

The Effect Of Parasocial Relationships, Influencer Attributes, Quality Uncertainty And Product Suitability On Impulse Buying In Live Streaming Influencer Willie Salim

Moh Afdal Daeng Patujuh^{1*}, Nabila Kharimah Verdy²

^{1,2}Management Study Program, Faculty of Business and Economics, Islamic University of Indonesia, Yogyakarta

*Corresponding Author: daengafdal405@gmail.com

Abstract

The development of digital technology and social media has transformed the way consumers make purchasing transactions, particularly through live streaming, which enables direct interaction between influencers and audiences. This condition encourages the formation of parasocial relationships that can influence impulsive purchasing behavior. Amid increasingly competitive digital marketing, understanding the factors that influence impulse buying is important for businesses and influencers. This study aims to examine the effects of attractiveness, trust, interactivity, and self-disclosure on parasocial relationships, as well as the effects of parasocial relationships on product quality uncertainty, product fit uncertainty, and impulse buying. It also examines the effects of product quality uncertainty and product fit uncertainty on impulse buying in the context of influencer Willie Salim's live streaming. This study employed a quantitative approach using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS. The sample was selected using purposive sampling, involving 300 respondents who were followers and viewers of Willie Salim's live streaming. The results show that attractiveness, trust, interactivity, and self-disclosure have positive and significant effects on parasocial relationships. Furthermore, parasocial relationships have negative and significant effects on product quality uncertainty and product fit uncertainty, while having a positive and significant effect on impulse buying. Product quality uncertainty and product fit uncertainty also have negative and significant effects on impulse buying. Thus, all hypotheses (H1–H9) are supported. These findings indicate that parasocial relationships formed through interactions with influencers not only increase consumers' tendency to engage in impulse buying but also reduce uncertainty regarding product

954



quality and product fit, which subsequently contributes to impulse buying behavior in the context of live streaming.

Keywords: parasocial relationship, perceived product quality uncertainty, perceived product fit uncertainty, impulsive buying, live streaming.

INTRODUCTION

In the digital era, social media has become a major channel in modern marketing activities because of its ability to reach audiences widely, quickly and interactively (Maharani, 2025). Platforms like TikTok, Instagram, YouTube, and Facebook have fueled the rise of the influencer phenomenon, individuals who have the ability to influence audience perceptions and behavior through digital content (Putra & Rachmawati, 2023). Through features such as live streaming, influencers not only convey product information, but also build emotional closeness and trust, thus playing an important role in driving purchasing decisions (Zaini *et al.*, 2025).

The development of influencer marketing has shown a very significant trend in recent years. The global market value has consistently increased and is projected to reach US\$24 billion by 2024 (Kumar, 2025). This confirms that influencer-based marketing strategies are not only popular, but also effective in improving marketing performance.

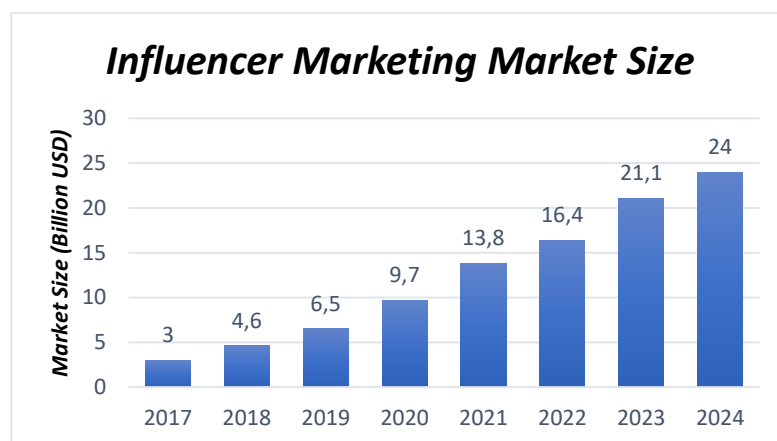


Figure 1. Development of Global Influencer Marketing Market Value 2017–2024

Source: Kumar (2025)

In addition, influencer content has been proven to generate a higher return on investment (ROI) compared to traditional advertising because it has a long-term effect through the distribution of content across various platforms (Collingwood, 2016). This

shows that influencers not only play a role as a promotional medium, but also as a sustainable marketing strategy.

In the context of consumer behavior, impulse buying is becoming an increasingly dominant phenomenon in the digital environment. Impulse buying is defined as the act of spontaneous, unplanned buying, influenced by emotional impulses and situational stimuli (Chaudhary, 2025). Live streaming reinforces this phenomenon through real-time interaction, engaging product visualizations, and marketing strategies such as limited-time discounts and time urgency, encouraging consumers to make immediate purchases.

In addition to situational factors, the role of influencers is also closely related to consumer psychology. Parasocial relationships, a one-way emotional closeness between audience and influencer, allow consumers to feel like they know and trust the influencer personally (Dibble *et al.*, 2016). This trust can reduce the perception of uncertainty in online purchases, especially regarding product quality and suitability (Ngo *et al.*, 2024). Thus, parasocial relationships become an important mechanism that bridges the influence of influencer attributes on impulsive buying behavior.

In Indonesia, the live streaming commerce phenomenon is growing rapidly and has become a major driver of digital transactions, particularly on the TikTok platform. The majority of transactions occur through the live streaming feature, demonstrating that real-time interactions significantly influence consumer purchasing decisions. This indicates that digital consumers are increasingly responsive to interactive experiences compared to conventional marketing approaches.

Furthermore, influencer attributes such as attractiveness, trustworthiness, interactivity, and self-disclosure play a crucial role in building relationships with audiences. Visual appeal and communication style can increase consumer attention, while trust and self-disclosure strengthen perceptions of authenticity (Pramesti & Abdillah, 2024). Interactivity through live streaming also creates a personal experience that increases emotional engagement, thereby increasing the likelihood of impulse purchases.

However, most previous research has focused on the direct influence of influencer attributes on purchasing decisions, and has not examined the underlying psychological mechanisms. The role of parasocial relationships and perceived product uncertainty in the context of live streaming remains relatively limited for comprehensive research (Maharani, 2025). Furthermore, the spontaneous dynamics of live streaming can potentially create uncertainty, but on the other hand, it can trigger impulse purchases when supported by trust in the influencer.

