

The Effect of Live Streaming Interactivity, Influencer Credibility, and Gamification Feature on Consumer Impulse Buying In Tiktokshop

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Abstract

The proliferation of social commerce has fundamentally reshaped consumer behavior, notably by amplifying the propensity for impulse buying on interaction-driven and entertainment-centric platforms such as TikTok Shop. This study examines the influence of Live Streaming Interactivity, Influencer Credibility, and Gamification features on consumer Impulse Buying within the TikTok Shop ecosystem in Indonesia. This study employs a quantitative, causal research design. Data were gathered via online surveys from 300 TikTok Shop users, selected through purposive sampling based on their prior engagement with live streaming and purchase history. Data analysis was executed using multiple linear regression via SPSS. The empirical findings reveal that Live Streaming Interactivity, Influencer Credibility, and Gamification each have a positive, statistically significant partial effect on Impulse Buying. Notably, Influencer Credibility emerged as the most dominant predictor. Furthermore, the simultaneous analysis confirms that these three variables significantly drive impulse buying behavior, yielding an Adjusted R^2 value of 0.313. This indicates that the proposed model accounts for 31.3% of the variance in consumer impulsive purchasing. These results validate the Stimulus–Organism–Response (S-O-R) framework within the social commerce context, where social, trust-based, and emotional stimuli collectively elicit impulsive behavioral responses. This research offers strategic insights for e-commerce practitioners on optimizing integrated marketing strategies through enhanced live-streaming engagement, influencer synergy, and gamified experiences.

Keywords: Live Streaming Interactivity, Influencer Credibility, Gamification feature, Impulse Buying, TikTok Shop, S-O-R Framework.

1. Introduction

The rapid advancement of digital technology has fundamentally transformed consumer consumption patterns, particularly in online commerce. Social media platforms have evolved beyond their initial function as communication tools into integrated digital marketplaces that simultaneously facilitate content creation, entertainment engagement, and commercial

exchange within a unified ecosystem. The growth of social commerce in Indonesia has been closely linked to the country's high social media penetration. Indonesia is currently recorded as the country with the largest TikTok audience base globally, with 194.37 million users aged 18 years and above as of mid-2025 ([Dataloka, 2025](#)). This substantial user base underscores TikTok's strategic position in Indonesia's digital economy, particularly as a platform that mediates interactions between business actors and digital consumers.

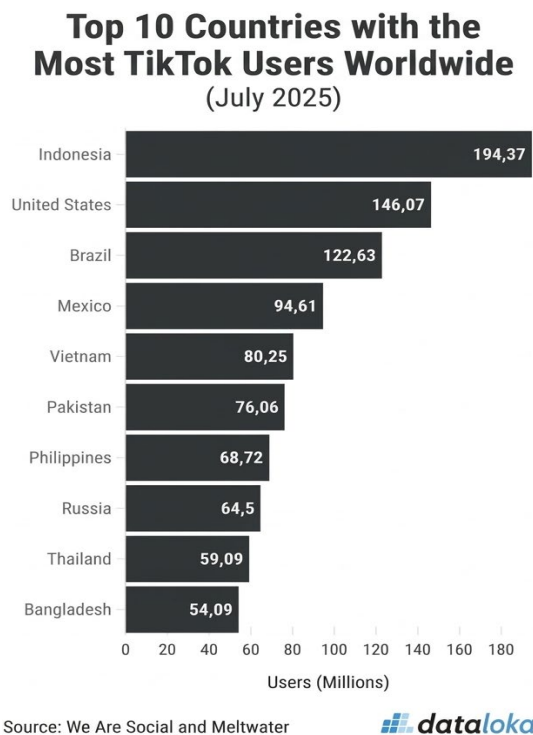


Figure 1. 10 Countries with the Highest Number of TikTok Users Worldwide (July - 2025) Source: Dataloka (2025), processed from We Are Social & Meltwater.

The substantial number of users is accompanied by high platform engagement. On average, TikTok users in Indonesia spend nearly 45 hours per month on the app, indicating a high level of interaction between content creators and consumers ([GoodStats, 2025](#)). This level of engagement fosters the expansion of content-driven social commerce activities and digital transactional interactions. Within this context, TikTok Shop has emerged as an e-commerce feature that capitalizes on the platform's interactive characteristics. Although it was temporarily suspended in late 2023 due to regulatory changes in social commerce, TikTok Shop has since resumed operations in compliance with e-commerce regulations, creating renewed opportunities for businesses to leverage digital interactions.

Consistent with this phenomenon, Zeta et al. (2025) found that 45% of Generation Z TikTok Shop users engage in impulsive purchasing behavior, influenced by exposure to creative content and influencer recommendations. These findings indicate a relationship between the intensity of digital interaction, promotional stimuli, and the tendency toward impulse buying behavior within the social commerce environment. Impulse buying is the tendency to make purchases without prior intention or planning, driven by immediate emotional impulses. On TikTok Shop, such behavior arises from the convergence of social interaction, visual

persuasion, and psychological stimulation embedded within the platform's features ([Sinurat & Salqaura, 2025](#)). One of the primary determinants of this behavior is Live Streaming Interactivity, defined as consumers' ability to interact directly with sellers and other viewers during live broadcasts. Through comment sections, like features, and virtual gifting mechanisms, consumers experience greater engagement and a more personalized shopping environment, which may stimulate spontaneous purchasing decisions.

