

The Effect of TikTok Shop Live Streaming Frequency on Impulse Buying with Positive Emotions Mediation

Tiara Diah Permatasari¹ Farida² M. Reza Ishadi Fadillah³ Ashera Yuslam⁴

^{1,2,3} Universitas Dr. Soetomo Surabaya, Indonesia

⁴University Utara Malaysia, Malaysia

¹tiaradiahp5@gmail.com, ²farida@unitomo.ac.id, ³reza.ishadi@unitomo.ac.id, asherayuslam@gmail.com

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Abstract

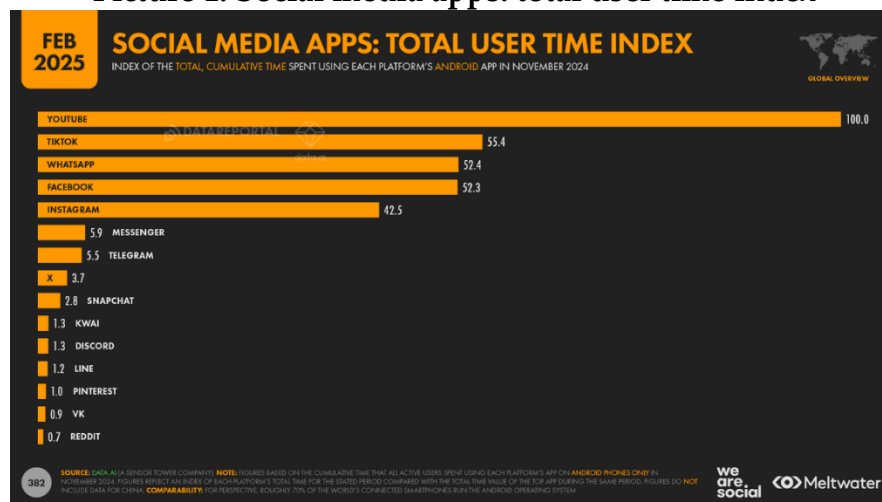
The rapid growth of live commerce through TikTok Shop has transformed digital consumer behavior by encouraging impulse purchases through real-time interactions, limited-time promotions, and repeated exposure to live-streaming content. However, previous studies have paid limited attention to viewing frequency and its underlying psychological mechanisms. This study examines the effect of TikTok Shop live-streaming viewing frequency on impulse buying behavior, the influence of viewing frequency on positive emotions, and the mediating role of positive emotions. Using a quantitative explanatory approach, data were collected from 101 active TikTok Shop users in Indonesia and analyzed using SPSS 26 and Hayes' PROCESS Macro Model 4. The results indicate that viewing frequency significantly affects impulse buying behavior ($\beta = 0.5362$, $p = 0.0001$) and positive emotions ($\beta = 0.5660$, $p < 0.001$). However, positive emotions do not significantly influence impulse buying behavior ($\beta = 0.2273$, $p = 0.0935$) and fail to mediate the relationship between viewing frequency and impulse buying ($\beta = 0.1286$, 95% CI = -0.0165 to 0.3570). The novelty of this study lies in demonstrating that repeated exposure to live-streaming content directly stimulates impulse buying without requiring emotional mediation. These findings extend the Stimulus-Organism-Response and Dual Process frameworks by showing that impulse buying in live commerce is driven primarily by repeated digital stimuli and rapid cognitive responses rather than affective mechanisms. Future studies should incorporate variables such as trust, Fear of Missing Out (FoMO), social presence, and self-control to develop a more comprehensive explanatory model.

I. Introduction

The development of digital transformation in the e-commerce sector has spurred various innovations that enrich the consumer shopping experience. These technological advances have not only facilitated interaction, but also ushered in a new era of communication through the emergence of new media (Soekiman et al., 2025). One such innovation is the use of live streaming features on e-commerce and social media platforms, such as TikTok Shop (Li et al., 2025; Purwanti & Septiani, 2025). For another example, the Indonesian government launched the Prakerja (Pre-Employment) Training Program as a strategic response to this challenge, aiming to enhance workforce competencies and support employability in the digital era (Susanto et al., 2024). For example, the number of Instagram social media users in Indonesia has continued to increase in recent years. According to data from Business of Apps, the number of Instagram users globally reached 1.96 billion people in the first quarter of 2022 (Ratnasari et al., 2022).

