



Consumer Attitude Formation Toward Brands Through Virtual Influencer Product Placement: Evidence from an Experimental Study

Nur Wahyudi¹, Moh. Fauzi², Nur Fitriyani³

^{1,2,3}Department of Management, Wiraraja University, Sumenep, Indonesia

ARTICLE INFO

Article history:

Received: Jan 23, 2026

Revised: Feb 11, 2026

Accepted: Feb 18, 2026

Keywords:

Virtual influencer

Product Placement

Brand Attitude

Instagram Marketing

Digital Marketing

Marketing Communication

ABSTRACT

This study aims to analyze the influence of product placement through virtual influencers on the formation of consumer attitudes, including attitudes toward the influencer, attitudes toward the product placement, and attitudes toward the brand. The research employed a post-test experimental design without a control group, involving 277 respondents. Data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique. The results indicate that attitudes toward virtual influencers and product placement significantly contribute to the formation of positive brand attitudes, particularly when the content is delivered credibly and aligns with the audience's values. This study contributes to the understanding of the effectiveness of product placement in shaping consumer attitudes

Corresponding Author:

Nur Wayhudi

Department of Management

Wiraraja University

Sumenep, Indonesia

Email: nwahyudi20@gmail.com

INTRODUCTION

Digital transformation has resulted in substantial changes to marketing communication techniques, particularly in how firms communicate with their customers via social media (Siahaan & Kamuri, 2025). Digital platforms are no longer just information delivery channels; they are also venues for engagement that allow companies and audiences to construct meaning, experiences, and symbolic relationships. In this setting, social media functions as a communication ecosystem, bringing together visual, narrative, and social aspects into a single integrated area (Koay et al., 2020).

Instagram occupies a significant place in the digital marketing environment because of its capacity to supply personalized visual material that can be readily integrated into users' daily activities. This feature makes Instagram an important tool for businesses to express promotional messages in context. Worldwide digital marketing spending is set to rise to USD 720 billion by 2023 (Kamp, 2023), highlighting the increased use of digital platforms in modern marketing communication strategies.

One technique that has emerged in response to these dynamics is influencer marketing, which places important persons as communication mediators between businesses and customers. Influencers deliver promotional messages using content that mimics common social activities; therefore, commercial communications are not always regarded as straight advertising (Agnihotri et al., 2023). This method enables the listener to develop a psychological connection with the message deliverer (Kamuri et al., 2023).

The visual aspect of Instagram influences the success of influencer marketing, as does the intensity of interaction between influencers and their followers. Content provided regularly and consistently has the ability to create parasocial interactions, which are one-way relationships that the audience perceives to be

personal. This relationship influences the audience's perception of both the influencer and the brand linked with them (Pozharliev et al., 2022).

As artificial intelligence technology advances, influencer marketing strategies evolve with the rise of virtual influencers. A virtual influencer is a digital representation that looks like a human and can connect with audiences on social media in a structured way (Mouritzen et al., 2023). The development of these digital entities represents a shift in how brands manage digital communication and identity expression.

Unlike actual influencers, content managers have complete control over virtual influencers' narrative, behavior, and visualization. This scenario offers greater control over brand image consistency and flexibility in communication message design (Baklanov, 2020). Furthermore, virtual influencers are viewed as capable of mitigating the reputational issues commonly connected with human public figures (Thomas & Fowler, 2021).

In digital marketing, product placement is a tactic that is frequently paired with influencer marketing to indirectly integrate businesses into content (Manongga & Giri, 2025). Product placement is not provided as a direct persuasive message but as part of the narrative or action depicted in digital material (Balasubramanian, 1994; Liu et al., 2015). This method uses the story's context to create brand associations in the audience's brains.

The effectiveness of product placement is determined by the audience's trust in the person delivering the message. When influencers are regarded to be credible and relevant, audiences are more likely to accept brand presence in the material they consume (Min et al., 2019; Kaur et al., 2021). In this situation, product placement functions as a communication method based on the audience's attitude toward the message source.

Product placement on social media has taken on new significance as material is consumed not only for amusement but also as a depiction of lifestyle. Integrating brands into digital material encourages people to associate the brand with everyday social practices, improving the relevance of marketing messaging (Alassani & Göretz, 2019; Suková & Miková, 2022).

However, most past research has focused on product placement by human influencers. The number of empirical studies on the role of virtual influencers in this setting remains rather low, as do the conceptual frameworks used (Arsenyan & Mirowska, 2021; Rodgers, 2021). This condition shows that there is potential for improvement in digital marketing literature.

