e-ISSN: 3025-8189 ; p-ISSN: 3025-8197

LANCAH JURNAL INOVASI DAN TREN

doi.org/10.35870/ljit.v4i2.9125

Vol. 4, No. 2, 2026

PP. 1516-1533

Homepage http://www.journal.lembagakita.com/ljit

When Pixels Persuade: Virtual Influencer Content Appeals, Credibility, and Generation Z Purchase Intention

Anggi Angellia[1*], Retno Tanding Suryandari[2]

Faculty of Economics and Business, Universitas Sebelas Maret, Surakarta, Indonesia[1,2]

Corresponding Author's Email: anggiangellia23@student.uns.ac.id

ARTICLE INFO

Article History:

Submitted *10 30, 2026*
Accepted *11 09, 2026*
Published *11 15, 2026*

ABSTRACT

This study examines how the emotional, rational, and authenticity appeals of virtual influencer (VI) content, together with VI credibility, relate to Generation Z purchase intention through perceived content value and consumer engagement. Data were collected through an online survey of 354 Indonesian Generation Z Instagram users who had seen Lil Miquela's Calvin Klein content and were analyzed using partial least squares structural equation modeling (PLS-SEM). Nine of the eleven hypotheses were supported. Rational appeal, emotional appeal, and VI credibility were positively related to perceived content value, with rational appeal showing the strongest relationship, whereas authenticity appeal had no significant effect. Perceived content value was strongly related to consumer engagement, which in turn was positively related to purchase intention. Perceived content value also mediated the relationships of the three significant antecedents with engagement, and engagement mediated the link between perceived content value and purchase intention. The study extends advertising value and source credibility perspectives to non-human endorsers by examining message appeals and source credibility jointly. For practitioners, the findings highlight the importance of informative, emotionally relevant, and credible VI content. The cross-sectional, single-influencer, and single-brand design limits causal inference and generalizability.

Keywords: *Virtual Influencer; Advertising Value; Source Credibility; Perceived Content Value; Consumer Engagement; Purchase Intention*

How to Cite:

Angellia, A., & Suryandari, R. T. (2026). When Pixels Persuade: Virtual Influencer Content Appeals, Credibility, and Generation Z Purchase Intention. LANCAH: Jurnal Inovasi Dan Tren, 4(2), 1516-1533. https://journal.lembagakita.com/ljit/article/view/9125

Copyright @ 2026. Published by Lembaga Komunitas Informasi Teknologi Aceh (KITA), Indonesia. This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). Based on a work at http://journal.lembagakita.com/ljit

Abstract & Indexing CC BY-NC 4.0 OPEN ACCESS

INTRODUCTION

Social media has become a principal arena for brand communication. In Indonesia, 143 million social media user identities were recorded at the start of 2025 (Kemp, 2025), and Generation Z, defined as individuals born between 1997 and 2012, accounts for 27.94% of the population (Badan Pusat Statistik, 2021). For fashion brands, digital marketing has become a pressing strategic concern (McKinsey & Company & The Business of Fashion, 2022), and collaborations with virtual influencers offer a distinctive setting in which to examine how young consumers evaluate both a promotional message and its source.

Virtual influencers (VIs) are digitally created personas managed by individuals or creative teams. They publish content, collaborate with brands, and interact with audiences on social media platforms (Moustakas et al., 2020). This study focuses on Lil Miquela's Calvin Klein-related Instagram content. Although a constructed persona affords its managers considerable control over presentation and narrative, it does not eliminate reputational or authenticity concerns. Research on human influencers and VIs highlights that audiences evaluate authenticity differently across these two settings (Audrezet et al., 2020; Lou et al., 2023).

Exposure to, and interaction with, influencer content do not necessarily translate into purchase intention. A preliminary survey of 32 Generation Z users conducted for this study revealed that 75% reported interacting with content because of its value or benefits, 59.4% because of its entertainment, and only 3.1% because of its authenticity. These descriptive pilot results informed the research focus but do not constitute a test of the proposed model. Related Indonesian live-commerce research has examined engagement and purchase-related responses to source and emotional cues (Triyanto, 2026; Triyanto & Haryanto, 2026). Impulsive buying in live commerce, however, differs conceptually from the intention to purchase a fashion product promoted by a VI.

Prior research on influencer persuasion has examined source credibility and relational responses (Sokolova & Kefi, 2020), whereas VI research has considered either the characteristics of content (Rungruangjit et al., 2024) or the credibility of the VI as a source (Jayasingh et al., 2025; Kim & Wang, 2024). Cao et al. (2025) link perceived value, engagement, and purchase intention in VI marketing but treat credibility as a moderator and place engagement before value. What has not yet been addressed is how message appeals and source credibility together relate to consumers' evaluation of VI content, and how this evaluation is linked to engagement and purchase intention. This article addresses that gap in three ways: it tests emotional, rational, and authenticity appeals together with VI credibility as joint antecedents of perceived content value; it treats authenticity appeal as a narrative-consistency construct that is distinct from source credibility; and it models a value-engagement-purchase intention sequence among Indonesian Generation Z consumers in a premium-fashion context, a setting that has received little attention in VI research.

Against this background, this study distinguishes three message appeals, namely emotional, rational, and authenticity appeals, from consumers' evaluation of the VI as a source. Emotional and rational appeals capture the experience and information offered by the message; authenticity appeal captures the message's consistency with the VI's persona and narrative; and VI credibility captures evaluations of the source. Perceived content value and consumer engagement are modeled sequentially, using responses from Indonesian Generation Z consumers exposed to Lil Miquela's Calvin Klein content on Instagram.

Accordingly, this study aims to: (1) examine the effects of emotional appeal, rational appeal, authenticity appeal and VI credibility on perceived content value (H1–H4); (2) examine the effect of

perceived content value on consumer engagement and the effect of engagement on purchase intention (H5–H6); and (3) test the mediating roles of perceived content value and consumer engagement (H7–H11).

LITERATURE REVIEW

1) Theoretical Foundation: Advertising Value and Source Credibility

This study is grounded in advertising value theory (Ducoffe, 1996) and the source credibility model (Ohanian, 1990). Advertising value theory explains how consumers judge the worth of a promotional message, whereas the source credibility model explains how they evaluate the communicator delivering it. Combining the two perspectives allows message characteristics and source evaluations to be examined within a single framework. Although related, the constructs derived from these perspectives remain conceptually distinct.

