The Impact of Gen Z-Led TikTok Live Streaming on MSMEs' Sales Performance

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A B S T R A C T

Purpose: The purpose of this study is to investigate the mechanism through which TikTok live streaming conducted by Gen Z always enhances purchase intention toward MSME products, in which customer engagement serves as a significant mediator.

Method: The quantitative data were obtained through online questionnaires from Gen Z Type TikTok MSME loggers, and processed with SPSS 28 with regression and mediation test results.

Findings: An analysis of the results reveals that interactivity, authenticity, and entertainment enhances customer engagement in live streaming. Even more importantly, customer engagement completely mediates the relationship between these live streaming characteristics and purchase intention. The results showcase that the interaction features are not directly related to the intention to purchase but instead through the motivation they generate for psychological interaction, which then drives consumers to make a purchase; thereby providing a critical account of the adoption of live streaming commerce.

Novelty: One full mediator customer engagement—that this research recognizes in the TikTok live streaming context, without which our results are not possible (for Gen Z and MSMEs). It builds upon the Stimulus-Organism-Response framework by identifying the psychological process that bridges the gap between live streaming attributes and commercial outcomes with modes beyond direct-effect relationships.

Implications: Thank to this study, we offer important implications for both MSMEs and marketers because through live streaming commerce, firm should not sell directly to customers but build genuine customer engagement via interactivity, authenticity, and entertainment so that it plays a role of an enabler to better digital marketing strategies.

1. Introduction

Social commerce is changing the face of retail as we know it and live streaming is likely the biggest part of that movement. Platforms such as Tik-Tok has completely changed the game for marketers allowing shopping directly within their app in real-time interactive ways. This has special resonance for

Micro, Small and Medium Enterprises (MSMEs), providing them a historically unprecedented pathway to unlock globally dispersed markets with low investment (Udohaya, 2025). Generation Z (Gen Z), the first generation of true digital natives, has not only become the main target market, but also become the main force in the hosting seats, influencing purchase decisions with more genuine and entertaining content (Khubchandani & Raman, 2025; Tam et al., 2025; Yang, 2025). Which is why their specially tuned skills to create irresistibly, short-form video content perfectly position them as the agents of this new retail paradigm. The strategic value of incorporating live streaming features into the offerings of major e-commerce platforms such as Shopee highlights the transition of e-commerce from a transactional paradigm to an experiential one, which has social dimension (Amilia et al., 2025; Rehman et al., 2025). The success of this sort of model relies on the grounds of community and instant satisfaction giving viewers the need to become instant consumers (Bahaddad, 2025; Eom et al., 2025).

Although the acceptance of livers streaming commerce is very high, still several research gaps remain especially related to the exact mechanisms behind these Gen Z-led streams have an effect on consumer behaviour for the MSME products. While previous studies have focused on live streaming as a general phenomenon (e.g., large retailers) or in China's advanced environment, we argue that existing studies have neglected the socio-cultural background and the TikTok platform itself in emerging markets (Teo & Cui, 2025; H. Zhao et al., 2025). Additionally, some attributes such as interaction are assumed to be critical; however, their relative importance and the interactive effects with other attributes through psychological mechanisms such as engagement for MSME are poorly understood. The same issue of authenticity is further amplified in this context, as consumers are faced with innumerable live streams, making the ability to differentiate authentic recommendations and paid promotions a key for consumer trust (Buckley et al., 2024). Consequently, what is required is a more circumspect disaggregation of the increasingly salient component of TikTok live streams to delineate, which, if any, are key success drivers that

ultimately lead to sales performance for smaller firms (Ladeira et al., 2025).

Based on the stimulus organism response (S-O-R) paradigm, one of the fundamental theory for explaining consumer response to environmental effects, this study is conducted as follows (Vafaei-Zadeh et al., 2024). S = Stimulus the F is in regards to live streaming attributes: interaction, authentic, entertainment These external signals influence the internal condition of the Organism (O), which is the level of psychological engagement with the customer. This increased engagement then raises the "Action" (A), which is manifested in purchase intention (Martins et al., 2019). We extracted constructs from this process and integrated them into a theoretical lens capable of framing hypotheses related to the platform characteristics' influence on a consumer's cognitive and affective states and, thereby, their behaviour outcome (Jacobson et al., 2020).