Furthermore, most research on virtual influencers is undertaken in a global or developed nation setting, while local cultural contexts in underdeveloped countries remain neglected. In fact, societal conventions, cultural values, and specific media consumption behaviors all have a significant impact on audience responses to digital marketing content (Jhawar et al., 2023).

In Indonesia, research on product placement in social media is still primarily focused on human influencers or specific entertainment media environments. The experimental strategy that combines views about influencers, product placement, and brands into a single analytical model remains relatively limited (Perwitasari & Paramita, 2020; Purnomo, 2023; Nadeak & Setiawan, 2024).

This study is unique in that it tests the role of virtual influencers as marketing communication agents in product placement practices on social media, using attitudes toward influencers and attitudes toward product placement as mechanisms for creating attitudes toward the brand. This approach combines the three attitude constructs into a single experimental framework without treating them as distinct interactions. This study was conducted on social media audiences in Malang City, East Java, which is a metropolitan location with strong social media usage and a diverse audience. The purpose of selecting this scenario is to present an empirical overview of how virtual influencers' product placement tactics are regarded in a dynamic social environment.

Notwithstanding the rapid expansion of influencer marketing research, several critical theoretical and empirical issues remain unresolved. First, prior empirical findings concerning the effectiveness of influencers in shaping brand-related outcomes are not entirely consistent. While numerous studies report that influencer credibility, attractiveness, and expertise positively influence brand attitudes and purchase intentions, other research highlights the growing skepticism of audiences toward sponsored content, suggesting that perceived commercialization may attenuate persuasive effects. These mixed findings indicate that the psychological processes underlying attitude formation in influencer-driven product placement contexts are still insufficiently clarified.

Second, the emergence of virtual influencers introduces a fundamental theoretical question regarding source effects in digital marketing communication. Unlike human influencers, virtual influencers

are algorithmically generated entities fully controlled by brand managers. Although some scholars argue that this controllability enhances message consistency and brand alignment, others contend that the absence of human authenticity may reduce perceived trustworthiness and emotional attachment. Consequently, it remains theoretically ambiguous whether virtual influencers operate through the same source credibility and parasocial interaction mechanisms traditionally observed in human influencer contexts.

Third, existing research on product placement in social media environments has largely examined its direct impact on brand-related variables. Limited empirical studies have explicitly modeled product placement as part of a structured attitudinal process involving attitudes toward the message source and attitudes toward the placement itself. This gap raises an important theoretical question: does product placement influence brand attitude directly, or does its effectiveness depend on evaluative mediating mechanisms rooted in attitude formation theory?

Finally, although classical frameworks such as attitude theory and source credibility theory have been extensively applied in traditional endorsement research, their structural integration within the context of AI-generated communication agents remains underexplored. The increasing presence of virtual influencers challenges conventional assumptions about authenticity, trust, and human–brand relationships. Therefore, empirical investigation into the structural relationships among attitudes toward virtual influencers, attitudes toward product placement, and attitudes toward brands is necessary to extend established marketing communication theories into technology-mediated environments, particularly within emerging market contexts.

Using this paradigm, this study seeks to investigate the relationship between consumer attitudes about virtual influencers, attitudes against product placement in Instagram content, and sentiments toward the businesses featured. The analysis focuses on understanding the links between attitude factors in the context of digital marketing communication, rather than assessing the efficacy of specific marketing methods.

LITERATURE REVIEW

Product Placement

Product placement is defined as a marketing communication technique that actively incorporates items or brands into entertainment content, both traditional and digital, with the goal of implicitly increasing brand exposure (Balasubramanian, 1994). This strategy differs from traditional advertising in that the commercial message is interwoven into the content flow, decreasing perceived intrusion and audience resistance to promotional messaging (Spielvogel et al., 2020). Product placement, through contextual integration, enables brands to appear as part of the audience's narrative, rather than as a solitary compelling message.

In actuality, the efficiency of product placement is defined not only by the brand's visibility but also by the contextual relevance and fit to the audience's daily lives. When a brand is presented in scenarios similar to consumer experiences, the likelihood of emotional attachments forming between the brand and the audience improves (Gupta et al. 2000). This state promotes the establishment of favorable connections and greater brand credibility in the minds of consumers.

Virtual Influencer

A virtual influencer is a digital representation that resembles a human and can actively interact with audiences via social media (Lou et al., 2022). These entities are created by programmers or media agencies (Stein et al., 2024), and media managers oversee all communication, narrative, and visualization operations (Sands et al., 2022). These traits distinguish virtual influencers from real influencers in terms of message control and consistency.

