




“Source credibility of beauty vloggers and consumer purchases of vegan cosmetics: The mediating role of cognitive and affective attitude”

AUTHORS	Bao Ngoc Le  Viet Tien Vu Mai Thi Le 
ARTICLE INFO	Bao Ngoc Le, Viet Tien Vu and Mai Thi Le (2024). Source credibility of beauty vloggers and consumer purchases of vegan cosmetics: The mediating role of cognitive and affective attitude. <i>Innovative Marketing</i> , 20(3), 14-27. doi: 10.21511/im.20(3).2024.02
DOI	http://dx.doi.org/10.21511/im.20(3).2024.02
RELEASED ON	Tuesday, 02 July 2024
RECEIVED ON	Saturday, 20 April 2024
ACCEPTED ON	Tuesday, 28 May 2024
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Innovative Marketing "
ISSN PRINT	1814-2427
ISSN ONLINE	1816-6326
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

45



NUMBER OF FIGURES

3



NUMBER OF TABLES

8

© The author(s) 2024. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 20th of April, 2024

Accepted on: 28th of May, 2024

Published on: 2nd of July, 2024

© Bao Ngoc Le, Viet Tien Vu, Mai Thi Le, 2024

Bao Ngoc Le, M.Sc., Department of Marketing, Posts and Telecommunications Institute of Technology, Vietnam.

Viet Tien Vu, M.Sc., Department of Marketing, Posts and Telecommunications Institute of Technology, Vietnam.

Mai Thi Le, Dr., International School, Vietnam National University, Vietnam. (Corresponding author)



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Conflict of interest statement:

Author(s) reported no conflict of interest

Bao Ngoc Le (Vietnam), Viet Tien Vu (Vietnam), Mai Thi Le (Vietnam)

SOURCE CREDIBILITY OF BEAUTY VLOGGERS AND CONSUMER PURCHASES OF VEGAN COSMETICS: THE MEDIATING ROLE OF COGNITIVE AND AFFECTIVE ATTITUDE

Abstract

Vegan cosmetics have become more popular among consumers due to increased environmental awareness and health consciousness after the COVID-19 pandemic. This study aims to investigate the influence of beauty vloggers' credibility on consumers' purchase intention toward vegan cosmetics. An integrated research model was built based on the source credibility and stimulus-organism-response theory. Data were collected from a questionnaire survey with 382 Vietnamese consumers at the minimum age of 18 who had experience watching beauty vloggers reviewing vegan cosmetics on YouTube. Partial least squares structural equation modeling was applied to analyze the collected data. The results show that the beauty vloggers' expertise, trustworthiness, and physical attractiveness all positively impact cognitive and affective attitudes, influencing consumers' purchase intention. Furthermore, these factors positively impact consumers' intention to purchase vegan cosmetics. Therefore, cognitive and affective attitudes partially mediate the relationship between the beauty vloggers' credibility and consumers' purchase intentions. Given that the direct and indirect effects point in the same direction, these mediators are classified as complementary. This study contributes to deeper understanding of consumers' intention to purchase vegan cosmetics recommended by beauty vloggers.

Keywords

affective attitude, beauty vloggers, cognitive attitude, purchase intention, source credibility, vegan cosmetics

JEL Classification

M31, M37, D12

INTRODUCTION

The global trend towards vegan products influences consumer choices across various sectors, including cosmetics. This surge in demand for vegan cosmetics can be attributed to growing environmental concerns and heightened health consciousness after the COVID-19 pandemic (Lee & Kwon, 2022). As industrial waste exacerbates environmental pollution, the call for veganism and environmentally-conscious choices is becoming a societal concern. This shift is notably evident in the beauty industry, where an increasing number of consumers are turning to vegetarian cosmetics (Dos Santos et al., 2023). The COVID-19 pandemic has further emphasized the need for safety-oriented trends in the beauty industry, prompting a shift towards a more suitable safety perspective. With the surge in mask usage due to environmental issues and infectious diseases, skin problems are on the rise globally, altering cosmetic usage patterns (Lee & Kwon, 2022). Vegan cosmetics is defined as a range of beauty products free from animal-derived ingredients. Commonly excluded ingredients in vegan cosmetics are lanolin, honey, beeswax, collagen, albumen, carmine, cholesterol,

and gelatin (Urban et al., 2022). They also have not been tested on animals (Dos Santos et al., 2023). Originating from the ethical beauty concept of the 1980s, these products aim to offer consumers less harmful alternatives while adhering to ecological guidelines. Consequently, they feature non-harmful ingredients, natural fragrances, and ethical manufacturing processes (Dos Santos et al., 2023). The market for vegan cosmetics has grown from \$13.56 billion in 2018 to \$16.29 billion in 2021, and it is projected to reach \$20.8 billion by 2025 (Ngo et al., 2024).

Vietnam, a rapidly developing Southeast Asian nation, is confronting environmental issues linked to urbanization and industrialization (Pham et al., 2018). These issues, encompassing pollution, deforestation, waste production, and escalating carbon emissions, have sparked a surge in environmental awareness among Vietnamese consumers. This heightened environmental consciousness has resulted in the adoption of green products, such as green beauty care, as a new consumption trend (Nguyen & Dekhili, 2019; Nguyen-Viet & Nguyen, 2024). Vietnam is emerging as a promising market for vegan products as more Vietnamese are embracing a vegan lifestyle (Petaasia, 2017). Local manufacturers benefit from the country's plentiful natural ingredients, such as squash, coffee beans, and coconut oils (Ngo et al., 2024). Despite this, domestic brands face stiff competition from foreign vegan cosmetics brands (Ngo et al., 2024), highlighting the need for a better understanding of consumer behavior. Previous studies have primarily focused on psychological and social factors influencing consumer purchases of vegan cosmetics, the role of social media has been overlooked. Given the high number of Internet and social media users in Vietnam (Statista, 2023), it is crucial to understand how social media impacts consumer choices for vegan cosmetics. Beauty products are the top category influenced by video blogs (or vlogs) shared on social media platforms (Manchanda et al., 2022). Therefore, understanding how the credibility of beauty vloggers impacts consumers' intention to purchase vegan cosmetics can help vegan cosmetics brands better understand the factors affecting consumers' purchase decisions. This underlines the relevance and originality of this research.

1. LITERATURE REVIEW AND HYPOTHESES

Source credibility is described as the extent to which a source is viewed as having relevant expertise and can be trusted to give an objective opinion on a topic (Hovland et al., 1953). Hovland et al. (1953) proposed the source credibility theory, which suggests that a credible source needs to be trustworthy and knowledgeable. According to this theory, the persuasiveness of a message heavily relies on the sender's credibility (Ohanian, 1990). Consequently, the impact of vlogger's video is determined by the perceived trustworthiness and expertise of a vlogger. Expertise is defined as the source's perceived ability to provide accurate information (Ohanian, 1990). An individual is deemed an expert when they are perceived to possess significant knowledge and experience related to a product. With the recent emergence of the vegan lifestyle after the COVID-19 pandemic, vegan cosmetics may be a new concept for some countries, emphasizing the need for comprehensive product information. When beauty vloggers demonstrate and discuss their personal experiences with a product, they can be regarded as experts in that product.