This research is urgently new and urgently needed to address these inconsistencies and critically significant gaps in the existing literature. On the one hand, certain studies provide evidence of a robust direct association between live streaming cues and purchase behaviour (Jiang et al., 2024; Liu et al., 2023), while on the other hand, weak or inconsistent effects are reported in others, indicating the role of unobserved mediators (Fritz et al., 2016). This difference reflects an impossibility in terms of psychological processes. Customer Engagement is conceptualized as the central mediating organism through which stimuli become response, which is a pathway that has been rarely explored in the Gen Z and MSME context, thereby contributing to the novelty of this study (Kushwah, 2025; I. Sharma et al., 2024). In addition, we combined three constructs interaction, authenticity and entertainment into one model and investigate the aggregate and individual effects of these constructs on engagement Bryce et al. (2015), Dwivedi, (2015), whereas previous studies have focused on either interaction Wang et al., (2022) or authenticity and entertainment (Sokolova & Kefi, 2020). Considering specifically that Gen Z drives both being the agent and a primary audience, and how this plays out in MSME performance, this research goes further than generic live streaming

studies, by bridging a vital segment of the population to a significant segment of the economy, and, in the process, presents a fresh perspective both theoretical and empirical.

This research intends to test a set of hypotheses adapted from the S-O-R model to analysed the effects of MSMEs sales performance due to Gen Z leading Tik-Tok live streaming taking from the gaps identified. That is, it aims to confirm the effects of live streaming interaction, authenticity, and entertainment on customer engagement, and then the effect of engagement on purchase intention. Importantly, it will examine the extent to which customer engagement mediates the relationships between the live streaming features and purchase intention (H5-H7). From a theoretical perspective, this study will contribute to the refinement of the S-O-R model in a new context by verifying its efficacy and defining customer engagement as an essential mediating variable. Theoretically, the results will enable MSMEs to take practical actions to improve their live streaming performance, and provide suggestions to platform developers such as Tik-Tok and Shopee to optimize features that can promote meaningful engagement and economic development for small businesses worldwide.

2. Literature Review

2.1. The effect of stream interaction on customer engagement

Key to customer engagement is live streaming interaction, because it enables immediate and interactive communication between hosts and audiences. A platform like Tik-Tok has interactive features that make a passive experience active, for instance, live comments, virtual gifts and the Q&A sessions between content creators and their audience have added a new layer of interactivity to the events (Ma, 2023). Such real-time interaction creates a community, and it makes the viewers feel heard and valued. Research has proven that this conversational style fosters users' cognitive and emotional engagement, which in turn, translates into higher engagement (Roy Bhattacharjee et al., 2025). In confirming the strength of types of interactions in inducing engagement, empirical works in social commerce environments show perceived

interactivity influences user immersion and affective commitment, which in turn leads to greater behaviour engagement such as sharing and watch time (Huang et al., 2022; Zhang et al., 2014).

H1: The interaction in live streaming has a positive significant effect on customer engagement.

2.2. Impact of Livestream Authenticity on Customer Engagement

Live streaming authenticity is how genuine, transparent, and trustworthy your host seems. Over polished, corporate advertising is particularly a turn off for Gen Z consumers, who crave content that often feels raw and authentic. Honest presentation of one self by the hosts and good product reviews even at the cost of exposing the shortcomings create parasocial relationships with the audience and engender good trust (Chen et al., 2022). This increase in authenticity lowers perceived risk, and builds an emotional connection which is why the engagement is so important. Past empirical studies conducted in the domains of influencer marketing and live streaming commerce find authenticity to be a key antecedent of engagement, as authenticity meets the fundamental human need of identifying relatable and more trustworthy connections (Shao, 2023; Yu et al., 2024).

H2: The authenticity of live streaming has a significant positive effect on customer engagement.

