.

As shown in Table 3: Assessment of Structural Model, the R^2 value which featured the amount of variance explained by the endogenous variables, Emotional Value, Green Trust and Purchase Intention in this study was 0.506, 0.541 and 0.640 respectively. For f^2 direct effect sizes, 0.02 is interpreted as small, 0.15 as medium and 0.35 as large effect sizes (Hair et al., 2017). Design, Typography and Effects had a small effect size on Emotional Value. For Green Trust, Design, Typography and Effects also had a small effect size on it too. Emotional Value had a medium effect size on Purchase Intention. Finally, Green Trust had a large effect size on Purchase Intention.

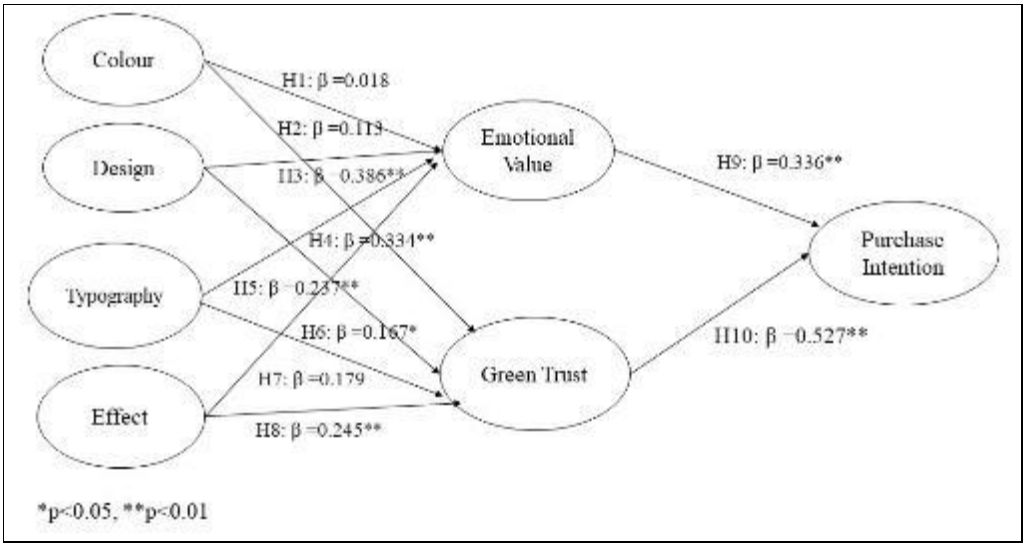


Figure 2: Results of Structural Model

PLS Predict

This study further assessed the model's predictive accuracy through the PLS Predict for out of sample prediction (Hair et al., 2019; Shmueli et al., 2016).

Table 4
Results of PLS Predict

	Q^2_predict	PLS-SEM RMSE	LM RMSE	PLS-SEM – LM RMSE
PI1	0.475	0.622	0.625	-0.003
PI2	0.397	0.660	0.692	-0.032
PI3	0.426	0.662	0.708	-0.046
PI4	0.308	0.656	0.685	-0.120

Based on Table 4: Results of PLS Predict, this study's model has predictive ability. The predictive results demonstrated that the dependent variables' indicators (Purchase Intention) in the PLS model generated lower predictive error than the LM model. When the PLS model generated lower predictive error than the LM model, the research model has high predictive power (Shmueli et al., 2019). The visual elements have a predictive ability on Emotional Value and Green Trust, which subsequently influenced Purchase Intention.

Discussion

Theoretical Contribution

This study examined the relationships between the four visual elements of Instagram advertisements – colour, design, typography and effect with emotional value, green trust and purchase intention. Although green advertising comprises multiple persuasive cues, consumers' receptivity to green advertising is a critical factor in determining how they interpret and react to advertising messages. This receptivity influences the development of green perceived value and green trust, which subsequently affect consumers' purchase intentions (Wang and Li, 2022; Fu and Gao, 2023; Rahman and Nguyen-Viet, 2023). Past

studies indicate that the impact of advertising elements—such as message style or appeals—on green purchasing behaviour is fully mediated by the perceived believability of the advertisement (Jäger and Weber, 2020). Extending the (S–O–R) framework into the green domain, the findings of this study help explain visual elements (stimulus), when perceived as trustworthy and supports emotional value (organism) can enhance purchase intention (response).