This feature provides consumers with the opportunity to obtain product information directly, interact in real-time with sellers, and enjoy exclusive promotions for a limited time. Through this interactive format, the shopping experience becomes more immersive and participatory, thus potentially influencing the consumer decision-making process, especially in triggering impulsive buying behavior. According to the Digital 2025 Global Overview report by We Are Social and Meltwater, TikTok ranks second in the global social media app usage duration index with a score of 55.4, just below YouTube which scored 100 (We Are Social, 2025). This achievement shows that global users, including in Indonesia, allocate a significant amount of time to using the TikTok app. This high usage duration reflects the intensity of interaction with various features, especially the TikTok Shop live streaming which now plays a significant role as a promotional medium and direct product sales channel.

Picture 1. Social media apps: total user time index



In consumer behavior, the frequency of watching TikTok Shop live streams serves as a stimulus that can trigger impulsive buying. Based on the Stimulus–Organism–Response (SOR) model, exposure to persuasive and interactive content evokes positive emotions such as excitement and urgency, leading to spontaneous purchases. Impulsive buying itself is an unplanned purchase driven by external cues and temporary emotions (Hsu et al., 2024), often intensified by factors like limited-time offers or the host's persuasive delivery (Sun et al., 2023). Previous studies show that presentation style, interactivity, and emotional involvement significantly increase purchase intention and impulsive behavior (Fara & Hartono, 2024; Kaniati et al., 2024; S. Liu, 2023; Pongratte et al., 2023). Thus, frequent exposure to TikTok Shop live streams can heighten emotional responses that encourage impulsive buying among Indonesian users.

Impulse buying through live streaming platforms is increasingly common in Indonesia. A Jakpat survey (2023) found that 42% of TikTok Shop users made impulsive purchases during live broadcasts, mainly due to limited-time offers and persuasive hosts, while Data Indonesia (2024) reported that 68% of users watch live streams at least once a week. This high exposure to digital stimuli encourages unplanned buying behavior. However, research gaps remain most studies focus on content and presentation rather

than viewing frequency, and few examine how viewing intensity relates to impulsive buying or how positive emotions mediate this relationship (Anindea et al., n.d.; Kurniawati et al., 2025). This study aims to fill these gaps through a more comprehensive analysis.

This study investigates how the frequency of watching TikTok Shop live streams influences impulsive buying behavior, its effect on positive emotions, and the mediating role of those emotions. Using a quantitative approach based on the Stimulus–Organism–Response (SOR) model, it tests four hypotheses linking viewing frequency, positive emotions, and impulsive buying among Indonesian TikTok Shop users. Excluding factors like self-control or trust, the study focuses on emotional and behavioral mechanisms. TikTok Shop, which integrates entertainment, interaction, and shopping, is especially popular among young Indonesians who enjoy fast and engaging experiences (Fara & Hartono, 2024; Kaniati et al., 2024). Yet, few studies have explored the psychological pathways connecting interactivity to impulsive buying, which this research aims to address.

Live streaming provides strong visual and social stimuli, including real-time seller interaction, limited-time offers, and product demonstrations (S. Liu, 2023; Pongratte et al., 2023). However, most studies view viewing frequency merely as exposure, overlooking the emotional engagement it creates. Higher viewing intensity can heighten emotional responses to digital stimuli (Y. Xu & Chen, 2025), revealing a gap in understanding how exposure relates to affective reactions. Research on social presence also shows that collective engagement and social pressure can trigger impulsive purchases by reducing cognitive control (Fara & Hartono, 2024; R. Zhang & Jing, 2023). This reflects Dual Process Theory, where emotion-driven System 1 dominates under strong affect (Y. Yang et al., 2021), yet empirical evidence on how live commerce activates this process remains limited.

Recent studies have demonstrated that live commerce has evolved from a

conventional online sales channel into a multifaceted consumption ecosystem that integrates entertainment, social interaction, and commercial transactions within a single digital environment. Researchers increasingly examine factors such as interactivity, streamer credibility, consumer trust, social presence, and immersive experiences because these elements significantly influence consumer engagement and purchasing behavior (Y. Chen et al., 2024; Kang et al., 2021; Zheng et al., 2023).

Within the live commerce context, scholars frequently apply the Stimulus-Organism-Response (S-O-R) framework to explain consumer decision-making processes. According to this perspective, digital stimuli, including promotional discounts, streamer-consumer interactions, user-generated comments, product demonstrations, and platform features, influence consumers' cognitive and emotional states before shaping their behavioral responses. Consequently, impulse buying has become one of the most extensively investigated outcomes in the live-streaming commerce literature. Recent review studies indicate that researchers increasingly seek to identify the psychological and situational mechanisms that encourage consumers to make unplanned purchases while watching live-streaming sessions (Sai, 2024; Son, 2024).

