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## Quantifying the Impact of Viewer Interactions on Consumer Engagement Metrics in Live Streaming E-Commerce on Taobao Live

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**Abstract:** This study examines how specific real-time viewer interactions, namely likes and comments, shape consumer engagement metrics within the context of live-streaming e-commerce on Taobao Live. Grounded in Gratifications Theory and Media Richness Theory, the research investigates whether these two interaction types exert differential effects on viewer count and watch duration, two key indicators of engagement. To address these questions, a quantitative dataset comprising 150 live-stream sessions from Taobao Tmall was collected and analyzed. Descriptive statistics outlined the variability in interaction and engagement behaviors, while Pearson correlation coefficients assessed bivariate relationships among variables. Subsequently, multiple regression models were employed to predict viewer count and watch duration based on likes and comments, while controlling for session length, average product price, and total product count. Results reveal that both likes and comments exhibit statistically significant positive associations with consumer engagement metrics; however, comments consistently emerge as the stronger predictor, exerting a more substantial influence on both the size of the audience and its duration of attention. These findings underscore the importance of high-effort, dialogic interactions in fostering deeper user engagement, supporting theoretical assertions regarding the role of social presence and cognitive elaboration in live-streaming contexts. Results indicate that encouraging active, comment-based interaction offers a more effective strategy than relying solely on passive indicators such as likes, providing actionable insights for broadcasters and platform designers seeking to optimize viewer participation and retention in live-stream e-commerce environments.

**Keywords:** Live streaming, E-Commerce, Viewer Interactions, Consumer Engagement, Taobao Live

### 1. Introduction

In an era where China's e-commerce marketing strategies strive to replicate the immediacy and intimacy of face-to-face sales interactions, few innovations have garnered as much attention as live-streaming e-commerce. Live streaming has rapidly reshaped the landscape of Chinese online shopping, merging real-time communication with e-commerce platforms to transform passive browsing into interactive consumer experiences. Increasingly, Chinese consumers are drawn to environments where broadcasters and buyers converge in real-time, fostering social interactions, immediate feedback, and community building. This shift in consumer behavior amplifies live streaming's importance as a marketing channel and highlights its potential to influence purchase decisions and brand loyalty.

Existing literature consistently shows that various interactive elements can significantly increase audience engagement. For example, Yu *et al.* (2018) and Wang and Wu (2019) jointly emphasized that interactive behaviors such as digital gift giving, commenting, and instant messaging are fundamental drivers of audience engagement, influencing consumers' social motivations and product evaluation processes. Similarly, Batara and Sugiarto (2024) and Addo *et al.* (2021) emphasized that emotional connections and social elements (including likes, chats, and exposure time) can enhance audience engagement, which further influences purchasing behavior.

Trust-based dynamics are also critical to increasing user engagement and loyalty. Guo *et al.* (2021) and Bolun *et al.* (2024) found that trust in anchors, products, and community members, as well as interactivity,



controllability, and reciprocity, are core attributes that promote rapid relationship building and increase consumer engagement in live commerce. Overall, these studies reveal the complexity of engagement mechanisms in live streaming and show that real-time interactions significantly influence audience behavior and business outcomes.

However, despite recognition of these interactive elements, prior research often conceptualizes viewer interactions broadly, neglecting to differentiate clearly among specific interaction types such as likes and comments (Wang & Li, 2020; Xu *et al.*, 2022). Although some studies have explored relational and emotional bonds (Hu & Chaudhry, 2020; Chen & Yang, 2023) and interactive design elements (Deng *et al.*, 2020), few have systematically quantified distinct roles of likes versus comments in driving viewer metrics such as audience size and viewing duration. Addressing this gap, the present study aims to (1) quantitatively examine the relationship between specific interaction types (likes and comments) and core engagement outcomes, and (2) determine whether these interactions exert differential impacts on consumer behaviors in China's live-streaming e-commerce context.