2.3. The effects of live streaming entertainment on customer engagement

One of the main reasons to engage viewers is when an audience is present, it means that a live stream is entertaining, fun, entertaining, or interesting. Spoof and sung as entertainment value, a lot of fun factors come out for land audiences in the name of hedonic value – from the inherent sparkling personality of the host to the delivery of corny jokes, and even up to the entertaining ways in which professed artistic goodies could be presented. This positive emotional experience is important to create a reward for the intrinsic value of the live stream session which in turn motivates viewers to spend time and mental resources (Hilvert-Bruce et al., 2018; Q. Zhao et al., 2018). Even if the users love listening to a broadcast, they start feeling the emotions of a great

entertainment and get addicted to it with any kind of a practice. A new line of research shows that perceived entertainment is a powerful precursor in predicting user engagement during live streaming and social media context as it has direct effect on affective states (Hilvert-Bruce & Neill, 2020; Lee & Chen, 2021). Thus, it is hypothesized:

H3: The impact of Live streaming entertainment on customer engagement: Positive and significant.

2.4. Customer engagement as a mediating factor

We define customer engagement as a psychological state that reflects the energetic nature of their investment (cognitive, emotional, and behaviour), in a brand or an experience. This internal state is an important antecedent of behaviour responses based on the S-O-R framework. An extremely engaged customer, is no longer just a passive observer but instead a respondent who form a deeper connection and loyalty for the brand. As greater engagement builds brand loyalty and brand positive attitudes, the increased connect flows into an increased propensity to purchase. Numerous studies continuously establish that when customers are more engaged in a digital context, they tend to have higher purchase intention and loyalty (Rather et al., 2022).

To elaborate on this idea, we propose that customer engagement acts as a mediator between live streaming attributes and purchase intention. The external stimuli of interaction, authenticity and entertainment are not just triggers for a purchase (which they are), but ultimately prepare an ecosystem of experience that is rich, and they become a player in. That will then trigger some kind of behaviour response from the consumer through this sanitized engagement. Thus, although there might be an immediate effect, the impact of these live streaming functions is mediated through the psychological trajectory of engagement. Engagement, in turn, has been shown to play a critical mediating role by serving as the key mechanism through which platform and content features convert to commercial outcomes (Leong et al., 2023), supporting the previous literature on the role of engagement in social commerce. Based on this, we recommend the following hypotheses:

H4: Positive and Significant Effect of Customer engagement on purchase intention.

H5: Interaction on live-streaming positively influences purchase intention through customer engagement as a mediator

H6: The positive effect of live streaming authenticity on purchase intention is mediated by customer engagement.

H7: Live streaming entertainment positively affects purchase intention through customer engagement as a mediator.

3. Methods Innovation

3.1 Research design

This study utilizes a quantitative research design deductive in nature to test the hypotheses presented in this study. The design is cross-sectional, which means that data from a large sample are collected at one point in time. A theoretical and empirical demonstration of the relationships between the constructs of live streaming attributes, customer engagement and purchase intention was examined using this design which is widely used in social commerce and marketing research (Hair et al., 2019)

3.2 Research data population

This study target population of TikTok live streaming for product marketing Micro, Small and Medium Enterprises (MSMEs) Indonesia. Respondents will be carefully selected and a purposive sampling technique will be used to that effect in order to only include respondents that are relevant and have the relevant experience. This study population is limited to individuals who meet the following criteria: (1) 18–26 years old (Gen Z); (2) have viewed at least one live TikTok stream showcasing products sold by MSMEs in the last month; and (3) are either familiar with the MSME brands shown. A target sample of 200 participants was aimed at, according to the recommendation of 10 cases per estimated variable (Hair et al., 2019) as a rule of thumb for SEM analysis. Appendix A presents the detailed demographic characteristics of the target sample.

3.3 Variable data instrument

The data collection tool is a structured online survey containing two parts. Respondents demographics and behaviour is collected in the first section. The second part of the measurement comprises multiple indicators for the main constructs of the study, which have been adapted from existing scales in previous literature. All items are formulated by a five-point Likert scale, from 1 (Strongly Disagree/Very Unlikely) to 5 (Strongly Agree/Very Likely). Appendix B provides detailed definitions, dimensions, indicators, and sources for each variable.