Trustworthiness refers to the perceived honesty and sincerity of the informant, as noted by Ohanian (1990). Unlike traditional celebrities, whom brands often recruit as their official ambassadors or spokespersons, Rahmi et al. (2017) pointed out that beauty vloggers were ordinary peers and perceived them as more reliable.

Adding to these characteristics, McGuire (1985) introduced source attractiveness as another aspect of a credible information source. He argued that an endorsement's effectiveness is affected by the physical attractiveness of the endorser. This source credibility aspect is essentially relevant to beauty vloggers (Manchanda et al., 2022). Physical attractiveness is defined by how pleasing a viewer finds a person to be. This appeal, often resulting from physical beauty, can evoke pleasure or liking (Dang-Van et al., 2023). Appreciation of beauty is a fundamental human trait, reflecting our daily perceptions and evaluations within the social world (Brielmann & Pelli, 2018). Since beauty products aim to enhance one's physical appearance, vlogger's attractiveness can be a strong indicator of credibility (Sokolova & Kefi, 2020). This is especially important for promoting vegan cosmet-

ics, which often take longer to show effects than conventional products. The physical attractiveness of the beauty vlogger can represent the ideal image that consumers aspire to.

Social media marketing activities mainly aim to shape the consumer's decision-making process (Alalwan et al., 2017), in which purchase intention is the most direct antecedent variable of purchase behavior (Ajzen, 1991). Purchase intention is the likelihood that consumers will plan or be willing to purchase a particular product or service in the future (Ajzen, 1991). Existing literature supports the impact of source credibility elements on consumers' buying intention (Filiari et al., 2023; Weismueller et al., 2021).

The theoretical frameworks applied to studies about consumer behavior surrounding vegan cosmetics have been limited to theory of planned behavior (TPB) (Ngo et al., 2024). This rational-based theory, which assumes consumers make reasoned choice, overlooks the affective elements that could influence behavior (Zahid et al., 2022). It also fails to account for situational factors that affect consumer decisions (Joshi & Rahman, 2015). Some researchers proposed the stimulus-organism-response (SOR) theory as an alternative model, which considers cognitive and emotional factors as determinants of consumer behavior (Mehrabian & Russell, 1974). Stimulus-organism-response theory, originating from environmental psychology, posits that environmental stimuli (S) influence and modify individuals' internal states (O), which then trigger approach or avoidance responses (R) (Mehrabian & Russell, 1974). The model's value in evaluating consumer responses lies in its ability to thoroughly understand consumer perceptions and attitudes toward stimuli and subsequent behaviors.

The SOR paradigm's use in this study has two benefits. First, it has already been used to examine online consumer responses, exploring how the interaction between people and technology impacts buying intention. Thus, it is well-suited for studying consumer behavior within a social media context. Second, the stimuli within the model represent the credibility of beauty vloggers, which influence the organism, reflecting consumers' cognitive and affective attitudes. This interaction produces specific behavioral outcomes (response).

Existing literature on green purchase behavior often reveals a gap between attitude and behavior (Claudy et al., 2013). The structure of attitude, consisting of cognitive and affective dimensions, might not be fully understood, leading to this discrepancy (Lee & Cheon, 2018). Previous studies have treated consumers' attitudes towards vegan cosmetics as a unidimensional construct. This study addresses this gap by examining attitude in terms of both cognition and affect. Attitude pertains to an individual's favorable or unfavorable judgment of a particular behavior (Ajzen, 1991). According to Ajzen (1991), the more positive a consumer's attitude toward a specific action, the greater their likelihood to carry it out. Thereby, understanding consumers' attitudes is crucial to overcoming barriers they may encounter before purchasing a product or service. Eroglu et al. (2001) describe attitude as a bi-dimensional construct comprising cognitive and affective attitudes. Cognitive attitude reflects consumers' overall product assessment based on utility and functional performance. In contrast, affective attitude pertains to the emotional evaluation of products (Eroglu et al., 2001). Walten and Wiedmann (2022) suggest that the more credible consumers perceive a source of information, the more likely they are to develop a higher product evaluation regarding cognitive and affective attitudes. Beauty vloggers usually provide consumers in-depth vegan product information, including ingredients and usage instructions. Therefore, consumers are likely to develop a positive cognitive evaluation of recommended products after watching beauty vlogs. Barritt (2020) emphasizes that the authenticity of beauty vloggers contributes to their popularity, fostering a solid emotional bond between them and their viewers. Song et al. (2023) further confirmed that a content provider's attractiveness is vital in forming viewer relationships. A viewer attracted to a content provider is more likely to interact with them.

Ngo et al. (2024) reported that attitude toward purchasing vegan cosmetics is the strongest predictor of purchase intention. Furthermore, prior research has established a positive correlation between aspects of attitude and purchasing intention. For example, Lee and Yun (2015) reported a positive impact of cognitive attitude on consumers' buying intention for organic food. In the

same line of thought, Suparno (2020) reported a positive association between affective attitude and consumers' intention to purchase halal cosmetics.

Based on the aforementioned discussion, a beauty vlogger, by forming a cognitive and affective attitude, may offer to consumers a solid reason to purchase their recommended products. The purchase intention would be stronger once a beauty vlogger can stimulate a positive evaluation of their content from both cognitive and affective perspectives. Therefore, it can be safely assumed that cognitive and affective attitudes toward purchasing vegan cosmetics might mediate the effect of the source credibility of beauty vloggers on purchase intentions.

This study aims to investigate the impact of the source credibility of beauty vloggers on consumers' intention to purchase vegan cosmetics. It also examines the mediating effects of cognitive and affective attitudes. The following hypotheses are developed based on the literature review and empirical evidence:

H1: Source credibility (expertise – H1a, trustworthiness – H1b, physical attractiveness – H1c) has a positive effect on the purchase intention.

H2: Expertise of beauty vloggers is positively associated with consumers' attitudes (cognitive attitude – H2a, affective attitude – H2b).

H3: Trustworthiness of beauty vloggers is positively associated with consumers' attitudes (cognitive attitude – H3a, affective attitude – H3b).

H4: Physical attractiveness of beauty vloggers is positively associated with consumers' attitude (cognitive attitude – H4a, affective attitude – H4b).

H5: Cognitive attitude is positively related to consumers' purchase intention.

H6: Affective attitude is positively related to consumers' purchase intention.