The primary advantage of virtual influencers is their capacity to maintain a consistent brand image while minimizing the reputational hazards connected with human public personalities (Arsenyan and Mirowska, 2021). Furthermore, virtual influencers provide greater creative flexibility in content and narrative production, allowing brand messages to be precisely suited to the values and identity they want to portray (Baklanov, 2020; Thomas & Fowler, 2021).

Attitude Toward the Influencer

Attitudes toward influencers represent the audience's cognitive and emotive perception of the person giving the promotional message on social media. Credibility, emotional proximity, and the quality of the

information offered all play significant roles in creating these attitudes (Han & Chen, 2022; Min et al., 2019). The consistency and relevancy of the content delivered to the audience, as well as the influencer's personality, all have an impact on this judgment.

The continual contact between influencers and their followers has the potential to foster parasocial ties, which are one-way partnerships that the audience interprets as personal connections. This link increases audience openness to promotional messaging and product suggestions from influencers (Tran et al., 2019). Furthermore, the quality of the story and the alignment of promotional content with audience values influence how views about influencers develop and persist (Belanche et al., 2021; Torres et al., 2019).

Attitude Toward Product Placement

Attitudes about product placement reflect the audience's evaluation of the presence of brands in media material. This response might be good or negative, depending on the situation, product kind, and exposed audience characteristics (Ulker-Demirel & Yildiz, 2020). When product placement is viewed as relevant and does not disrupt the flow of the content, audiences are more likely to react positively.

Aside from contextual elements, ethical attitudes and the amount of realism in product placement influence the audience's attitude toward the brand on display. Product placement that is excessively explicit or incongruent with the content may elicit opposition, whereas natural integration might boost audience acceptability (Kowalczyk & Royne, 2012; Kaur et al., 2021).

Attitude Toward the Brand

Brand attitude is a consumer's overall evaluation based on direct consumption experiences and social environment information (Ghorban, 2012). In the context of digital marketing, brand exposure through third-party influencers is critical in developing this mindset, particularly when the message source is viewed as reliable and relevant (Tseng & Wang, 2023).

Attitude toward a brand displays emotional engagement and customer awareness of the brand's principles. This appraisal is influenced not only by product qualities but also by the brand's representation in social media content (Lee et al., 2017).

Relationship Between Attitudes

According to the literature, opinions toward influencers are strongly related to customer attitudes toward the products they advocate. Influencers with a positive image and high credibility are more likely to form positive associations with the products they promote (Chin et al., 2020). Consistent contact between influencers and their audiences helps to create trust, which improves the audience's perception of the brand (Panggati et al., 2023).

Furthermore, views towards influencers influence how audiences perceive product placement in social media material. Influencers who are viewed as real and competent make product placement appear more natural and relevant (Kumar & Tripathi, 2019; Punjani & Kumar, 2021). Positive sentiments about influencers improve audience approval of product placement methods (Panggati et al., 2023).

On the other hand, sentiments regarding product placement influence attitudes towards brands. Product placement that is contextual and aligned with content that people love leads to higher positive brand assessments (Sander et al., 2021). Integrating brands that are regarded relevant to the audience's daily lives creates a sense of intimacy between the brand and the consumers.

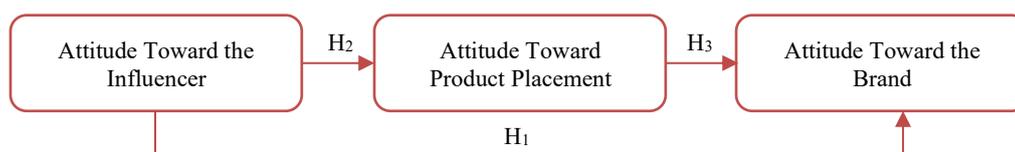


Figure 1. Conceptual Framework

RESEARCH METHOD

This study takes a quantitative approach and uses an experimental design to investigate the relationship between consumer attitudes toward virtual influencers, attitudes against product placement, and attitudes toward brands in the setting of social media. This method was chosen because it allows for the systematic assessment of connections between attitude variables in a controlled setting without attempting to draw normative generalizations beyond the research context.

The experimental design was carried out by displaying stimuli in the form of Instagram content, including virtual influencers and integrated product placement. The stimulus is intended to resemble digital marketing content regularly received by social media users, therefore keeping it relevant to the audience's daily usage. Prior to completing the prepared study instrument, respondents were asked to evaluate the content.

The study population consists of active Instagram users who live in Malang City, East Java. Active user requirements are based on everyday Instagram usage, such as browsing visual material and following influential accounts. The purposive sample strategy was used in the sampling process, with the assumption that respondents had prior experience viewing influencer content on Instagram.