Empirical evidence identifies several important antecedents of impulse buying in live commerce environments, including product scarcity, flash sales, time-limited discounts, Fear of Missing Out (FoMO), social proof, streamer credibility, visual appeal, and real-time interactivity. Existing studies consistently suggest that psychological states such as excitement, trust, flow experience, and arousal function as critical mediators that translate marketing stimuli into impulsive purchasing behavior (Azrasyah, 2024; Firdausy, 2024; Son, 2024).

Recent literature further highlights the transformation of social media from a communication-oriented platform into a transaction-oriented ecosystem. Consumers increasingly utilize social media not only to obtain product information but also to

evaluate products, interact with brands and fellow consumers, and complete purchases directly within platform-based environments. Contemporary research has therefore expanded its focus to include influencer marketing, social commerce, creator economy dynamics, user-generated content, social trust, community engagement, and AI-powered recommendation systems as major drivers of consumer behavior in digital marketplaces (Benmiloud et al., 2024).

Furthermore, recent findings indicate that consumers often place greater trust in community recommendations, online reviews, and influencer endorsements than in traditional advertising messages. Social media platforms such as TikTok, Instagram, and online communities have become influential sources of product evaluation and information exchange, significantly shaping consumer perceptions, trust formation, and purchase decisions. Research also demonstrates that online customer reviews and community-generated content positively influence consumer trust and purchasing intentions, reinforcing the growing importance of peer-driven communication in contemporary digital commerce (Y. Chen et al., 2024; Firdausy, 2024).

Urgency factors like time-limited discounts and scarce product availability strongly drive impulsive buying (Asmoro & Rofiah, 2024; Jiang & Cai, 2021), yet most studies focus only on their direct effects without exploring the emotional mechanisms behind them. Under time pressure, consumers tend to decide spontaneously, but few studies examine how positive emotions such as joy and excitement mediate this link. Psychologically, emotions act as a bridge between external stimuli (e.g., live streaming content) and behavioral responses like impulse buying. Positive feelings from repeated viewing can deepen emotional engagement (Dong & Tarofder, 2024), though prior research rarely treats emotions as the main mediator in the stimulus–response process, leaving this aspect underexplored.

Many prior studies emphasize external factors like promotions, seller

communication, and trust, but overlook how viewing frequency can evoke positive emotions that drive impulse buying. This study addresses that gap by empirically testing the link between TikTok Shop viewing frequency, positive emotions as a mediating variable, and impulsive behavior particularly relevant in Indonesia, where live commerce is rapidly growing but emotional aspects remain underexplored. Grounded in the S–O–R theory, which posits that external stimuli shape emotions and cognition, prior research also shows that stimuli such as destination attributes or new experiences can elicit passion and behavioral intentions (Huang & Bu, 2022; Kuo & Chang, 2024).

In marketing, stimuli include external factors that trigger consumer responses, such as limited-time offers, flash discounts, and product scarcity. Atmospheric cues like visuals, background music, or AR/VR effects enhance the shopping experience, while social stimuli appear through persuasive sellers, real-time interaction, and audience engagement. Technological elements, including easy payments, instant notifications, and personalized recommendations, also influence behavior. In live streaming commerce, stimuli such as time pressure, scarcity messages (“only five left”), and enthusiastic sellers effectively spark positive consumer emotions (G. Yang et al., 2024).

Based on this explanation, the following hypothesis is proposed :

H1 :The frequency of watching TikTok Shop live streaming has a significant impact on impulse buying behavior.

This theory helps explain consumer behavior dynamics in social media and e-commerce. Platforms like TikTok use various stimuli such as limited-time offers, discounts, and scarcity cues to evoke strong emotions and drive impulse purchases. Rani et al., 2023 found that frequent social media use acts as a stimulus influencing cognition and spontaneous buying. Positive emotions like happiness and enthusiasm boost purchase intentions, brand engagement, loyalty, and post-purchase satisfaction (Y. Yang et al., 2021). Additionally, appealing visuals, music, and AR/VR features enhance

enjoyment and strengthen consumers' emotional connection with the shopping experience (Qu et al., 2023).

Empirical research shows that the emergence of positive emotions can reduce an individual's cognitive control and increase the tendency to behave impulsively when shopping. Furthermore, social interactions between sellers and audiences, whether through direct communication or the participation of other consumers, can foster feelings of warmth and connectedness, which strengthen the impact of positive emotions on impulsive behavior (X. Zhang & Zhang, 2024). Based on this explanation, the hypothesis is:

H2 :The frequency of watching TikTok Shop live streaming has a significant impact on consumers' positive emotions.

H3: Positive emotions have a significant effect on impulse buying behavior.