Based on this description, this study aims to analyze the influence of influencer attractiveness, trustworthiness, interactivity, and self-disclosure on parasocial relationships, as well as their implications for perceived product uncertainty and impulse



buying. This research is expected to provide empirical contributions to the development of digital marketing literature, particularly in understanding consumer behavior in the era of live streaming commerce.

Objectives

This study aims to :

1. Examine the influence of influencer attractiveness on parasocial relationships.
2. Examine the influence of influencer trust on parasocial relationships.
3. Examine the influence of influencer interactivity on parasocial relationships.
4. Examine the influence of self-disclosure on parasocial relationships.
5. Examine the influence of parasocial relationships on perceived quality uncertainty.
6. Examine the influence of parasocial relationships on perceived suitability uncertainty.
7. Examine the influence of parasocial relationships on impulse buying.
8. Examine the influence of perceived quality uncertainty on impulse buying.
9. Examine the influence of perceived suitability uncertainty on impulse buying.

Theoretical basis

This research is based on the cognitive theory of emotion which states that external stimuli will be processed cognitively, then give rise to an emotional response that drives individual behavior. In the context of digital marketing, these stimuli can be exposure to influencer content, real-time interactions, and visual and verbal communication that occurs in live streaming (Ma *et al.*, 2024). The resulting emotional responses, such as trust and closeness, can develop into parasocial relationships and encourage impulsive behavior. This theory is reinforced by attribution theory, which explains that consumers tend to attribute influencer recommendations to genuine intentions, thereby increasing trust and influencing purchasing decisions (Kapitan & Silvera, 2016).

Live streaming is an interactive media based on real-time communication that allows two-way interaction between influencers and audiences (Merritt & Zhao, 2022 ; Hsu & Hu, 2024). In the context of e-commerce, live streaming has developed into live commerce, namely promotional activities and transactions carried out directly on one platform (Wang *et al.*, 2022). The main characteristics of live streaming such as interactivity, immediacy, and personal communication make it effective in increasing consumer engagement (Tang *et al.*, 2016 ; Wang & Li, 2020).

Influencers are individuals who have the ability to influence audience perceptions and behavior through content shared on social media (Leung *et al.*, 2022). Influencer marketing effectiveness is determined by several key attributes: attractiveness,



trustworthiness, interactivity, and self-disclosure. Attractiveness reflects an influencer's ability to capture attention and build emotional connection (Filieri *et al.*, 2023). Trust relates to perceptions of an influencer's credibility and honesty (Sokolova & Kefi, 2020). Interactivity demonstrates the influencer's ability to create responsive two-way communication (Kim, 2022). Meanwhile, self-disclosure strengthens perceptions of authenticity and psychological closeness through sharing personal experiences (Kim & Song, 2016 ; Lu *et al.*, 2023).

These four attributes play a role in forming a parasocial relationship, namely a one-way emotional relationship that the audience feels towards the influencer Yuan *et al.* (2021). This relationship makes the audience feel close and trusting, making it easier to accept product recommendations (Samudra *et al.*, 2024). In the context of online shopping, parasocial relationships also play a role in reducing product uncertainty, which consists of quality uncertainty and suitability uncertainty (Ma *et al.*, 2024; Ngo *et al.*, 2024). Quality uncertainty relates to doubts about product performance Chung (2020), Acuti *et al.* (2022) whereas suitability uncertainty is related to the suitability of the product to consumer needs.

The lower the level of uncertainty felt, the more likely consumers are to make impulse purchases, namely spontaneous purchases triggered by emotional impulses without planning (Iyer *et al.*, 2020 ; Dinesha, 2022). In the context of live streaming, stimuli such as direct interaction, product demonstrations, and influencer recommendations can accelerate the decision-making process, thereby increasing the tendency for impulsive buying (Rodrigues *et al.*, 2021).

Hypothesis Development

The influencer's appeal can increase followers' emotional interest and involvement, thus triggering the formation of parasocial relationships (Ma *et al.*, 2024 ; Hapsari *et al.* 2022). Attractive individuals tend to be perceived more positively (halo effect), making it easier for followers to feel close and emotionally connected (Su *et al.*, 2021). The intensity of exposure to attractive influencers also strengthens the process of identification and psychological closeness.

H1: Influencer attractiveness has a positive effect on parasocial relationships.

Trust in influencers reflects perceptions of honesty, credibility, and good intentions, which form the basis for the formation of psychological closeness between followers and influencers (Alkan & Ulas, 2023). The higher the trust, the more likely followers are to feel comfortable and emotionally connected (Filieri *et al.*, 2023). Trust also makes followers more open to receiving information and building long-term attachments.

H2: Trust in influencers has a positive influence on parasocial relationships.



Influencer interactivity through two-way communication and real-time responses increases followers' sense of appreciation and emotional engagement (H. (Ma *et al.*, 2024 ; Kim, 2022). Quick, personal responses create the illusion of a real social connection. This reinforces the perception of closeness and fosters a more intense parasocial relationship (Jun & Yi, 2020).

H3: Influencer interactivity has a positive effect on parasocial relationships.

Self-disclosure allows influencers to appear more authentic and human, thereby reducing the psychological distance with their audience (Kim & Song, 2016; Lu *et al.*, 2023). Openness in sharing personal experiences makes followers feel like they know the influencer better on a personal level. This strengthens emotional closeness and encourages the formation of parasocial relationships (Filieri *et al.*, 2023)

H4: Self-disclosure has a positive effect on parasocial relationships.

Parasocial relationships increase trust in influencers, thereby reducing the perception of uncertainty about product quality (Ma *et al.*, 2024; Li *et al.*, 2025). Emotional closeness makes followers rely on influencer recommendations as a credible source of information. As a result, rational evaluation of product quality is reduced.

H5: Parasocial relationships have a negative effect on product quality uncertainty.

Parasocial relationships also reduce product fit uncertainty because followers feel they have something in common with the influencer (Hapsari *et al.*, 2022; Ma *et al.*, 2024). This feeling of similarity increases the belief that the product meets individual needs. This makes consumers more confident in making purchasing decisions.