The sample size was selected by taking into account the statistical adequacy and applicability of the experimental research design. Participants were asked to express voluntary consent before taking part in the complete research series. The complete data-gathering method was carried out online to reflect the peculiarities of social media as the research context.

The study tool was created as a structured questionnaire that assesses three major constructs: attitudes about virtual influencers, attitudes against product placement, and attitudes toward brands. Each construct is operationalized with a set of indicators developed from prior research and tailored to the social media situation. A five-point Likert scale was used to assess respondents' level of agreement with the provided statements.

Attitudes toward virtual influencers were gauged using variables that represented respondents' cognitive and affective assessments of the virtual figures depicted in the content. Attitudes toward product placement were examined using respondents' evaluations of the brand's relevance, appropriateness, and integration into Instagram content. Meanwhile, attitudes toward the brand were assessed based on respondents' overall evaluations of the brand following exposure to the research stimulus.

Prior to conducting the main study, the research tools were validated and reliable to assure measurement consistency and accuracy. Validity studies were conducted to determine the indicators' ability to represent the measured constructs, and reliability tests were performed to confirm the instruments' internal stability. Only indications that match the testing criteria are considered for further study.

The acquired data were analyzed using an inferential statistical approach to determine the correlations between the variables suggested in the research framework. The study aims to investigate the impact of attitudes toward virtual influencers on attitudes toward product placement and attitudes toward brands, as well as the impact of attitudes toward product placement on attitudes toward brands. All analyses were carried out at a standard significance level for social research.

To guarantee research integrity, the entire data gathering and processing process follows research ethics norms. Respondent identities are kept private, and the collected data is utilized purely for academic purposes. This study does not involve any potentially hazardous manipulation of respondents, and participants are free to withdraw at any moment.

RESULTS AND DISCUSSIONS

RESULTS

Convergent Validity

Convergent validity testing was done to ensure that each indication accurately represented the latent construct being measured. Convergent validity was assessed by examining the outer loading values and Average Variance Extracted (AVE) for each research topic, which included attitudes about virtual influencers, product placement, and the brand.

Table 1. Convergent Validity Test Results

Variable / Dimension	AVE
Attitude to Influencers (ATI)	0.622
Attractiveness	0.684
Trust	0.764
Expertise	0.819
Brand Fit	0.664
Attitude to Brand (ATB)	0.811
Attitude to Product Placement (ATPP)	0.679

Source: Primary Data Processed, 2025

Convergent validity testing is considered valid when the AVE (Average Variance Extracted) value exceeds 0.6 (Hair et al., 2014). The analysis results demonstrate that all research variables have an AVE value more than 0.5, indicating that the constructs in this model can sufficiently explain the variation of their indicators.

Discriminant Validity

The Heterotrait-Monotrait Ratio (HTMT) technique was used to assess discriminant validity, with recommended values of less than 0.85 and up to 0.90 (Hair et al., 2019). The analysis results demonstrate that all HTMT values in Malang city are less than 0.90 (see table 2), showing that the model's constructs can be empirically separated from one another. As a result, we can conclude that discriminant validity was met in this study.

Table 2. Diskriminant Validity Test Results

	ATI	ATB	ATPP
Attitude to Influencers			
Attitude to the Brand	0.755		
Attitude to Product Placement	0.763	0.740	

Source: Primary Data Processed, 2025

Internal Consistency Reliability Analysis

The composite dependability value was used for internal consistency reliability analysis, with a minimum threshold of 0.70 (Hair et al., 2019). The results from the participants revealed that all components had composite reliability ratings greater than 0.7 (see Table 3). Thus, the overall construct has strong internal consistency and is dependable.

Table 3. Internal Consistency Reliability Analysis Result

Variable / Dimension	Composite Reliability
Attitude to Influencers (ATI)	0.894
Attractiveness	0.916
Trust	0.945
Expertise	0.950
Brand Compatibility	0.943
Attitude to the Brand (ATB)	0.938
Attitude to Product Placement (ATPP)	0.853

Source: Primary Data Processed, 2025

Coefficient of Determination

Attitudes towards influencers and product placement account for 54.1% and 40.7% of the variance in attitude toward the brand, respectively, according to the coefficient of determination (R^2) value (refer to Table 4). These findings show a moderate to poor level of effect, implying that additional factors outside the model contribute to both constructs.