Advertising value refers to consumers' assessment of how useful or worthwhile advertising is. Ducoffe's (1996) framework relates informativeness, entertainment, and irritation to advertising value, whereas credibility is treated separately in the present study. Subsequent influencer research has examined message value alongside source credibility and trust in branded content (Lou & Yuan, 2019). Cao et al. (2025) further investigate perceived value, engagement, and purchase intention in VI marketing; their model offers a closely related perspective, although its ordering of engagement and value differs from the sequence proposed here.

Source evaluations complement message evaluations. Ohanian's (1990) endorser scale distinguishes attractiveness, expertise and trustworthiness, dimensions that are pertinent to understanding how consumers assess a digitally created persona. Studies of AI-based and virtual influencers have considered the role of credibility in engagement, advertising responses and purchase intention (Jayasingh et al., 2025; Kim & Wang, 2024; Zeng & Lin, 2025), while Triyanto (2026) examines source-related cues and parasocial responses in the related but distinct setting of live commerce.

Following the content categories examined by Rungruangjit et al. (2024), the present study distinguishes emotional, rational and authenticity appeals. The first two share conceptual links with entertainment and informativeness, respectively. Authenticity appeal is introduced as a narrative-consistency construct rather than being equated with factual message credibility, and VI credibility is assessed separately as a source evaluation. The four antecedents are proposed to relate to perceived content value, which is in turn followed by engagement and purchase intention (Figure 1). This specification extends selected ideas from both perspectives; it does not reproduce Ducoffe's original model unchanged. Unlike prior VI studies that examine content characteristics (Rungruangjit et al., 2024) or source credibility (Jayasingh et al., 2025; Zeng & Lin, 2025) separately, or that treat credibility as a moderator (Cao et al., 2025), the present model positions message appeals and source credibility as joint antecedents of perceived content value. This integration constitutes the main theoretical novelty of the study.

2) Content Appeals, Source Credibility and Perceived Content Value

Emotional appeal concerns the capacity of content to evoke feelings such as enjoyment, hope, pride, or closeness. Entertainment can enhance advertising value by making a message pleasurable to receive (Ducoffe, 1996; Lou & Yuan, 2019), and emotional value constitutes a recognized dimension of consumer evaluation (Sweeney & Soutar, 2001). Rungruangjit et al. (2024) examine emotional content in responses to human-like VIs, while Triyanto and Haryanto (2026) investigate displayed emotions and engagement in

live commerce. These studies motivate the proposed relationship without establishing that the same emotional process operates identically across contexts.
H1. *Emotional appeal of VI content positively affects perceived content value*.

Rational appeal concerns useful information about a brand and its products, including sponsorship disclosure, offers and product news. Research on social media advertising has linked informativeness with perceived value (Hanaysha & Alhyasat, 2025; van Deventer & Saraiva, 2025), and digital content research has considered perceived value in brand- and purchase-related responses (Bui et al., 2023; Liu & Wang, 2023). The elaboration likelihood model offers a complementary account of how relevant arguments are processed, contingent on motivation and ability (Petty & Cacioppo, 1986). Together, these perspectives support the examination of rational appeal as an antecedent of perceived content value.
H2. *Rational appeal of VI content positively affects perceived content value.*

Authenticity appeal is operationalised here through content–persona fit, the portrayal of a lively lifestyle and personal storytelling, adapted from Rungruangjit et al. (2024). Human-influencer research has addressed authenticity management, its measurement and its relationship with content or brand responses (Audrezet et al., 2020; Hasan et al., 2024; Lee & Eastin, 2021; Liao & Chen, 2024; Ünalmış et al., 2026). These studies, however, do not establish that narrative cues carry the same meaning for an artificial persona. VI research instead suggests that audiences can separate the constructed character from their evaluation of its presentation (Lou et al., 2023; Zeng & Lin, 2025). A positive relationship with perceived value is therefore proposed for testing rather than assumed.
H3. *Authenticity appeal of VI content positively affects perceived content value.*

Consumers may regard an attractive, knowledgeable and trustworthy VI as a credible source of product information (Ohanian, 1990). Credibility has been examined in relation to engagement and purchase intention in AI-influencer research (Jayasingh et al., 2025) and in advertising responses to human and virtual influencers (Kim & Wang, 2024). Cao et al. (2025) also treat credibility as a moderator of VI marketing responses, a role distinct from its antecedent role in the present model. This literature provides a basis for examining VI credibility in relation to perceived content value.
H4. *VI credibility positively affects perceived content value.*

3) Perceived Content Value, Engagement and Purchase Intention

Consumer engagement broadly denotes cognitive, emotional and behavioural investment in brandrelated interaction (Hollebeek et al., 2014). The four-item instrument employed here focuses on viewing, attention, interaction and information seeking and therefore does not separately capture every facet of that broad definition. Nguyen et al. (2024) examine perceived values and online engagement in a model of brand loyalty, and Cao et al. (2025) link engagement with perceived value in VI marketing, albeit in a different order. These studies motivate an examination of the proposed value-engagement relationship, whose direction must nonetheless be interpreted within the limitations of the design.
H5. *Perceived content value positively affects consumer engagement.*

Engagement may be accompanied by greater attention to, and interest in, the promoted products. Cao et al. (2025) examine engagement and purchase intention in VI marketing, while Angmo et al. (2026) consider VI content, credibility and consumer responses. Sokolova and Kefi (2020) study credibility and parasocial interaction in relation to purchase intention, although those relational constructs should not be

equated with engagement. Indonesian live-commerce studies likewise examine engagement alongside impulsive buying, a different purchase-related outcome (Triyanto, 2026; Triyanto & Haryanto, 2026). The following hypothesis therefore concerns purchase intention specifically.

H6. *Consumer engagement positively affects purchase intention.*

4) Proposed Indirect Relationships

Consumers' evaluation of content may help to explain how message and source cues relate to engagement. Similarly, engagement may help to explain the relationship between perceived content value and purchase intention. Advertising value theory and related influencer studies provide a basis for investigating these indirect relationships, but they do not require every message effect to be fully mediated (Cao et al., 2025; Ducoffe, 1996; Nguyen et al., 2024). Live-commerce evidence also examines engagement within indirect purchase-related pathways, without testing the same value-based sequence (Triyanto & Haryanto, 2026). The hypotheses below specify two-path indirect effects; the complete three-link serial effect from each initial antecedent to purchase intention is a separate quantity.