H7: Cognitive attitude mediates the relationship between source credibility factors (expertise – H7a, trustworthiness – H7b, physical attractiveness – H7c) and purchase intention.

H8: Affective attitude mediates the relationship between source credibility factors (expertise – H8a, trustworthiness – H8b, physical attractiveness – H8c) and purchase intention.

The research model is illustrated in Figure 1.

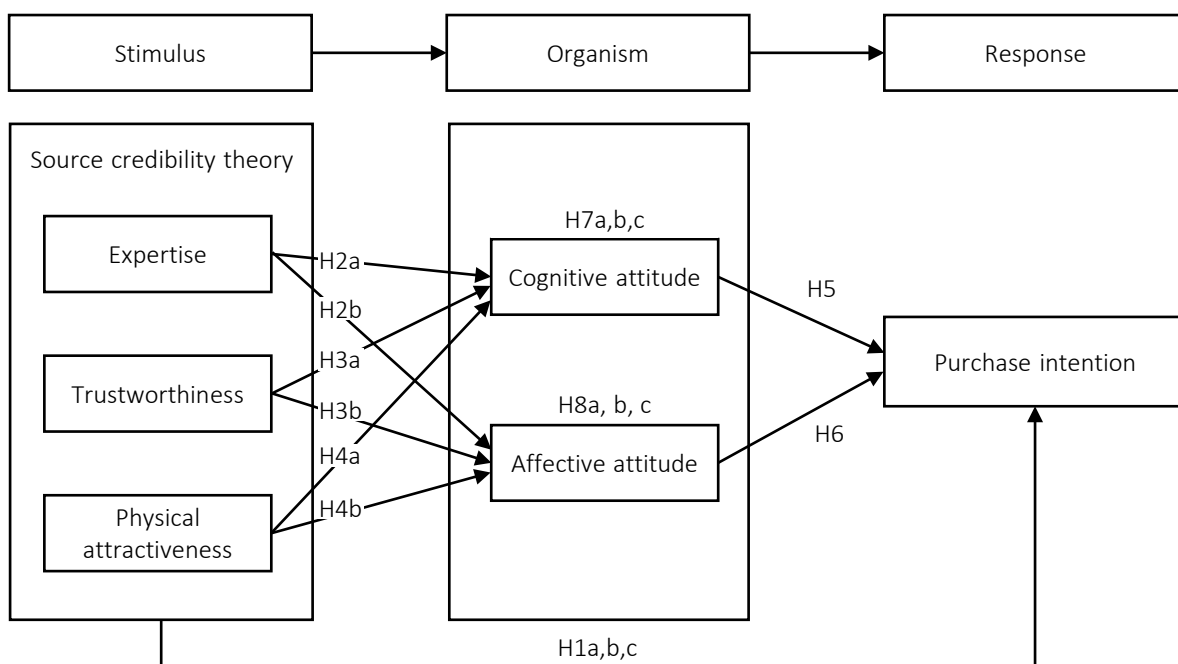


Figure 1. Proposed research model

2. METHODOLOGY

The measurement items were adapted from existing pre-validated scales in the literature. The questionnaire was translated backward into English and Vietnamese, as Behr (2017) suggested. All the items were rated on a five-point Likert scale that ranged from “strongly disagree” (1) to “strongly agree” (5). The use of a 5-point Likert scale has been associated with improved communication with respondents, and enhanced response rate and quality (Bouranta et al., 2009). Dawes (2008) also suggested that a 5-point scale simplifies the understanding of scale descriptors for the interviewers. As such, this study utilizes a 5-point Likert scale. Before the main study, a pre-test was conducted with 35 individuals who had experience watching beauty vloggers to ensure the representativeness and suitability of survey items and identify potential problems relating to question clarity, wording of items, and time of completion. After the pre-test, minor adjustments were made to the questionnaire and items. This study’s measurement items and constructs are presented in Table 1.

The study used a quantitative research approach based on data from self-administered questionnaires. The respondents filled out the questionnaire via online forms shared through email and social networking sites, as well as offline paper surveys. The participants were individuals aged 18 and over with experience watching beauty vloggers reviewing vegan cosmetics on YouTube. Vegan cosmetics include skincare, color cosmetics (also known as makeup), haircare, fragrances, and personal care. YouTube was chosen because it is the largest video-sharing platform in the world. Two screening questions were used to include only qualified participants. Moreover, the beauty category is the most popular content category on YouTube (Muda & Hamzah, 2021). Given that this study has 18 indicators, a minimum sample size of 180 was required, as the general rule suggests there should be five to ten observations for each indicator (Hair et al., 2018). Without a sampling frame, the study employed a convenience snowball sampling method. The authors initially distributed the questionnaire to colleagues, friends, and acquaintances, who

Table 1. Summary of the variables

Construct	Items	Sources
Expertise	EXP1. The beauty vlogger is an expert in vegan cosmetics	Ohanian (1990), Manchanda et al. (2022)
	EXP2. The beauty vlogger is knowledgeable in vegan cosmetics	
	EXP3. The beauty vlogger is qualified to offer advice related to vegan cosmetics	
	EXP4. The beauty vlogger is skilled in vegan cosmetics	
Trustworthiness	TW1. The beauty vlogger is dependable	Ohanian (1990)
	TW2. The beauty vlogger is honest	
	TW3. The beauty vlogger is reliable	
Physical attractiveness	ATT1. The beauty vlogger is good-looking	Manchanda et al. (2022)
	ATT2. The beauty vlogger is elegant	
	ATT3. The beauty vlogger is glamorous	
Cognitive attitude	CATT1. It is wise to purchase the vegan cosmetics product recommended by the beauty vlogger	Kim et al. (2021)
	CATT2. It is worth purchasing the vegan cosmetics product recommended by the beauty vlogger	
	CATT3. It is ideal to purchase the vegan cosmetics product recommended by the beauty vlogger	
Affective attitude	AFATT1. I like to purchase the vegan cosmetics products recommended by the beauty vlogger	Kim et al. (2021)
	AFATT2. I enjoy purchasing the vegan cosmetics products recommended by the beauty vlogger	
	AFATT3. It is pleasant to purchase the vegan cosmetics product recommended by the beauty vlogger	
Purchase intention	PI1. I am happy to buy vegan cosmetics products recommended by the beauty vlogger in the future	Ngo et al. (2024)
	PI2. I would buy vegan cosmetics products recommended by the beauty vlogger in the future	
	PI3. I intend to buy vegan cosmetics products recommended by the beauty vlogger in the future	

were then asked to invite others in their network to participate in the survey. The survey participants were allowed to complete either an online or paper version based on their preference. For the online survey, participants were given an anonymous URL created via Google Forms. This URL was mainly circulated via social media. In addition, to minimize the effect of social desirability bias, as recommended by Podsakoff et al. (2012), specific instructions were given to respondents on how to answer the questions. They were informed about the research’s academic purposes, reassured about their anonymity and confidentiality, and told that there were no right or wrong responses. A total of 394 responses were collected over approximately three months. Twelve responses were discarded due to missing data, resulting in a final valid sample of 382 respondents, which exceeded the target sample size.