In addition to Live Streaming Interactivity, Influencer Credibility plays a crucial role in shaping impulsive purchasing decisions. Influencer Credibility encompasses expertise, trustworthiness, and attractiveness, fostering audience confidence in recommendations. Consumers are more likely to trust influencers perceived as authentic and honest, thereby allowing such recommendations to shape perceptions and purchasing decisions. However, prior findings suggest that the effect of Influencer Credibility on impulse buying is context-dependent and inconsistent across platforms ([Yuarti et al., 2023](#)). Another increasingly prominent factor in digital shopping behavior is the Gamification feature. TikTok Shop incorporates various game-based elements, including missions, points, vouchers, quizzes, lucky draws, and rewards, to capture consumer attention. These features create an enjoyable shopping experience while providing tangible incentives for user participation ([Afrida et al., 2025](#)). From a consumer psychology perspective, such reward systems enhance perceived shopping enjoyment and may trigger impulsive behavior, as consumers are motivated to participate in order to obtain additional bonuses or discounts.

Several prior studies have examined determinants of impulse buying within the social commerce context. [Lubis \(2025\)](#) found that Live Streaming Interactivity significantly influences impulse buying through increased emotional engagement. [Annisa and Apriyana \(2025\)](#) revealed that Influencer Credibility affects consumer trust but does not consistently exert a direct influence on impulsive behavior, suggesting the presence of mediating variables. Meanwhile, [Liao et al. \(2024\)](#) demonstrated that the Gamification feature on social commerce platforms enhances shopping enjoyment and stimulates impulsive purchasing, particularly among younger consumers with strong hedonic orientations. Despite the growing body of literature, a clear research gap remains. Empirical studies examining the simultaneous influence of Live Streaming Interactivity, Influencer Credibility, and Gamification features on impulse buying within the TikTok Shop context in Indonesia remain limited. Moreover, findings on the impact of Influencer Credibility on impulse buying remain inconsistent, depending on platform characteristics and audience profiles. This gap underscores the need for further empirical investigation to understand how the distinctive features of TikTok Shop—characterized by entertainment integration and active user participation—shape impulse buying behavior.

This study holds both academic and practical significance. Academically, it contributes to the literature on consumer behavior in the social commerce 2.0 era, where the boundaries between entertainment, social interaction, and economic exchange are increasingly blurred. Practically, the findings are expected to provide insights for online businesses and digital marketers in designing live-streaming-based promotional strategies and optimizing gamification feature to enhance the tendency toward impulse buying. Based on the aforementioned background, this study aims to analyze the influence of Live Streaming Interactivity, Influencer Credibility, and Gamification feature on the impulse buying behavior of TikTok Shop consumers in Indonesia, both partially and simultaneously.

2. Literature Review

2.1. Impulse Buying

Impulse buying is a phenomenon that frequently occurs during shopping, particularly in digital environments that offer a range of visual and emotional stimuli. [Zhang et al. \(2021\)](#) define impulse buying as a purchasing action that arises suddenly, is driven by strong emotional impulses, and occurs without prior planning. Such decisions do not involve a rational evaluation process; rather, they are triggered by momentary hedonic urges. In the era of social commerce, this behavior has become increasingly prevalent as digital platforms such as TikTok Shop offer interactive, entertaining shopping experiences. Consumers not only view products but also interact with sellers and other users, obtain entertainment, and experience strong emotional stimulation ([Kalemben et al., 2024](#)). The combination of technological convenience and an engaging shopping atmosphere positions impulse buying as a common behavioral pattern among TikTok Shop users.

2.2. Live Streaming Interactivity

The concept of Live Streaming Interactivity refers to the extent to which users can actively participate in live broadcasts conducted by sellers or influencers. [Feng et al. \(2024\)](#) explain that interactivity in live streaming represents users' ability to influence the form and content of communication in real time. On TikTok Shop, this is manifested through comment sections, like features, and virtual gifting, which enable direct interaction between sellers and viewers. Such interaction fosters emotional closeness, engagement, and trust toward the seller. When consumers feel acknowledged and involved in two-way communication, they are more likely to experience spontaneous purchasing urges. [Irrawati & Isa \(2025\)](#) found that interactivity in live streaming enhances social presence and strengthens purchase intention. Similarly, [Putra & Hayadi \(2024\)](#) demonstrated that Live Streaming Interactivity positively influences impulse buying through increased emotional engagement. Therefore, higher perceived interactivity increases the likelihood of impulsive purchasing behavior. This perspective aligns with the stimulus–organism–response (S-O-R) framework, in which [Feng et al. \(2024\)](#) emphasize that stimuli embedded in live streaming trigger cognitive and affective responses that subsequently intensify impulsive buying tendencies and lead to impulse buying behavior.