Table 4. Coefficient of Determination Result

Variable	R ²	Remarks
Attitude to the Brand (ATB)	0.541	Moderate
Attitude to Product Placement (ATPP)	0.407	Moderate

Source: Primary Data Processed, 2025

Analysis of Predictive

A predictive study (Q² Predict) utilizing the PLS-Predict technique reveals that the PLS model has greater predictive power than the linear model, producing lower RMSE and MAE values for most endogenous indicators (see Table 5). The constructs of attitude toward the brand and attitude toward product placement have positive Q² predict values, indicating strong predictive ability. As a result, the model is classified as having modest predictive power.

Table 5. Analysis of Predictive Result

Variable Indicators	Q ² predict	Model PLS		Model LM	
		RMSE	MAE	RMSE	MAE
ATB1	0.331	0.550	0.428	0.519	0.370
ATB2	0.313	0.579	0.436	0.530	0.364
ATB3	0.326	0.576	0.443	0.546	0.387
ATB4	0.359	0.595	0.465	0.548	0.394
ATPP1	0.262	0.677	0.526	0.686	0.529
ATPP2	0.214	0.674	0.493	0.672	0.496
ATPP3	0.138	0.760	0.595	0.763	0.603
ATPP4	0.214	0.799	0.633	0.794	0.638

Source: Primary Data Processed, 2025

Hypothesis Testing

The findings of testing the three hypotheses indicate that all relationships between variables are positive and significant. Attitudes toward influencers were discovered to have a reasonably substantial influence on attitudes toward brands. Additionally, attitude toward influencers had a significant impact on attitude toward product placement. This demonstrates the impact of influencers on audience views of marketing communication tactics. Meanwhile, opinions about the brand have a favorable and significant impact on attitudes toward product placement, while the magnitude of this influence is minimal. This research demonstrates that influencers play a more significant role than the brand in affecting views of product placement efforts.

Table 5. Hypothesis Testing Result

Hypothesis	PC	P-value	f ²	Remarks
H ₁ Attitude to influencers → Attitude to brands	0.492	0.000	0.293	Positive; Significant; Moderate effects
H ₂ Attitude to influencers → Attitude to product placement	0.609	0.000	0.589	Positive; Significant; Huge effect
H ₃ Attitude to product placement → Attitude to the brand	0.274	0.001	0.091	Positive; Significant; Small effects

Source: Primary Data Processed, 2025

DISCUSSION

The findings of this study provide important insights into the structural mechanisms underlying consumer attitude formation in virtual influencer-based product placement on social media. All hypothesized relationships were positive and statistically significant, indicating that the proposed attitudinal framework is

empirically supported. More importantly, the magnitude of the structural effects offers deeper theoretical implications beyond mere statistical significance.

The results indicate that Attitude Toward the Influencer (ATI) has a substantial and significant effect on Attitude Toward the Brand (ATB) ($\beta = 0.492$, $p < 0.001$, $f^2 = 0.293$), suggesting a moderate effect size. This finding reinforces the central role of the message source in shaping brand evaluations within digitally mediated communication environments. Consistent with prior research (Min et al., 2019; Kaur et al., 2021), consumers who perceive influencers as credible, attractive, and aligned with their values tend to transfer these positive evaluations to the endorsed brand. Even though the influencer in this study is virtual rather than human, the evaluative transfer mechanism appears to operate similarly to traditional endorsement contexts (Arsenyan & Mirowska, 2021; Thomas & Fowler, 2021). This suggests that perceived coherence and symbolic credibility may substitute for physical authenticity in forming favorable brand attitudes.

More strikingly, the relationship between ATI and Attitude Toward Product Placement (ATPP) demonstrates a very large effect size ($\beta = 0.609$, $p < 0.001$, $f^2 = 0.589$). According to PLS-SEM benchmarks (Hair et al., 2019), an f^2 value above 0.35 indicates a large effect, and the observed value substantially exceeds this threshold. This finding suggests that evaluations of the virtual influencer dominate audience interpretations of embedded brand messages. In other words, product placement effectiveness in this context is not primarily determined by the brand's presence itself, but by prior evaluations of the source delivering the content.

This substantial effect may reflect what can be conceptualized as *authority dominance* in digital marketing communication. When audiences perceive a virtual influencer as competent, trustworthy, and professionally curated, they are more likely to interpret product placements as natural, relevant, and acceptable. The influencer functions not merely as a promotional intermediary but as a cognitive filter through which brand integration is evaluated. This aligns with source credibility theory, which posits that source evaluation significantly shapes message acceptance (Min et al., 2019), and extends it into AI-mediated communication environments.