Structural equation modeling (SEM) was employed for hypothesis testing. There are two primary approaches to SEM: Covariance-based SEM (CB-SEM) and partial least squares SEM (PLS-SEM). PLS-SEM is recommended for theory development studies (Reinartz et al., 2009). As this study incorporates source credibility components into the stimuli stage and cognitive and affective attitude into the organism stage, it extends the SOR model. Therefore, PLS-SEM was preferred for hypothesis testing. Besides, PLS-SEM is more adaptable when dealing with non-normal data. This is often seen in social science studies, where data frequently deviates from a multivariate normal distribution (Reinartz et al., 2009). This was a crucial aspect of this study, as the type of distribution was unknown before data collection.

3. RESULTS

The demographic information in Table 2 reveals that most respondents were female, accounting for 83.2%, compared to 16.8% of males. Regarding age, approximately 30.7% were between 18 and 24, 36.2% were between 25 and 34, 26.6% were between 35 and 44, and 6.5% were above 45 years old. In terms of qualifications, respondents are well-educated. The data show

that most respondents held college or university degrees (76.7%), while 15.7% had graduate or above education. A small percentage had a professional degree (4.7%), and 2.9% had high school or below education. The age and educational levels of the sample closely resemble those previously reported in research on green beauty care products (Nguyen-Viet & Nguyen, 2024). Income was classified into 4 groups: under VND 10 million (101 respondents, 26.5%), VND 10 million – 20 million (137 respondents, 35.9%), over VND 20 million to 30 million (86 respondents, 22.6%), and over VND 30 million (57 respondents, 15%).

Table 2. Demographic profile of respondents (*n* = 382)

Classification		Frequency	Percentage (%)
Gender	Female	318	83.2
	Male	64	16.8
Age	18-24	117	30.7
	25-34	138	36.2
	35-44	102	26.6
	Over 45	25	6.5
Income	Under VND 10,000,000	101	26.5
	10,000,000 – 20,000,000	137	35.9
	20,000,001 – 30,000,000	86	22.6
	Over 30,000,000	57	15
Educational level	High school and below	11	2.9
	Professional degree	18	4.7
	College or Bachelor’s degree	293	76.7
	Graduate or above	60	15.7

The measurement model analysis evaluates measurement scales’ internal consistent reliability and convergent and discriminant validity (Hair et al., 2019). The results in Table 3 and Figure 2 indicate that all items had outer loadings ranging from 0.833 to 0.904, exceeding the cutoff value of 0.70 (Hair et al., 2019). Cronbach’s alpha values for all variables were between 0.804 and 0.904, which surpassed the cutoff value of 0.70. Additionally, the composite reliability (CR) values for all variables fell between 0.884 and 0.932, which exceeded the cutoff value of 0.70 (Hair et al., 2019). Thus, the measures’ internal consistent reliability is satisfactory.

Table 3. Reliability and validity

Variable	Item	Outer loading	CR	AVE	Cronbach's alpha
Expertise	EXP1	0.888	0.932	0.775	0.904
	EXP2	0.868			
	EXP3	0.874			
	EXP4	0.892			
Trustworthiness	TW1	0.910	0.922	0.798	0.874
	TW2	0.868			
	TW3	0.902			
Attractiveness	ATT1	0.833	0.884	0.718	0.804
	ATT2	0.848			
	ATT3	0.863			
Cognitive attitude	CATT1	0.904	0.928	0.811	0.884
	CATT2	0.896			
	CATT3	0.901			
Affective attitude	AFATT1	0.868	0.895	0.739	0.824
	AFATT2	0.848			
	AFATT3	0.863			
Purchase intention	PI1	0.851	0.913	0.778	0.857
	PI2	0.909			
	PI3	0.885			

Furthermore, the average variance extracted (AVE) values ranged from 0.718 to 0.811. These values surpassed the cutoff value of 0.50 (Hair et al., 2019), indicating a good convergent validity. Fornell and Larcker's criterion (Fornell &

Larcker, 1981) and HTMT ratio (Henseler et al., 2015) were used to assess discriminant validity. The criterion set by Fornell and Larcker is assessed by contrasting the square roots of the AVE with the correlations between latent variables