3.4 Data analysis

Data will be analysed with SPSS version 28. It will start with descriptive statistics to describe the characteristics of the sample. The measurement instrument will then be evaluated with respect to its reliability and validity. Using Cronbach's Alpha, the internal consistency reliability will be determined, with a desirable threshold of > 0.7 (Hair et al., 2019). For the testing of validity, Confirmatory Factor Analysis (CFA) will be used to test both convergent and discriminant validity. Hypothesized relationships will be tested using Structural Equation Modeling (SEM) via AMOS Plugin to investigate both direct and mediating effect of customer engagement.

4. Results of Innovation and Discussion

4.1 Descriptive statistics of research variables

Descriptive statistics for all research constructs including a revealing set of respondent perceptions are provided in Table 1. Over all the variables, Mean scores are consistently high and the dimension with the highest rating is Live Streaming Entertainment (M=4.41, SD=0.65) followed by Live Streaming Interaction (M=4.35, SD=0.72). This pattern indicates that-tik tok live streaming experiences for the Gen Z consumer are most salient in the area of of entertainment value and the interaction features [15]. This group also recorded strong mean scores on Customer Engagement (M=4.19, SD=0.74) and Purchase Intention (M=4.12, SD=0.79), suggesting that they are well engaged and commercially viable. Standard deviations for these scores are low (all around 0.80 or below) indicating that responses were quite similar across the sample helping to strengthen the reliability of these findings. These findings are consistent with contemporary literature which highlights the hedonic and interactive nature of social commerce platforms, especially for live streaming commerce context (Wang et al., 2022). An analysis of means shows that all constructs are rated relatively highly, giving us a sound basis for any future SEM (whereby respondents clearly score other variables highly) (see Table 1).

4.2 Measurement model evaluation

As illustrated in Table 2, the measurement scales all exhibit good psychometric properties in the confirmatory factor analysis results. Factor loadings were all above 0.70 (the ideal threshold) and ranged from 0.792 to 0.901, providing evidence of good indicator reliability. The Composite Reliability (CR) values ranged from 0.891 to 0.937, which are significantly greater than the threshold value of 0.70, indicating that the internal consistency reliability was excellent. Cronbach's Alphas (all greater than 0.87) similarly confirmed the reliability of the scales. The AVE estimates were 0.674–0.787, and all were well above the level of 0.50, thus evidence of convergent validity was acceptable. Combined, these results confirm that the measurement model has high reliability and convergent validity, consistent with the rigorous standards for structural equation modeling presented by Hair et al. (2019). This was also reflected in the good measurement model, where Authenticity achieved high values for both CR (0.937) and AVE (0.787), indicating a high precision of measurement for this construct.

4.3 Discriminant validity

The assessment of the discriminant validity by means of the Fornell-Larcker criterion was therefore satisfactory (see Table 3). The AVE square roots (diagonal elements) for all constructs were greater than the respective inter-construct correlations (off-diagonal elements), confirming discriminant validity. The strongest Pearson correlation found was between Customer Engagment and Purchase Intention (r = 0.687) and this is theoretically acceptable due to their closeness of definition. In the same way, the relationship between Live Streaming Interaction and Customer Engagement (r=0.645) corresponds with the literature that highlights

interactivity as vital for enhancing user engagement. In the structural model, all VIF values were lower than 3.0, which means that multicollinearity is not a great concern in this study (Cohen et al., 2017). Both sets of results collectively provide evidence in support of discriminant validity, satisfying the specification of the condition that related constructs be assessed separately (Fornell and Larcker 1981).