H6: Parasocial relationships negatively influence product suitability uncertainty.

Emotional closeness in parasocial relationships encourages strong affective responses, thereby increasing the tendency for impulse buying (Ma *et al.*, 2024; Zhou *et al.*, 2023). Followers tend to rely on emotions rather than rational considerations. Furthermore, the desire to emulate influencers also reinforces impulse buying.

H7: Parasocial relationships have a positive effect on impulse buying.

Uncertainty about product quality increases doubt and encourages consumers to make more in-depth evaluations (Chung, 2020; Ma *et al.*, 2024). This condition makes the decision-making process more rational and planned. As a result, the tendency for impulsive buying decreases.

H8: Uncertainty about product quality has a negative effect on impulse buying.

Product suitability uncertainty raises doubts about the suitability of the product to consumer needs or preferences (Jha *et al.*, 2019; Ma *et al.*, 2024). This uncertainty slows the decision-making process and increases rational considerations. Therefore, the higher the uncertainty, the lower the tendency to make impulse purchases.

H9: Product suitability uncertainty negatively impacts impulse buying.



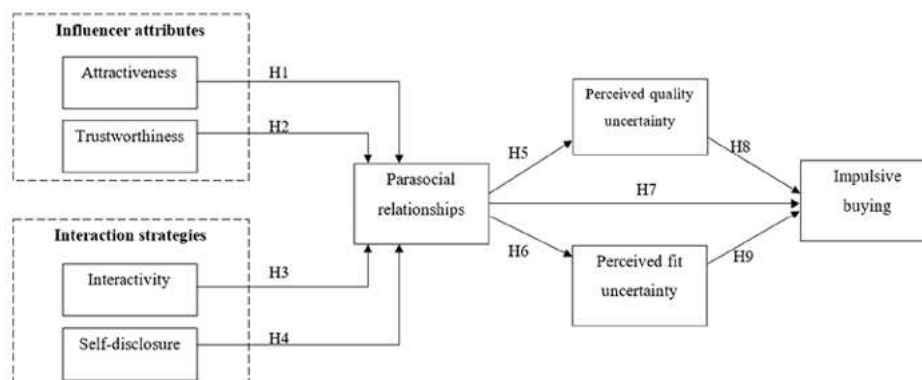


Figure 2. Research Framework
Source: Adapted from Ma *et al.* (2024)

Research methods

This research uses a quantitative approach with a positivistic paradigm, which aims to analyze phenomena objectively through numerical data and statistical testing (Hair *et al.*, 2021). The population in this study was Indonesian social media users who follow influencer Willie Salim and have watched product promotions via live streaming. The sampling technique used non-probability sampling with a purposive sampling method, which selects respondents based on specific criteria to align with the research objectives (Sekaran & Bougie, 2018). The respondent criteria include: (1) active social media users for at least the last six months, (2) at least 17 years old, (3) following Willie Salim's account, and (4) having watched product promotions via live streaming. The determination of the sample size refers to Hair *et al.* (2021), This is 5–10 times the number of indicators, so this study used a sample of 300 respondents. The research data consisted of primary data obtained through an online questionnaire and secondary data from literature and previous research (Hair *et al.*, 2021). The research instrument used a five-point Likert scale to measure respondents' perceptions of the research variables (Kandasamy *et al.*, 2020 ; Qahtan *et al.*, 2023).

Data analysis was carried out using *Structural Equation Modeling–Partial Least Squares* (SEM-PLS) with the help of SmartPLS 4.0, because it is able to analyze complex relationships between latent variables and can be used on data that is not normally distributed (Hair *et al.*, 2021). Model evaluation was conducted in two stages: the outer model and the inner model. The outer model was used to test the validity and reliability of the constructs through convergent validity, discriminant validity, and composite reliability. Meanwhile, the inner model was used to examine the relationship between variables through the path coefficient and the coefficient of determination (R^2), as well as hypothesis testing using bootstrapping techniques with the criteria of a t-statistic > 1.96

and a p-value < 0.05 (Hair *et al.*, 2021). This approach allows for comprehensive testing of relationships between variables and produces robust findings in explaining impulse buying behavior in the context of influencer live streaming.

RESULTS AND DISCUSSION

Respondent Characteristics

Respondent characteristics in this study are presented to provide a general overview of the profile of the respondents who were the object of the study. This analysis includes respondents' gender, age, occupation, and income level.

Table 1. Respondent Characteristics

Characteristics	Category	Frequency	Percentage (%)
Gender	Man	128	42.7
	Woman	172	57.3
Age	17–20 years	65	21.7
	21–25 years	109	36.3
	26–30 years	114	38.0
	> 30 years	12	4.0
Work	Students	80	26.7
	Civil Servants/TNI/POLRI	31	10.3
	Self-employed	59	19.7
	Private employees	112	37.3
	Housewife/Retiree	18	6.0
Income	≤ 1 Million	50	16.7
	2–3 Million	94	31.3
	4–5 Million	93	31.0
	> 5 Million	63	21.0
Total Respondents		300	100.0

Source: Processed primary data, 2026

Based on Table 1, the overall characteristics of the respondents, it can be concluded that the respondents were predominantly female, with 172 people (57.3%). In terms of age, the majority were in the 26–30 years range, with 114 people (38.0%), followed by 21–25 years old, with 109 people (36.3%). Based on occupation, most respondents worked as private employees, namely 112 people (37.3%), while in terms of income, respondents with an income of 2–3 million were dominated by 94 people (31.3%), followed by 4–5 million people by 93 people (31.0%). This shows that the respondents of the study were dominated by the productive age group with a middle



income level who actively used social media and had the potential to make impulsive purchases.

Measurement Model (Outer Model)

Measurement model evaluation was conducted to assess the validity and reliability of indicators in measuring the research's latent variables. Testing was conducted using the Partial Least Squares (PLS) algorithm, which includes convergent validity, discriminant validity, and construct reliability.

Convergent Validity

Convergent validity aims to ensure that each indicator accurately represents the construct being measured. An indicator is considered valid if its loading factor is >0.70 and its Average Variance Extracted (AVE) is >0.50 (Hair *et al.*, 2021). The results of the convergent validity test can be seen in Table 2 below.