Interestingly, although the relationship between Attitude Toward Product Placement and Attitude Toward the Brand is positive and significant ($\beta = 0.274$, $p = 0.001$, $f^2 = 0.091$), the effect size is small. This suggests that product placement alone contributes modestly to brand attitude formation when compared to the dominant role of influencer evaluation. Therefore, brand attitude appears to be more strongly influenced by perceptions of the communicator than by the embedded brand exposure itself. This finding refines prior product placement research (Balasubramanian, 1994; Alassani & Göretz, 2019) by demonstrating that, within social media ecosystems, the persuasive strength of product placement is highly contingent upon source evaluation.

From a model-level perspective, the R^2 value for Attitude Toward the Brand (0.541) indicates moderate explanatory power, suggesting that more than half of the variance in brand attitude is explained by ATI and ATPP. Meanwhile, the R^2 for Attitude Toward Product Placement (0.407) indicates a meaningful level of predictive capacity. Furthermore, positive Q^2 predict values and lower RMSE and MAE values for the PLS model compared to the linear model demonstrate that the structural model possesses acceptable out-of-sample predictive relevance. Collectively, these results indicate that the proposed attitudinal framework is not only statistically significant but also structurally robust and predictively relevant.

Importantly, the findings suggest that virtual influencers are evaluated through psychological mechanisms comparable to those applied to human influencers. Despite lacking physical authenticity, virtual influencers in this study effectively activate source credibility and evaluative transfer processes. This challenges the assumption that authenticity must be inherently human and suggests that narrative consistency, symbolic authority, and brand alignment may compensate for the absence of human identity (Arsenyan & Mirowska, 2021; Thomas & Fowler, 2021).

This study advances marketing communication theory in several ways. First, it extends attitude formation theory by demonstrating that brand attitude in virtual influencer contexts is structured through layered evaluative mechanisms. Rather than emerging solely from brand exposure, brand attitudes are formed through sequential evaluations of the influencer (ATI) and the embedded communication strategy (ATPP). This provides empirical support for a mediated attitudinal formation process in AI-driven endorsement environments.

Second, the results expand source credibility theory by showing that perceived authority and credibility can be constructed algorithmically. The strong $ATI \rightarrow ATPP$ effect indicates that persuasive authority does not require human embodiment; instead, symbolic expertise, aesthetic coherence, and narrative control may be sufficient to generate evaluative dominance.

Third, this study integrates influencer marketing and product placement research into a unified structural model. Prior literature often examines influencer effects and product placement independently. By modeling ATI , $ATPP$, and ATB simultaneously, this study offers a more comprehensive understanding of how embedded brand communication operates in social media ecosystems.

From a managerial standpoint, the findings suggest that the effectiveness of product placement through virtual influencers depends primarily on the strength of influencer identity construction. Given the very large effect of ATI on $ATPP$, firms should prioritize developing credible, consistent, and value-aligned virtual influencer personas before intensifying brand integration efforts. Investments in visual sophistication alone are insufficient; audiences respond to perceived expertise, authenticity cues, and brand congruence.

Moreover, the moderate $ATI \rightarrow ATB$ effect indicates that virtual influencers can function comparably to human influencers in shaping brand evaluations. This offers strategic advantages, including greater narrative control, reduced reputational volatility, and enhanced long-term brand alignment. However, the relatively small $ATPP \rightarrow ATB$ effect suggests that aggressive or overly explicit product placements may not significantly strengthen brand attitudes unless supported by strong influencer credibility. Managers should therefore focus on seamless brand integration within influencer narratives rather than increasing placement visibility.

This study also contributes to understanding digital marketing dynamics in emerging markets, specifically Indonesia. The strong $ATI \rightarrow ATPP$ effect may reflect cultural tendencies such as higher authority orientation and strong social media engagement intensity, which amplify source-based influence mechanisms. In collectivist and relationally oriented societies, audiences may place greater emphasis on perceived authority and social validation, potentially strengthening the dominance of influencer evaluation in shaping product placement acceptance. Therefore, while the structural relationships identified in this study may generalize across contexts, the magnitude of these effects may vary depending on cultural dimensions and digital literacy levels. Future cross-cultural research is needed to examine whether authority dominance in virtual influencer marketing is universally observed or contextually amplified in emerging markets.

CONCLUSION

This study examined the structural relationships among Attitude Toward the Influencer (ATI), Attitude Toward Product Placement ($ATPP$), and Attitude Toward the Brand (ATB) in the context of virtual influencer-based marketing communication. The findings demonstrate that brand attitudes are formed through a layered evaluative mechanism in which perceptions of the influencer play a dominant role. The very large effect of ATI on $ATPP$ indicates that evaluations of the message source substantially shape audience acceptance of embedded brand content, suggesting the presence of authority-based evaluative transfer in AI-mediated endorsement environments. While product placement positively influences brand attitude, its effect is comparatively smaller, reinforcing the primacy of source evaluation over mere brand exposure.