2.3. Influencer Credibility

Source credibility theory, developed by Hovland, Janis, and Kelley (as cited in [Aini, 2022](#)), provides the theoretical foundation for understanding Influencer Credibility. The theory posits that message effectiveness is determined by the communicator's credibility, which consists of three dimensions: expertise, trustworthiness, and attractiveness. In digital marketing, influencers serve as communicators who shape audience perceptions and behaviors through product recommendations. With a high level of credibility, influencers may serve as stimuli that evoke cognitive and affective consumer responses, thereby increasing the tendency toward impulsive purchasing. Several empirical studies demonstrate the influence of Influencer Credibility on consumer behavior. [Sagitarini & Martini \(2025\)](#) found that Influencer Credibility has a positive effect on impulse buying behavior among Generation Z, indicating that communicator credibility contributes to spontaneous purchasing tendencies. Additionally, [Sanina et al. \(2025\)](#) reported that Influencer Credibility influences impulse buying, with trust acting as a significant mediating variable. These findings support the application of source credibility theory in explaining how influencer credibility functions as a stimulus that elicits psychological responses leading to impulsive purchasing behavior.

2.4. Gamification Feature

Gamification refers to the application of game elements in non-game contexts to enhance user engagement and motivation (Lim et al., 2025). TikTok Shop implements the Gamification feature through elements such as quizzes, missions, point systems, spin wheels, and reward vouchers. These features create enjoyment, challenge, and incentives that increase consumer involvement. From a consumer psychology perspective, game elements generate hedonic pleasure and shopping enjoyment, which may encourage spontaneous purchasing behavior. Che et al. (2023) state that gamification features in social commerce platforms enhance shopping enjoyment and stimulate the urge to buy impulsively, particularly among younger consumers. Accordingly, the stronger the gaming experience perceived by TikTok Shop users, the greater the likelihood of impulse buying behavior.

2.5. Conceptual Framework

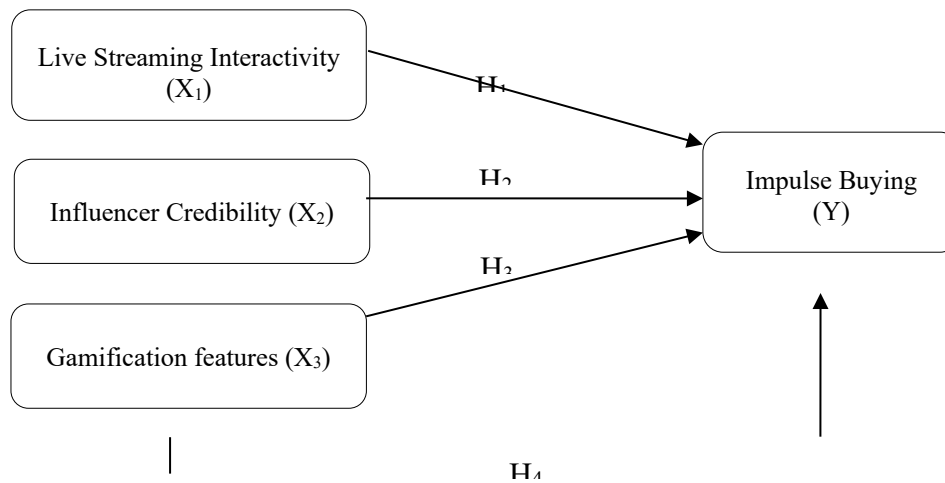


Figure 2. Conceptual Framework

1.4 Research Hypotheses

- H1:** Live Streaming Interactivity has a positive and significant effect on consumer Impulse buying on TikTok Shop.
- H2:** Influencer Credibility has a positive effect on consumer Impulse buying on the TikTok Shop.
- H3:** The gamification feature has a positive and significant effect on consumer Impulse buying in the TikTok Shop.
- H4:** Live Streaming Interactivity, Influencer Credibility, and Gamification features simultaneously have a significant effect on consumer Impulse buying on TikTok Shop.

3. Research Methods

3.1 Type and Research Approach

This study employs a quantitative research design with a causal approach. A quantitative approach is adopted because the study aims to test hypotheses regarding causal relationships between independent and dependent variables based on numerical data collected through questionnaires ([Sugiyono, 2022](#)). The causal approach is used to analyze the influence of Live Streaming Interactivity, Influencer Credibility, and the Gamification feature on consumer Impulse buying in the TikTok Shop. This research applies a cross-sectional design, in which data collection is conducted at a single point in time to capture respondents' perceptions and behaviors related to Impulse buying on TikTok Shop.

3.2 Research Location and Time

The research was conducted online, with respondents drawn from various regions across Indonesia and consisting of active TikTok Shop users. Data were collected by distributing questionnaires via Google Forms from July to December 2025.

3.3 Population and Sample

The population of this study comprises all TikTok Shop users in Indonesia who have made purchases through the platform. Considering the large and continuously growing number of TikTok Shop users, the population is categorized as an infinite population.

The sample was determined using purposive sampling with the following criteria:

- (1) TikTok users residing in Indonesia,
- (2) individuals who have made purchases through TikTok Shop,
- (3) individuals who have watched or interacted in TikTok Shop live streaming sessions, and
- (4) individuals aged at least 18 years.

The sample size was set at 300 respondents. The determination of this sample size is based on recommendations for multivariate analysis, which suggest a minimum sample size of 5–10 times the number of research indicators to ensure stable parameter estimation ([Hair et al., 2014](#)). Additionally, this sample size falls within the range considered adequate for behavioral and survey research involving large populations ([Roscoe, 1975](#); [Cochran, 1977](#)). Therefore, the selected sample size satisfies the principles of sample adequacy and statistical power.