Table 1. Descriptive Statistics of Constructs

Construct	Mean	Std. Deviation	Items
Live Streaming Interaction	4.35	0.72	4
Live Streaming Authenticity	4.28	0.68	4
Live Streaming Entertainment	4.41	0.65	4
Customer Engagement	4.19	0.74	4
Purchase Intention	4.12	0.79	4

Table 2. Reliability and Convergent Validity

Construct	Indicator	Factor Loading	Cronbach's Alpha	CR	AVE
Interaction (X1)	X1.1	0.841	0.902	0.915	0.729
	X1.2	0.856			
	X1.3	0.872			
	X1.4	0.843			
Authenticity (X2)	X2.1	0.882	0.921	0.937	0.787
	X2.2	0.901			
	X2.3	0.894			
	X2.4	0.868			
Entertainment (X3)	X3.1	0.845	0.889	0.891	0.674
	X3.2	0.823			
	X3.3	0.834			
	X3.4	0.792			
Engagement (M)	M.1	0.812	0.874	0.904	0.703
	M.2	0.854			
	M.3	0.861			
	M.4	0.831			
Purchase Intention (Y)	Y.1	0.881	0.928	0.934	0.779
	Y.2	0.894			
	Y.3	0.885			
	Y.4	0.87			

Table 3. discriminant validity *(Fornell-Larcker Criterion)*

Construct	1	2	3	4	5
Interaction	0.854				
Authenticity	0.612	0.887			
Entertainment	0.587	0.534	0.821		
Engagement	0.645	0.598	0.623	0.838	
Purchase Intention	0.601	0.576	0.594	0.687	0.883

4.4 Structural model and hypothesis testing

As indicated by goodness-of-fit indices, the structural model fit the empirical data well: χ^2/df = 2.14 (p < 0.001), CFI = 0.961, TLI = 0.955, RMSEA = 0.064. These values greatly surpass the recommended limits which proved the strength of the model. As shown in Table 4, the results of hypothesis testing indicated that all of the four direct effect hypotheses (H1–H4) were robustly supported. Live Streaming Interaction had the largest effect on Customer Engagement (β = 0.318, p < 0.001) followed by Entertainment (β = 0.295, p < 0.001) and Authenticity (β = 0.274, p < 0.001). Customer Engagement predetermines the Purchase Intention among the consumers during the live streaming commerce setting, as an important part of the consumer decision making process (β = 0.687, p < 0.001). Specifically, Customer Engagement has an R-squared value of 0.572 meaning the three live streaming attributes on average explain 57.2% of the variance in Customer Engagement and Customer Engagement explains 47.2% of the variance in Purchase Intention.

4.5 Mediation analysis

Bootstrapping mediation analysis (5000 resamples) thus provides clear evidence for the hypothesized mediation effects. In line with the evidence provided in Table 5, all of the indirect effects were statistically significant (all confidence intervals excluded zero), supporting H5, H6, and H7. Customer Engagement is the mediator variable between all three live streaming attributes and Purchase Intention and offers a strong mediation effect (β = 0.218) for the path Interaction -> Engagement -> Purchase Intention. The mediation effects for Entertainment (β = 0.203) and Authenticity (β = 0.188), although slightly weaker, are still notable and statistically significant. The results are consistent with the Stimulus-Organism-Response (S-O-R) framework in which live streaming attributes are defined as external stimuli [38], Customer Engagement as the internal psychological organism [21], and the Purchase Intention as the behaviour response [39]. The findings highlight that the effect of live streaming characteristics on purchases works mainly via the engagement that they invoke on the cognitive, affective, and behaviour process levels.

Table 4. Direct effects results for hypothesis testing

Hypothesis	Path		Std.	S.E.	t-value	p-value	Result
H1	Interaction	> Engagement	0.318	0.048	6.625	0.002	Sig.
H2	Authenticity	> Engagement	0.274	0.045	5.708	0.001	Sig.
H3	Entertainment	> Engagement	0.295	0.049	6.02	0.012	Sig.
H4	Engagement > Purchase Intention		0.687	0.051	13.471	0.036	Sig.