Building upon extant research in live streaming e-commerce, this article seeks to advance scholarly understanding of consumer engagement on Taobao Live by focusing on two key objectives. First, it aims **(1)** to quantify the relationship between real-time, active, viewer interactions, likes and comments, and fundamental passive engagement metrics such as viewer count and watch duration. In this way, the study seeks to offer empirical insight into how these interaction forms directly correlate with measurable indicators of platform involvement. Second, this paper **(2)** seeks to detect whether likes and comments have different effects on user engagement outcomes, thereby clarifying how each interaction mechanism shapes consumer behavior in unique ways. By examining these two objectives, this study not only fills a significant gap in the existing literature on the different effects of different interaction types but also provides practical guidance for e-commerce practitioners seeking to improve consumer engagement and satisfaction on Taobao Live.

## 1.1 Theoretical Framework

Gratification theory (Ruggiero, 2000) assumes that individuals actively seek media content to satisfy specific social, emotional, and informational needs, thus emphasizing the autonomous role of users in the media consumption process. Unlike earlier models that portray audiences as passive recipients, this theory explains how live e-commerce platforms engage viewers through three main gratifications. First, social gratification comes from users forming virtual communities through real-time interactions with anchors and other viewers, and utilizing features such as real-time chat, comments, and likes (Hilvert-Bruce *et al.*, 2018). These social interactions can foster a sense of belonging and community participation, thereby increasing audience engagement. Second, emotional gratification comes from the immersive and entertaining nature of live broadcasts, where synchronous communication and participation elements can generate excitement, relaxation, or a sense of companionship—factors that further attract users to continue participating (Hilvert-Bruce *et al.*, 2018). Third, transactional gratification comes from the ability to explore products in real time, ask for product details, and observe the purchasing behavior of others; this process satisfies audiences' information and practice needs and helps make informed purchasing decisions (Xu *et al.*, 2022). Live e-commerce platforms such as Taobao Live incorporate these social, emotional, and transactional elements into an interactive environment, reflecting the multifaceted nature of user motivation predicted by satisfaction theory, ultimately increasing overall engagement and satisfaction.

At the same time, media richness theory (Brunelle, 2010) argues that different communication media have different abilities to convey information and promote engagement, and that "richer" media can provide more immediate feedback, richer cues, and more personalized experiences. In the field of live e-commerce, platforms such as Taobao Live fully embody these characteristics through real-time interaction, rich sensory input (video, voice, and text), and adaptive content presentation. Specifically, instant feedback mechanisms (such as instant replies from hosts to comments) can increase user satisfaction and engagement by building a loop of direct communication (Xu *et al.*, 2022). In addition, the use of multiple cues, including audiovisual elements and informal conversational language variations, can create a sense of immediacy and interpersonal connection. Tailored personalization further enriches the livestreaming medium: by tailoring product demonstrations or discussion topics to audience preferences, hosts are able to enhance social presence and create a face-to-face shopping experience (Deng *et al.*, 2020).



Taken together, these dimensions highlight how livestreaming e-commerce leverages the richness of the medium to increase consumer engagement and trust, ultimately distinguishing it from more static or text-based digital commerce channels.

Based on this theoretical foundation, we can understand comments in livestreaming e-commerce as richer and more socially interactive content than likes. Likes are a low-input, one-click affirmation, while comments require active cognitive processing, which is consistent with the Elaboration Likelihood Model's assertion that deeper engagement leads to stronger attitude formation and behavior change (Petty & Cacioppo, 1986). In addition, comments can promote direct interaction between viewers and hosts, enhancing a sense of community and social presence, which is a key factor in extending interaction time (Hilvert-Bruce *et al.*, 2018). Empirical evidence supports this distinction; Kim and Yang (2017) found that comments lead to higher levels of discussion and sustained user engagement than passive likes. Given these insights, comments are expected to have a greater impact on engagement metrics because they not only reflect users' active engagement but also reinforce it.