3.4 Types and Sources of Data

This study utilizes both primary and secondary data. Primary data were collected directly through the distribution of questionnaires via Google Forms. Secondary data were collected from various sources, including literature, scientific journals, research reports, and relevant statistical data concerning TikTok Shop usage and Impulse buying behavior.

3.5 Data Collection Technique

Data were collected through an online questionnaire administered via Google Form and distributed to respondents who met the specified criteria. The questionnaire employed a 1–5 Likert scale, where 1 indicates strongly disagree and 5 indicates strongly agree, to measure respondents' perceptions of each variable indicator.

3.6 Research Variables and Operational Definitions

This study includes three independent variables—Live Streaming Interactivity (X_1), Influencer Credibility (X_2), and Gamification feature (X_3)—and one dependent variable, Impulse buying (Y). The operational definitions of each variable are presented in the following table.

Table 1. Operational Definitions and Research Indicators

Variable	Operational Definitions	Research Indicators	Sources
Live Streaming Interactivity (X_1)	Live Streaming Interactivity refers to the level of interactive engagement perceived by consumers during live streaming sessions, characterized by real-time two-way communication between sellers and consumers, social interaction among viewers, and the utilization of interactive platform features that enhance consumer engagement and shopping experience. This level of interactivity serves as an external stimulus that influences consumers' cognitive and affective responses in the context of Impulse buying.	1. Two-way interaction between seller and consumer 2. Speed and clarity of seller responses 3. Social interaction among viewers 4. Utilization of interactive platform features 5. Intensity of engagement during live streaming	(Feng et al., 2024 ; Lubis, 2025)
Influencer Credibility (X_2)	Influencer Credibility refers to the level of consumer perception of an influencer's reliability and appropriateness as an information source, reflected in honesty, trustworthiness, expertise, and professionalism in delivering promotional content, thereby influencing consumer confidence in the recommended products.	1. Influencer honesty 2. Level of trustworthiness 3. Influencer expertise 4. Content professionalism 5. Consistency and reliability	(Feng et al., 2024 ; Hakim et al., 2025)
Fitur Gamifikasi (X_3)	Gamification is the application of game elements in digital marketing activities to increase enjoyment, intrinsic motivation, and consumer engagement through challenges, game rules, point systems, and rewards, ultimately stimulating consumer behavioral responses such as purchase interest and purchasing decisions.	1. Attractiveness of missions/challenges 2. Clarity of rules 3. Attractiveness of rewards 4. Satisfaction with points/rewards 5. Element of enjoyment 6. User engagement 7. Intensity of participation 8. Role of gamification in encouraging purchase intention	(Che et al., 2023 ; Liao et al., 2024)
Impulse Buying (Y)	Impulse buying refers to purchasing behavior that occurs spontaneously, without prior planning, and is driven by situational stimuli and positive	1. Unplanned purchases 2. Spontaneous buying urges	(Dang et al., 2025 ; Zhang)

emotional responses, with minimal rational consideration before the purchase decision is made in the social commerce context.

3. Intensity of desire to purchase when exposed to stimuli [et al., 2021](#))
4. Lack of rational consideration
5. Positive emotional response
6. Rapid purchase decision

3.7 Data Analysis Technique

The analysis procedures included descriptive statistics, validity and reliability testing, classical assumption testing, and multiple linear regression analysis. Descriptive statistics were used to describe data characteristics and respondent answer tendencies through minimum, maximum, mean, and standard deviation values. Validity testing was conducted using Corrected Item-Total Correlation with a correlation criterion of > 0.30 , while reliability testing employed Cronbach's Alpha with a minimum threshold of 0.70. Classical assumption tests included normality testing using the Kolmogorov-Smirnov and Shapiro-Wilk tests, multicollinearity testing by examining Tolerance and Variance Inflation Factor (VIF) values, and heteroskedasticity testing by examining absolute residual values (ABS_RES). Multiple linear regression analysis was employed to examine the influence of Live Streaming Interactivity, Influencer Credibility, and the Gamification feature on consumer Impulse buying on TikTok Shop. Model testing was conducted using the coefficient of determination (R^2), F-test, and t-test. The multiple linear regression model in this study is formulated as follows: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$. where Y represents Impulse buying, X_1 represents Live Streaming Interactivity, X_2 represents Influencer Credibility, X_3 represents Gamification feature, α represents the constant, β represents the regression coefficients, and ε represents the error term.

4. Results and Discussion

4.1. Research Results

Table 2. Results of Descriptive Statistics

Descriptive Statistics	N	Min	Max	Mean	Std. Deviation
Live streaming interactivity (X_1)	300	1,40	4,60	3,0450	,59654
Influencer credibility (X_2)	300	1,40	4,70	3,0977	,61025
Gamification feature (X_3)	300	1,25	4,75	2,9921	,57179
Impulse buying (Y)	300	1,08	4,83	3,0917	,68973
Valid N (listwise)	300				

Descriptive statistical analysis was conducted to describe the characteristics of each research variable based on the minimum, maximum, mean, and standard deviation values from 300 respondents. The variable Live Streaming Interactivity has a mean of 3,0450 and a standard deviation of 0,59654, while Influencer Credibility has a mean of 3,0977 and a standard deviation of 0,61025. These results indicate that respondents demonstrate relatively high and consistent perceptions of both variables. Furthermore, the Gamification feature (X_3) variable has a mean of 2,9921 and a standard deviation of 0,57179, suggesting that respondents' evaluations fall within the moderate category and exhibit relatively low dispersion. The Impulse buying (Y) variable has a mean value of 3,0917 and a standard deviation of 0,68973, indicating a relatively high tendency toward impulsive purchasing behavior. Overall, the mean

values of all variables fall within the moderate to high category, with standard deviations below 1, indicating that the data are stable and suitable for further inferential analysis.