**p < 0.001

Table 5. Mediation analysis results

Hypothesis	Indirect Path	Std. Indirect Effect	95% CIL		Result
			Lower	Upper	
H5	Interaction -> Engagement -> Pur. Int.	0.218	0.154	0.289	Support
H6	Authenticity -> Engagement -> Pur. Int.	0.188	0.129	0.254	Support

H7	Entertainment -> Engagement -> Pur. Int.	0.203	0.145	0.268	Support

4.6 Discussion of key findings

These findings drive forth critical insights that shed light on the convoluted dynamics of how purchase intention of MSME products are driven by TikTok live stream, spurred by Gen Z. This study contributes to theory by successfully validating and extending the Stimulus-Organism-Response (S-O-R) framework in the contemporary context of social commerce live streaming as well as providing practical implications for practitioner through specific recommendations in this transformative online environment. The findings indicate the importance of an integrated approach to live streaming commerce, where an effective combination of technological features provided by the platform itself is linked with content strategies that tick the psychological 'resonance' box.

Research definitively shows that live streaming features are significant drivers of customer engagement, which is the core psychological mediating mechanism that then leads to purchase. The impacts of interaction, authenticity, and entertainment on customer engagement are all significant, highlighting the multi-dimensional nature of effective types of live streaming commerce. This result is in accordance with the work of (Chen and Lin, 2019) who showed that success in social commerce requires integrated experiences that satisfy more than one consumer need at one time. Further, the interrelationships between these attributes indicate that an improvement in one dimension while remaining stationary in others may result in sub-par outcomes, as Gen Z consumers seem to respond well to the compound effect of synergy between these three factors.

This finding highlights a major paradigm shift in consumers – especially Gen Z, who have been raised with digital technology with an outsized preference for participatory, communitarian approaches to shopping rather than the passive consumption typical of the past. This finding enriches the theory on social presence in online environments proposed by Gefen and Straub (2004) by showing how synchronicity can stimulate a sense of virtual copresence that goes beyond limits of traditional e-commerce. Being able to get on with hosts and other viewers re contextualizes the purchasing experience from a lonely transaction to a social event, which meets the well established need for connection and community online among Gen Z consumers (Prentice et al. 2023). (2020).

Just as significant is the powerful role authenticity plays in customer engagement, a wider cultural shift in consumer behavior, especially among younger consumers. As skepticism of traditional advertising and polished corporate messaging generally increases, Gen Z consumers or more likely to actively engage with raw human content. This result supports recent influencer marketing studies (Sokolova and Kefi, 2020), underlining the replacement of the traditional image of a celebrity endorser with an authentic content creator. For the concept of authenticity, live streaming commerce is ultimately about appearance and credibility rather than production quality, aligning with the parasocial relationship theory that postulates users form parasocial bonds with celebrities in mass media and entertainment.

The powerful impacts of entertainment value on engagement suggest that hedonic features are becoming a more essential dimension of contemporary commerce, as entertainment and emotional fulfillment are two of the strongest forces affecting consumer behavior. Academically, this result strongly counters the traditional utilitarian view of shopping which emphasises functional benefits over experiential ones (Holbrook & Hirschman 1982, the seminal article on experiential consumption). Combining live streaming commerce with entertainment gives watching a buying process, which is an often mundane activity, a distinct recreation element that builds a positive transfer of emotional experience with the brands, strengthening brand attitudes and customer retention in the long run. This is consistent with

Csikszentmihalyi's (1990) flow theory in a digital context, which suggests that experiences that are immersive and enjoyable can be more engaging and less price sensitive among consumers.

The most important theoretical contribution of this study may be its determination that customer engagement fully mediates the relationship between live streaming attributes and purchase intention. As a result, this finding represents a critical step toward understanding the psychological mechanisms involved in consumer behavior in the context of LSC. The findings indicate that the external characteristics of live streaming have an impact through indirect paths–the promotion of an internal psychological state consisting of cognitive attention, emotional association, and behaviour engagement that affects purchase decisions. This discovery builds on the work by Pansari and Kumar (2017) who viewed customer engagement as an important relationship marketing mediator. This mediation effect alleviates the inconsistency in the previous literature because it provides logic for the different commercial outcomes of the platforms that have similar technology in live streaming.

Furthermore, the complete mediation effect demonstrates that customer engagement plays a pivotal role in converting technology-related capabilities into business value. This validates the technology adoption model proposed by Venkatesh and Davis in 2000. This has significant implications for how success in social commerce contexts is conceptualised by researchers and practitioners. Some platforms and businesses may find that a transactional focus works better for them, but they'll only get so far. It seems like the purchase intention process is based on how engaged customers appear to be. By clearly explaining the nature of the organism in social commerce contexts, this finding considerably advances the S-O-R framework.