Specifically, design and typography enhance emotional value and green trust, which are important in developing purchase intention. Emotions and trust remain central to green advertising as they influence purchase intention. However, colour has no impact on both emotional value and green trust. Effect influences green trust but not emotional value.

When investigating colour from a cross-modal sensory perspective, many scholars claim that consumers prefer product packaging that utilises conventional colour schemes (Steiner and Florack, 2023; Wang et al., 2025). The colour green serves as a potent non-verbal cue of environmental awareness, signifying sustainable practices and motivating customers to align their behaviours with environmentally-friendly habits (Lichtenfeld et al., 2012). Green is deeply linked to environmental protection and sustainable practices, and numerous brands leverage this association to heighten public consciousness regarding sustainability (Sossini et al., 2022).

However, some research indicates that consumers may show a preference for novel and unique colour choices (Garber et al., 2000; Spence and Velasco, 2018). Such contradictions stem from human cognitive variability, as consumers process information and perceive norms (innovations) inconsistently (Xu, 2026). Individual variations in cognitive processing can lead to distinct differences in how consumers prefer specific product colour design schemes (Martinez et al., 2021). Cognitive differences shape how information is interpreted, consumers may not always prefer green to symbolise sustainability; instead, their emotional responses and trust depend heavily on whether a colour scheme feels reliably familiar or distinctively innovative.

While green marketing aims to promote products or services with environmental benefits, its effectiveness is undermined by greenwashing, which occurs when brands exaggerate or misrepresent their environmental claims (Han et al., 2024; Zhou and Tong, 2022). Consumers may be tired of seeing the same green colour designs and become sceptical of simple colour cues and view green backgrounds as superficial greenwashing rather than proof of real sustainability.

Effect can only enhance green trust but not emotional value. Visual effects contribute directly to perceived visual complexity because they increase the number, variety, and salience of visual elements within an interface. Features such as animations, gradients, shadows, and decorative graphics can enrich the visual presentation and make it appear more dynamic and aesthetically appealing. However, visual complexity should be carefully balanced because both excessive and insufficient complexity can negatively affect users' cognitive processing. Rather than following a simple linear pattern, the relationship between visual complexity and cognitive load reflects an optimal level at which users receive sufficient informational cues without overloading their limited working memory (Althuizen, 2021; Zhong et al., 2025).

Designs that contain too many visual elements may impose unnecessary extraneous cognitive load, causing users to allocate attention to irrelevant details rather than the intended information. In contrast, overly minimal designs may not provide enough visual stimulation to sustain users' engagement or support effective information processing. Therefore, visual complexity that falls within an optimal range can enhance trust because it helps consumers perceive a design as informative, organised and credible. According to the optimal moderate complexity theory, background images with a balanced level of visual complexity facilitate smoother information processing, which in turn increases consumers' intentions to make online purchases (Appel et al., 2020).

Excessive complexity may reduce emotional value by overwhelming users, while overly simple designs may lack the visual richness or novelty needed to evoke positive feelings. Consequently, visual complexity is likely to exert a stronger influence on trust than on emotional value, as trust is largely shaped by cognitive evaluations of clarity, usability, and credibility, whereas emotional value depends on broader affective and aesthetic qualities that extend beyond visual complexity alone.

The visual elements, design and typography, collectively provide richer semiotic signals that strengthen both emotional value and green trust, making them more effective than colour and effect in shaping consumer emotional responses to green Instagram advertisements. Clean, minimalist layouts convey transparency and reduce the likelihood of audiences perceiving the message as greenwashing, while cluttered or overly decorative designs can undermine confidence in the brand. Typography further enhances persuasive impact, as bold sans-serif fonts project modernity and confidence, whereas handwritten styles evoke warmth and authenticity, thereby reinforcing trustworthiness more effectively than colour alone. The meanings linked to a typeface can interact with the content of the accompanying text, shaping overall interpretation (McCarthy and Mothersbaugh, 2002).

Practical Implications

The practical implications of this study highlight the importance of thoughtful visual design and typography in green Instagram advertising. When consumers are exposed to information conveyed through green advertising, they develop perceptions and evaluations based on the signals received, which subsequently shape their attitudes toward green products and influence their purchase intentions (Dangelico and Vocalelli, 2017; Santa and Drews, 2023).

Integrating cultural elements into product packaging or design has been found to enhance perceptions of prestige and luxury, leading to more favourable product evaluations (Laroche et al., 2021). Similarly, visual elements such as design and typography can strengthen consumer perceptions by evoking favourable emotions, and building green trust, ultimately encouraging purchase intention of green products.