H7. *Perceived content value mediates the effect of emotional appeal on consumer engagement.*

H8. *Perceived content value mediates the effect of rational appeal on consumer engagement.*

H9. *Perceived content value mediates the effect of authenticity appeal on consumer engagement.*

H10. *Perceived content value mediates the effect of VI credibility on consumer engagement.*

H11. *Consumer engagement mediates the effect of perceived content value on purchase intention.*

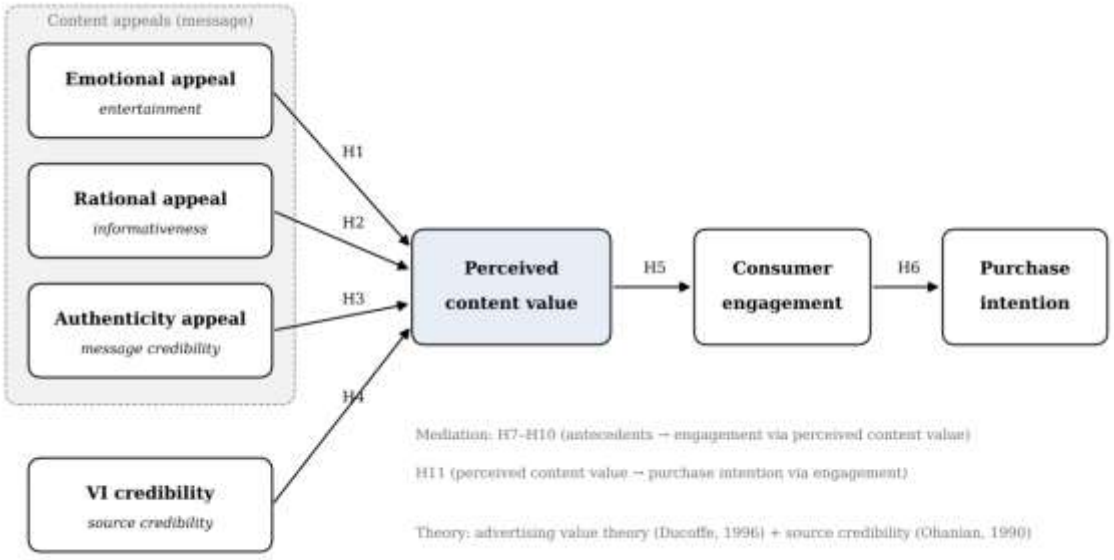


Figure 1. Research Model
(Source: Developed by the authors based on Ducoffe (1996) and Ohanian (1990))

Note: *The diagram presents the proposed conceptual links. The authenticity label refers to narrative cues and does not imply that authenticity appeal and message credibility are interchangeable constructs.*

METHODS OF RESEARCH

1) Research Design and Setting

This study adopted a quantitative, cross-sectional survey design. It focuses on Lil Miquela, a humanlike VI, and her Instagram content associated with Calvin Klein. This combination provides a specific premium-fashion setting in which respondents are able to evaluate both the content and its source. Rather than assuming that all Indonesian Instagram users encounter or recognize the collaboration, the sampling criteria required familiarity with both the persona and the brand.

2) Population, Sampling and Data Collection

The population comprised Indonesian Generation Z consumers who actively used Instagram and were familiar with Lil Miquela and Calvin Klein. Purposive sampling was employed to obtain informed evaluations of the specified content (Etikan et al., 2016). Screening questions required respondents to belong to the target generation, to use Instagram actively, to recognize Lil Miquela as a VI, to know Calvin Klein, and to have seen Lil Miquela's Calvin Klein-related Instagram content. The final reported age categories span 18–28 years.

The questionnaire was administered via Google Forms from 10 August to 10 September 2026 and distributed through Instagram, WhatsApp groups and communities, X, and TikTok. Of the 363 responses received, 354 passed the screening and data-quality checks and were retained for analysis. The model comprised 65 indicators. Although the sample exceeds a heuristic of five observations per indicator, this calculation alone does not establish statistical power or sample adequacy, because expected effects, model specification, and estimation requirements also matter (Hair et al., 2022).

Table 1 summarizes the sample profile. Most respondents were aged 22–25 years (59.0%), female (78.8%), held a bachelor's degree (55.9%), and were students (47.2%). Respondents were drawn from different locations, including Jakarta (22.3%) and Surabaya (19.2%), and reported a range of income or allowance levels. Given its purposive composition, the sample is not representative of all Indonesian Generation Z consumers.

Table 1. Respondent Profile (n = 354)

Characteristic	Category	n	%
Age	18–21 years	129	36.4
	22–25 years	209	59.0
	26–28 years	16	4.5
Gender	Female	279	78.8
	Male	75	21.2
Education	Bachelor’s degree	198	55.9
	Senior high school	131	37.0
	Diploma	18	5.1
	Master’s degree or other	7	2.0
Occupation	Student	167	47.2
	Private-sector employee	118	33.3
	Entrepreneur	28	7.9
	Civil servant	24	6.8
	Other	17	4.8
Monthly income or allowance (IDR)	< 1,000,000	76	21.5
	1,000,000–2,999,999	132	37.3
	3,000,000–4,999,999	47	13.3
	5,000,000–9,999,999	59	16.7

	≥ 10,000,000	15	4.2
	No fixed income	25	7.0

Note: Percentages are reported as computed from the sample and may not total 100% because of rounding.
(Source: Primary data processed, 2026)

3) Measurement

All constructs were specified as reflective and measured on five-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). Items were adapted from the sources listed in Table 2, translated into Indonesian and contextualised to Lil Miquela's content promoting Calvin Klein. Table 2 reports the number of items and the dimensions captured by each scale.