Table 2. Convergent Validity Test

Variables	Item	Loading Factor	AVE	Information
Attractiveness	ATT1	0.868	0.659	Valid
	ATT2	0.821		Valid
	ATT3	0.753		Valid
	ATT4	0.801		Valid
Parasocial Relationship	PR1	0.900	0.731	Valid
	PR2	0.813		Valid
	PR3	0.840		Valid
	PR4	0.866		Valid
Interactivity	INT1	0.827	0.641	Valid
	INT2	0.801		Valid
	INT3	0.745		Valid
	INT4	0.804		Valid
	INT5	0.823		Valid
Trust	TR1	0.832	0.657	Valid
	TR2	0.780		Valid
	TR3	0.815		Valid
	TR4	0.815		Valid
Perceived Uncertainty of Compatibility	PFU1	0.848	0.642	Valid
	PFU2	0.819		Valid
	PFU3	0.769		Valid

	PFU4	0.765		Valid
	PFU5	0.802		Valid
Perceived Quality Uncertainty	PQU1	0.861	0.637	Valid
	PQU2	0.826		Valid
	PQU3	0.740		Valid
	PQU4	0.709		Valid
	PQU5	0.822		Valid
	PQU6	0.818		Valid
Self-Disclosure	SD1	0.835	0.637	Valid
	SD2	0.798		Valid
	SD3	0.769		Valid
	SD4	0.800		Valid
	SD5	0.787		Valid
Impulse Buying	IB1	0.879	0.670	Valid
	IB2	0.795		Valid
	IB3	0.773		Valid
	IB4	0.823		Valid

Source: SmartPLS Output Results, 2026

Based on the test results, all indicators had loading factor values above 0.70, thus valid in representing the research constructs. Furthermore, the AVE value for each variable was also greater than 0.50, indicating that the constructs met convergent validity criteria and adequately explained the indicator variance.

Discriminant Validity

Discriminant validity was assessed to ensure that each construct in the model was sufficiently distinct from the other constructs. The assessment was conducted using the *Fornell-Larcker criterion* and *cross-loading*. According to the *Fornell-Larcker criterion*, the square root of the AVE for each construct should be greater than its correlations with other constructs (Sekaran & Bougie, 2018).



Table 3. Discriminant Validity Test

Variabel	Attractiveness	Parasocial Relationship	Interaktivitas	Trust	Product Suitability Uncertainty	Product Quality Uncertainty	Impulse Buying	Self-Disclosure
Attractiveness	0.812							
Parasocial Relationship	0.555	0.855						
Interaktivitas	0.635	0.581	0.801					
Trust	0.671	0.561	0.651	0.811				
Product Suitability Uncertainty	-0.509	-0.455	-0.486	-0.479	0.801			
Product Quality Uncertainty	-0.581	-0.509	-0.574	-0.572	0.775	0.798		
Impulse Buying	0.687	0.598	0.593	0.679	-0.666	-0.711	0.818	
Self-Disclosure	0.637	0.557	0.634	0.679	-0.524	-0.604	0.587	0.798

Source: SmartPLS Output Results, 2026

The results indicate that all constructs met the required criteria. The square root of AVE values ranged from 0.798 to 0.855 and were consistently higher than the correlations among the constructs. Furthermore, the *cross-loading* results showed that each indicator had the highest loading on its respective construct compared with the other constructs. Therefore, all constructs and indicators in the model satisfied the requirements for discriminant validity, indicating that the measurement model adequately distinguishes each construct from the others.



Reliability

Reliability testing was conducted to ensure the internal consistency of indicators in measuring research constructs. In PLS analysis, construct reliability was assessed using Cronbach's Alpha and Composite Reliability (Hair *et al.*, 2021). A construct is declared reliable if it has a Composite Reliability and Cronbach's Alpha value > 0.70 . The results of the reliability test can be seen in Table 3.

Table 4. Reliability Test

Variables	Cronbach's Alpha	Composite Reliability	Information
Attractiveness	0.827	0.833	Reliable
Parasocial Relationship	0.877	0.881	Reliable
Interactivity	0.860	0.862	Reliable
Trust	0.827	0.830	Reliable
Product Suitability Uncertainty	0.860	0.863	Reliable
Product Quality Uncertainty	0.885	0.889	Reliable
Impulse Buying	0.834	0.835	Reliable
Self-Disclosure	0.857	0.858	Reliable

Source: SmartPLS Output Results, 2026

Based on the test results, all variables had Cronbach's Alpha and Composite Reliability values above 0.70, thus concluding that all constructs in this study have a high level of reliability and good internal consistency. Therefore, all variables in this study are suitable for further analysis in the structural model (inner model).

Structural Model (Inner Model)

After the measurement model (outer model) is declared valid and reliable, the next stage is evaluating the structural model (inner model). This test aims to determine the relationships between constructs in the research model through analysis of the coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2) using the Partial Least Squares (PLS) method. The following figure illustrates the relationship model between variables in this study.

Coefficient of Determination (R-Square)

The coefficient of determination (R^2) is used to measure the ability of independent variables to explain dependent variables in the research model (Hair *et al.*, 2021). The higher the R^2 value indicates the greater the model's ability to explain variations in endogenous variables.



Table 5. R Square Test Results

Variables	R-Square	R-Square Adjusted
Parasocial Relationship	0.432	0.425
Product Suitability Uncertainty	0.207	0.204
Product Quality Uncertainty	0.260	0.257
Impulse Buying	0.604	0.600

Source: SmartPLS Output Results, 2026

Based on the test results, the R^2 value for the Impulsive Buying variable is 0.604, indicating that the variables in the model are able to explain 60.4% of the variation in impulsive buying, while the remainder is explained by other variables outside the study. The R^2 value for Parasocial Relationships is 0.432, which is included in the moderate category, while Product Quality Uncertainty is 0.260 and Product Suitability Uncertainty is 0.207, which are included in the weak category. Referring to the criteria Hair *et al.* (2021), this value shows that the model has a fairly good ability to explain the main variables, especially impulsive buying.

Predictive Relevance (Q-Square)

Predictive relevance (Q^2) is used to measure a model's predictive ability through a blindfolding procedure. A model is said to have good predictive ability if the Q^2 value is > 0 .