Dual Process Theory explains moral judgment as the interaction between System 1, which generates quick emotional responses, and System 2, which processes rational reasoning (Borhany et al., 2021; Gautier et al., 2021; Sui, 2023). Evidence from trolley dilemma studies shows that emotional activation in System 1 often leads to norm-based rather than consequence-focused decisions (Grünhage & Reuter, 2021; Sui, 2023). In purchasing contexts, positive emotions mediate the link between stimulus and response. Marketing strategies such as discounts, scarcity cues, engaging visuals, interactivity, and live streaming evoke joy and excitement that weaken rational control and promote impulse buying (Christina et al., 2022). Based on this explanation, the following hypothesis is proposed :

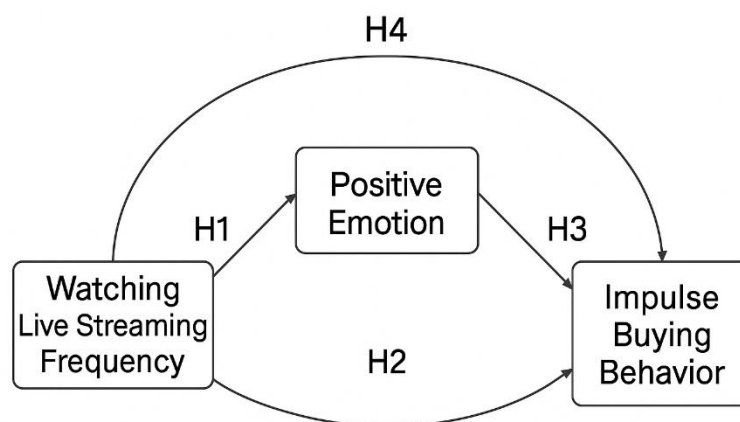
H4 :Positive emotions mediate the relationship between the frequency of watching TikTok Shop live streaming and impulse buying behavior.

2. Research Methods

This research framework outlines the relationship between three key variables: live

streaming frequency (independent), positive emotions (mediator), and impulsive buying behavior (dependent). Based on the Stimulus–Organism–Response (SOR) theory, it assumes that frequent exposure to TikTok Shop live streams (stimulus) influences psychological states (organism) through positive emotions, leading to impulsive purchases (response) (Huo et al., 2023). Using a quantitative, explanatory-causal design, the study examines both direct and indirect effects to better understand the psychological mechanisms behind unplanned buying behavior.

Picture 2. Hypothesis flowchart



This study used a census sampling method, selecting all population members as respondents due to the small sample size. While suitable for capturing active Indonesian social media users, this method carries potential selection bias, as population diversity may not be fully represented. Thus, generalizations should be made cautiously. Data were collected online via a Google Form distributed through WhatsApp, Instagram, and TikTok, using research instruments adapted from validated studies and measured with a five-point Likert scale.

The research instrument was developed by adapting measurement scales that had been previously validated in the literature. The live streaming viewing frequency variable was measured using indicators related to viewing habits, viewing duration, interaction

participation, preferred account preferences, and engagement in special events. The positive emotions variable was assessed through indicators reflecting feelings of happiness, enthusiasm, enjoyment, relaxation, and satisfaction with interactions. Meanwhile, the impulse buying variable was measured using indicators of spontaneous purchasing, purchase urges triggered by limited-time offers, sudden buying desires, the influence of product visualization, and post-purchase evaluation. All questionnaire items were measured using a five-point Likert scale.

The study initially involved 150 respondents; however, only 101 questionnaires met the eligibility criteria and were included in the final analysis. The sample size of 101 respondents was considered adequate because it satisfied the minimum requirements for multiple regression analysis as recommended by Tabachnick and Fidell (2020). Furthermore, the sample size was sufficient to conduct mediation analysis using PROCESS Macro Model 4 while maintaining adequate statistical power.

Prior to hypothesis testing, the study assessed the validity and reliability of the measurement instrument. Validity was evaluated using item-total correlation by comparing the calculated correlation coefficient (r-value) with the critical r-table value of 0.1966 at a 5% significance level. All indicators measuring viewing frequency, positive emotions, and impulse buying produced calculated r-values exceeding the critical threshold, indicating that all measurement items were valid.

Reliability was examined using Cronbach's Alpha coefficient. The results yielded Cronbach's Alpha values of 0.745 for viewing frequency, 0.752 for positive emotions, and 0.749 for impulse buying. Since all values exceeded the recommended threshold of 0.70, the instrument demonstrated satisfactory internal consistency and was considered reliable for further analysis.

Before conducting mediation analysis, the research model was evaluated through a series of classical assumption tests. Normality was assessed using the Shapiro-Wilk test,

and all variables produced significance values greater than 0.05, indicating that the data were normally distributed. Heteroscedasticity was examined using the Glejser test, and all independent variables showed significance values above 0.05, suggesting the absence of heteroscedasticity. Multicollinearity was subsequently evaluated using Tolerance and Variance Inflation Factor (VIF) values. All variables exhibited a Tolerance value of 0.863 (> 0.10) and a VIF value of 1.159 (< 10), confirming that multicollinearity was not a concern in the model.