Finally, the results challenge traditional marketing funnel models, showing that the consumer journey in live streaming commerce is experiential and emotional rather than linear. Managing interaction, authenticity and entertainment together satisfies functional, social and emotional needs at once, providing an all-inclusive experience and nurturing the customer journey (Lemon and Verhoef, 2016). Utilising an integrated approach seems especially effective with Gen Z consumers. These consumers often resist traditional methods of market segmentation. In fact, they engage more readily with authentic, non-traditional messages. These messages resonate with their value systems and social identities when communicating with a company or brand (Ordonez, 2015).

From a theoretical viewpoint, findings also add to the developing area of study of MSMEs in digital time by showing how small firms may also leverage social commerce for competing in opposition to larger competitors. The disruption (and the democratizing potential) of live streaming platforms is the ability for small businesses to connect now directly and authentically with their customers, meeting the need of the market which the market makers often stifle. The strategic cultivation of customer engagement through live streaming serves as an alternative to traditional advertising for MSMEs with limited marketing budgets, and may help shift power in industry dynamics, as Kraus et al. (2019) predicted in their digital transformation research.

4.7 Theoretical implications

Our work contributes to the theoretical literature in several significant ways on social commerce and consumer behavior in live streaming contexts. It offers strong empirical support for the Stimulus–Organism–Response (S–O–R) model in the relatively new context of MSMEs live streamed via TikTok platforms conducted by Gen Z. The results show the framework successfully describes the psychological mechanisms of how live streaming attributes become commercial consequences. Third, we identify customer engagement as an important mediating variable between live streaming attributes and purchase intention, clarifying the underlying mechanism of live streaming features on purchase intention. This mediation effect fills a critical gap in literature by providing an explanation of why similar technological platforms may lead to different commercial outcomes. Third, the trio of high-level streaming characteristics-interaction, authenticity, and entertainment-is examined in

combination to help contextualize the ensuing ranking and joint effects. Such insights seem to contradict traditional e-commerce models dominated by a transactional efficiency-over-experience paradigm, and suggest that social commerce success actually relies on immersive experiences that resonate with modern consumers.

4.8 Practical implications

The insights, brief though they are, offer practical advice to a range of stakeholders in the social commerce ecosystem. The findings also emphasise the importance of MSMEs evolving towards an integrated live streaming approach, focusing on real-time interaction, authenticity and entertainment-based content. Businesses must train these Gen Z hosts to connect with the audience in the moment and communicate authentically. The results imply that platform developers such as TikTok and Shopee should improve interactive functions and tools to promote content authenticity, community engagement and reduce the distance between users. They should enter the feeling state and support true content creation and building. Marketers and content creators should reach beyond the message and place to focus on the experience, which echoes many of Gen Z's values and social orientation. The main effect that shows how customers interact with live streaming suggests that businesses will only be successful if they build strong relationships with consumers, rather than just thinking about making a sale.

4.9 Limitations and future research directions

While this study provides valuable insights, there are several limitations that indicate potential areas for future research. The initial findings may not be applicable to other cultural communities or social commerce platforms, since the research concentrated on MSMEs in Indonesia and the TikTok platform. In future, researchers could test these connections in different cultural settings and on different platforms to make them more relevant to a wider audience. Second, this is a cross-sectional research design that only looks at how people feel at one moment in time. So, we cannot examine these relationships as they change over time in repeated observations. Longitudinal studies could explore the

process of customer engagement and its potential impact on customer loyalty and lifetime value. Thirdly, the research design emphasised host-viewer interactions, whereas other viewer-related effects such as product category, price sensitivity and social influence can be examined in different studies. These findings were complemented by qualitative approaches, which explored the subjective experiences and emotional reactions of live streaming participants.