Table 6. Q-Square Test Results

Variables	Q^2 (=1-SSE/SSO)	Information
Parasocial Relationship	0.304	Has predictive relevance value
Product Suitability Uncertainty	0.129	Has predictive relevance value
Product Quality Uncertainty	0.159	Has predictive relevance value
Impulse Buying	0.388	Has predictive relevance value

Source: SmartPLS Output Results, 2026

Based on the Q-square test results, all dependent variables have values greater than 0, indicating that the model has good predictive ability. The Impulsive Buying variable has the highest Q^2 value, indicating that the model is able to predict impulsive



buying behavior quite well compared to other variables. Thus, overall, this research model has good predictive relevance and is suitable for use in hypothesis testing.

Hypothesis Testing Results

Structural relationship model testing was conducted to explain the relationship between variables in this study. Structural model testing was conducted through the Partial Least Square (PLS) approach using SmartPLS software version 4.0. This test aims to determine the direct and indirect effects between hypothesized latent variables. The basis for decision making in hypothesis testing is based on the p-value and t-statistic obtained from the output path coefficients. The testing criteria used are if the p-value < 0.05 (5% significance level) and t-statistic > 1.960, then it can be concluded that there is a significant influence between the exogenous variables on the endogenous variables. Conversely, if the p-value > 0.05 and t-statistic < 1.960, then the effect is declared insignificant. The results of hypothesis testing in this study are presented in Figure 3 and Table 7 below. Information about hypothesis testing:

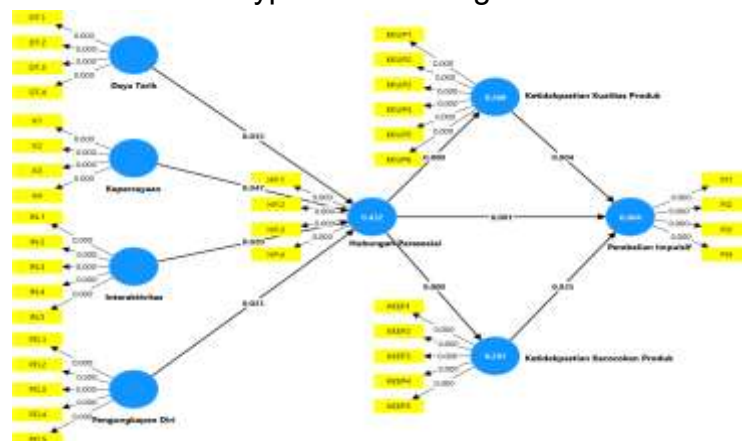


Figure 3. Hypothesis testing

Source: SmartPLS Output Results, 2026

Table 7. Hypothesis Testing

Variables	Original Sample (O)	T Statistics (O/STDEV)	P Values	Information
Attraction -> Parasocial Relationship	0.174	2.133	0.033	Accepted
Trust -> Parasocial Relationship	0.158	1.987	0.047	Accepted

Interactivity -> Parasocial Relationships	0.256	2.318	0.020	Accepted
Self-Disclosure -> Parasocial Relationships	0.177	2.316	0.021	Accepted
Parasocial Relationship -> Product Quality Uncertainty	-0.509	5.181	0,000	Accepted
Parasocial Relationship -> Product Fit Uncertainty	-0.455	4.693	0,000	Accepted
Parasocial Relationships -> Impulse Buying	0.298	3.177	0.001	Accepted
Product Quality Uncertainty -> Impulse Buying	-0.372	2.887	0.004	Accepted
Product Fit Uncertainty -> Impulse Buying	-0.242	2.108	0.035	Accepted

Source: SmartPLS Output Results, 2026

The Influence of Attraction on Parasocial Relationships

The test results show that Attractiveness has a positive and significant effect on Parasocial Relationships with a t-statistic value of $2.133 > 1.96$, and a p-value of $0.033 < 0.05$, thus the hypothesis is accepted. These results indicate that the higher the attractiveness of an influencer, the stronger the parasocial relationship formed. In the context of live streaming, attractiveness comes not only from physical appearance but also from character and communication style that make influencers feel closer and more relatable. This finding is in line with Pratama (2021) and Tandayong & Palumian (2022) which states that the attractiveness of influencers can strengthen parasocial relationships, and is supported by Su *et al.* (2021) and Hapsari *et al.* (2022).



The Influence of Trust on Parasocial Relationships

The test results show that trust has a positive and significant effect on parasocial relationships, with a t-statistic of $1.987 > 1.96$, and a p-value of $0.047 < 0.05$, thus the hypothesis is accepted. This indicates that the higher the audience's trust, the stronger the parasocial relationship formed. Trust that arises from the influencer's honesty and consistency makes the audience feel safe and emotionally connected. This finding is in line with Ma *et al.* (2024) and Filieri *et al.* (2023) and supported by Sokolova & Kefi (2020) which emphasizes the role of trust in building emotional closeness.

The Influence of Interactivity on Parasocial Relationships

The test results show that interactivity has a positive and significant effect on parasocial relationships with a t-statistic value of $2.318 > 1.96$, and a p-value of $0.020 < 0.05$, thus the hypothesis is accepted. This indicates that the higher the interactivity, the stronger the parasocial relationship. Two-way interactions, such as responding directly to comments, make the audience feel cared for and involved. This finding is in line with Jun & Yi (2020) and Ma *et al.* (2024), and supported by Chen, (2025) and Mubarak *et al.*, (2021).

The Influence of Self-Disclosure on Parasocial Relationships

The test results show that Self-Disclosure has a positive and significant effect on Parasocial Relationships with a t-statistic value of $2.316 > 1.96$, and a p-value of $0.021 < 0.05$, thus the hypothesis is accepted. This indicates that the higher the self-disclosure, the stronger the parasocial relationship. Sharing personal experiences makes influencers perceived as more authentic and closer to the audience. This finding is in line with Filieri *et al.* (2023) and Saniah (2025), and supported by Rahmaningrum *et al.*, (2024) and Lu *et al.* (2023).