Table 2. Measurement Scales

Construct	Items	Dimensions captured	Source
Emotional appeal	22	Positive-emotion, entertaining and relational content	Rungruangjit et al. (2024)
Rational appeal	10	Sponsorship disclosure, remunerative and informative content	Rungruangjit et al. (2024)
Authenticity appeal	3	Content–personality fit, lively lifestyle, personal storytelling	Rungruangjit et al. (2024)
VI credibility	14	Attractiveness, expertise, trustworthiness	Ohanian (1990); Cao et al. (2025)
Perceived content value	9	Functional, social-relational and emotional value	Na and Alam (2026)
Consumer engagement	4	Viewing, attention, interaction, information seeking	Na and Alam (2026)
Purchase intention	3	Willingness, active seeking, likelihood	Rungruangjit et al. (2024)

Note: The seven adapted scales comprise 65 indicators, all measured on five-point Likert scales and contextualised to Lil Miquela's Calvin Klein-related content.

(Source: Compiled by the authors, 2026)

Rungruangjit et al.'s (2024) appeal items originally concerned what consumers wanted a human-like VI to provide. In this study they were rephrased as evaluations of observed content, for instance whether Lil Miquela's Calvin Klein content conveyed an optimistic story. This adaptation aligned the questionnaire with the study's stimulus but also altered the framing of the original items. Perceived content value and engagement items were adapted from Na and Alam's (2026) hotel live-streaming setting; their applicability to VI fashion content should therefore be considered alongside the measurement statistics.

4) Data Analysis

The proposed model was estimated using partial least squares structural equation modelling (PLS-SEM) in SmartPLS 4 (Hair et al., 2022). The analysis proceeded in two stages. First, the reflective measurement model was assessed in terms of indicator loadings, internal consistency reliability (Cronbach's alpha, rho_A and composite reliability), convergent validity (average variance extracted) and discriminant validity (the Fornell–Larcker criterion and the heterotrait–monotrait ratio). Second, the structural model was evaluated with respect to model fit (SRMR), collinearity (inner VIF), explanatory power (R^2), effect size (f^2) and predictive relevance (PLSpredict).

Bootstrap estimates were used to assess the direct paths and the specific indirect effects. A 95% confidence interval excluding zero was interpreted as evidence of a significant effect, alongside the reported t and p values (Nitzl et al., 2016). The two-path indirect effects were interpreted separately from the unreported complete serial paths, and the cross-sectional design was not used to infer temporal causation.

RESULTS AND DISCUSSION

This section first reports the assessment of the measurement model, followed by model fit and collinearity diagnostics, the explanatory and predictive power of the structural model, and the hypothesis tests. The findings are then discussed in relation to prior literature, before their theoretical and managerial implications and the study's limitations are considered.

1) Measurement Model Assessment

All 65 indicator loadings exceeded 0.70, ranging from 0.704 to 0.899, so no item was removed. As shown in Table 3, the AVE of every construct exceeded 0.50, ranging from 0.611 for emotional appeal to 0.797 for purchase intention, thereby satisfying the conventional criterion for convergent validity (Hair et al., 2022).

Table 3. Convergent Validity

Construct	Items	Loading range	AVE	Remark
Emotional appeal (EMO)	22	0.704–0.827	0.611	Valid
Rational appeal (RAT)	10	0.769–0.852	0.654	Valid
Authenticity appeal (AUT)	3	0.884–0.899	0.794	Valid
VI credibility (CRE)	14	0.750–0.831	0.625	Valid
Perceived content value (PCV)	9	0.766–0.829	0.639	Valid
Consumer engagement (ENG)	4	0.861–0.890	0.761	Valid
Purchase intention (PI)	3	0.888–0.896	0.797	Valid

Note: AVE = average variance extracted. Criteria: outer loading > 0.70 and AVE > 0.50 (Hair et al., 2022).
(Source: Primary data processed with SmartPLS 4, 2026)

Table 4 indicates that Cronbach's alpha, rho_A, and composite reliability exceeded 0.70 for all constructs, supporting internal consistency reliability (Hair et al., 2022). Nevertheless, emotional appeal (α = 0.970; CR = 0.972) and VI credibility (α = 0.954; CR = 0.959) yielded values above 0.95. Such values may signal item redundancy and therefore warrant scrutiny, rather than supporting an unqualified conclusion that every reliability criterion has been met.

Table 4. Internal Consistency Reliability

Construct	Cronbach's α	rho_A	Composite reliability	Remark
Emotional appeal (EMO)	0.970	0.971	0.972	Reliable*
Rational appeal (RAT)	0.941	0.943	0.950	Reliable
Authenticity appeal (AUT)	0.871	0.878	0.920	Reliable
VI credibility (CRE)	0.954	0.956	0.959	Reliable*
Perceived content value (PCV)	0.929	0.930	0.941	Reliable
Consumer engagement (ENG)	0.895	0.897	0.927	Reliable
Purchase intention (PI)	0.873	0.873	0.922	Reliable

Note: Criterion: α, rho_A and CR > 0.70 (Hair et al., 2022). *Values above 0.95 warrant scrutiny for possible item redundancy.
(Source: Primary data processed with SmartPLS 4, 2026)

Discriminant validity was examined using two complementary criteria. As Table 5 shows, the square root of each construct's AVE exceeded its correlations with all other constructs, satisfying the Fornell-Larcker point-estimate criterion (Fornell & Larcker, 1981). Table 6 further shows that all HTMT ratios

were below 0.85, with the highest value observed between perceived content value and engagement (0.549). The estimates thus meet the selected numerical criterion for discriminant validity (Henseler et al., 2015), although they do not by themselves establish content validity.

Table 5. Discriminant Validity: Fornell–Larcker Criterion

Construct	EMO	RAT	AUT	CRE	PCV	ENG	PI
EMO	**0.782**						
RAT	0.355	**0.809**					
AUT	0.166	0.130	**0.891**				
CRE	0.403	0.268	0.186	**0.791**			
PCV	0.470	0.468	0.077	0.433	**0.799**		
ENG	0.293	0.227	0.084	0.251	0.502	**0.872**	
PI	0.229	0.165	0.101	0.225	0.398	0.474	**0.893**

Note: Bold diagonal values are the square roots of AVE; off-diagonal values are inter-construct correlations. EMO = emotional appeal; RAT = rational appeal; AUT = authenticity appeal; CRE = VI credibility; PCV = perceived content value; ENG = consumer engagement; PI = purchase intention.