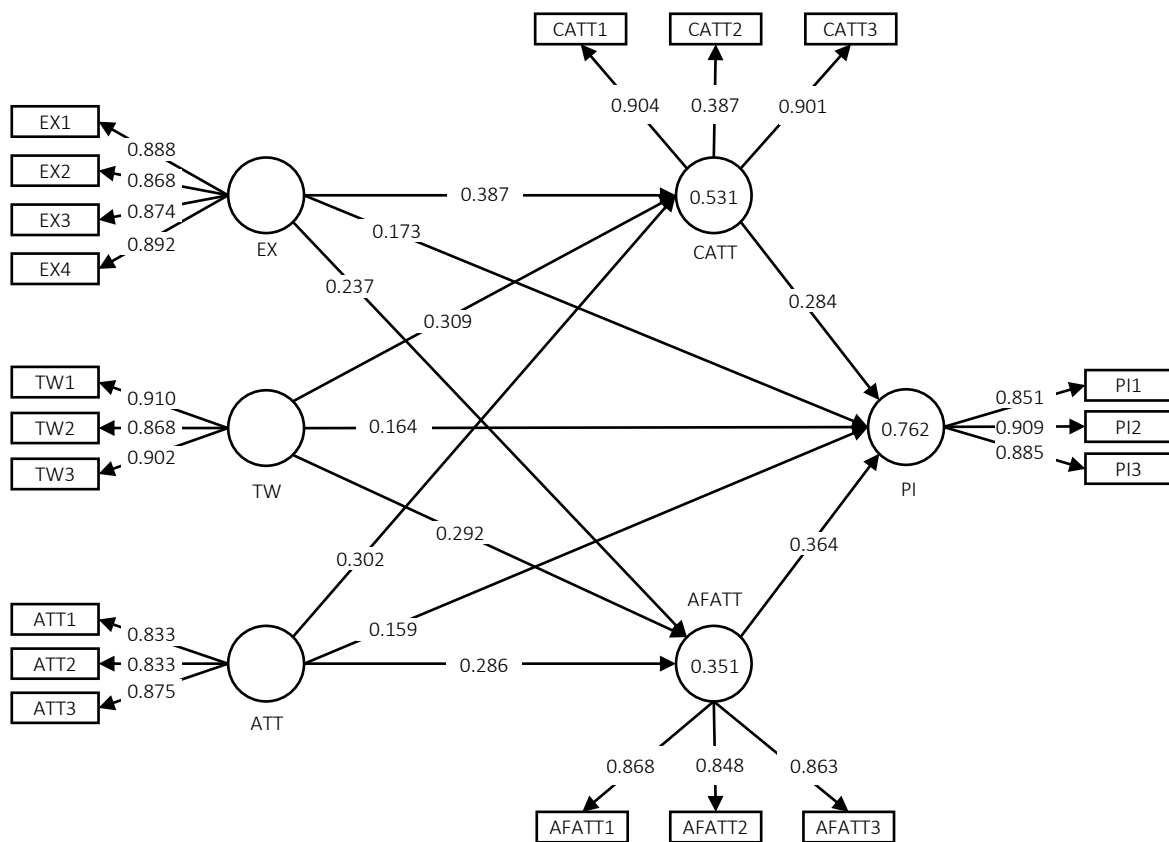


Figure 2. Evaluation of the measurement model

(Fornell & Larcker, 1981). If the square roots of a construct's AVE exceed the squared correlations of other constructs, discriminant validity is deemed to be established. Table 4 illustrates that the square root of all AVE values on the main diagonal exceeds the correlation coefficient between constructs in the corresponding rows and columns of the matrix, providing initial support for discriminant validity (Hair et al., 2019). HTMT is another criterion to evaluate discriminant validity. Table 5 presents that all HTMT ratios are below 0.90, indicating that discriminant validity is achieved (Hair et al., 2019).

Table 4. Fornell and Larcker criterion for discriminant validity

	AFATT	ATT	CATT	EX	PI	TW
AFATT	0.860					
ATT	0.422	0.847				
CATT	0.554	0.482	0.901			
EX	0.416	0.259	0.577	0.881		
PI	0.734	0.536	0.748	0.588	0.882	
TW	0.451	0.257	0.526	0.360	0.580	0.894

Note: square roots of AVE are on the main diagonal.

Table 5. Heterotrait-monotrait (HTMT) ratios for discriminant validity

	AFATT	ATT	CATT	EX	PI	TW
AFATT						
ATT	0.517					
CATT	0.649	0.567				
EX	0.479	0.299	0.642			
PI	0.868	0.641	0.859	0.665		
TW	0.529	0.305	0.598	0.398	0.665	

Next, the structural model is evaluated to verify the hypothesized relationships using the bootstrapping method with 5,000 resamples. All VIF values are smaller than the threshold value of 5. Hence, multicollinearity did not violate the sample data (Hair et al., 2019).

As shown in Figure 3 and Table 6, all the direct path relationships were accepted at a significance level of 5%. Consumers' purchase intention towards vegan cosmetics was positively influenced by expertise ($\beta = 0.173, p < 0.001$), trustworthiness ($\beta = 0.164, p < 0.001$), and physical attractiveness ($\beta = 0.159, p < 0.001$) of the beauty vlogger. Thus,

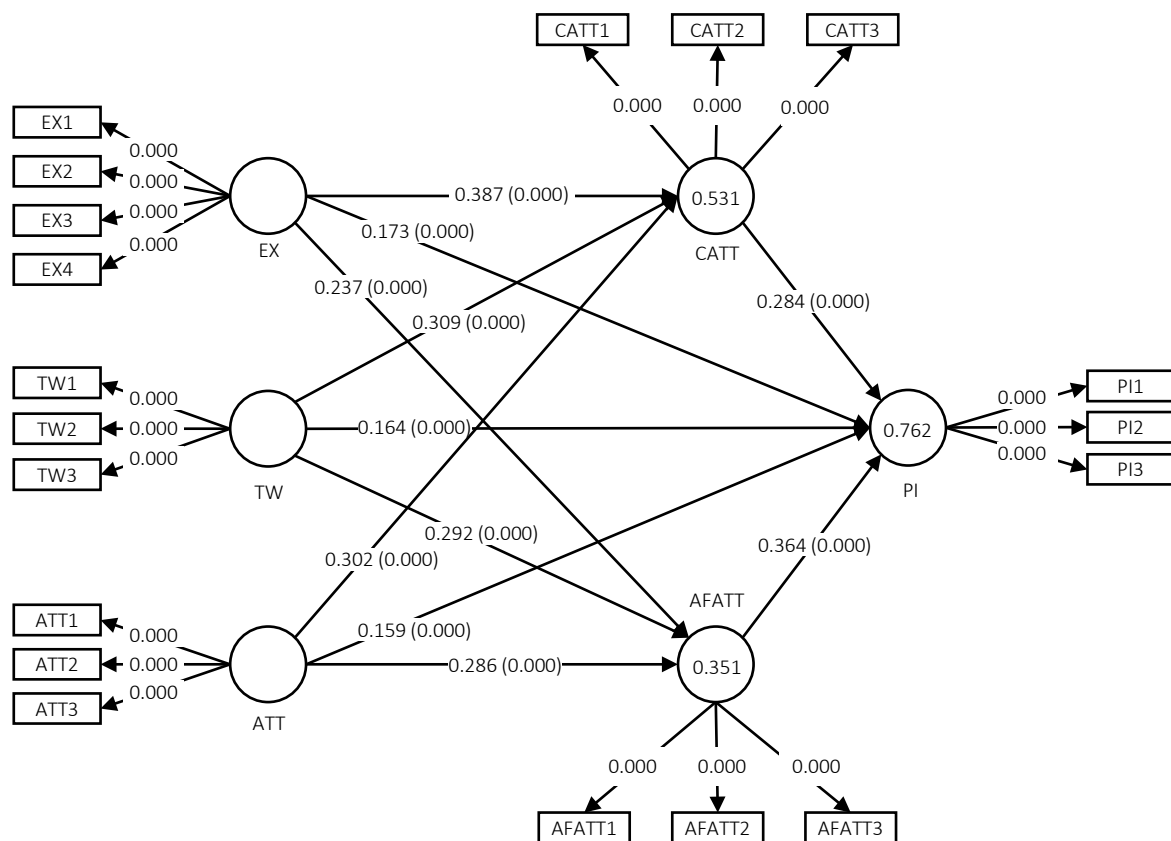


Figure 3. Structural model assessment

H1a, H1b, and H1c are validated. Furthermore, expertise was positively associated with cognitive attitude ($\beta = 0.387, p < 0.001$) and affective attitude ($\beta = 0.237, p < 0.001$). Hence, H2a and H2b are accepted. Moreover, trustworthiness was positively related to cognitive attitude ($\beta = 0.309, p < 0.001$) and affective attitude ($\beta = 0.292, p < 0.001$). Therefore, H3 and H3b are supported. Physical attractiveness was positively associated with cognitive attitude ($\beta = 0.302, p < 0.001$) and affective attitude attractiveness ($\beta = 0.286, p < 0.001$), confirming H4a and H4b. Besides, purchase intention was positively affected by cognitive attitude ($\beta = 0.284, p < 0.001$) and affective attitude ($\beta = 0.364, p < 0.001$), supporting H5 and H6. Out of all predictors, the affective attitude had the strongest impact on purchase intention, followed by cognitive attitude, expertise, trustworthiness, and physical attractiveness. Expertise was the strongest predictor of cognitive attitude, followed by trustworthiness, and physical attractiveness. In contrast,

trustworthiness had the most substantial effect on affective attitude, followed by physical attractiveness, and expertise.