For advertisers, the findings suggest that using creative and original layouts with attractive typography, and engaging visual effects help enhance green trust with young audiences on Instagram. Advertisers should not treat visual elements in isolation. It should consider how design, layout and motion work together to create a coherent visual narrative. For example, simple design and subtle motion effects, shading, and texture effects introduce dynamism and stimulate emotional arousal, ensuring that sustainability messages capture attention.

Furthermore, a cohesive design system can support consumer decision-making by directing attention, eliciting emotional responses, and influencing judgments regarding a product's fit, credibility, and distinctiveness (Hsu et al., 2026).

Limitations and Future Study

This study has several limitations that suggest directions for future research. First, the product stimuli were restricted to visual elements and green products. In particular, products associated with traditional craftsmanship that elicit perceptions of brand coolness and nostalgia may produce different results from this study. Future research should explore other product categories to determine whether the observed relationships hold across different product types.

Second, the sample size of participants is relatively small given the complexity of the proposed model involving seven constructs within the green marketing industry. The limited sample size may limit the greneralisability of the study's findings. The age distribution of participants in the main study was concentrated between 18 – 25 years old. This relatively narrow age range may also limit the generalisability of the study's results. Future studies should target larger and more diverse samples from a wider range of age groups to enhance the external validity and robustness of the results.

Finally, with respect to geographic scope, this research focused exclusively on consumers in Malaysia, a developing country with a rapidly expanding market for green products. It remains unclear whether the same patterns would be observed among consumers in other countries. Further research is needed to examine the applicability of these findings across these regions.

References

Aji, H. M., & Sutikno, B. (2015). The extended consequence of greenwashing: Perceived consumer skepticism. *International Journal of Business and Information, 10*(4), 433–468.

Althuizen, N. (2021). Revisiting Berlyne's inverted U-shape relationship between complexity and liking: The role of effort, arousal, and status in the appreciation of product design aesthetics. *Psychology & Marketing, 38*(3), 481–503.

Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science, 48*(1), 79–95.

Asif, M. H., Zhongfu, T., Irfan, M., & Işık, C. (2023). Do environmental knowledge and green trust matter for purchase intention of eco-friendly home appliances? An application of extended theory of planned behavior. *Environmental Science and Pollution Research, 30*, 37762–37774.

Barreda, A., Nusair, A., Wang, K., Okumus, Y. F., & Bilgihan, A. (2020). The impact of social media activities on brand image and emotional attachment: A case in the travel context. *Journal of Hospitality and Tourism Technology, 11*(1), 109–135.

Becker, J.M., Ringle, C.M., Sarstedt, M. and Völckner, F. (2015), How collinearity affects mixture regression results, *Marketing Letters*, *26*(4), 643-659.

Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing, 56*(2), 57–71.

Childers, T. L., & Jass, J. (2002). All dressed up with something to say: Effects of typeface semantic associations on brand perceptions and consumer memory. *Journal of Consumer Psychology, 12*(2), 93–106.

Choi, Y. K., Yoon, S., Kim, K., & Kim, Y. (2019). Text versus pictures in advertising: Effects of psychological distance and product type. *International Journal of Advertising, 38*(4), 528–543.

Cian, L., Longoni, C., & Krishna, A. (2020). Advertising a desired change: When process simulation fosters (vs. hinders) credibility and persuasion. *Journal of Marketing Research, 57*, 489–508.

Dangelico, R. M., & Vocalelli, D. (2017). "Green marketing": An analysis of definitions, strategy steps, and tools through a systematic review of the literature. *Journal of Cleaner Production, 165*, 1263–1279.

de Sio, S., Zamagni, A., Casu, G., & Gremigni, P. (2022). Green trust as a mediator in the relationship between green advertising skepticism, environmental knowledge, and intention to buy green food. *International Journal of Environmental Research and Public Health, 19*, 16757.

Djafarova, E., & Bowes, T. (2021). "Instagram made me buy it": Generation Z impulse purchases in the fashion industry. *Journal of Retailing and Consumer Services, 59*, 102345.

Fowler, F. J. (2014). The problem with survey research. *Contemporary Sociology: A Journal of Reviews, 43*(5), 660–662.

Fu, L., & Gao, J. (2023). Bitter or sweet? The interactive impact of message framing and environmental attitude on the effectiveness of green advertising. *Asian Journal of Communication, 33*, 246–267.