After all assumptions had been satisfied, mediation analysis was conducted using Hayes' PROCESS Macro Model 4. The validity of the mediation model was assessed by examining direct effects, indirect effects, and bootstrap estimates based on 5,000 resamples with a 95% confidence interval. This procedure enabled the researchers to determine whether positive emotions functioned as a significant mediator in the relationship between live-streaming viewing frequency and impulse buying behavior.

The viewing frequency variable (X) is measured through regular viewing habits, viewing duration, participation in interactions, favorite account preferences, and participation in special events (Hilvert-Bruce et al., 2018; Wang & Li, 2022); the positive emotion variable (M) includes feelings of happiness, enthusiasm, enjoyment, relaxation, and interaction satisfaction (Mehrabian & Russell, 1974; Watson et al., 1988; X. Xu et al., 2020); while the TikTok impulse buying variable (Y) is measured through spontaneous purchases, urges due to limited offers, sudden urges, the influence of product visualization, and post-purchase re-evaluation (Y. Chen & Yao, 2018; Rook, 1987).

3. Results And Discussion

A. Validity Test

Validity testing was conducted to determine the extent to which the statement items in the questionnaire were able to measure the concept that should be measured. The test was conducted by comparing the calculated r value (r count) with the r table at a

significance level of 5% and the number of samples (n) = 101, so that the r table = 0.1966 was obtained. The decision-making criteria were if the calculated $r > r$ table, then the item was declared valid, whereas if the calculated $r < r$ table, the item was considered invalid.

Table 5. Validity Test

Variable Validity Test Viewing Frequency (X)		
No	Rcount	Rtable
1	0.640	0.1966
2	0.679	0.1966
3	0.587	0.1966
4	0.593	0.1966
5	0.614	0.1966
Validity Test of Positive Emotion Variable (M)		
No	Rcount	Rtable
1	0.749	0.1966
2	0.624	0.1966
3	0.631	0.1966
4	0.644	0.1966
5	0.505	0.1966
Variable Validity Test Impulsive Tiktok (Y)		
No	Rcount	Rtable
1	0.707	0.1966
2	0.566	0.1966
3	0.559	0.1966
4	0.641	0.1966
5	0.715	0.1966

Determination of instrument validity is done by comparing the Rcount value with the Rtable. A statement item is declared valid if the Rcount value is greater than the Rtable, whereas if the Rcount is smaller or equal to the Rtable then the item is considered invalid. Based on the results of data processing, the Rtable value is 0.1966 with $n = 100$, a significance level of 0.05, and degrees of freedom ($df = n - 2$). All statement items in variable X (Viewing Frequency), variable M (Positive Emotions), and variable Y (Impulsive Behavior) have Rcount values greater than the Rtable. Variable X shows a value of 0.640, variable M is 0.749, and variable Y is 0.707, all of which exceed the Rtable value. With these results, all statement items in this study are proven valid and therefore suitable for use in

the next stage of analysis.

B. Reliability Test

Reliability testing aims to assess the internal consistency of a research instrument, namely the extent to which the questionnaire items provide stable and reliable results when used to measure the same construct. In this analysis, reliability testing is performed using the Cronbach's Alpha coefficient. Generally, a Cronbach's Alpha value greater than 0.60 is considered reliable.

Table 6. Reliability Test

No	Variables	Rtable
1	Viewing Frequency (X)	0.745
2	Positive Emotions (M)	0.752
3	Impulsive Tiktok (Y)	0.749

The reliability assessment of the instrument in this study used the Cronbach's Alpha coefficient. An instrument is declared highly reliable if the Cronbach's Alpha value is ≥ 0.90 , reliable if it is in the range of 0.70–0.90, fairly reliable in the range of 0.60–0.70, and less reliable if the value is below 0.60. The test results show that the Frequency of Viewing (X) variable has a Cronbach's Alpha value of 0.745, the Positive Emotions (M) variable is 0.752, and the TikTok Impulsive Behavior variable (Y) is 0.749. All of these values are above the minimum limit of 0.60, so the instrument used in this study is declared reliable and suitable for further analysis.

C. Classical Assumption Test

1. Normality Test

The normality test aims to ensure that the data from each variable in the regression or mediation model (X, M, and Y) has a normal distribution, that is, a symmetrical data distribution pattern around the mean value. This assumption is an important basis in parametric analyses such as linear regression and mediation tests (Macro PROCESS Model 4) because it affects the reliability of parameter estimates and the resulting level of

statistical significance.