The Influence of Parasocial Relationships on Product Quality Uncertainty

The test results show that parasocial relationships have a negative and significant effect on product quality uncertainty with a t-statistic value of $5.181 > 1.96$, and a p-value of $0.000 < 0.05$, thus the hypothesis is accepted. This indicates that the stronger the parasocial relationship, the lower the product quality uncertainty. Emotional closeness makes the audience more trusting of influencer recommendations. This finding is in line with Ma *et al.* (2024) and Sajan *et al.* (2024), and supported by Ulya *et al.* (2025).

The Influence of Parasocial Relationships on Product Fit Uncertainty

The test results show that Parasocial Relationships have a negative and significant effect on Product Suitability Uncertainty with a t-statistic value of $4.693 > 1.96$, and a p-



value of $0.000 < 0.05$, so the hypothesis is accepted. This indicates that the stronger the parasocial relationship, the lower the product suitability uncertainty. Audiences tend to feel that the product suits them because of the perception of similarity. This finding is in line with Ma *et al.* (2024) and Awawdeh *et al.* (2024), and supported by Hapsari *et al.* (2022).

The Influence of Parasocial Relationships on Impulsive Buying

The test results show that parasocial relationships have a positive and significant effect on impulsive buying, with a t-statistic of $3.177 > 1.96$, and a p-value of $0.001 < 0.05$, thus the hypothesis is accepted. This indicates that the stronger the parasocial relationship, the higher the tendency for impulsive buying. Emotional closeness encourages affective responses and accelerates purchasing decisions. This finding is in line with Ma *et al.* (2024) and Zhou *et al.* (2023), and supported by Iyer *et al.* (2020) and Dinesha (2022).

The Effect of Product Quality Uncertainty on Impulsive Buying

The test results show that product quality uncertainty has a negative and significant effect on impulse buying with a t-statistic value of $2.887 > 1.96$, and a p-value of $0.004 < 0.05$, so the hypothesis is accepted. This indicates that the higher the quality uncertainty, the lower the impulse buying. Doubts about quality make consumers more cautious in making decisions. This finding is in line with Chung (2020) and Ma *et al.* (2024), and supported by Wantri (2023).

The Effect of Product Suitability Uncertainty on Impulse Buying

The test results show that Product Suitability Uncertainty has a negative and significant effect on Impulse Buying with a t-statistic value of $2.108 > 1.96$, and a p-value of $0.035 < 0.05$, so the hypothesis is accepted. This indicates that the higher the suitability uncertainty, the lower the impulsive buying. Doubt about product suitability encourages rational evaluation and delays purchases. This finding is in line with Ma *et al.* (2024) and Jha *et al.* (2019), and supported by Matt & Hess (2016).

Conclusion

Based on the results of the study using SEM-PLS on 300 respondents, it can be concluded that influencer attractiveness, trustworthiness, interactivity, and self-disclosure have a positive and significant effect on parasocial relationships, indicating that the more attractive, trustworthy, interactive, and open an influencer is, the stronger the emotional closeness formed with the audience. Furthermore, parasocial relationships have been shown to have a negative effect on uncertainty about product quality and suitability,



meaning that the stronger the closeness, the lower the level of audience doubt about the product. In addition, parasocial relationships also have a positive effect on impulse buying, so that emotional closeness can encourage spontaneous purchasing decisions. Conversely, uncertainty about product quality and suitability has a negative effect on impulse buying, indicating that the higher the consumer doubt, the lower the tendency for spontaneous buying. Overall, all hypotheses are accepted and confirm that parasocial relationships play a key role in encouraging impulsive buying in the context of live streaming.

Managerial Implications

The results of this study indicate that influencers and brands need to strengthen their appeal and authentic personal branding, build trust through transparency and consistency, and optimize interactivity in live streaming through two-way communication. Furthermore, relevant and emotional self-disclosure strategies can increase psychological closeness with audiences. To encourage impulse purchases, it is important for brands and influencers to reduce product uncertainty through clear information presentations, demonstrations, and testimonials, as well as utilize emotional trigger strategies such as limited-time promotions and storytelling in live sessions.

Research Limitations

This study has several limitations, namely the number of respondents was limited to followers of one influencer so that generalization is still limited, the use of online questionnaires that have the potential to cause response bias, and research variables that are still limited and do not include other factors such as price promotions or situational factors.

Suggestion

Future research is recommended to expand the object and sample size to make the results more representative, and to add other variables such as perceived value, discounts, and urgency effects to make the model more comprehensive. Furthermore, using a longitudinal and mixed methods approach can provide deeper understanding. Research can also compare different social media platforms to examine differences in their effects. Practitioners are advised to focus more on building long-term emotional connections, increasing product transparency, and optimizing interactive features to strengthen parasocial relationships and encourage impulse buying.

REFERENCE

Acuti, D., Pizzetti, M., & Dolnicar, S. (2022). When sustainability backfires: A review on

971



- the unintended negative side-effects of product and service sustainability on consumer behavior. *Psychology & Marketing*, 39(10), 1933–1945. <https://doi.org/10.1002/mar.21771>
- Alkan, Z., & Ulas, S. (2023). Trust in social media influencers and purchase intention: An empirical analysis. *Online Journal of Communication and Media Technologies*, 13(1), e202301. <https://doi.org/10.30935/ojcmr/12783>
- Awawdeh, E., Alhassan, R., & Alalya, A. (2024). The impact of fostering parasocial relationship between influencing entrepreneurs and social media followers on the brand image and the purchase intentions of start-up companies. 473, 433–445. https://doi.org/10.1007/978-3-031-56121-4_41
- Chaudhary, M. (2025). Impulse Buying Behavior In Digital Age: A Psychological Perspective. *International Journal of Consumer Studies Volume*, 49(3).
- Chen, C.-P. (2025). YouTube influencer marketing through parasocial interaction: a dyadic perspective. *Journal of Research in Interactive Marketing*, 19(3), 460–481. <https://www.emerald.com/jrim/article/19/3/460/1239192>
- Chung, J. (2020). Effect of Quality Uncertainty, Regulatory Focus, and Promotional Strategies on Perceived Savings for Sustainable Marketing. *Sustainability*, 12(14), 5653. <https://doi.org/10.3390/su12145653>
- Collingwood, S. (2016). Study: Influencer marketing yields 16x better ROI than digital marketing, proving ROI of influencer marketing. *The Carusele Influencer Marketing Blog*. <https://blog.carusele.com/new-study-proves-roi-of-influencer-marketing>
- Dibble, J. L., Hartmann, T., & Rosaen, S. F. (2016). Parasocial Interaction and Parasocial Relationship: Conceptual Clarification and a Critical Assessment of Measures. *Human Communication Research*, 2(1), 21–44. <https://doi.org/10.1111/hcre.12063>
- Dinesha, P. K. C. (2022). Understanding Impulse Buying Behaviour: A Systematic Literature Review. *Proceedings of International Conference on Business Management*, 18. <https://doi.org/10.31357/icbm.v18.5877>
- Filieri, R., Acikgoz, F., Li, C., & Alguezaui, S. (2023). Influencers' "organic" persuasion through electronic word of mouth: A case of sincerity over brains and beauty. *Psychology & Marketing*, 40(2), 347–364. <https://doi.org/10.1002/mar.21729>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *An Introduction to Structural Equation Modeling*. Springer.
- Hapsari, D. K., Manalu, S. R., & Rahmijai, L. R. (2022). Memahami motivasi, bentuk interaksi, dan manfaat bagi follower dalam mengikuti micro-influencer di media sosial Instagram. *Interaksi Online*, 11(1), 367–386. <https://ejournal3.undip.ac.id/index.php/interaksi-online/article/view/37287>