Theoretically, this study extends attitude formation and source credibility frameworks into the domain of algorithmically constructed influencers, demonstrating that persuasive authority does not necessarily depend on human embodiment. By integrating influencer evaluation and product placement within a single structural model, the study offers a more comprehensive explanation of brand attitude formation in social media ecosystems, particularly within an emerging market setting.

Nevertheless, several limitations provide directions for future research. The study was conducted within a single cultural context and did not directly compare virtual and human influencers, limiting generalizability and comparative inference. Future research should employ cross-cultural and multi-group experimental designs to test boundary conditions and examine whether authority dominance effects vary across contexts. Additionally, extending the model to include behavioral outcomes and moderating variables such as AI familiarity or perceived authenticity would further strengthen theoretical integration in virtual influencer research.

References

- Agnihotri, D., Chaturvedi, P., Kulshreshtha, K., & Tripathi, V. (2023). Investigating the impact of authenticity of social media influencers on followers' purchase behavior: mediating analysis of parasocial interaction on Instagram. *Asia Pacific Journal of Marketing and Logistics*, 35(10), 2377-2394. <https://doi.org/10.1108/APJML-07-2022-0598>
- Alassani R. & Göretz, J. (2019). Product placements by micro and macro influencers on Instagram. *Social Computing and Social Media*, 11579, 251-267. https://doi.org/10.1007/978-3-030-21905-5_20
- Arsenyan, J., & Mirowska, A. (2021). Almost human? A comparative case study on the social media presence of virtual influencers. *International Journal of Human Computer Studies*, 155(102694), 1-16. <https://doi.org/10.1016/j.ijhcs.2021.102694>
- Baklanov, N. (2020). *The top Instagram virtual influencers in 2020*. Retrieved Mar 14, 2024, from: <https://hypeauditor.com/blog/the-top-instagram-virtual-influencers-in-2020/>
- Belanche, D., Casalo, L. V., Flavián, M., & Ibáñez-Sánchez, S. (2021). Building influencers' credibility on Instagram: effects on followers' attitudes and behavioral responses toward the influencer. *Journal of Retailing and Consumer Services*, 61, 1-11. <https://doi.org/10.1016/j.jretconser.2021.102585>
- Chin, P. N., Isa, S. M., & Alodin, Y. (2019). The impact of endorser and brand credibility on consumers' purchase intention: the mediating effect of attitude towards brand and brand credibility. *Journal of Marketing Communications*, 26(8), 1-17. <https://doi.org/10.1080/13527266.2019.1604561>
- Feldt, L. S. (1973). What size samples for methods/materials experiments?. *Journal of Educational Measurement*, 10(3), 221-226. <https://doi.org/10.1111/j.1745-3984.1973.tb00800.x>
- Ghorban, Z.S. (2012). Brand attitude, its antecedents and consequences. investigation into smartphone brands in Malaysia. *Journal of Business and Management*, 2, 31-35. <https://doi.org/10.9790/487X-0233135>
- Guo, F., Ye, G., Hudders, L., Lv, W., Li, M., & Duffy, V. G. (2019). Product placement in mass media: A review and bibliometric analysis. *Journal of Advertising*, 48(2), 215-231. <https://doi.org/10.1080/00913367.2019.1567409>
- Gupta, P. B., & Gould, S. J. (1997). Consumers' perceptions of the ethics and acceptability of product placements in movies: product category and individual differences. *Journal of Current Issues & Research in Advertising*, 19(1), 37-50. <http://dx.doi.org/10.1080/10641734.1997.10505056>
- Gupta, P. B., Balasubramanian S. K., & Klassen, M. L. (2000). Viewers' evaluations of product placements in movies: public policy issues and managerial implications. *Journal of Current Issues and Research in Advertising*, 22(2), 41-52. <https://doi.org/10.1080/10641734.2000.10505107>
- 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*, 3(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Han, J. & Chen, H. (2022). Millennial social media users' intention to travel: the moderating role of social media influencer following behavior. *International Hospitality Review*, 36(2), 340-357. <https://doi.org/10.1108/IHR-11-2020-0069>
- Jhawar, A., Kumar, P., & Varshney, S. (2023). The emergence of virtual influencers: a shift in the influencer marketing paradigm. *Young Consumers*, 24(4), 468-484. <https://doi.org/10.1108/YC-05-2022-1529>
- Karrh, J. A., Frith, K. T., & Callison, C. (2001). Audience attitudes towards brand (product) placement: Singapore and the United States. *International Journal of Advertising: The Review of Marketing Communications*, 20(1), 3-24.
- Kaur, R., Sharma, R. K., & Bakshi, A. (2021). Antecedents and consequences of consumers' attitudes toward product placements: evidence from India. *International Journal of Emerging Markets*, 18(9), 2698-2717. <https://doi.org/10.1108/IJOEM-09-2020-1087>
- Kamuri, K. J., Anabuni, A. U. T., Riwu, Y. F., & Manongga, I. R. A. (2023). The Role Of Digital Marketing Content Tools In Building Public Trust In Kupang City To Online Shopping. *Journal of Tourism Economics and Policy*, 3(3), 182-188. <https://doi.org/10.38142/jtep.v3i3.769>