Based on the integrative framework provided by gratification theory (Ruggiero, 2000) and media richness theory (Brunelle, 2010), this study argues that Taobao Live's rich, multisensory, and instant feedback features can best meet the motivations of live viewers, whether social, emotional, or transactional. When users receive quick responses and encounter multiple cues (e.g., video, voice, text) tailored to their preferences, they experience heightened emotional involvement and acquire the practical information necessary for purchase decisions. These interactive elements not only cultivate an engaging environment but also differentiate the influence of specific engagement behaviors, reinforcing the expectation that comments-rather than likes-serve as the primary drivers of viewer count and watch duration. This theoretical convergence suggests that interactive elements such as likes and comments play an important role in fostering both the social connectivity and media richness that underlie increased consumer engagement. In line with the research objectives, the following hypotheses are proposed:

**H1:** There is a significant positive relationship between real-time viewer interactions (likes and comments) and consumer engagement metrics (viewer count and watch duration).

**H2:** Comments will exert a stronger influence on consumer engagement metrics (viewer count and watch duration) than likes, given their higher informational and social-interaction value.

## 2. Methods

### 2.1 Data Collection

In order to meet the two primary objectives of quantifying the relationship between likes/comments and fundamental engagement metrics and discerning whether these interactions exert differential effects on consumer behavior, this study adopts a quantitative-only data collection approach. Live streaming sessions from Taobao Tmall, China's leading e-commerce platform, were observed over a continuous two-month period to capture routine viewer behaviors under normal conditions. Data was extracted using HUITUN (<https://www.huitun.com>), a specialized analytics platform that aggregates and visualizes real-time live streaming metrics. A power analysis (G\*Power; Faul *et al.*, 2007) was conducted assuming a moderate effect size ( $f^2 = .15$ ), alpha of .05, and power of .95, resulting in a required minimum sample size of approximately 138 sessions; accordingly, a final sample of 150 live-stream sessions was chosen to ensure sufficient statistical power while maintaining feasibility. These 150 sessions were selected from 20 stores based on clearly defined criteria: (1) regular broadcasting schedules (e.g., daily or weekly live sessions), (2) established viewer base indicated by stable follower counts, and (3) consistent engagement activity, ensuring representativeness across major product categories (fashion, electronics, beauty).

Namely, based on the public metrics of Taobao Live, we intentionally selected stores based on mid- to high-end sales tiers (e.g., monthly sales between 5,000 to 50,000 units) and fan bases (e.g., follower counts between 50,000 to 500,000 followers). This screening strategy is designed to ensure that each store has sufficient viewing traffic and reliable audience interactions to conduct meaningful analysis of interaction metrics such as likes and comments. While focusing on stores with a mature audience base and relatively high sales tiers can improve the reliability of interaction data, it may also limit the generalizability of the findings to niche product categories that are smaller in scale, have fewer fans, and have less frequent audience interactions. Therefore, the findings should be interpreted with caution when applied to similar mid- to high-end stores or outside of mainstream product categories.



This purposeful sampling approach helps capture everyday audience interactions under typical e-commerce streaming conditions, thereby improving comparability and robustness. Specifically, audience interactions (likes and comments) and engagement outcomes (number of viewers and viewing time) will be systematically recorded for each session. By focusing on these quantitative indicators, this study will isolate and measure how each form of audience interaction (likes and comments) correlates with engagement indicators and may have different impacts on them.

## 2.2 Data Analysis

The data analysis proceeds in three primary stages. First, descriptive statistics capture the distribution and central tendencies of key variables, namely likes, comments, viewer count, and watch duration. This initial examination offers a foundational overview of the dataset derived from the 150 sampled live-stream sessions, illuminating underlying interaction patterns among participants. To verify the robustness of using likes and comments as independent predictors, an additional regression analysis including an interaction term (likes  $\times$  comments) was conducted. Second, correlation analyses (e.g., Pearson's  $r$ ) explore the strength and direction of associations between viewer interactions (likes and comments) and engagement outcomes (viewer count and watch duration). These correlations furnish preliminary evidence regarding the extent to which different interaction types relate to engagement metrics.