All six hypotheses regarding indirect effects are supported at 5% significance level. According to Table 7, cognitive attitude positively mediates the influence of expertise ($\beta = 0.110, p < 0.001$), trustworthiness ($\beta = 0.088, p < 0.001$), and physical attractiveness ($\beta = 0.086, p < 0.001$) on consumers' purchase intention. Therefore, H7a, H7b and H7c are supported. Moreover, affective attitude positively mediates the effect of expertise ($\beta = 0.086, p < 0.001$), trustworthiness ($\beta = 0.106, p < 0.001$), and physical attractiveness ($\beta = 0.104, p < 0.001$) on consumers' purchase intention. Thus, H8a, H8b and H8c are supported. Given that both direct and indirect effects are significant and point in the same direction, the mediating effects of cognitive and affective attitude are categorized as complementary mediation (Zhao et al., 2010).

Table 6. Structural path estimates

Hypothesis	Relationship	Path coefficient	Std.	p-value	Decisions	f-square	Effect sizes
Direct effects							
H1a	Expertise → Purchase intention	0.173	0.038	0.000	Supported	0.082	Small
H1b	Trustworthiness → Purchase intention	0.164	0.032	0.000	Supported	0.077	Small
H1c	Physical attractiveness → Purchase intention	0.159	0.027	0.000	Supported	0.077	Small
H2a	Expertise → Cognitive attitude	0.387	0.043	0.000	Supported	0.269	Medium
H2b	Expertise → Affective attitude	0.237	0.046	0.000	Supported	0.073	Small
H3a	Trustworthiness → Cognitive attitude	0.309	0.036	0.000	Supported	0.172	Medium
H3b	Trustworthiness → Affective attitude	0.292	0.046	0.000	Supported	0.110	Small
H4a	Physical attractiveness → Cognitive attitude	0.302	0.034	0.000	Supported	0.175	Medium
H4b	Physical attractiveness → Affective attitude	0.286	0.044	0.000	Supported	0.113	Small
H5	Cognitive attitude → Purchase intention	0.284	0.058	0.000	Supported	0.150	Medium
H6	Affective attitude → Purchase intention	0.364	0.048	0.000	Supported	0.077	Small

Table 7. Results of indirect effects

Hypothesis	Relationship	Path coefficient	Std.	p-value	VAF	Decision
H7a	Expertise → Cognitive attitude → Purchase intention	0.110	0.029	0.000	29.80%	Complementary mediator
H7b	Trustworthiness → Cognitive attitude → Purchase intention	0.088	0.022	0.000	24.58%	Complementary mediator
H7c	Physical attractiveness → Cognitive attitude → Purchase intention	0.086	0.020	0.000	23.62%	Complementary mediator
H8a	Expertise → Affective attitude → Purchase intention	0.086	0.020	0.000	23.62%	Complementary mediator
H8b	Trustworthiness → Affective attitude → Purchase intention	0.106	0.023	0.000	29.60%	Complementary mediator
H8c	Physical attractiveness → Affective attitude → Purchase intention	0.104	0.021	0.000	28.57%	Complementary mediator

Table 8. R-square and Q-square values

Endogenous constructs	R ²	Adjusted R ²	Level of predictive accuracy	Q ²	Predictive relevance
Cognitive attitude	0.531	0.528	Moderate	0.427	Medium
Affective attitude	0.351	0.346	Moderate	0.254	Medium
Purchase intention	0.762	0.758	High	0.581	Large

Additionally, all the VAF values fall between 20% and 80%, confirming the partial mediation.

The model’s predictive capability was evaluated using two criteria: predictive accuracy and predictive relevance. As shown in Table 8, the predictive accuracy was assessed based on the coefficient of determination (*R*²), representing each endogenous latent variable’s amount of explained variance (Hair et al., 2019). Accordingly, the beauty vloggers’ expertise, trustworthiness, and physical attractiveness of the beauty vlogger explained cognitive and affective attitude, accounting for 53.1% and 35.1% of the total variance, respectively. These *R*² values indicate a moderate level of predictive accuracy (Henseler et al., 2009). All constructs collectively explained approximately 76.2% of the variance of consumers’ purchase intention, demonstrating high predictive accuracy (Henseler et al., 2009).

On the other hand, the Stone-Geisser *Q*² (cross-validated redundancy) value greater than 0 was used to determine the endogenous variable’s predictive relevance in the extended model. This was done by applying the blindfolding procedure in SmartPLS4.0. The *Q*² values for cognitive attitude, affective attitude, and purchase intention were 0.427, 0.254, and 0.581, confirming the sufficient relevance of the proposed model.

4. DISCUSSION

This study explored how beauty vlogger’s credibility influences consumer purchase intentions for vegan cosmetics via cognitive and affective attitudes. An integrated model was developed from the source credibility theory and the stimulus-organism-response theory. Hypothesized relationships were tested using data from individuals who had previously watched vegan cosmetics recommended by beauty vloggers. The stimuli were the vloggers’ expertise, trustworthiness, and physical attractiveness. The organism was operationalized

as the cognitive and affective approach to attitude, and the response was reflected by purchase intention.

The findings revealed that consumers’ purchase intention of vegan cosmetics was affected by affective attitude, cognitive attitude, expertise, trustworthiness, and physical attractiveness. This finding is similar to that of Lee and Yun (2015) and Suparno (2020). To the best of the researchers’ knowledge, no prior research has investigated the integrative effects of source credibility of beauty vloggers on both consumers’ cognitive and affective attitudes. This study offers fresh insights into the source credibility-attitude-intention hierarchy in the context of vegan cosmetics. Both cognitive and affective attitudes were positively affected by the vlogger’s expertise, trustworthiness, and physical attractiveness. This finding extends the work of Walten and Wiedmann (2022). Cognitive attitude was primarily influenced by expertise, while affective attitude was mainly influenced by trustworthiness. These are novel findings. One possible explanation is that consumers value a product’s functional and physical attributes when forming cognitive evaluations, so they place crucial importance on whether the vlogger has expert knowledge of vegan cosmetics. Conversely, consumers also seek information about product’s weaknesses. Therefore, honest reviews that include positive and negative aspects are likely to impress consumers, leading to positive emotions towards the vlogger. The current study validates an extended SOR framework by incorporating source credibility elements as stimuli and supports its application in influencer marketing research (Song et al., 2023).