- Manongga, I. R. A., & Giri, Y. S. (2025). The Dynamics of Millennial Consumer Behavior in Online Shopping Decision-Making on the Shopee Marketplace with Scarcity Perception as a Moderating Variable. *Journal of Management and Business Innovation*, 01(01), 01–13. <https://doi.org/10.65792/jombinov.v1i01.3>
- Moni Y. Siahaan, & Klaasvakumok J. Kamuri. (2025). Causal Model of Emotional Intelligence, Digital Literacy, and Employee Work Productivity of Banking Staff in Kupang: A Structural Equation Modeling Approach. *Journal of Management and Business Innovation (JOMBINOV)*, 1(1), 14–27. <https://v-learnov.com/index.php/jombinov/article/view/25>
- Muzellec, L., Kanitz, C., Lynn, T. (2013). Fancy a coffee with friends in ‘Central Perk’? . *International Journal of Advertising*, 32(3), 399–417. <https://doi.org/10.2501/IJA-32-3-399-417>
- Nadeak C. R. Br., & Setiawan, R. (2024). The analysis of product placement on brand awareness and brand attitude of Kopiko candy in season 2 of Taxi Driver Korean drama. *Ekombis Review: Jurnal Ilmiah Ekonomi dan Bisnis*, 12(1), 1017-1026. <https://doi.org/10.37676/ekombis.v12i1.5256>
- Newell J, Salmon CT, Chang S. (2006). The hidden history of product placement. *Journal Of Broadcasting & Electronic Media*, 50(4), 575–594. https://doi.org/10.1207/s15506878jobem5004_1
- Panggati, I. E., Sasmoko, Simatupang, B., & Abdinagoro, S. B. (2023). Does digital influencer endorsement contribute to building consumers’ attitude toward digital advertising during COVID-19 pandemic? mediating role of brand attitude. *Cogent Business & Management*, 10(2), 16. <https://doi.org/10.1080/23311975.2023.2220204>
- Perwitasari, D. A., & Paramita, E. L. (2020). Product placement on Korean drama as an effective tool for brand positioning (case study: Laneige). *Jurnal Muara Ilmu Ekonomi dan Bisnis*, 4(1), 140–145. <https://doi.org/10.24912/jmieb.v4i1.7717>
- Punjani, K. K. & Kumar, V. V. R. (2021). Impact of advertising puffery and celebrity trustworthiness on attitude and purchase intent: a study on Indian youth. *Journal of Advances in Management Research*, 18(5), 738-757. <https://doi.org/10.1108/JAMR-06-2020-0133>
- Purnomo, N. (2023). The effect of product placement on consumer buying interest with brand awareness as a mediating variable. *International Journal of Integrative Sciences*, 2(5), 681–694. <https://doi.org/10.55927/ijis.v2i5.4135>
- Rejeb, A., Rejeb, K., Abdollahi, A., & Treiblmaier, H. (2022). The big picture on Instagram research: Insights from a bibliometric analysis. *Telematics and Informatics*, 73(101876), 1-28. <https://doi.org/10.1016/j.tele.2022.101876>
- Rodgers, S. (2021). Themed issue introduction: Promises and perils of artificial intelligence and advertising. *Journal of Advertising*, 50(1), 1–10. <https://doi.org/10.1080/00913367.2020.1868233>
- Sander, F., Föhl, U., Walter, N., & Demmer, V. (2021). Green or social? An analysis of environmental and social sustainability advertising and its impact on brand personality, credibility and attitude. *Journal of Brand Management*, 28, 429-445. <https://doi.org/10.1057/s41262-021-00236-8>
- Sands, S., Campbell, C. L., Plangger, K. and Ferraro, C. (2022). Unreal influence: leveraging AI in influencer marketing. *European Journal of Marketing*, 56(6), 1721-1747. <https://doi.org/10.1108/EJM-12-2019-0949>