Table 3. Results of Instrument Validity Test

Variable	Number of items	CITC range	Criteria	Remark
<i>Live Streaming Interactivity (X₁)</i>	10	0,322-0,440	> 0,30	Valid
<i>Influencer Credibility (X₂)</i>	10	0,345-0,450	> 0,30	Valid
<i>Gamification feature (X₃)</i>	16	0,374-0,472	> 0,30	Valid
<i>Impulse Buying (Y)</i>	12	0,467-0,608	> 0,30	Valid

The validity test was conducted using Corrected Item–Total Correlation (CITC) with the criterion of CITC > 0,30. Based on the results shown in Table 3, all statement items for Live Streaming Interactivity (X₁), Influencer Credibility (X₂), Gamification feature (X₃), and Impulse buying (Y) have CITC values above the established minimum threshold. The CITC values range from 0,322–0,440 for X₁, 0,345–0,450 for X₂, 0,374–0,472 for X₃, and 0,467–0,608 for Y. Therefore, all statement items are declared valid and appropriate for use as research instruments.

Table 4. Results of Instrument Reliability Test

Variable	Number of Item	Cronbach's Alpha	Criteria	Remark
<i>Live Streaming Interactivity (X₁)</i>	10	0,727	> 0,70	Reliable
<i>Influencer Credibility (X₂)</i>	10	0,740	> 0,70	Reliable
<i>Gamification feature (X₃)</i>	16	0,816	> 0,70	Reliable
<i>Impulse Buying (Y)</i>	12	0,852	> 0,70	Reliable

The reliability test results indicate that all variables meet the reliability standard, with Cronbach's Alpha values exceeding 0,70. The alpha values for each variable are as follows: Live Streaming Interactivity (0.727), Influencer Credibility (0.740), Gamification feature (0.816), and Impulse buying (0.852). Thus, all variables are considered reliable and consistent in measuring the research constructs.

Table 5. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	,039	300	,200*	,996	300	,587

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

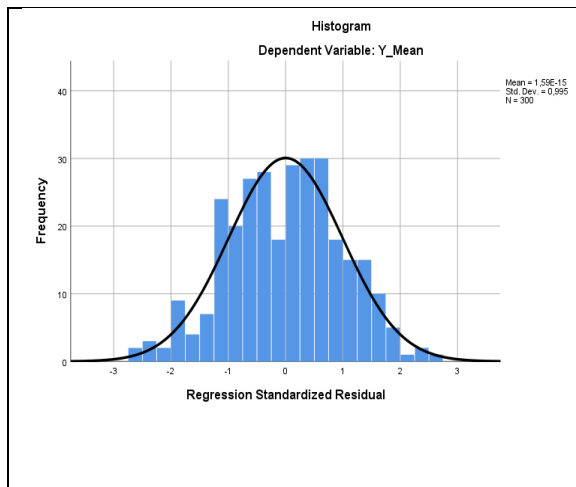


Figure 3. Histogram normalitas

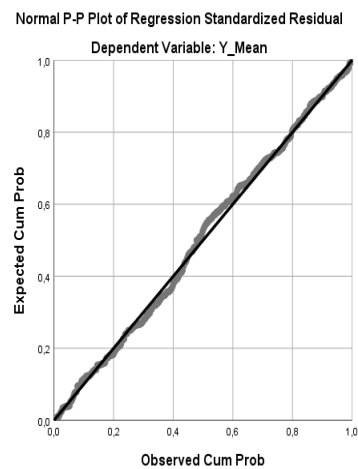


Figure 4. Normal P-P Plot

The normality test was conducted to determine whether the residual data in the regression model are normally distributed. Testing was performed using the Kolmogorov–Smirnov and Shapiro–Wilk tests, supported by histogram and Normal P–P Plot analysis. The Kolmogorov–Smirnov test yields a p-value of 0,200, while the Shapiro–Wilk test yields a p-value of 0,587, both exceeding 0,05. Additionally, the histogram displays a distribution pattern approaching normality, and the Normal P–P Plot shows points following the diagonal line. Therefore, it can be concluded that the residual data are normally distributed and that the regression model satisfies the normality assumption.

Table 6. Multicollinearity Test.