(Source: Primary data processed with SmartPLS 4, 2026)

Table 6. Discriminant Validity: Heterotrait–Monotrait Ratio (HTMT)

Construct	EMO	RAT	AUT	CRE	PCV	ENG
RAT	0.369					
AUT	0.181	0.145				
CRE	0.416	0.283	0.205			
PCV	0.490	0.497	0.091	0.455		
ENG	0.314	0.247	0.096	0.269	0.549	
PI	0.247	0.182	0.113	0.245	0.441	0.536

Note: Criterion: HTMT < 0.85 (Henseler et al., 2015). Abbreviations as in Table 5.

(Source: Primary data processed with SmartPLS 4, 2026)

2) Model Fit and Collinearity Assessment

Before the structural relationships were interpreted, model fit and predictor collinearity were examined (Table 7). The SRMR of the estimated model was 0.045, below both the reported HI99 value of 0.052 and the commonly used threshold of 0.08. This diagnostic supports further examination of the model under the reported assessment procedure, but it does not prove that the model is causally correct or uniquely supported. Inner VIF values ranged from 1.000 to 1.304, indicating limited collinearity among the predictors.

Table 7. Model Fit and Collinearity Assessment

Diagnostic	Value	Criterion	Remark
SRMR (estimated model)	0.045	< 0.08; < HI99 (0.052)	Acceptable
Inner VIF (structural model)	1.000–1.304	Limited collinearity	No concern

Note: SRMR = standardised root mean square residual; HI99 = 99th percentile of the bootstrap-based SRMR distribution; VIF = variance inflation factor.

(Source: Primary data processed with SmartPLS 4, 2026)

3) Explanatory Power, Effect Size and Predictive Power

As reported in Table 8, the four antecedents jointly explained 37.6% of the variance in perceived content value (adjusted $R^2 = 0.369$). Perceived content value explained 25.2% of the variance in engagement (adjusted $R^2 = 0.250$), and engagement explained 22.5% of the variance in purchase intention (adjusted $R^2 = 0.223$). The PLS predict Q^2predict values were positive for perceived content value (0.354), engagement (0.106), and purchase intention (0.054). Moreover, the PLS-SEM RMSE was lower than the linear-model benchmark for all 16 endogenous indicators, which is consistent with favorable out-of-sample performance within that prediction exercise (Hair et al., 2022). These results do not, however, establish predictive performance in an independent population.

Table 8. Explanatory and Predictive Power

Endogenous construct	R^2	Adjusted R^2	Q^2predict
Perceived content value (PCV)	0.376	0.369	0.354
Consumer engagement (ENG)	0.252	0.250	0.106
Purchase intention (PI)	0.225	0.223	0.054

Note: Q^2predict values were obtained through the PLSpredict procedure; positive values indicate that the model outperforms the naïve mean benchmark.

(Source: Primary data processed with SmartPLS 4, 2026)

Table 9 reports the effect sizes (f^2) of the structural paths, which complement the R^2 values by showing how much each predictor contributes to the explained variance of its endogenous construct. Among the antecedents of perceived content value, rational appeal produced the largest f^2 (0.134), followed by emotional appeal (0.087) and VI credibility (0.082), whereas the f^2 for authenticity appeal was negligible (0.005). The paths from perceived content value to engagement ($f^2 = 0.338$) and from engagement to purchase intention ($f^2 = 0.290$) showed the largest effect sizes in the model.

Table 9. Effect Size (f^2)

Path	f^2	Related hypothesis
Emotional appeal → Perceived content value	0.087	H1
Rational appeal → Perceived content value	0.134	H2
Authenticity appeal → Perceived content value	0.005	H3
VI credibility → Perceived content value	0.082	H4
Perceived content value → Consumer engagement	0.338	H5
Consumer engagement → Purchase intention	0.290	H6

Note: f^2 indicates the change in R^2 of the endogenous construct when the predictor is omitted from the model.

(Source: Primary data processed with SmartPLS 4, 2026)

4) Hypothesis Testing

Five of the six direct hypotheses were supported (Table 10). Rational appeal exhibited the largest numerical coefficient for perceived content value ($\beta = 0.313$), followed by emotional appeal ($\beta = 0.267$) and VI credibility ($\beta = 0.251$), supporting H2, H1, and H4. Because no formal contrast of these coefficients was performed, this ordering should not be read as evidence of statistically different effects. Authenticity appeal yielded a non-significant coefficient ($\beta = -0.055$, $p = 0.225$), with a confidence interval spanning zero; H3 was therefore not supported. Perceived content value was positively related to engagement ($\beta = 0.502$), supporting H5, and engagement was positively related to purchase intention ($\beta = 0.474$), supporting H6.

Table 10. Hypothesis Testing: Direct Effects

Hyp.	Path	β	t	p	95% CI	Decision
H1	EMO → PCV	0.267	5.300	< 0.001	[0.168, 0.366]	Supported
H2	RAT → PCV	0.313	6.260	< 0.001	[0.212, 0.407]	Supported
H3	AUT → PCV	−0.055	1.213	0.225	[−0.147, 0.040]	Not supported
H4	CRE → PCV	0.251	4.986	< 0.001	[0.150, 0.348]	Supported
H5	PCV → ENG	0.502	11.822	< 0.001	[0.418, 0.583]	Supported
H6	ENG → PI	0.474	11.580	< 0.001	[0.392, 0.555]	Supported

Note: β = standardised path coefficient; t = bootstrap test statistic; CI = bootstrap confidence interval. Numerical rankings of coefficients are not formal tests of differences.

(Source: Primary data processed with SmartPLS 4, 2026)

In summary, Table 10 shows that all direct paths were significant except the path from authenticity appeal to perceived content value. Four of the five specific indirect effects were significant (Table 11). Perceived content value mediated the relationships of rational appeal (β = 0.157), emotional appeal (β = 0.134) and VI credibility (β = 0.126) with engagement, supporting H8, H7 and H10. The indirect coefficient for authenticity appeal was not significant (β = −0.028, p = 0.229); H9 was therefore not supported. Engagement mediated the relationship between perceived content value and purchase intention (β = 0.238), supporting H11.

Table 11. Hypothesis Testing: Specific Indirect Effects

Hyp.	Path	β	t	p	95% CI	Decision
H7	EMO → PCV → ENG	0.134	4.647	< 0.001	[0.081, 0.194]	Supported
H8	RAT → PCV → ENG	0.157	5.645	< 0.001	[0.103, 0.212]	Supported
H9	AUT → PCV → ENG	−0.028	1.204	0.229	[−0.073, 0.021]	Not supported
H10	CRE → PCV → ENG	0.126	4.496	< 0.001	[0.074, 0.182]	Supported
H11	PCV → ENG → PI	0.238	6.984	< 0.001	[0.175, 0.308]	Supported

Note: The table reports the five specified two-path indirect effects; these are not separate tests of the complete three-link serial effects.