Finally, multiple regression models provided a more rigorous assessment of the study hypotheses. Separate models addressed the number of viewers and duration of viewing, with likes and comments as the main independent variables. In these models, controlling for product price, total number of products, and session duration helped isolate the unique effects of each form of viewing interaction. Diagnostic tests for normality, homoscedasticity, and multicollinearity ensured the reliability and validity of the regression estimates. Diagnostic results indicated that the models met satisfactory normality (Shapiro-Wilk tests: all  $p > .05$ ), homoscedasticity (visual inspection of residual plots revealed no systematic patterns), and no problematic multicollinearity (VIF values  $< 5$  for all predictors). Additionally, model-fit statistics confirmed strong explanatory power (Adjusted  $R^2$  values of .818 for viewer count and .725 for watch duration), and Durbin-Watson tests revealed no problematic autocorrelation (values of approximately 1.98 and 2.03, respectively). Altogether, these analytical steps clarified (1) whether there was a significant relationship between likes/comments and the basic engagement outcomes and (2) the extent to which likes and comments had different effects on consumer behavior.

## 2.3 Ethical Considerations

All user data collected for this study has been anonymized to protect personal identities, and no personally identifiable information is retained in the final data set. This project follows institutional ethical guidelines and complies with relevant privacy regulations, including those governing data collection and processing in digital environments. The HUITUN analytics platform follows best practices and provides aggregated metrics rather than raw user-level identifiers, minimizing the risk of accidental disclosure. All data is securely stored and used only for this study, in accordance with the principle of data minimization. This approach ensured that the study preserved participant confidentiality and upheld ethical standards throughout the research process.

## 2.4 Results

Descriptive analyses (table 1) indicated considerable variability in likes, comments, viewer count, and watch duration across the 150 recorded sessions. Likes ranged from 120 to over 2,000, whereas comments spanned from as few as 40 to as many as 540 per session. Viewer count likewise exhibited wide dispersion, with some broadcasts attracting 1,000 concurrent viewers and others drawing as many as 9,600. Mean watch duration was 15.43 minutes, though the shortest observed average was 5.29 minutes, and the longest was 29.1.

These observations provide an initial sense of the heterogeneity in engagement across different product categories and streaming contexts. A robustness check using regression analysis including an interaction term (likes  $\times$  comments) showed that the interaction was not significant ( $\beta = 0.00002$ ,  $p = 0.63$ ), indicating that the effects of



likes and comments on engagement indicators (number of viewers and viewing time) occurred independently, and there was no meaningful moderation effect between the two variables.

**Table 1.** Descriptive Statistics for Key Engagement Variables (N = 150)

Variable	Mean	Median	SD	Min	Max
Likes	695.49	648	371.22	120	2,020
Comments	215.03	208	109.83	40	540
Viewer Count	3,596.83	3,550	1,945.66	1,000	9,600
Watch Duration	15.43	15.20	5.29	5.00	29.10

Pearson correlation analyses (table 2) further clarified how likes and comments align with the core measures of engagement. Both forms of interaction showed statistically significant, positive associations with viewer count and watch duration ( $p < .001$ ). However, comments consistently displayed stronger relationships than likes, with correlation coefficients reaching as high as .80 for viewer count and .72 for watch duration: substantially exceeding the corresponding figures for likes. These findings suggest that while increased viewer interactions of any kind may foster engagement, sessions featuring more conversational and informational exchanges appear especially influential in driving larger audiences and sustaining attention for longer intervals.

**Table 2.** Pearson Correlations Among Key Variables (N = 150)

	Likes	Comments	Viewer Count	Watch Duration
Likes	—	0.59***	0.67***	0.42***
Comments		—	0.80***	0.72***
Viewer Count			—	0.56***
Watch Duration				—

\*\*\*  $p < .001$  (two-tailed)