Model		Collinearity Statistics	
		VIF	Tolerance
1	(Constant)		
	Live Streaming Interactivity	1,314	0,761
	Influencer Credibility	1,286	0,778
	Gamification Feature	1,288	0,776

a. Dependent Variable: Impulse Buying

The multicollinearity test was conducted to determine whether strong linear relationships exist among the independent variables in the regression model. A good regression model requires the absence of multicollinearity, indicated by Tolerance values $> 0,10$ and Variance Inflation Factor (VIF) values < 10 . Based on Table 6, all independent variables have tolerance values above 0,10, namely X_1 (0,761), X_2 (0,778), and X_3 (0,776). In addition, the VIF values for each variable are below 10, with the highest value being 1,314. Therefore, it can be concluded that there is no multicollinearity among the independent variables in this research model. Accordingly, all independent variables are appropriate for multiple regression analysis, and the model satisfies the classical multicollinearity assumption.

Table 7. Heteroskedasticity Test

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	,375	,127	2,956	,003
	Live streaming interactivity	-,034	,036	-,938	,349
	Influencer Credibility	,023	,035	,648	,518
	Gamification feature	,042	,037	1,108	,269

a. Dependent Variable: ABS_RES

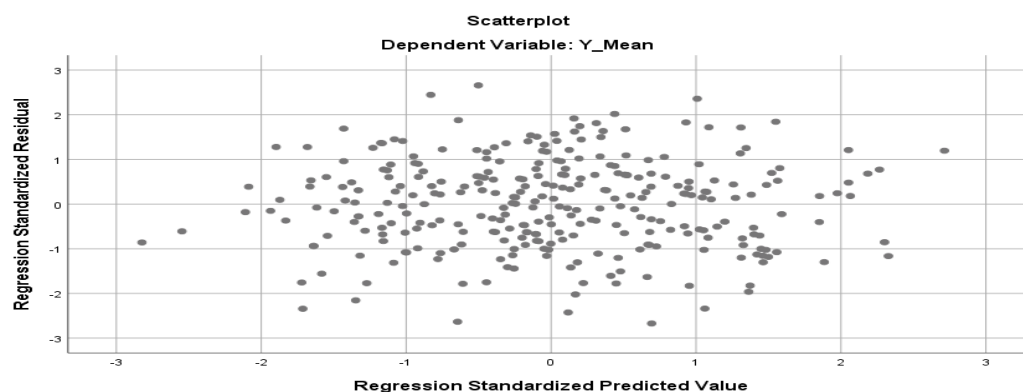


Figure 5. Scatterplot

Based on the Glejser test results in Table 7, the significance values for all independent variables— X_1 (0,349), X_2 (0,518), and X_3 (0,269)—are greater than 0,05, indicating the absence of heteroskedasticity. This finding is reinforced by the scatterplot in Figure 5, which shows residuals randomly distributed above and below the horizontal line without forming a specific pattern. Thus, the regression model satisfies the homoskedasticity assumption and is appropriate for multiple linear regression analysis.

Table 8. Results of Multiple Linear Regression Analysis

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	,521	,222	2,348	,020
	Live Streaming Interactivity	,199	,064	3,135	,002
	Influencer Credibility	,336	,061	5,473	,000
	Gamification Feature	,308	,066	4,694	,000

Referring to Table 8, the regression equation is obtained as follows:

$$Y = 0,521 + 0,199X_1 + 0,336X_2 + 0,308X_3$$

The interpretation of the regression equation is as follows:

The constant value of 0,521 indicates that when all independent variables are held constant, the dependent variable has a baseline value of 0,521.

The coefficient of Live Streaming Interactivity (X_1) is 0,199 and positive, indicating that an increase in live streaming interactivity will increase the dependent variable, assuming other variables remain constant.

The coefficient of Influencer Credibility (X_2) is 0,336 and positive, indicating that higher influencer credibility tends to increase the dependent variable.

The coefficient of the Gamification feature (X_3) is 0,308 and positive, indicating that a more attractive gamification feature will increase the dependent variable.

Partial Test (t-test)

Based on Table 8, the following can be explained:

Live Streaming Interactivity (X_1) has a significance value of 0,002 ($< 0,05$), indicating a positive and significant effect on the dependent variable. This shows that increased interaction between sellers and consumers during live streaming can drive the dependent variable higher.

Influencer Credibility (X_2) has a significance value of 0,000 ($< 0,05$), meaning that this variable has a positive and significant effect on the dependent variable. This result indicates that trust in the influencer plays an important role in shaping the dependent variable.

Gamification feature (X_3) has a significance value of 0,000 ($< 0,05$), indicating that this variable has a positive and significant effect on the dependent variable. This suggests that game features and rewards can increase consumer interest in the dependent variable.

Table 9. Simultaneous Statistical Test (F-test)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45,436	3	15,145	46,310	,000 ^b
	Residual	96,807	296	,327		
	Total	142,243	299			

a. Dependent Variable: Impulse Buying

b. Predictors: (Constant), Gamification Feature, Influencer Credibility, Live Streaming Interactivity

Based on the simultaneous test (F-test) results in Table 9, the F value is 46,310 with a significance level of 0,000 ($< 0,05$). This indicates that Live Streaming Interactivity, Influencer Credibility, and Gamification feature simultaneously have a significant effect on Impulse buying. Therefore, the regression model is declared fit for use in this study.