(Source: Primary data processed with SmartPLS 4, 2026)

Overall, nine of the eleven hypotheses were supported. Rational appeal, emotional appeal and VI credibility were positively related to perceived content value (H1, H2 and H4); perceived content value was positively related to consumer engagement (H5); and engagement was positively related to purchase intention (H6). Perceived content value mediated the relationships of these three antecedents with engagement (H7, H8 and H10), and engagement mediated the relationship between perceived content value and purchase intention (H11). The two hypotheses involving authenticity appeal (H3 and H9) were not supported because authenticity appeal had no significant effect on perceived content value.

Two qualifications apply to these mediation results. First, the model does not include direct comparison paths from the four antecedents to engagement or from perceived content value to purchase intention; the significant specific indirect effects therefore cannot distinguish full from partial mediation (Nitzl et al., 2016). Second, H7–H11 do not constitute a separate bootstrap test of the complete three-link indirect path from an initial content or source cue, through both intermediaries, to purchase intention.

5) Discussion of Findings

The estimates link rational appeal, emotional appeal, and VI credibility with perceived content value,

which is positively related to engagement and, in turn, to purchase intention. Authenticity appeal, as operationalized through three narrative cues, shows a non-significant relationship with value. This pattern is compatible with the proposed framework, but it does not establish the temporal order of the variables.

a. Rational appeal and perceived content value

Rational appeal displayed the largest numerical coefficient among the four antecedents of perceived content value and the largest indirect coefficient for engagement, although this does not establish that it is statistically stronger than emotional appeal or credibility. The positive association is consistent with research on informativeness and advertising value (Hanaysha & Alhyasat, 2025; Lou & Yuan, 2019; van Deventer & Saraiva, 2025). Rungruangjit et al. (2024) likewise distinguish informative content in humanlike VI communication, although their outcomes concern intentions to follow and to purchase. The present result suggests that product-relevant information remains worth examining even when the spokesperson is digitally created.

b. Emotional appeal and VI credibility

Emotional appeal was positively related to perceived content value, consistent with the role of entertainment in advertising value (Ducoffe, 1996) and of emotional benefits in consumer evaluation (Sweeney & Soutar, 2001). Triyanto and Haryanto (2026) provide related evidence on displayed emotions and engagement in live commerce, but their design and purchase-related outcome differ from the present VI-fashion setting. The result should therefore be read as contextual support for examining emotional content rather than as a demonstration of an identical mechanism across influencer formats. VI credibility also had a positive coefficient for perceived value, indicating that attractiveness, apparent expertise, and trustworthiness remain relevant evaluations even when the persona is artificial. This finding is consistent with research on credibility in responses to AI and virtual influencers (Jayasingh et al., 2025; Kim & Wang, 2024; Zeng & Lin, 2025). Triyanto (2026) examines credibility and relational responses in live commerce. Collectively, these studies direct attention to source evaluation, without implying that credibility operates in the same way, or with the same relative importance, in every setting.

c. Interpreting the authenticity result

Authenticity appeal had no significant effect on perceived content value ($\beta = -0.055$, $p = 0.225$), and its indirect relationship with engagement was also not significant. A likely reason lies in how the construct was measured. The three items capture persona fit, lifestyle portrayal, and personal storytelling, which respondents may see as parts of a fictional storyline rather than as signs of honesty. Because audiences know that a VI is a constructed character (Lou et al., 2023), such storytelling may add little to their judgment of whether the content is useful. This explanation was not tested directly, and the result applies only to the cues, sample, and collaboration studied here. It does not mean that authenticity is unimportant for all VIs or that it works differently than for human influencers (Audrezet et al., 2020; Lee & Eastin, 2021), because no human-influencer comparison was made.

d. Perceived content value, engagement and purchase intention

Perceived content value explained approximately one quarter of the variance in engagement. Nguyen et al. (2024) similarly model value followed by engagement, although their ultimate outcome is brand loyalty. Cao et al. (2025) study value, engagement, and purchase intention but adopt a different ordering, illustrating why temporal sequence cannot simply be inferred from related literature. The positive engagement-intention coefficient aligns with the relevance of engagement in VI marketing, whereas live-

commerce findings concern impulsive buying rather than the purchase intention measured here (Triyanto, 2026; Triyanto & Haryanto, 2026).

The specific indirect effects justify further investigation of value in the relationships of emotional appeal, rational appeal, and credibility with engagement, and of engagement in the value-intention relationship. They do not, however, establish complete mediation or the full three-link serial effect. Moreover, the explained variance in engagement (25.2%) and purchase intention (22.5%) leaves substantial variation unaccounted for. Price, prior ownership, and brand attitude are possible avenues for further study, rather than explanations identified by the present model.

6) Theoretical Implications

This study applies selected advertising-value concepts to a non-human endorser in a premium-fashion context. The positive emotional and rational coefficients are compatible with the relevance of entertainment and information to consumers' content evaluations (Ducoffe, 1996). The findings extend the setting in which these relationships are examined; they neither validate every component of the original advertising-value framework nor establish causal generality.

The model also considers source and message evaluations jointly. VI credibility is associated with perceived content value alongside emotional and rational appeals, complementing work on message value and source credibility (Lou & Yuan, 2019) as well as research on credibility and parasocial interaction (Sokolova & Kefi, 2020). These constructs remain conceptually distinct even when they contribute to related consumer responses.

The non-significant authenticity result suggests that, in VI research, narrative consistency and the credibility of a claim should be measured as separate constructs (Lou et al., 2023).

Finally, the proposed sequence separates value, engagement, and purchase intention. The significant two-path indirect estimates warrant further examination of this structure, but do not support the claim that the complete serial process has been established. Live-commerce research reflects a related interest in engagement and internal consumer responses, without testing the same value sequence or outcome (Triyanto, 2026; Triyanto & Haryanto, 2026).).