The normality test in this study used the Shapiro-Wilk method, which is considered more appropriate for sample sizes under 200 respondents ($N = 101$). The significance value (Sig.) obtained was then compared with a confidence level of $\alpha = 0.05$. If the Sig. value is greater than 0.05, the data is considered normally distributed. Conversely, if the Sig. value is less than 0.05, the data is considered non-normally distributed.

Table 7. Normality Test

Tests of Normality			
	Shapiro-Wilk		
	Statistics	df	Sig.
X	.981	101	.200
M	.957	101	.132
Y	.988	101	.200
*. This is a lower bound of the true significance.			
a. Lilliefors Significance Correction			

The test results show that variable X as the independent variable has a significance value of 0.200 which is greater than 0.05, so the data is normally distributed. Variable M as the mediator variable shows a significance value of 0.132 which also exceeds the 0.05 limit, indicating that the distribution is normal. Meanwhile, variable Y as the dependent variable has a significance value of 0.200 which is above 0.05, so the Y data is also normally distributed. Based on these findings, all variables in this study meet the assumption of normality. With the fulfillment of the normality assumption, the data is considered suitable for analysis using regression and mediation tests through Macro PROCESS Model 4. No data transformation, such as logarithm or square root, is required, because the data distribution has met the expected parametric distribution criteria.

2. *Heteroscedasticity Test*

The heteroscedasticity test checks whether a regression model has equal residual variances across observations. A good model shows constant variance (homoscedasticity), while unequal variance (heteroscedasticity) can make regression estimates biased and

inefficient.

This study used the Glejser method, where the absolute residual value (Abs_Res) served as the dependent variable and the independent variables (X and M) as predictors. If the significance value (Sig.) is greater than 0.05, the model meets the homoscedasticity assumption; if it is less than 0.05, heteroscedasticity is present.

Table 8. Heteroscedasticity Test

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		β	Std. Error	β	
1	(Constant)	3,229	.906		3,564 .001
	X	.006	.051	.014	.124 .901
	M	-.024	.052	-.050	-.458 .648

a. Dependent Variable: Abs_Res

The heteroscedasticity testing criteria state that if the significance value is greater than 0.05, then the model does not experience heteroscedasticity, whereas if the value is equal to or less than 0.05, it means there are symptoms of heteroscedasticity. The results of the analysis show that the variable X (Viewing Frequency) has a significance value of 0.901 and the variable M (Positive Emotion) is 0.648. Both values are greater than 0.05, so it can be concluded that the regression model in this study does not experience heteroscedasticity problems and meets the requirements for further analysis.

3. *Multicollinearity Test*

The multicollinearity test checks whether independent variables in a regression model are highly correlated. A good model should be free from multicollinearity, as strong correlations can make regression coefficients unstable and reduce accuracy. In this study, multicollinearity was tested using Tolerance and Variance Inflation Factor (VIF) values. If Tolerance > 0.10 and VIF < 10, the model is free from multicollinearity; otherwise, it indicates multicollinearity among the independent variables.

Table 9. Multicollinearity Test

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	β			Tolerance	VIF
1	(Constant)	6,229	1,652		3,771	.000		
	X	.405	.094	.400	4,332	.000	.863	1,159
	M	.233	.095	.226	2,447	.016	.863	1,159

a. Dependent Variable: Y

Based on the analysis results, the Tolerance value for both independent variables, namely X (Watching Frequency) and M (Positive Emotion), is 0.863 which is greater than 0.100. Meanwhile, the Variance Inflation Factor (VIF) value for both variables is recorded at 1.159 which is below 10. This finding indicates that the two independent variables in the regression model do not experience symptoms of multicollinearity, so the model is suitable for further analysis.

D. Mediation Test

The Macro Process table is a processed result of SPSS PROCESS Macro version 4.2 developed by Andrew F. Hayes. This analysis applies Model 4, a simple mediation model that functions to identify whether the influence of the independent variable (X) on the dependent variable (Y) occurs directly or through the role of a mediator variable (M). In this study, the variable Viewing Frequency (X) acts as the independent variable, Positive Emotions (M) as the mediator, and TikTok Impulsiveness (Y) as the dependent variable. The number of respondents involved in this analysis was 100 people.