Table 10. Coefficient of Determination (R^2) Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,565 ^a	,319	,313	,57188

a. Predictors: (Constant), Gamification Feature, Influencer Credibility, Live Streaming Interactivity

b. Dependent Variable: Impulse Buying

Based on Table 10, the Adjusted R Square value of 0,313 indicates that Live Streaming Interactivity, Influencer Credibility, and Gamification feature explain 31,3% of the variance in Impulse buying. Meanwhile, 68,7% of the variance in Impulse buying is influenced by other factors outside this research model, such as price, sales promotion, product quality, brand trust, perceived risk, and other psychological and situational consumer factors. Thus, the regression model demonstrates adequate explanatory power and is appropriate for further analysis.

3.2 Discussion

The Effect of Live Streaming Interactivity on Impulse Buying

The hypothesis testing results indicate that Live Streaming Interactivity (X_1) has a positive and significant effect on Impulse Buying, as evidenced by a significance value of 0,002 ($< 0,05$) and a positive regression coefficient of 0,199. This finding suggests that the higher the level of interactivity perceived during live streaming, the greater the tendency to engage in impulse buying. These results affirm that interactivity is not merely a complementary feature in live streaming, but rather a strategic factor capable of stimulating spontaneous purchase decisions. This finding is consistent with the systematic literature review by [Li et al. \(2025\)](#), which positions live-streaming interactivity as a primary stimulus within the Stimulus–Organism–Response (S-O-R) framework. The synthesis of prior studies demonstrates that two-way communication, instant responses from streamers, and audience engagement through comments and questions enhance consumers' emotional arousal and cognitive involvement. These stimuli accelerate the transition from stimulus to response in the form of impulse buying, particularly because live streaming creates an immersive shopping experience and reduces consumers' rational evaluation processes. Furthermore, empirical research by [Chung et al. \(2025\)](#) strengthens the psychological mechanism underlying the relationship between interactivity and impulse buying. The study explains that interactive elements in live-streaming commerce contribute to the development of social presence, defined as the perception of strong social interaction between sellers and consumers. This social presence has been shown to enhance consumers' flow state, a condition in which individuals feel deeply immersed, focused, and engaged in the ongoing activity. The flow state significantly encourages impulse buying behavior, as consumers become more susceptible to real-time stimuli without engaging in extensive deliberation. In the Indonesian consumer context, the present findings are also consistent with [Asmarani et al. \(2024\)](#), who reported that live shopping activities have a positive and significant effect on impulse buying among marketplace users. Direct interaction between sellers and consumers during live sessions creates a more dynamic, communicative, and engaging shopping atmosphere compared to conventional online shopping. Such conditions encourage consumers to make spontaneous purchases when exposed to visual stimuli and real-time communication from sellers.

The Effect of Influencer Credibility on Impulse Buying

Based on the partial test results, Influencer Credibility (X_2) has a positive and significant effect on Impulse Buying, with a significance value of 0,000 ($< 0,05$) and a regression coefficient of 0,336. This coefficient is the largest among the independent variables, indicating that influencer credibility plays a dominant role in influencing impulse buying behavior. Conceptually, this dominance can be explained by the characteristics of TikTok Shop consumers, who are predominantly from Generation Z—a consumer segment that tends to be more responsive to reference figures than to technical platform features. In this context, influencer credibility—reflected in perceived expertise, honesty, and personal attractiveness—functions as a heuristic cue that simplifies the decision-making process. Consumers no longer evaluate products extensively, but instead rely on trust in figures perceived as relevant and authentic. This explains why the effect of influencer credibility is stronger than interactivity or gamification, which, although engaging, still require higher levels of cognitive involvement. Additionally, TikTok's nature as a person-centered platform further reinforces the dominance of influencer credibility. Content on TikTok emphasizes personal narratives, visual expression, and emotional closeness between creators and audiences. Under such conditions, influencers serve

not only as product information providers but also as sources of social legitimacy. As a result, product recommendations delivered by credible influencers are more readily accepted and can directly trigger impulse buying. These findings align with source credibility theory, which posits that the effectiveness of marketing messages is strongly influenced by audience perceptions of the communicator's expertise, trustworthiness, and attractiveness. Influencers with high credibility are able to reduce consumers' cognitive resistance and accelerate message acceptance, thereby encouraging spontaneous purchase decisions. The results support the findings of [Sagitarini and Martini \(2025\)](#), who reported that influencer credibility has a positive and significant effect on impulse buying among Generation Z, particularly when influencers are perceived as highly competent, honest, and attractive. Similarly, [Sanina et al. \(2025\)](#) emphasized that influencer credibility influences impulse buying through increased consumer trust, which acts as a primary psychological mediator in impulsive decision-making processes.