**Table 3.** Multiple Regression Predicting Viewer Count (Model 1) and Watch Duration (Model 2)

	Model 1: Viewer Count	$\beta$ (Model 1)	Model 2: Watch Duration	$\beta$ (Model 2)
	B (SE)		B (SE)	
Constant	-236.873 (241.16)	—	3.218 (1.34)*	—
Likes	2.141 (0.27)***	0.35	0.009 (0.001)***	0.29
Comments	11.762 (0.94)***	0.62	0.052 (0.004)***	0.44
Average Product Price	0.487 (0.19)*	0.09	0.002 (0.001)	0.04
Total Product Count	15.945 (4.21)***	0.17	0.051 (0.022)*	0.1
Session Length (min)	22.180 (7.85)***	0.11	0.031 (0.041)	0.03
N (Observations)	150		150	
R <sup>2</sup>	0.825		0.734	
Adjusted R <sup>2</sup>	0.818		0.725	
F-Statistic	132.81***		75.94***	

Note: Standard errors (SE) appear in parentheses. Significance levels: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . Standardized beta coefficients ( $\beta$ ) enable direct comparison of predictor variables.

A standard multiple regression procedure was conducted to examine how likes and comments predict two key engagement metrics, viewer count and watch duration, while controlling for session length, average product price, and total product count. As seen in table 3, the first model, which used viewer count as the dependent variable, yielded a strong overall fit ( $R^2 = 0.825$ ,  $F(5,144) = 132.81$ ,  $p < .001$ ). Both likes ( $b = 2.141$ ,  $p < .001$ ) and comments ( $b = 11.762$ ,  $p < .001$ ) emerged as significant, positive predictors, with the coefficient for comments indicating a



notably larger effect. Additionally, total product count ( $b = 15.945$ ,  $p < .001$ ) and session length ( $b = 22.180$ ,  $p < .001$ ) contributed meaningfully, whereas average product price ( $b = 0.487$ ,  $p < .05$ ) exhibited a smaller yet significant positive relationship with viewer count.

In the second model, which employed watch duration as the outcome variable, results likewise indicated a good model fit ( $R^2 = 0.734$ ,  $F(5,144) = 75.94$ ,  $p < .001$ ). Consistent with the first model, both likes ( $b = 0.009$ ,  $p < .001$ ) and comments ( $b = 0.052$ ,  $p < .001$ ) were statistically significant predictors of watch duration. Comments again displayed a higher coefficient than likes, suggesting a stronger association with extended viewing. Among the control variables, total product count ( $b = 0.051$ ,  $p < .05$ ) was the only significant predictor, whereas session length and average product price did not reach statistical significance in explaining differences in watch duration.

### 3. Discussion

The descriptive findings, depicting a broad spread in likes, comments, and viewer count, and watch duration, underscore the inherent variability in viewer engagement, consistent with theoretical perspectives on interactivity and consumer behavior. This observed variability aligns with theories suggesting that multiple interactive dimensions can differentially influence viewer engagement, depending on context-specific factors (Wang & Li, 2020; Addo *et al.*, 2021). Specifically, the substantial range in likes (from 120 to 2,020) and comments (from 40 to 540) indicates variability in session effectiveness, potentially explained by theories highlighting factors such as broadcast timing, product category relevance, and broadcasters' communicative effectiveness (Lin *et al.*, 2021; Xu *et al.*, 2022).

Building upon these observations, the correlation results confirm that viewer interactions positively align with core engagement metrics. Both likes and comments show strong, statistically significant relationships with viewer count and watch duration, thus supporting the notion that real-time interaction fosters a richer, more community-oriented environment conducive to sustaining audience interest (Wang & Li, 2020; Addo *et al.*, 2021). Most markedly, the coefficients for comments are consistently higher than for likes, suggesting that text- and conversation-based interactions may be more powerful in shaping audience behavior. Comments typically require higher cognitive engagement than likes, which are less cognitively engaging and can enhance social presence by promoting active conversations and richer information exchanges (Kim & Yang, 2017). These findings complement prior research that suggests that comments can promote deeper emotional and informational exchanges, thereby stimulating higher engagement (Lin *et al.*, 2021; Song *et al.*, 2021). In other words, while likes seem to provide a baseline signal of audience appreciation, comments may represent a more active investment of attention and social presence (Xu *et al.*, 2022). This dynamic may help explain why sessions with active comment streams in the dataset have the most viewers and the longest watch time, suggesting that streamers who encourage chat-based conversations may be better able to retain viewers and motivate them to continue to engage.