Furthermore, this study supported the complementary mediating effect of cognitive and affective attitudes on the impact of vlogger’s expertise, trustworthiness, and physical attractiveness on consumers’ intention to purchase vegan cosmetics. These insights build upon a prior study by Walten and Wiedmann (2022), which established that credible

information sources contribute to positive cognitive and affective attitudes and purchase intention toward innovative products but did not explore the causal relationships between these factors.

Finally, this study emphasizes that the source credibility of beauty vloggers affects consumers' purchase intention directly and indirectly via cognitive

and affective attitudes. It therefore highlights the importance of understanding the underlying mechanism through which the source credibility of beauty vloggers influences consumer responses. The mediated model validated in the current study can serve as a theoretical framework for future research in the areas of vegan cosmetics and influencer marketing.

CONCLUSION

The findings of this study offer theoretical advancements. First, it fills the gap in understanding the impact of source credibility of beauty vloggers (i.e., source expertise, trustworthiness, and physical attractiveness) on consumers' purchase intention towards vegan cosmetics. Second, it validates the existence of two sub-dimensions of attitude toward purchasing vegan cosmetics. Finally, it highlights the crucial role of cognitive and affective attitudes as mediators between source credibility and the purchase intention of vegan cosmetics.

This study has several implications for beauty vloggers and vegan cosmetic brands. First, it identified that three dimensions of source credibility influence consumers' attitudes toward purchasing vegan cosmetics. To be more persuasive, beauty vloggers should showcase strong makeup and skincare skills, explain product descriptions and ingredients in simple terms, and maintain objectivity, especially for sponsored content. They should also care about their appearance to avoid bias in products' features and effects.

The findings highlight the significance of vlogs as a marketing communication tool that vegan cosmetic brands can utilize. Companies looking to integrate platforms like YouTube into their promotional strategies should engage with trusted, knowledgeable, and appealing vloggers. Those with a large following who can sample and review products are particularly beneficial, as regular product reviewers on social media are often seen as opinion leaders. Reviews should encompass both positive and negative aspects to enhance credibility.

Several limitations in this study should be addressed in the future. First, this study collected cross-sectional data, which might reduce the internal validity of the hypothesis testing. Future researchers should gather longitudinal data to better assess causal relationships between variables. Second, the study focused solely on Vietnamese consumers, potentially limiting the generalizability of the findings. Cross-countries comparisons could enhance the external validity of the proposed model. Third, data was collected using a non-probability sampling technique. This method was chosen due to the lack of a suitable sampling frame and consumer list. However, the sample's representativeness and effectiveness may be questioned. Future research should address this by using a more probability sampling technique.

AUTHOR CONTRIBUTIONS

Conceptualization: Bao Ngoc Le, Mai Thi Le.

Data curation: Bao Ngoc Le, Viet Tien Vu.

Formal analysis: Bao Ngoc Le, Mai Thi Le.

Funding acquisition: Bao Ngoc Le, Viet Tien Vu.

Investigation: Mai Thi Le.

Methodology: Bao Ngoc Le, Mai Thi Le.

Resources: Viet Tien Vu.
 Software: Viet Tien Vu, Mai Thi Le.
 Supervision: Bao Ngoc Le, Mai Thi Le.
 Validation: Bao Ngoc Le, Mai Thi Le.
 Visualization: Bao Ngoc Le, Viet Tien Vu.
 Writing – original draft: Bao Ngoc Le, Mai Thi Le.
 Writing – review & editing: Bao Ngoc Le, Mai Thi Le.

ACKNOWLEDGMENT

The authors would like to thank the Posts and Telecommunications Institute of Technology (PTIT) and the International School, Vietnam National University (VNU), Hanoi, Vietnam, for providing research assistance.

CONFLICTS OF INTEREST/COMPETING INTERESTS

The authors declare no conflict of interest.

REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. (2017). Social media in marketing: A review and analysis of the existing literature. *Telematics and Informatics*, 34(7), 1177-1190. <https://doi.org/10.1016/j.tele.2017.05.008>
- Barritt, A. (2020). Microcelebrity, Class, and Participatory Entitlement. In *Makeup in the World of Beauty Vlogging: Community, Commerce, and Culture* (pp. 65-84).
- Behr, D. (2017). Assessing the use of back translation: The shortcomings of back translation as a quality testing method. *International Journal of Social Research Methodology*, 20(6), 573-584. <https://doi.org/10.1080/13645579.2016.1252188>
- Bouranta, N., Chitiris, L., & Paravantis, J. (2009). The relationship between internal and external service quality. *International Journal of Con-temporary Hospitality Management*, 21(3), 275-293. <https://doi.org/10.1108/09596110910948297>
- Brielmann, A. A., & Pelli, D. G. (2018). Aesthetics. *Current Biology*, 28(16), R859-R863. <https://doi.org/10.1016/j.cub.2018.06.004>
- Claudy, M. C., Peterson, M., & O'Driscoll, A. (2013). Understanding the attitude-behavior gap for renewable energy systems using behavioral reasoning theory. *Journal of Macromarketing*, 3(4), 273-287. <https://doi.org/10.1177/0276146713481605>
- Dang-Van, T., Vo-Thanh, T., Vu, T. T., Wang, J., & Nguyen, N. (2023). Do consumers stick with good-looking broadcasters? The mediating and moderating mechanisms of motivation and emotion. *Journal of Business Research*, 156. <https://doi.org/10.1016/j.jbusres.2022.113483>
- Dawes, J. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5-point, 7-point and 10-point scales. *International Journal of Market Research*, 50(1), 61-104. <https://doi.org/10.1177/147078530805000106>
- Dos Santos, R. C., de Brito Silva, M. J., da Costa, M. F., & Batista, K. (2023). Go vegan! digital influence and social media use in the purchase intention of vegan products in the cosmetics industry. *Social Network Analysis and Mining*, 13(1). <https://doi.org/10.1007/s13278-023-01034-7>
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing a conceptual model and implications. *Journal of Business Research*, 54(2), 177-184. [https://doi.org/10.1016/s0148-2963\(99\)00087-9](https://doi.org/10.1016/s0148-2963(99)00087-9)
- Filieri, R., Acikgoz, F., & Du, H. (2023). Electronic word-of-mouth from video bloggers: The role of content quality and source homophily across hedonic and utilitarian products. *Journal of Business Research*, 160. <https://doi.org/10.1016/j.jbusres.2023.113774>
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.2307/3151312>