- Hsu, L.-C., & Hu, S.-Y. (2024). Antecedents and consequences of the trust transfer effect on social commerce: The moderating role of customer engagement. *Current Psychology*, 43(5), 4040–4061. <https://doi.org/10.1007/s12144-023-04634-w>
- Iyer, G. R., Blut, M., Xiao, S. H., & Grewal, D. (2020). Impulse buying: A meta-analytic review. *Journal of the Academy of Marketing Science*, 48(3), 384–404. <https://doi.org/10.1007/s11747-019-00670-w>
- Jha, M., Kemper, J., & Brettel, M. (2019). Product uncertainty in online markets: the influence of situational factors and individual characteristics on purchase decision reversal. *Proceedings of the Annual Hawaii International Conference on System Sciences*, 2019-January, 6418–6427. https://aisel.aisnet.org/hicss-52/os/practice-based_research/5/
- Jun, S., & Yi, J. (2020). What makes followers loyal? The role of influencer interactivity in building influencer brand equity. *Journal of Product & Brand Management*, 29(6), 803–814. <https://doi.org/10.1108/JPBM-02-2019-2280>
- Kandasamy, I., Kandasamy, W. V., Obbineni, J. M., & Smarandache, F. (2020). Indeterminate Likert scale: feedback based on neutrosophy, its distance measures and clustering algorithm. *Soft Computing*, 24(10), 7459-7468. <https://doi.org/10.1007/s00500-019-04372-x>
- Kapitan, S., & Silvera, D. H. (2016). From digital media influencers to celebrity endorsers: Attributions drive endorser effectiveness. *Marketing Letters*, 27(3), 553–567. <https://doi.org/10.1007/s11002-015-9363-0>
- Kim, H. (2022). Keeping up with influencers: exploring the impact of social presence and parasocial interactions on Instagram. *International Journal of Advertising*, 41(3), 414–434. <https://www.tandfonline.com/doi/abs/10.1080/02650487.2021.1886477>
- Kim, J., & Song, H. (2016). Celebrity's self-disclosure on Twitter and parasocial relationships: A mediating role of social presence. *Computers in Human Behavior*, 62, 570–577. <https://doi.org/10.1016/j.chb.2016.03.083>
- Kumar, N. (2025). 30+ influencer marketing statistics of 2025 (Updated). DemandSage. <https://www.demandsage.com/influencer-marketing-stats/>
- Leung, F. F., Gu, F. F., & Palmatier, R. W. (2022). Online influencer marketing. *Journal of the Academy of Marketing Science*, 50(2), 226–251. <https://doi.org/10.1007/s11747-021-00829-4>
- Li, J., Hosain, M. S., & Zaman, F. U. (2025). Parasocial relationship, brand attitude, and purchase intention: A dual mediation model. *Journal of Relationship Marketing*, 1–45. <https://doi.org/10.1080/15332667.2025.2471517>
- Lu, Y., Liu, X., Hu, Y., & Zhu, C. (2023). Influence of livestreamers' intimate self-disclosure on tourist responses: The lens of parasocial interaction theory. *Journal of Hospitality and Tourism Management*, 57, 170–178.



- <https://doi.org/10.1016/j.jhtm.2023.09.008>
- Ma, X., Aw, E., C.-X., & Filieri, R. (2024). From screen to cart: how influencers drive impulsive buying in livestreaming commerce? *Journal of Research in Interactive Marketing*, 18(6), 1034–1058. <https://doi.org/10.1108/JRIM-05-2023-0142>
- Maharani, Y. (2025). Pengaruh Influencer Marketing dan Content Marketing terhadap Purchase Decision dengan Brand Awareness dan Perceived Value sebagai Variabel Mediasi. *AKADEMIK: Jurnal Mahasiswa Ekonomi & Bisnis*, 5(1), 382–395. <https://doi.org/10.37481/jmneb.v5i1.1206>
- Matt, C., & Hess, T. (2016). Product fit uncertainty and its effects on vendor choice: An experimental study. *Electronic Markets*, 26(1), 83–93. <https://doi.org/10.1007/s12525-015-0200-8>
- Merriitt, K., & Zhao, S. (2022). The power of live stream commerce: A case study of how live stream commerce can be utilised in the traditional British retailing sector. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(2), 71. <https://doi.org/10.3390/joitmc8020071>
- Mubarak, N., Kusumawati, A., & Raharjo, K. (2021). Menggali peran digital fitness influencer terhadap parasocial interaction dan fan citizenship behaviour. *Jurnal Studi Komunikasi (Indonesian Journal of Communications Studies)*, 5(3), 764–790. <https://doi.org/10.25139/jsk.v5i3.3633>
- Ngo, T. T. A., Bui, C. T., Chau, H. K. L., & Tran, N. P. N. (2024). Electronic word-of-mouth (eWOM) on social networking sites (SNS): Roles of information credibility in shaping online purchase intention. *Heliyon*, 10(11), e32168. <https://doi.org/10.1016/j.heliyon.2024.e32168>
- Pramesti, A. N., & Abdillah, R. F. (2024). Dampak rating dan ulasan konsumen terhadap keputusan pembelian di e-commerce. *Prosiding Seminar Nasional Amikom Surakarta*, 2, 1480–1494. <https://proceeding.amikomsolo.ac.id/index.php/semnas/article/view/401>
- Pratama, C. S. (2021). Pengaruh daya tarik fisik dan sosial, sikap homofili, terhadap interaksi parasosial dan niat beli pada influencer Fadil Jaidi. (Skripsi, Universitas Atma Jaya Yogyakarta).
- Putra, R. W., & Rachmawati, I. (2023). Pengaruh Karakteristik Akun Social Media Influencer terhadap Niat untuk Mengikuti Akun dan Saran pada Media Sosial TikTok. *Jurnal Ilmiah Global Education*, 4(3), 1757–1770. <https://doi.org/10.55681/jige.v4i3.1236>
- Qahtan, S., Alsattar, H. A., Zaidan, A. A., Deveci, M., Pamucar, D., & Martinez, L. (2023). A comparative study of evaluating and benchmarking sign language recognition system-based wearable sensory devices using a single fuzzy set. *Knowledge-Based Systems*, 269, 110519. <https://doi.org/10.1016/j.knosys.2023.110519>