Controlling for session length, average product price, and total number of products, multivariate regression results paint a more detailed picture of how likes and comments act as drivers of engagement. In the first model, both likes and comments are significantly positively correlated with number of viewers; however, the coefficient for comments is significantly higher. This pattern matches the proposition that comment-based interactions often contain richer conversational or informational content, which is more engaging for viewers than the simple endorsement represented by likes. In addition, the importance of total number of products and session duration suggests that showing more products and extending live broadcasts could further increase the number of viewers, perhaps by providing a wider variety of products and longer opportunities for interaction.

In the second model, focusing on watch time, comments again show a stronger effect than likes, reinforcing the inference that more engaging forms of interaction encourage viewers to stay online longer. While the control variables do not consistently predict watch time, the impact of comments remains consistent even after accounting for session characteristics, suggesting their importance as a mechanism for sustained attention. These observations echo findings from other studies that highlight the particular role that two-way communication plays in fostering deeper levels of audience engagement (e.g., Song *et al.*, 2021) and complement previous findings that interactive elements of livestreams are critical for prolonged audience engagement (Wang & Li, 2020). Thus, in this model, while likes appear to help convey positive audience sentiment, comments play a more important role in attracting more viewers and maintaining long-term engagement.



The practical implication of these findings is that strategically cultivating comment-based interactions and maintaining a steady stream of likes is critical for boosting key engagement metrics such as audience size and watch time. Given that both correlation and regression analyses indicate that comments are significantly influential, streamers can prioritize interactive prompts, such as asking viewers direct questions about product preferences or inviting them to share feedback. However, streamers must acknowledge that the effectiveness of these strategies depends on viewers' willingness to actively participate. Implementing live polls, screen chat highlights, and dedicated Q&A sessions can further strengthen comment-based engagement and increase viewers' sense of active participation in livestreams.

Additionally, when scheduling live streams, balancing the length of the stream and the diversity of the content appears to be beneficial. Longer streams that showcase multiple products or topics provide more opportunities for viewers to comment and get feedback, which increases social presence and helps sustain engagement. From a platform design perspective, user interface enhancements such as pinning popular comments, spotlighting viewer questions, or enabling topic discussions can promote richer real-time conversations. Finally, our results suggest further investigation into whether stream moderators or chat assistants can ensure that high-traffic channels remain structured and accessible, encouraging potential commenters to participate confidently.

While these findings are derived from China's livestream e-commerce ecosystem, comparisons with Western platforms reveal some important differences. China's livestream shopping market is significantly more mature, with sales expected to reach approximately \$700 billion by 2024, compared to TikTok Shop's projected sales of \$17.5 billion in the United States (Yurieff & Gehan, 2024). Nearly 80% of U.S. adults have never participated in a livestream shopping event, often citing concerns about product quality and the seller's credibility (Morning Consult, 2023). Chinese consumers have embraced livestream shopping as a mainstream method of shopping, with integrated platforms enabling seamless one-click purchases, while Western platforms often require external website redirects, increasing friction to conversion.

Despite these differences, engagement patterns show clear similarities. TikTok Shop, which has become the leading livestream shopping platform in the United States, explicitly follows China's lead by encouraging longer, more interactive livestreams (Lin & Nuangjamnong, 2022). We find that comment-based interactions drive continued viewing, consistent with observations that community-oriented livestreams increase viewer engagement time. However, while 60% of U.S. adults have tried watching shopping livestreams, only 33% have made a purchase, suggesting that viewers seek entertainment and interaction rather than immediate purchases (Pongratte *et al.*, 2023). Western platforms have adopted live chats and influencers to replicate China's success, but adoption remains low due to trust issues: more than three-quarters of U.S. users believe that livestream shopping encourages impulse purchases, and more than half believe that hosts are more entertaining than credible (Pongratte *et al.*, 2023). To convert higher thresholds for viewing engagement into actual sales, Western platforms may need to focus more on credibility and a smooth checkout experience (Pongratte *et al.*, 2023).