Garber, L. L., Jr., Hyatt, E. M., & Starr, R. G., Jr. (2000). The effects of food color on perceived flavor. *Journal of Marketing Theory and Practice, 8*(4), 59–72.

Gefen, D., Rigdon, E. E., & Straub, D. (2011). Editor's comments: An update and extension to SEM guidelines for administrative and social science research. *MIS Quarterly, 35*(2), 1–7.

Gold, A., Malhotra, A., & Segars, A. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems, 18*(1), 185–214.

Haddad, S. (2025). How do self-brand-congruity and emotional brand attachment affect the patronage of original and counterfeited luxury branded products? *European Journal of Marketing, 60*(3), 725–752.

Hair, J. F. Jr., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage Publications.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2018). *Advanced issues in partial least squares structural equation modeling* (L. Fargotstein, Ed.). SAGE Publications.

Hair, J.F., Jr, Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM, *European Business Review*, *31*(1), 2-24.

Hallez, L., Spruyt, B., Boen, F., & Smits, T. (2024). How consumers value sustainable packaging: An experimental test combining packaging material, claim, and price. *British Food Journal, 126*(9), 3566–3583.

Han, T., Han, J., Liu, J., & Li, W. (2024). Effect of emotional factors on purchase intention in live streaming marketing of agricultural products: A moderated mediation model. *PLOS ONE, 19*(4), e0298388. https://doi.org/10.1371/journal.pone.0298388.

Henderson, P. W., Cote, J. A., Leong, S. M., & Schmitt, B. (2003). Building strong brands in Asia: Selecting the visual components of image to maximize brand strength. *International Journal of Research in Marketing, 20*(4), 297–313.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science, 43*(1), 115–135.

Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development, and validation. *Journal of Interactive Marketing, 28*(2), 149–165.

Hou, C. X., & Sarigollu, E. (2022). Is bigger better? How the scale effect influences green purchase intention: The case of washing machines. *Journal of Retailing and Consumer Services, 65*, 102894.

Hoyer, W. D., & Stokburger-Sauer, N. E. (2012). The role of aesthetic taste in consumer behavior. *Journal of the Academy of Marketing Science, 40*(1), 167–180.

Hsu, C.-L., Chen, Y.-C., & Huang, Y.-Y. (2026). From cues to connections: Visual style design on Instagram and its impact on brand relationships. *Asia Pacific Journal of Marketing and Logistics, ahead-of-print*(ahead-of-print). https://doi.org/10.1108/APJML-09-2025-1938

Hussain, A., & Ehsan, M. (2026). Emotional trust as a mediator between green marketing authenticity, greenwashing, and green purchase intentions in digital advertising. *Journal of Contemporary Marketing Science, ahead-of-print*(ahead-of-print). https://doi.org/10.1108/JCMARS-09-2025-0046

Jäger, A. K., & Weber, A. (2020). Can you believe it? The effects of benefit type versus construal level on advertisement credibility and purchase intention for organic food. *Journal of Cleaner Production, 257*, 120543.

Jin, C. H., & Villegas, J. (2007). Consumer responses to advertising on the internet: The effect of individual differences on ambivalence and avoidance. *Cyber Psychology & Behavior, 10*(2), 258–266.

Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing, 57*(1), 1–22.

Khan, Z. A., Kamran, H., Bino, E., & Mahmood, M. (2025). Aesthetic typography of packaging design and purchase intention: A study of women shoppers of beauty products in Oman under the 'View' model. *FIIB Business Review, 14*(3), 337–347.

Kim, E., Shoenberger, H., Kwon, E., & Ratneshwar, S. (2022). A narrative approach for overcoming the message credibility problem in green advertising. *Journal of Business Research, 147*, 449–461.

Kulczynski, A., & Hook, M. (2024). Typography talks: Influencing vintage anemoia and product safety perceptions with vintage typography. *Journal of Marketing, 88*(4), 129–153.

Labrecque, L. I., & Milne, G. R. (2012). Exciting red and competent blue: The importance of color in marketing. *Journal of the Academy of Marketing Science, 40*(5), 711–727.

Laroche, M., Li, R., Richard, M.-O., & Shao, M. (2021). Understanding Chinese consumers' and Chinese immigrants' purchase intentions toward global brands with Chinese elements. *Journal of Product & Brand Management, 30*(8), 1077–1093.

Li, G. X., Yang, L. F., Zhang, B. J., Li, X. X., & Chen, F. Y. (2021). How do environmental values impact green product purchase intention? The moderating role of green trust. *Environmental Science and Pollution Research, 28*, 46020–46034.