- Rahmaningrum, A., Koswara, I., & Fuady, I. (2024). Pengaruh visualisasi influencer dan kesesuaian kepribadian terhadap niat pembelian. *Comdent: Communication Student Journal*, 2(2), 456–470. <https://doi.org/10.24198/comdent.v2i2.60108>
- Rodrigues, R. I., Lopes, P., & Varela, M. (2021). Factors affecting impulse buying behavior of consumers. *Frontiers in Psychology*, 12, Article 697080. <https://doi.org/10.3389/fpsyg.2021.697080>
- Sajan, S., Kavalam, T. J., Baruah, R., Naik, S. J., & Mathew, A. M. (2024). Exploring parasocial relationships in committed individuals. *Journal of Positive School Psychology*, 8(3), 13–23. <https://journalppw.com/index.php/jppw/article/download/18500/11541/23358>
- Samudra, A., Kurniawati, K., & Masnita, Y. (2024). Sistem teori stimulus-respon dalam kesesuaian influencer-produk dan interaksi media sosial untuk meningkatkan niat beli. *Jurnal Riset Entrepreneurship*, 7(2), 100–114. <https://doi.org/10.30587/jre.v7i2.8098>
- Saniah, N. (2025). Strategi komunikasi efektif dalam meningkatkan loyalitas pelanggan pada era digital. *Prosiding Seminar Nasional Teknologi Komputer Dan Sains*, 3(1), 355–360. <https://doi.org/10.61132/prosemnastek.v3i1.620>
- Sekaran, U., & Bougie, R. (2018). *Research Methods For Business: A Skill Building Approach*. Wiley.
- Sokolova, K., & Kefi, H. (2020). Instagram and YouTube bloggers promote it, why should I buy? How credibility and parasocial interaction influence purchase intentions. *Journal of Retailing and Consumer Services*, 53. <https://doi.org/10.1016/j.jretconser.2019.01.011>
- Su, B.-C., Wu, L.-W., Chang, Y.-Y.-C., & Hong, R.-H. (2021). Influencers on social media as references: Understanding the importance of parasocial relationships. *Sustainability*, 13(19), 10919. <https://doi.org/10.3390/su131910919>
- Tandayong, F. A., & Palumian, Y. (2022). Peranan influencer dalam meningkatkan parasocial interaction dan purchase intention produk kostemik lokal Scarlett. *Jurnal Ilmiah Manajemen Dan Bisnis (JIMBis)*, 1(2), 171–191. <https://doi.org/10.24034/jimbis.v1i2.5375>
- Tang, J. C., Venolia, G., & Inkpen, K. M. (2016). Meerkat and Periscope: I stream, you stream, apps stream for live streams. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, 4770–4780. <https://doi.org/10.1145/2858036.2858374>
- Ulya, R., Nisak, C. L. C., Aidillah, E., & Mutmainnah, M. (2025). Kepercayaan Followers Terhadap Influencer Dinda Azzura (@ Dinzzur) dalam Mereview Produk Kecantikan Melalui Media Sosial Instagram. *Jurnal Realitas Sosial*, 1(1), 35–54. <https://journal.risetmandiri.com/index.php/jrs/article/view/11>



- Wang, M., & Li, D. (2020). What motivates audience comments on live streaming platforms? *PLOS ONE*, 15(4), e0231255. <https://doi.org/10.1371/journal.pone.0231255>
- Wang, Y., Lu, Z., Cao, P., Chu, J., Wang, H., & Wattenhofer, R. (2022). How live streaming changes shopping decisions in e-commerce: A study of live streaming commerce. *Computer Supported Cooperative Work (CSCW)*, 31(4), 701–729. <https://doi.org/10.1007/s10606-022-09439-2>
- Wantri, W. (2023). Pengaruh pengetahuan produk, kualitas produk, dan kelengkapan produk terhadap keputusan pembelian pada Toko Aman Berkat Motor Tanjungpinang. (Skripsi, STIE Pembangunan Tanjungpinang).
- Yuan, C. L., Moon, H., Kim, K. H., & Wang, S. (2021). The influence of parasocial relationship in fashion web on customer equity. *Journal of Business Research*, 130, 610–617. <https://doi.org/10.1016/j.jbusres.2019.08.024>
- Zaini, M. R., Said, M. M., & Widayawati, E. (2025). Pengaruh live streaming shopping, online customer review, dan kemudahan transaksi terhadap keputusan pembelian online. *JIAGABI*, 14(1), 291–300. <https://jim.unisma.ac.id/index.php/jiagabi/article/view/27311>
- Zhou, J., Kian, M. W., & Keong, C. S. (2023). Examining the role of parasocial interaction relationship on impulse purchase behavior in live streaming commerce. *AIP Conference Proceedings*, 2827(1). <https://doi.org/10.1063/5.0164465>