Table 10. Macro Process X – M – Y

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****							
Total effect of X on Y							
Effect	se	t	p	LLCI	ULCI	c_cs	
.6649	.0987	6,7384	.0000	.4670	.8628	.6793	

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_cs	
	,5362	,1227	4,3690	,0001	,2899	,7825	,5478

Indirect effect(s) of X on Y:

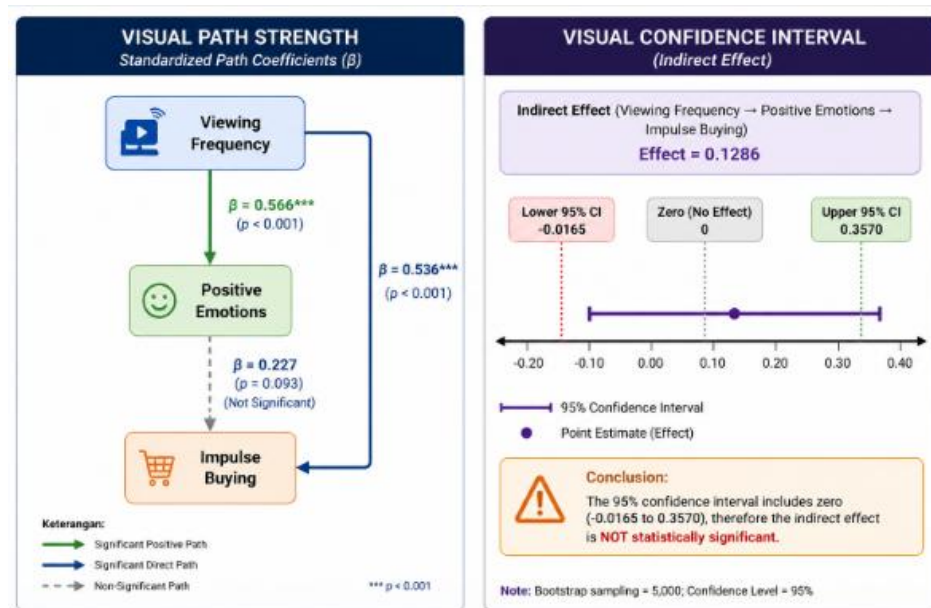
	Effect	BootSE	BootLLCI	BootULCI
Z	,1286	,0949	-,0165	,3570

Completely standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
Z	,1314	,0937	-,0180	,3496

The analysis shows that viewing frequency significantly increases positive emotions ($R = 0.6134$; $R^2 = 0.3763$; $\beta = 0.5660$; $p = 0.000$), explaining 37.63% of emotion variance. In the next model, viewing frequency and positive emotions together explain 49% of impulsive buying behavior ($R = 0.7000$; $R^2 = 0.4900$; $F = 24.9849$; $p = 0.000$). Viewing frequency has a strong positive effect on impulsive buying ($\beta = 0.5362$; $p = 0.0001$), while positive emotions show a weaker, insignificant effect ($\beta = 0.2273$; $p = 0.0935$), indicating that positive emotions do not significantly mediate the relationship.

Picture 3. Visual path and confidence interval analysis



The analysis of total, direct, and indirect effects shows that viewing frequency significantly increases impulsive buying ($\beta = 0.6649$; $p = 0.000$), with a strong direct effect ($\beta = 0.5362$; $p = 0.0001$) even after including positive emotions. However, the indirect effect through positive emotions ($\beta = 0.1286$; BootLLCI = -0.0165; BootULCI = 0.3570) is not significant, as confirmed by bootstrapping with 5,000 samples at a 95% confidence level, indicating that positive emotions do not mediate the relationship between viewing frequency and impulsive behavior on TikTok.

The analysis reveals that viewing frequency directly and significantly affects positive emotions and impulsive behavior, but positive emotions do not significantly mediate this relationship. This indicates that impulsive behavior on TikTok is driven more by the intensity and frequency of content exposure than by the positive emotions generated during viewing.

This study enhances understanding of the psychological mechanisms behind impulsive buying on live streaming commerce platforms, especially TikTok Shop. Using PROCESS Macro Model 4, the results align with the Stimulus–Organism–Response (S–O–R) framework, though the mediating effect of positive emotions is not fully significant. Empirically, viewing frequency acts as an external stimulus that can trigger impulsive

purchases, either directly or through emotional reactions.

The first hypothesis (H1) confirms that TikTok Shop viewing frequency significantly affects impulsive buying ($\beta = 0.5362$; $p = 0.0001$). This supports the S–O–R model (Mehrabian & Russell, 1974), which states that external stimuli—such as promotions, persuasion, and interactivity—can evoke affective responses and influence consumer behavior. Consistent with J. Liu et al., 2023 and Y. Xu et al., 2022, repeated exposure to interactive content increases psychological involvement and urgency, driving spontaneous purchases.