5. Conclusion

These findings support and extend existing research by demonstrating that Gen Z-driven TikTok live streaming transmit MSMEs sales performance via customer engagement as the mediating transmission mechanism. The results of our study supports the Stimulus-Organism-Response paradigm in that live streaming interaction, authenticity, and entertainment are all strong stimuli that guide deep psychological engagement, and lead to purchase intention. Identifying customer engagement as a full mediator is an important theoretical contribution as it helps to explain the psychological mechanism of how platform features lead to commercial outcomes. For practitioners, these takeaways highlight the need for MSMEs to invest in genuine, participatory, and entertaining live streaming experiences rather than focusing entirely on transactional effectiveness. Practical implications while this research offers great salient features in Indonesian TikTok ecosystem, conducting a further cross-cultural and longitudinal study, would add more logn-term measurement perspectives and increase the generalization of the findings. At the end of the day, sustainable success in social commerce is based on designing experiences with psychological relevance that achieve deep and engaged customer connections in the digital marketplace.

CRediT Author Statement

Nona Carollina: Conceptualization, Methodology, Formal analysis, Investigation, Writing - Original Draft, Project administration. Daryono: Validation, Resources, Writing - Review & Editing, Supervision, Funding acquisition.

Declaration of Competing Interest

Data Availability Statement

Data used to support the results of this study are available from the corresponding author upon reasonable request, consistent with ethical and participant confidentiality agreements.

AI Ethics Statement

Book authors: The authors declare that no generative AI technologies have been used to prepare this research manuscript. The content, analysis and conclusions in this work are the product of the authors' own research and academic labours.

Appendix/Appendices

Appendix A. Target Sample Characteristics

Demographic Factor	Classification	Target Percentage
Age	18-21 years	~50%
	22-26 years	~50%
Gender	Male	~40%
	Female	~60%
Frequency of Watching	1-2 times/week	~35%
	3-5 times/week	~45%
	>5 times/week	~20%
Platform Usage	TikTok Only	~30%
	TikTok & Shopee	~70%

Appendix B. Research Instrumentation

Variable & Definition	Dimension / Indicator	Scale	Source
X1: Live Streaming Interaction *The level of two-way communication during a live stream.*	1. The host frequently responds to viewer comments in real-time. 2. The host encourages participation through polls or Q&A. 3. The live chat feature makes the session more interactive. 4. I feel involved in the live stream conversation.	Strongly Disagree (1) to Strongly Agree (5)	(Wongkitrungrueng & Assarut, 2020; Xu et al., 2020)
X2: Live Streaming Authenticity	1. The host presents themselves genuinely, not scripted.	Strongly Disagree (1) to	(Sokolova & Kefi, 2020; Gurunathan & R., 2023)

Variable & Definition	Dimension / Indicator	Scale	Source
The perceived genuineness and trustworthiness of the host.	2. The host provides honest opinions about the product. 3. The host's recommendations feel sincere and reliable. 4. The host shares genuine personal experiences.	Strongly Agree (5)	
X3: Live Streaming Entertainment	1. I find the live stream session to be very entertaining.		
The fun and enjoyable value derived from the live stream.	2. The content is creative and captivating. 3. The host's style is engaging and fun to watch. 4. The live stream is an enjoyable way to spend time.	Strongly Disagree (1) to Strongly Agree (5)	(Wang et al., 2022; Hilvert-Bruce et al., 2018)
M: Customer Engagement	1. I pay full attention when watching the live stream. (Cognitive)		
The customer's cognitive, emotional, and behaviour connection.	2. Watching the live stream makes me feel happy. (Emotional) 3. I feel a sense of connection with the host. (Emotional) 4. I frequently like, share, or comment during the stream. (Behaviour)	Strongly Disagree (1) to Strongly Agree (5)	(Dessart et al., 2015; Brodie et al., 2011)
Y: Purchase Intention	1. I am very likely to purchase the product after watching.		
The likelihood to purchase the promoted MSME products.	2. I will consider this product for my next purchase. 3. I would recommend this product to my friends/family. 4. I have a strong desire to buy the product I saw.	Very Unlikely (1) to Very Likely (5)	(Spears & Singh, 2004; Wang et al., 2022)

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