7) Managerial Implications

Managers of VI fashion campaigns could assess the clarity and usefulness of product information, including offers and sponsorship disclosure. Although rational appeal had the largest numerical coefficient for value, the findings do not establish an optimal allocation of campaign resources or a statistically superior content strategy. Entertaining and emotionally relevant presentation also merits evaluation; managers could test whether optimistic or relational storylines improve audience responses when combined with useful product information. Because the present survey did not manipulate particular storylines, these suggestions require campaign-level testing.

Persona managers could review the consistency of appearance, voice, apparent expertise, and brand partnerships, as these practices may help audiences to evaluate credibility, although none was tested separately as a managerial intervention in this study. The non-significant authenticity estimate is not sufficient reason to abandon personal storytelling or transparency. Managers should first distinguish fictional backstories from honest claims and consistent presentation, and then test how the intended audience interprets each.

Campaign monitoring could incorporate direct measures of perceived value and purchase intention

alongside views, likes, saves, and information clicks. Behavioral platform metrics are not interchangeable with the latent constructs measured in this questionnaire, and purchase intention is not a measure of sales. Interactive formats, product questions, and collection links are possible ways of inviting audience participation; however, their usefulness should be evaluated rather than assumed, because the positive engagement-intention association does not show that adding a particular interaction feature will increase purchases.

8) Limitations and Future Research

The cross-sectional, single-source self-report design supports associational analysis but not temporal or causal inference, and common method influences remain a concern. Future studies could separate measurement occasions, apply appropriate marker-variable procedures, or manipulate content cues experimentally. Inner VIFs address predictor collinearity and should not be treated as a conclusive assessment of common method variance.

The purposive recruitment of respondents familiar with Lil Miquela and Calvin Klein limits generalizability. The sample was predominantly female (78.8%) and included many students (47.2%), with reported ages from 18 to 28 years; it therefore does not represent the entire Generation Z cohort. Quota-based or probability sampling and appropriately powered group comparisons could examine variation by gender, income, and familiarity. In addition, the study examines one VI, one premium-fashion brand, and one platform. Replication with other personas, degrees of human-likeness, product categories, and platforms would help to establish the scope of the associations, and a direct comparison with human influencers would be necessary to support claims that a mechanism differs by source type.

Measurement also warrants refinement. Value and engagement items were adapted from hotel live streaming, the engagement scale emphasizes behavioral responses, and authenticity is captured by three narrative cues. The very high reliability estimates for emotional appeal and credibility merit examination for redundancy. Further research could assess content validity and distinguish persona authenticity, message credibility, parasocial interaction, and social presence (Stein et al., 2024; Triyanto, 2026). Finally, purchase intention is not observed behavior; behavioral or longitudinal data would help to evaluate whether the proposed sequence is followed by actual purchasing. Future analyses could also estimate the complete three-link serial indirect effects, test competing directions and direct paths, and formally compare antecedent coefficients.

CONCLUSION

This study examined how the content appeals and credibility of a virtual influencer relate to Generation Z purchase intention through perceived content value and consumer engagement. With respect to the first objective, rational appeal, emotional appeal and VI credibility were positively related to perceived content value, whereas authenticity appeal, as measured through narrative cues, had no significant effect on perceived content value. Informative and emotionally engaging content from a credible persona therefore appears to be associated with how consumers judge the worth of VI content.

Regarding the second objective, perceived content value was positively related to consumer engagement, and engagement was positively related to purchase intention. Concerning the third objective, perceived content value mediated the relationships of rational appeal, emotional appeal and VI credibility with engagement, and engagement mediated the relationship between perceived content value and purchase

intention. Taken together, the results indicate a link between message and source evaluations, perceived content value, engagement and purchase intention in VI marketing. Because the data are cross-sectional and limited to one influencer, one brand and one platform, these findings show associations rather than causal effects; experimental, longitudinal and comparative studies are needed to test the causal order and boundaries of these relationships.

AUTHOR CONTRIBUTIONS

The first author, a master's student, contributed to the conceptualisation of the study, development of the research model and methodology, design of the questionnaire, data collection, data analysis and preparation of the initial manuscript. The second author, as the academic supervisor, contributed to the supervision of the research, guidance on the theoretical framework and methodology, interpretation of the research findings, and critical review and refinement of the manuscript. Both authors participated in the discussion of the research findings, reviewed and approved the final version of the manuscript, and are responsible for the integrity and accuracy of the work.

CONFLICT OF INTEREST

The authors declare that there are no financial or non-financial conflicts of interest that could have influenced the conduct of the research, data analysis, preparation or publication of this article.

ARTIFICIAL INTELLIGENCE (AI) USE STATEMENT

In preparing this article, the authors used artificial intelligence (AI) technology as an assisting tool for language editing, grammar checking and improving the structure and clarity of the manuscript. AI was not used to generate, manipulate or analyse the research data. The authors retain full responsibility for the content of the article, the interpretation of the findings, and the accuracy and integrity of the manuscript.

REFERENCES

Angmo, P., Mahajan, R., & Ranjitha, G. P. (2026). Unveiling the power of virtual influencers: Impact of content and credibility on consumer engagement and purchase intentions. Journal of Relationship Marketing, 25(1), 58–89. https://doi.org/10.1080/15332667.2025.2471668

Audrezet, A., de Kerviler, G., & Guidry Moulard, J. (2020). Authenticity under threat: When social media influencers need to go beyond self-presentation. Journal of Business Research, 117, 557–569. https://doi.org/10.1016/j.jbusres.2018.07.008

Badan Pusat Statistik. (2021, January 21). Hasil Sensus Penduduk 2020. https://demakkab.bps.go.id/id/news/2021/01/21/67/hasil-sensus-penduduk-2020.html

Bui, T. T., Tran, Q. T., Alang, T., & Le, T. D. (2023). Examining the relationship between digital content marketing perceived value and brand loyalty: Insights from Vietnam. Cogent Social Sciences, 9(1), 2225835. https://doi.org/10.1080/23311886.2023.2225835

Cao, N., Isa, N. M., Perumal, S., & Chen, C. (2025). Perceived value, consumer engagement, and purchase intention in virtual influencer marketing: The role of source credibility and generational cohort. Journal of Theoretical and Applied Electronic Commerce Research, 20(2), 150.

Ducoffe, R. H. (1996). Advertising value and advertising on the web. Journal of Advertising Research, 36(5), 21–35. https://doi.org/10.1080/00218499.1996.12466626

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics, 5(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39–50. https://doi.org/10.1177/002224378101800104

Hair, J. F., Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). SAGE Publications.