Li, H., Zhang, L., & Hsu, C. H. (2023). Research on user-generated photos in tourism and hospitality: A systematic review and way forward. *Tourism Management, 96*, 104714.

Li, Y., & Shan, B. (2025). The influence mechanism of green advertising on consumers' purchase intention for organic foods: The mediating roles of green perceived value and green trust. *Frontiers in Sustainable Food Systems, 9*, 1515792. https://doi.org/10.3389/fsufs.2025.1515792

Lichtenfeld, S., Elliot, A. J., Maier, M. A., & Pekrun, R. (2012). Fertile green: Green facilitates creative performance. *Personality and Social Psychology Bulletin, 38*(6), 784–797.

Lima, P. A. B., Falguera, F. P. S., Silva, H. M. R. da, Maciel, S., Mariano, E. B., & Elgaaied-Gambier, L. (2024). From green advertising to sustainable behavior: a systematic literature review through the lens of value-belief-norm framework. *International Journal of Advertising*, *43*(1), 53–96.

Martinelli, E., & De Canio, F. (2021). Purchasing veg private labels? A comparison between occasional and regular buyers. *Journal of Retailing and Consumer Services, 63*, 102748. https://doi.org/10.1016/j.jretconser.2021.102748

Martinez, L. M., Rando, B., Agante, L., & Abreu, A. M. (2021). True colors: Consumers' packaging choices depend on the color of retail environment. *Journal of Retailing and Consumer Services, 59*, 102372.

McCarthy, M. S., & Mothersbaugh, D. L. (2002). Effects of typographic factors in advertising-based persuasion: A general model and initial empirical tests. *Psychology & Marketing, 19*(7–8), 663–691.

Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. The MIT Press.

Perez-Vega, R., Kaartemo, V., Lages, C. R., Razavi, N. B., & Männistö, J. (2021). Reshaping the contexts of online customer engagement behavior via artificial intelligence: A conceptual framework. *Journal of Business Research, 129*, 902–910. https://doi.org/10.1016/j.jbusres.2020.11.002

Phillips, B. J., & McQuarrie, E. F. (2004). Beyond visual metaphor: A new typology of visual rhetoric in advertising. *Marketing Theory, 4*(1–2), 113–136.

Pieters, R., & Wedel, M. (2004). Attention capture and transfer in advertising: Brand, pictorial, and text-size effects. *Journal of Marketing, 68*(2), 36–50. https://doi.org/10.1509/jmkg.68.2.36.27794

Pieters, R., Wedel, M., & Batra, R. (2010). The stopping power of advertising: Measures and effects of visual complexity and brand congruity. *Journal of Marketing, 74*(5), 48–60. https://doi.org/10.1509/jmkg.74.5.048

Rahman, S. U., & Nguyen-Viet, B. (2023). Towards sustainable development: Coupling green marketing strategies and consumer perceptions in addressing greenwashing. *Business Strategy and the Environment, 32*, 2420–2433. https://doi.org/10.1002/bse.3256

Rathee, S., & Milfeld, T. (2024). Sustainability advertising: Literature review and framework for future research. *International Journal of Advertising*, *43*(1), 7–35.

Reber, R., Schwarz, N., & Winkielman, P. (2004). Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience? *Personality and Social Psychology Review, 8*(4), 364–382.

Ringle, C. M., Wende, S., & Becker, J. M. (2024). *SmartPLS 4* (Version 4.1.1.8) [Computer software]. SmartPLS GmbH. https://www.smartpls.com

Santa, J. C., & Drews, S. (2023). Heuristic processing of green advertising: Review and policy implications. *Ecological Economics, 206*, 107760. https://doi.org/10.1016/j.ecolecon.2023.107760

Schmitt, B. (2012). The consumer psychology of brands. *Journal of Consumer Psychology, 22*(1), 7–17.

Shah, R., Modi, A., Muduli, A., & Patel, J. D. (2023). Purchase intention for energy-efficient equipment appliances: Extending TPB with eco-labels, green trust, and environmental concern. *Energy Efficiency, 16*, 31. https://doi.org/10.1007/s12053-023-10111-x

Shen, Z. (2023). Platform or content strategy? Exploring engagement with brand posts on different social media platforms. *SAGE Open, 13*(4), 1–12.

Shi, J., & Jiang, Z. (2023). Chinese cultural element in brand logo and purchase intention. *Marketing Intelligence & Planning, 41*(2), 171–185.

Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J. H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLS predict. *European Journal of Marketing, 53*(11), 2322–2347.

Sossini, L., Santi, R., & Del Curto, B. (2022). *The colors of sustainability: How materials CMF design can guide sustainable perceptions and behaviors*. In *Color and Colorimetry: Multidisciplinary Contributions* (Vol. XVII A, pp. 277–284). Research Culture and Science Books.

Spence, C., & Velasco, C. (2018). On the multiple effects of packaging color on consumer behavior and product experience in the “food and beverage” and “home and personal care” categories. *Food Quality and Preference, 68*, 226–237.

Statista. (2025, December 29). Instagram – statistics and facts. *Statista*. https://www.statista.com/topics/1882/instagram/#statisticChapter

Steiner, K., & Florack, A. (2023). The influence of packaging color on consumer perceptions of healthfulness: A systematic review and theoretical framework. *Foods, 12*(21), 3911.

Sueur, A., Tauty, L., & Khan, T. (2024). Measuring the impact of visual elements of an ad on consumer attitudes toward purchase decisions: Focus on the sport industry (Master’s thesis, Linnaeus University). *DiVA Portal*. https://urn.kb.se/resolve?urn=urn:nbn:se:lnu:diva-129836

Suphasomboon, T., & Vassanadumrongdee, S. (2022). Toward sustainable consumption of green cosmetics and personal care products: The role of perceived value and ethical concern. *Sustainable Production and Consumption, 33*, 230–243.

Tok, D., Huang, Y., & Lu, Y. (2024). Feel the green: How a handwritten typeface affects tourists’ responses to green tourism products and services. *Tourism Management, 104*, 104920. https://doi.org/10.1016/j.tourman.2024.104920

Valdez, P., & Mehrabian, A. (1994). Effects of color on emotions. *Journal of Experimental Psychology: General, 123*(4), 394–409.

Vazquez, E. E., Patel, C., Alvidrez, S., & Siliceo, L. (2023). Images, reviews, and purchase intention on social commerce: The role of mental imagery vividness, cognitive and affective social presence. *Journal of Retailing and Consumer Services, 74*, 103415.

Wang, C., Peng, Y., & Wan, X. (2025). The color-flavor incongruency effect elicited by flavor stimuli and words. *Food Quality and Preference, 122*, Article 105280.

Wang, J., & Li, A. (2022). The impact of green advertising information quality perception on consumers’ response: An empirical analysis. *Sustainability, 14*, 13248. https://doi.org/10.3390/su142013248

Wei, C. F., Chiang, C. T., Kou, T. C., & Lee, B. C. Y. (2017). Toward sustainable livelihoods: Investigating the drivers of purchase behavior for green products. *Business Strategy and the Environment, 26*, 626–639.

White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT consumer behaviors to be more sustainable: A literature review and guiding framework. *Journal of Marketing, 83*, 22–49.

Xu, A., Wei, C., Zheng, M., Sun, L., & Tang, D. (2022). Influence of perceived value on repurchase intention of green agricultural products: From the perspective of multi-group analysis. *Sustainability, 14*, 15451. https://doi.org/10.3390/su142215451.

Xu, Q., Xiong, Y., & Shao, Y. (2026). How vintage typography shapes brand status: Experimental evidence from traditional Chinese characters. *Journal of Product & Brand Management, 35*(4), 602–614.

Xu, Z. (2026). The interaction effect of packaging color and cognitive style on consumer purchase intention. *British Food Journal, 128*(1), 171–190.

Yuhao, S. (2023). Eye-tracking: The influence of picture and text layout on the effect of commercial advertising. *Academic Journal of Humanities and Social Sciences, 9*, 1–5.

Zhang, Y., Liu, J., & Li, X. (2024). Value delivery in green consumption: The effect of advertisement value proposition on consumer perception and purchase intention. *Frontiers in Psychology, 15*. https://doi.org/10.3389/fpsyg.2024.1339197

Zhong, Q., Zhou, L., Zhang, J., & Ji, T. (2025). The inverted U-shape of consumer reviews and conversion rates: The moderating role of store longevity and transaction volume on service-selling platforms. *Journal of Retailing and Consumer Services, 82*, 104063.

Zhou, R., & Tong, L. (2022). A study on the influencing factors of consumers' purchase intention during livestreaming e-commerce: The mediating effect of emotion. *Frontiers in Psychology, 13*, 903023.