## 4. Conclusion

In summary, these findings provide practical guidance for streamers and platform designers seeking to enhance the live streaming experience by increasing audience engagement. The results highlight the importance of active participation, especially through comment interaction, which promotes substantive information and social interaction more than likes. Strategically motivating audiences to actively participate through conversations, interactive prompts, and personalized communications is an effective way to improve audience retention, satisfaction, and overall engagement.

However, there are also some limitations. Initially, the quantitative examination of this study focused on a specific e-commerce platform (Taobao Live) and a limited product category, which may limit the applicability of these results. Subsequent research can repeat this analysis on different live streaming platforms and in different product environments to verify the reliability of these findings. In addition, while this study considered session duration, average product price, and total product quantity, other important variables (such as streamer attractiveness, promotion intensity, or platform-specific algorithms) were excluded, which may affect the results. Including these



complementary elements in future research frameworks can provide a deeper understanding of the mechanism of engagement.

Future research should also examine audience-specific characteristics (such as demographics, user expertise level, and cultural background) and their moderating effects on engagement. In addition, studying the timing of live broadcasts, the effects of different chat moderation methods, and strategies for specific content can provide useful insights. Such research can further refine engagement strategies and provide reference for creating personalized recommendations suitable for specific audience groups, ultimately promoting more effective and improved live broadcast engagement models.

## References

- Batara, L.C., Sugiarto, C. (2024). Exploring the Influence of Viewers Engagement in Live Shopping: A Study on the Impact of Skepticism and Perceived Emotional Value on Purchase Intention. *International Journal of Science, Technology & Management*, 5(3), 576–584. <https://doi.org/10.46729/ijstm.v5i3.1097>
- Bolun, Z., Yan, Z., Minghui, J. (2024). The configurational impact of e-commerce live streaming interactivity on consumer engagement behavior. *Asia Pacific Journal of Marketing and Logistics*, 37(3), 631-649. <https://doi.org/10.1108/APJML-03-2024-0271>
- Brunelle, E. (2010). Media Richness Theory and the Intention to Use Online Stores: *International Journal of Customer Relationship Marketing and Management*, 1(3), 27–42. <https://doi.org/10.4018/jcrrmm.2010070103>
- Chen, N., Yang, Y. (2023). The Role of Influencers in Live Streaming E-Commerce: Influencer Trust, Attachment, and Consumer Purchase Intention. *Journal of Theoretical and Applied Electronic Commerce Research*, 18(3), 1601–1618. <https://doi.org/10.3390/jtaer18030081>
- Clement Addo, P., Fang, J., Asare, A.O., Kulbo, N.B. (2021). Customer engagement and purchase intention in live-streaming digital marketing platforms. *The Service Industries Journal*, 41(11–12), 767–786. <https://doi.org/10.1080/02642069.2021.1905798>
- Deng, F., Wang, Y., Liang, X. (2020). Research on the Impact of Taobao Live Broadcasting on College Students' Online Consumption Behavior Based on TAM Model. In J. Xu, G. Duca, S. E. Ahmed, F. P. García Márquez, & A. Hajiyev (Eds.), *Proceedings of the Fourteenth International Conference on Management Science and Engineering Management*, Springer International Publishing. 1190, 771–782. [https://doi.org/10.1007/978-3-030-49829-0\\_57](https://doi.org/10.1007/978-3-030-49829-0_57)
- Faul, F., Erdfelder, E., Lang, A.G., Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191. <https://doi.org/10.3758/BF03193146>
- Guo, L., Hu, X., Lu, J., Ma, L. (2021). Effects of customer trust on engagement in live streaming commerce: Mediating role of swift guanxi. *Internet Research*, 31(5), 1718–1744. <https://doi.org/10.1108/INTR-02-2020-0078>
- Hilvert-Bruce, Z., Neill, J.T., Sjöblom, M., Hamari, J. (2018). Social motivations of live-streaming viewer engagement on Twitch. *Computers in Human Behavior*, 84, 58–67. <https://doi.org/10.1016/j.chb.2018.02.013>
- Hu, M., Chaudhry, S.S. (2020). Enhancing consumer engagement in e-commerce live streaming via relational bonds. *Internet Research*, 30(3), 1019–1041. <https://doi.org/10.1108/INTR-03-2019-0082>
- Kim, C., Yang, S.U. (2017). like, comment, and share on Facebook: How each behavior differs from the other. *Public Relations Review*, 43(2), 441–449. <https://doi.org/10.1016/j.pubrev.2017.02.006>
- Lin, Q., Nuangjamnong, C. (2022). Exploring the Role of Influencers and Customer Engagement on Purchase Intention in TikTok Live Streaming Shopping. *International Journal of Social Sciences and Humanities Invention*, 9(12), 7469–7498. <https://doi.org/10.18535/ijsshi/v9i012.04>
- Lin, Y., Yao, D., Chen, X. (2021). Happiness Begets Money: Emotion and Engagement in Live Streaming. *Journal of Marketing Research*, 58(3), 417–438. <https://doi.org/10.1177/00222437211002477>
- Morning Consult. (2023, January). *Will U.S. live shopping finally have its moment in 2023?* Morning Consult Pro. Retrieved from <https://pro.morningconsult.com/trend-setters/live-shopping-social-media-2023>