14. Hair, J. F., Babin, B. J., Anderson, R. E., & Black, W. C. (2018). *Multivariate Data Analysis* (8th ed.). Cengage Learning EMEA.
15. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
16. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
17. Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing* (Vol. 20, pp. 277-319). Emerald Group Publishing Limited. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014)
18. Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and persuasion*. Yale University Press.
19. Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 3(1-2), 128-143. <https://doi.org/10.1016/j.ism.2015.04.001>
20. Kim, J. J., Han, H., & Ariza-Montes, A. (2021). The impact of hotel attributes, well-being perception, and attitudes on brand loyalty: Examining the moderating role of COVID-19 pandemic. *Journal of Retailing and Consumer Services*, 62. <https://doi.org/10.1016/j.jretconser.2021.102634>
21. Lee, H., & Cheon, H. (2018). Exploring Korean Consumers' Attitudes Toward Ethical Consumption Behavior in the Light of Affect and Cognition. *Journal of International Consumer Marketing*, 30(2), 98-114. <https://doi.org/10.1080/08961530.2017.1376241>
22. Lee, H.-J., & Yun, Z.-S. (2015). Consumers' perceptions of organic food attributes and cognitive and affective attitudes as determinants of their purchase intentions toward organic food. *Food Quality and Preference*, 39, 259-267. <https://doi.org/10.1016/j.foodqual.2014.06.002>
23. Lee, J., & Kwon, K. H. (2022). Good ingredients from foods to vegan cosmetics after COVID-19 pandemic. *Journal of Cosmetic Dermatology*, 21(8), 3190-3199. <https://doi.org/10.1111/jocd.15028>
24. Manchanda, P., Arora, N., & Sethi, V. (2022). Impact of Beauty Vlogger's Credibility and Popularity on eWOM Sharing Intention: The Mediating Role of Parasocial Interaction. *Journal of Promotion Management*, 28(3), 379-412. <https://doi.org/10.1080/10496491.2021.1989542>
25. McGuire, W. J. (1985). Attitudes and Attitude Change. In a. E. A. Gardner Lindzey (Ed.), *Handbook of Social Psychology* (3rd ed., Vol. 2, pp. 233-346). Random House.
26. Mehrabian, A., & Russell, J. A. (1974). *An Approach To Environmental Psychology*. The MIT Press.
27. Muda, M., & Hamzah, M. I. (2021). Should I suggest this YouTube clip? The impact of UGC source credibility on eWOM and purchase intention. *Journal of Research in Interactive Marketing*, 15(3), 441-459. <https://doi.org/10.1108/jrim-04-2020-0072>
28. Ngo, T. N. H., Nguyen, V. B., & Hong, T. H. (2024). Purchase Intention for Vegan Cosmetics: Applying an Extended Theory of Planned Behavior Model. *Sage Open*, 14(1). <https://doi.org/10.1177/21582440241240548>
29. Nguyen, T. P., & Dekhili, S. (2019). Sustainable development in Vietnam: An examination of consumers' perceptions of green products. *Business Strategy & Development*, 2(2), 127-136. <https://doi.org/10.1002/bsd2.48>
30. Nguyen-Viet, B., & Nguyen, A. T. L. (2024). Vietnamese consumer's perspective on green beauty care products: Exploring the impact of animal welfare concerns and skepticism toward green advertising. *Acta Psychologica*, 244. <https://doi.org/10.1016/j.actpsy.2024.104210>
31. Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19(3), 39-52. <https://doi.org/10.1080/000913367.1990.10673191>
32. Petaasia. (2017). *Hồ Chí Minh named one of the top 10 most vegan-friendly cities in Asia 2017*. Retrieved from <https://www.petaasia.com/media/ho-chi-minh-named-one-top-10-most-vegan-friendly-cities-asia>
33. Pham, T. H., Nguyen, T. N., Phan, T. T. H., & Nguyen, N. T. (2018). Evaluating the purchase behaviour of organic food by young consumers in an emerging market economy. *Journal of Strategic Marketing*, 27(6), 540-556. <https://doi.org/10.1080/0965254x.2018.1447984>
34. Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539-569. <https://doi.org/10.1146/annurev-psych-120710-100452>
35. Rahmi, Y., Sekarasih, L., & Sjabadhini, B. (2017). The Influence of Beauty Vlog on Perceived Source Credibility and Purchase Intention. *Makara Human Behavior Studies in Asia*, 21(1). <https://doi.org/10.7454/mssh.v21i1.3496>
36. Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing*, 26(4), 332-344. <https://doi.org/10.1016/j.ijresmar.2009.08.001>
37. Sokolova, K., & Kefi, H. (2020). Instagram and YouTube bloggers promote it, why should I buy? How credibility and parasocial interaction influence purchase intentions. *Journal of Retailing and Consumer Services*, 53. <https://doi.org/10.1016/j.jretconser.2019.01.011>
38. Song, H. G., Kim, Y. S., & Hwang, E. (2023). How Attitude and Para-Social Interaction Influence Purchase Intentions of Mukbang Users: A Mixed-Method Study.

- Behavioral Sciences*, 13(3). <https://doi.org/10.3390/bs13030214>
39. Statista. (2023). *Social media in Vietnam - statistics & facts*. Retrieved from <https://www.statista.com/topics/8182/social-media-in-vietnam/#topicOverview>
 40. Suparno, C. (2020). Online purchase intention of halal cosmetics: S-O-R framework application. *Journal of Islamic Marketing*, 12(9), 1665-1681. <https://doi.org/10.1108/jima-09-2019-0192>
 41. Urban, K., Giesey, R., & Delost, G. (2022). A Guide to Informed Skincare: The Meaning of Clean, Natural, Organic, Vegan, and Cruelty-Free. *Journal of Drugs in Dermatology*, 21(9), 1012-1013. <https://doi.org/10.36849/JDD.6795>
 42. Walten, L., & Wiedmann, K.-P. (2022). How product information and source credibility affect consumer attitudes and intentions towards innovative food products. *Journal of Marketing Communications*, 29(7), 637-653. <https://doi.org/10.1080/13527266.2022.2061033>
 43. Weismueller, J., Harrigan, P., Wang, S., & Soutar, G. N. (2021). Influencer Endorsements: How Advertising Disclosure and Source Credibility Affect Consumer Purchase Intention on Social Media. *Australasian Marketing Journal*, 28(4), 160-170. <https://doi.org/10.1016/j.ausmj.2020.03.002>
 44. Zahid, H., Ali, S., Danish, M., & Sulaiman, M. A. B. A. (2022). Factors Affecting Consumers Intentions to Purchase Dairy Products in Pakistan: A Cognitive Affective-Attitude Approach. *Journal of International Food & Agribusiness Marketing*, 1-26. <https://doi.org/10.1080/08974438.2022.2125919>
 45. Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206. <https://doi.org/10.1086/651257>