The findings align with Kahneman’s Dual Process Theory, which states that decision-making involves two systems: System 1 (fast, intuitive, emotional) and System 2 (slow, rational). In TikTok Shop live streaming, System 1 dominates, as impulsive purchases often stem from emotional cues, time-limited promotions, and product scarcity. Repeated exposure not only increases product familiarity but also reinforces emotion-driven decisions.

The second hypothesis (H2) shows that viewing frequency significantly affects positive emotions ($\beta = 0.5660$; $p = 0.000$). Frequent exposure to engaging content evokes enjoyment, curiosity, and entertainment, supporting Affective Response Theory, which highlights the role of emotions in shaping consumer preferences. Consistent with Christina et al., (2022), Kuo & Chang, (2024), and Laato et al., (2020), visual appeal, presenter expressions, interactivity, and entertainment value enhance emotional engagement, strengthening consumers’ emotional connection to promotional content.

The third hypothesis (H3) was not supported, as positive emotions had no significant effect on impulsive buying behavior ($\beta = 0.2273$; $p = 0.0935$). Although the relationship was positive, it was not strong enough to show that emotional pleasure directly drives impulsive purchases. Instead, factors such as time pressure, price discounts, and persuasive communication play a greater role. This supports (C.-C. Chen

& Lin, 2018), who found that impulsive buying in social commerce is more influenced by external cues than internal emotions. From a Dual Process Theory view, this reflects System 1's dominance quick, intuitive reactions to external stimuli without deep emotional processing.

The fourth hypothesis (H4) also showed that positive emotions did not significantly mediate the link between viewing frequency and impulsive buying ($\beta = 0.1286$; BootLLCI = -0.0165; BootULCI = 0.3570). This indicates the effect of viewing frequency occurs directly rather than through emotional mediation. Within the S-O-R framework, this suggests that emotional responses do not always act as key mediators when the stimulus itself is strong and repetitive enough to trigger immediate action.

This study refines the digital consumer behavior model within the S-O-R framework, identifying viewing frequency as the stimulus, positive emotions as the organism, and impulsive behavior as the response. Although positive emotions did not significantly mediate the relationship, the strong direct link between viewing frequency and impulsive behavior shows that digital cues like product displays, real-time interaction, and social persuasion can directly shape consumer actions. Managerially, frequent and engaging interactions, persuasive hosts, and scarcity-based tactics are more effective in driving impulsive purchases than emotional responses alone.

Theoretically, this study deepens the integration of the S-O-R Model, Affective Response Theory, and Dual Process Theory in digital consumption. Findings show that while emotions matter, impulsive buying is mainly driven by rapid cognitive reactions and repeated exposure to external stimuli. Thus, in TikTok Shop's social commerce setting, viewing frequency acts more as a habit-forming trigger than an emotional catalyst, emphasizing the dominant role of environmental stimuli in shaping consumer decisions.

4. Conclusion

This study confirms that the frequency of watching TikTok Shop live streams

significantly influences users' impulse buying behavior. The more frequently individuals watch live streams, the more likely they are to make spontaneous purchases. This finding demonstrates the validity of the Stimulus–Organism–Response (S–O–R) model, where external stimuli, in the form of intense content exposure, can trigger consumer behavior responses.

Furthermore, viewing frequency has been shown to increase consumers' positive emotions, such as joy, enthusiasm, and amusement. However, although the direction of the relationship between positive emotions and impulse buying is positive, the effect is not statistically significant. This means that positive emotions are not a primary mediating factor in the relationship between viewing frequency and impulse buying behavior. The effect is direct and is largely determined by habituation factors and situational stimuli, such as limited promotions, seller interactivity, and time pressure.

Theoretically, this study enriches understanding of the integration of S–O–R theory, Affective Response Theory, and Dual Process Theory in explaining digital consumer behavior. The results indicate that impulsive purchasing decisions on live commerce platforms are driven more by rapid cognitive mechanisms (System 1) that are reactive to external stimuli, rather than by deep affective processes.

Practically, this research provides implications for businesses to optimize the frequency and quality of interactions during live streaming sessions. Strategies such as using urgency signals, interactive product demonstrations, and authentic and charismatic communication can increase engagement and encourage spontaneous purchasing decisions without relying too heavily on manipulating consumers' positive emotions.

Future studies should expand sample size and demographic diversity to improve external validity. Researchers should also incorporate additional variables such as trust, Fear of Missing Out (FoMO), perceived scarcity, social presence, parasocial interaction, and consumer self-control to obtain a more comprehensive understanding of impulse

buying mechanisms in live commerce. Comparative studies across platforms such as TikTok Shop, Shopee Live, Instagram Live, and YouTube Live would provide valuable insights into platform-specific consumer behavior. Longitudinal research designs are also recommended to examine how repeated exposure to live-streaming content influences purchasing behavior over extended periods.

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