- Petty, R.E., Cacioppo, J.T. (1986). The Elaboration Likelihood Model of Persuasion. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*, 19,123–205. Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60214-2](https://doi.org/10.1016/S0065-2601(08)60214-2)
- Pongratte, L. J., Liu, J., Putri, M.D.P.W., Paulin, A. (2023). The Effect of Promotion via TikTok Live Streaming on Consumers' Buying Interest in Clothing Products. *Open Journal of Social Sciences*, 11(04), 333–347. <https://doi.org/10.4236/jss.2023.114024>
- Ruggiero, T.E. (2000). Uses and Gratifications Theory in the 21st Century. *Mass Communication and Society*, 3(1), 3–37. [https://doi.org/10.1207/S15327825MCS0301\\_02](https://doi.org/10.1207/S15327825MCS0301_02)
- Song, D., Chen, X., Guo, Z., GAO, X. (2021). *What drives sales of E-commerce live streaming? Evidence from Taobao*.
- 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, X., Wu, D. (2019). Understanding User Engagement Mechanisms on a Live Streaming Platform. In F. F.-H. Nah & K. Siau (Eds.), *HCI in Business, Government and Organizations. Information Systems and Analytics*, Springer International Publishing. 11589, 266–275. [https://doi.org/10.1007/978-3-030-22338-0\\_22](https://doi.org/10.1007/978-3-030-22338-0_22)
- Xu, C., Li, Z., Su, J. (2022). Live shopping interactivity, social presence and sustainable consumer purchase intention: Based on TAM model. *International Journal of Sustainable Development and Planning*, 17(8), 2631–2639. <https://doi.org/10.18280/ijstdp.170832>
- Yu, E., Jung, C., Kim, H., Jung, J. (2018). Impact of viewer engagement on gift-giving in live video streaming. *Telematics and Informatics*, 35(5), 1450–1460. <https://doi.org/10.1016/j.tele.2018.03.014>
- Yurieff, K., Gehan, A. (2024). *TikTok tries to woo American shoppers, one livestream at a time. The Information*. Retrived from <https://www.theinformation.com/articles/tiktok-tries-to-woo-american-shoppers-one-livestream-at-a-time>

### Author contribution statement

Shantong Liu: Investigation, Methodology, Writing Original Draft, Sameer Kumar: Conceptualization, Supervision, Formal Analysis, Writing Review & Editing. Both the authors read approved the final version of the manuscript.

### Does this article screen for similarity?

Yes

### Ethics approval

No ethical clearance certificate is applicable for this present study.

### Conflict of Interest

The authors have no conflicts of interest to declare. There is also no financial interest to report. The author certifies that the submission is original work and is not under review at any other publication.

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