Hanaysha, J. R., & Alhyasat, K. M. (2025). Examining the effect of social media advertising features on customer perceived value and brand love in the retail industry. Telematics and Informatics Reports, 18, 100208. https://doi.org/10.1016/j.teler.2025.100208

Hasan, S., Zahid, H., & Qayyum, A. (2024). Influencer authenticity and intention to co-create brand value: An investigation of central and peripheral pathways. Cogent Business & Management, 11(1), 2393236. https://doi.org/10.1080/23311975.2024.2393236

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

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. https://doi.org/10.1016/j.intmar.2013.12.002

Jayasingh, S., Sivakumar, A., & Vanathaiyan, A. A. (2025). Artificial intelligence influencers' credibility effect on consumer engagement and purchase intention. Journal of Theoretical and Applied Electronic Commerce Research, 20(1), 17. https://doi.org/10.3390/jtaer20010017

Kemp, S. (2025, February 25). Digital 2025: Indonesia. DataReportal. https://datareportal.com/reports/digital-2025-indonesia

Kim, D., & Wang, Z. (2024). Social media influencer vs. virtual influencer: The mediating role of source credibility and authenticity in advertising effectiveness within AI influencer marketing. Computers in Human Behavior: Artificial Humans, 2(2), 100100. https://doi.org/10.1016/j.chbah.2024.100100

Lee, J. A., & Eastin, M. S. (2021). Perceived authenticity of social media influencers: Scale development and validation. Journal of Research in Interactive Marketing, 15(4), 822–841. https://doi.org/10.1108/JRIM-12-2020-0253

Liao, J., & Chen, J. (2024). The authenticity advantage: How influencer authenticity management strategies shape digital engagement with sponsored videos. Journal of Business Research, 185, 114937. https://doi.org/10.1016/j.jbusres.2024.114937

Liu, Y., & Wang, M. (2023). The effect of short video content marketing on consumer purchase intention. Frontiers in Business, Economics and Management, 11(3), 1–5. https://doi.org/10.54097/fbem.v11i3.12934

Lou, C., Kiew, S. T. J., Chen, T., Lee, T. Y. M., Ong, J. E. C., & Phua, Z. (2023). Authentically fake? How consumers respond to the influence of virtual influencers. Journal of Advertising, 52(4), 540–557. https://doi.org/10.1080/00913367.2022.2149641

Lou, C., & Yuan, S. (2019). Influencer marketing: How message value and credibility affect consumer trust of branded content on social media. Journal of Interactive Advertising, 19(1), 58–73. https://doi.org/10.1080/15252019.2018.1533501

McKinsey & Company, & The Business of Fashion. (2022). The state of fashion 2023: Holding onto growth as global clouds gather. https://www.mckinsey.com/industries/retail/our-insights/state-of-fashion-archive

Moustakas, E., Lamba, N., Mahmoud, D., & Ranganathan, C. (2020). Blurring lines between fiction and reality: Perspectives of experts on marketing effectiveness of virtual influencers. In 2020 International Conference on Cyber Security and Protection of Digital Services (Cyber Security) (pp. 1–6). IEEE. https://doi.org/10.1109/CyberSecurity49315.2020.9138861

Na, M., & Alam, S. S. (2026). Impact of live streaming experience, value and trust in live streaming platform on hotel booking intention: Mediating role of customer engagement and moderating role of streamer popularity. International Journal of Hospitality Management, 133, 104524. https://doi.org/10.1016/j.ijhm.2025.104524

Nguyen, N. M., Nguyen, H. T., & Cao, T. A. (2024). Effects of social media marketing activities on perceived values, online brand engagement, and brand loyalty. Emerging Science Journal, 8(5), 1957–1975. https://doi.org/10.28991/ESJ-2024-08-05-017

Nitzl, C., Roldán, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling: Helping researchers discuss more sophisticated models. Industrial Management & Data Systems, 116(9), 1849–1864. https://doi.org/10.1108/IMDS-07-2015-0302

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/10.1080/00913367.1990.10673191

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 19, pp. 123–205). Academic Press. https://doi.org/10.1016/S0065-2601(08)60214-2

Rungruangjit, W., Mongkol, K., Piriyakul, I., & Charoenpornpanichkul, K. (2024). The power of human-like virtual-influencer-generated content: Impact on consumers' willingness to follow and purchase intentions. Computers in Human Behavior Reports, 16, 100523. https://doi.org/10.1016/j.chbr.2024.100523

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, 101742. https://doi.org/10.1016/j.jretconser.2019.01.011

Stein, J.-P., Breves, P. L., & Anders, N. (2024). Parasocial interactions with real and virtual influencers:

The role of perceived similarity and human-likeness. New Media & Society, 26(6), 3433–3453. https://doi.org/10.1177/14614448221102900

Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. Journal of Retailing, 77(2), 203–220. https://doi.org/10.1016/S0022-4359(01)00041-0

Triyanto, H. (2026). From virtual intimacy to spontaneous purchases: A parasocial interaction perspective on live streaming commerce. Jurnal Manajemen Motivasi, 22(2), 1346–1355. https://doi.org/10.29406/jmm.v22i2.9468

Triyanto, H., & Haryanto, B. (2026). Understanding impulsive buying in live-streaming commerce: The role of streamer-displayed emotions, customer engagement, and time pressure. Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE), 9(2), 13013–13028. https://doi.org/10.31538/iijse.v9i2.10337

Ünalmış, E., Dirsehan, T., & Erdoğmuş, İ. E. (2026). Consequences of influencer-created content on influencers' authenticity in the beauty and personal care industry. Journal of Marketing Communications, 32(2), 203–229. https://doi.org/10.1080/13527266.2024.2371833

van Deventer, M., & Saraiva, M. (2025). Antecedents of Generation Y consumers' perceived value of social media advertisements. Cogent Social Sciences, 11(1), 2450097. https://doi.org/10.1080/23311886.2025.2450097

Zeng, H.-K., & Lin, C. A. (2025). Consumer evaluation of virtual vs. human influencers via source credibility, perceived social similarity, and consumption motivation. Journal of Theoretical and Applied Electronic Commerce Research, 20(3), 168. https://doi.org/10.3390/jtaer20030168