The Effect of Gamification feature on Impulse Buying

The findings indicate that the Gamification feature (X_3) has a positive and significant effect on Impulse Buying, with a significance value of 0,000 ($< 0,05$) and a regression coefficient of 0,308. This result suggests that the more engaging and interactive the gamification feature offered, the greater the likelihood that consumers will engage in impulse buying. Gamification elements such as games, rewards, points, and challenges create enjoyment and enhance consumer enthusiasm during the shopping process. These elements provide a hedonic shopping experience, encouraging consumers to make purchases as part of their gaming activities or to obtain specific benefits. Consequently, purchase decisions are not entirely based on rational considerations, but are influenced by the emotional experiences generated through platform interaction. Psychologically, gamification triggers positive emotions and increases consumer engagement in shopping activities. This is consistent with [Hamari et al. \(2014\)](#), who found that gamification elements such as points, rewards, and challenges consistently enhance intrinsic motivation, enjoyment, and user activity, although their effectiveness depends on the implementation context and user characteristics. In online shopping contexts, this enjoyable play experience acts as a stimulus that generates affective responses, thereby increasing the tendency toward impulse buying. These findings are further supported by [De Canio et al. \(2021\)](#), who explain that gamification in shopping applications functions as a trigger of intrinsic motivation that enhances shopping engagement, which subsequently increases unplanned purchase intentions. Gamification creates conditions of focus, shopping enjoyment, and social interaction that immerse consumers in the shopping experience, thereby reducing self-control over spontaneous purchases. Thus, impulse buying arises not only from momentary emotional impulses but also as a consequence of high consumer engagement within the gamification system. Within the Indonesian marketplace context, [Rizano and Salehudin \(2023\)](#) demonstrated that gamification positively influences shopping engagement and indirectly increases impulsive buying behavior, particularly through the dimensions of shopping enjoyment and socialness. The combination of game elements, social interaction, and reward systems makes consumers feel more entertained and engaged, thereby stimulating spontaneous purchasing impulses. These findings confirm that impulse buying on digital platforms is closely linked to hedonic and interactive shopping experiences.

The Simultaneous Effect of Live Streaming Interactivity, Influencer Credibility, and Gamification Feature on Impulse Buying

Based on the simultaneous test (F-test), the calculated F value is 46,310 with a significance level of 0,000 ($< 0,05$). This result indicates that Live Streaming Interactivity, Influencer

Credibility, and Gamification features simultaneously have a significant effect on Impulse Buying. Therefore, the regression model employed in this study is considered fit to explain the relationships among variables within the social commerce context, particularly on the TikTok Shop platform in Indonesia. These findings suggest that impulse buying behavior is not driven by a single factor but rather by a combination of complementary digital marketing stimuli. Live Streaming Interactivity generates real-time social engagement, Influencer Credibility builds trust and product legitimacy, while the Gamification feature provides an enjoyable, emotionally engaging shopping experience. The integration of these three elements forms an immersive shopping environment that encourages consumers to make spontaneous purchase decisions. Conceptually, these results reinforce the application of the Stimulus–Organism–Response (S-O-R) framework in social commerce. Live Streaming Interactivity functions as a social stimulus, Influencer Credibility as a trust-based stimulus, and the Gamification feature as an emotional stimulus, simultaneously influencing consumers' internal conditions, both affectively and cognitively. These internal changes subsequently trigger impulse buying. The findings are consistent with those of [Hongsuchon et al. \(2025\)](#), who state that impulse buying in social commerce is triggered by the accumulation of concurrent platform environmental stimuli. Thus, the simultaneous testing results demonstrate that the three independent variables do not operate independently, but rather create a synergistic effect in influencing impulse buying. Simultaneous variable testing provides a more comprehensive understanding than partial testing, as it reflects the actual conditions of the social commerce environment where multiple marketing stimuli are presented concurrently. These findings also explain discrepancies in prior studies that tended to examine variables separately, without considering interactions among stimuli within a single digital platform ecosystem.

5. Conclusion

Based on the analysis, it can be concluded that Live Streaming Interactivity, Influencer Credibility, and Gamification features simultaneously have a significant effect on Impulse Buying in the TikTok Shop in Indonesia. The Adjusted R Square value of 0,313 indicates that 31,3% of the variation in Impulse Buying can be explained by Live Streaming Interactivity, Influencer Credibility, and Gamification feature. Meanwhile, the remaining 68,7% of the variation is influenced by factors outside the research model, such as price, sales promotion, product quality, brand trust, and consumers' psychological and situational factors. Although the coefficient of determination falls within the moderate range, these results indicate that the research model has adequate explanatory power. The findings provide an important empirical contribution to the development of impulse buying research within the context of social commerce, particularly TikTok Shop in Indonesia. Unlike previous studies that generally examined digital marketing factors separately, this study demonstrates that the combination of social stimulus (live-streaming interactivity), trust stimulus (influencer credibility), and emotional stimulus (gamification feature) within a single model exerts a significant influence on consumer impulse buying behavior. The novelty of this study lies in its integrative approach, which positions the three variables as complementary external stimuli within the Stimulus–Organism–Response (S-O-R) framework. Thus, this research not only enriches empirical evidence on the determinants of impulse buying but also extends the application of the S-O-R theory in the relatively underexplored context of live-streaming commerce, particularly on the TikTok Shop platform in Indonesia.

Based on the findings of this study, e-commerce practitioners and TikTok Shop platform managers are advised to integrate Live Streaming Interactivity, Influencer Credibility, and

Gamification features in a balanced manner within their digital marketing strategies. Strengthening social interaction during live streaming sessions, selecting credible influencers, and developing relevant and engaging gamification features can create a more immersive shopping experience and effectively stimulate consumer impulse buying. For future research, it is recommended to incorporate additional variables that were not examined in this study, such as price factors, sales promotion, brand trust, and consumers' psychological characteristics. Furthermore, the use of qualitative research methods or a mixed-methods approach may provide deeper insights into the psychological processes underlying consumers' responses to digital marketing stimuli on social commerce platforms.

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