

From Interaction to Purchase Decision: A Sequential S-O-R Model of Consumer Engagement and Trust in Live Shopping for MSME Products

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Abstract

Abstract

Purpose: this study develops a Stimulus–Organism–Response (S-O-R) model to explain how Perceived Live Shopping Interactivity (PLSI) influences Purchase Decision through Social Presence (SP), Live Commerce Trust (LCT), and Live Shopping Customer Engagement (LSCE) in the context of MSME products.

Research Method: a simulated dataset of 380 cases was analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) as a preliminary dry run. LSCE was modeled as a higher-order construct comprising Cognitive Processing, Affection, and Activation..

Results and Discussion: PLSI positively influenced SP ($\beta = 0.637$) and LCT ($\beta = 0.362$), while SP positively influenced LCT ($\beta = 0.348$). LCT positively affected LSCE ($\beta = 0.458$) and Purchase Decision ($\beta = 0.262$), while LSCE positively affected Purchase Decision ($\beta = 0.425$). The results support a sequential pathway from interactivity to purchase decision through SP, LCT, and LSCE.

Implications: the model provides a basis for future empirical testing and may guide MSMEs in designing more engaging and trustworthy live-shopping experiences.

Originality: this study integrates social presence, trust, and multidimensional customer engagement into a sequential S-O-R mechanism for live-shopping purchase decisions.

Keywords: live shopping; perceived interactivity; social presence; customer engagement; purchase decision

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1. Introduction

Live shopping has transformed digital commerce by combining real-time video, product presentation, communication, and transaction facilities in a single shopping environment. For micro, small, and medium-sized enterprises (MSMEs), live shopping provides an opportunity to interact directly with consumers, explain products, and reduce uncertainty. However, high interaction does not always result in a purchase. Therefore, an important issue is understanding how live-shopping interactivity is transformed into a purchase decision.

This development is particularly relevant for MSMEs, which frequently operate with limited brand recognition, marketing resources, and opportunities to establish direct relationships with consumers. Live shopping provides MSMEs with a more personal communication channel through which they can demonstrate products, clarify consumer concerns, and communicate product attributes. Nevertheless, consumers may actively participate in a live-shopping session without ultimately making a purchase.

Recent studies demonstrate that interactivity influences consumer responses in live commerce. Joo and Yang (2023) found that perceived interactivity contributes to consumers' live-shopping

experiences and shopping intentions, while Tian et al. (2023) identified interactivity as an antecedent of streamer trust. Recent research also indicates that interactive elements, social presence, and trust are important mechanisms underlying consumers' purchase-related responses in live-streaming commerce (Liu & Zhang, 2024; Weyna et al., 2026). Customer engagement is likewise important because social-commerce attributes can encourage consumers to invest greater cognitive, emotional, and behavioral resources in digital shopping experiences (Busalim et al., 2024).

Despite these findings, several research gaps remain. First, much of the existing research focuses on purchase intention rather than purchase decision (Joo & Yang, 2023; Liu & Zhang, 2024; Sari et al., 2026). Second, interactivity, social presence, trust, and engagement are frequently examined separately or through shorter mediation mechanisms. Third, limited attention has been given to the sequential mechanism of interactivity → social presence → trust → engagement → purchase decision. Finally, this mechanism remains underexplored in the specific context of MSME products.

Accordingly, this study asks: How does Perceived Live Shopping Interactivity influence Purchase Decision through Social Presence, Live Commerce Trust, and Live Shopping Customer Engagement? Using the Stimulus–Organism–Response (S-O-R) framework, Perceived Live Shopping Interactivity is positioned as the stimulus; Social Presence, Live Commerce Trust, and Customer Engagement as sequential organismic states; and Purchase Decision as the response. The novelty of this study lies in integrating these constructs into a sequential S-O-R mechanism and positioning purchase decision, rather than purchase intention, as the final outcome in the MSME live-shopping context.

This study preliminarily evaluates the proposed model using a simulated dataset and PLS-SEM before subsequent empirical testing. The remainder of the paper presents the literature review and hypotheses, research methodology, results and discussion, and finally the conclusions, implications, limitations, and directions for future research.

2. Literature Review and Hypothesis Development

2.1 Stimulus–Organism–Response (S-O-R) Theory

The Stimulus–Organism–Response (S-O-R) framework explains how environmental stimuli influence behavioral responses through individuals' internal psychological states and has been applied in contemporary social-commerce research to explain consumers' responses to digital shopping environments (Busalim et al., 2024). In live shopping, the framework is particularly relevant because interactive features do not necessarily produce purchase-related responses directly. Instead, consumers psychologically process social and informational cues before making behavioral decisions.

In this study, Perceived Live Shopping Interactivity (PLSI) represents the stimulus, while Social Presence (SP), Live Commerce Trust (LCT), and Live Shopping Customer Engagement (LSCE) represent sequential organismic states. Purchase Decision (PD) represents the behavioral response. The proposed mechanism is therefore:

Perceived Live Shopping Interactivity → Social Presence → Live Commerce Trust → Live Shopping Customer Engagement → Purchase Decision.

The model extends the S-O-R logic by conceptualizing the organism as a sequential psychological process rather than a single intermediate state.

2.2 Perceived Live Shopping Interactivity and Social Presence.

Perceived interactivity refers to consumers' perceptions of reciprocal communication, responsiveness, participation, and information exchange in a digital environment. In live shopping, consumers can communicate with sellers or hosts, ask questions, and receive real-time responses. Joo and Yang (2023) demonstrate that perceived interactivity is an important characteristic of live-stream commerce and contributes to consumers' shopping experiences.

Interactive communication may also strengthen consumers' perceptions that another human being is socially present within the digital environment. Recent evidence from Indonesian livestream commerce shows that real-time interaction and responsiveness are closely associated with social presence and trust (Weyna et al., 2026). Thus, interactive communication is expected to make live shopping feel more socially immediate and interpersonal. Therefore:

H1: Perceived Live Shopping Interactivity has a positive effect on Social Presence.

2.3 Social Presence and Live Commerce Trust

Social presence reflects consumers' perception of human contact and interpersonal interaction within a mediated environment. In live shopping, consumers can observe sellers, receive direct responses, and experience interpersonal communication that reduces the psychological distance associated with online shopping. Social presence and trust remain conceptually distinct. Social presence

represents the perception that another person is socially present, whereas trust reflects beliefs regarding the seller's credibility, honesty, and reliability. Recent live-commerce research shows that social presence can contribute to trust and purchase-related responses (Sari et al., 2026; Weyna et al., 2026). Research on live-streaming shopping further indicates that presence and relational experiences can contribute to the formation of consumer trust (Yang et al., 2025). Accordingly:

H2: Social Presence has a positive effect on Live Commerce Trust.

2.4 Perceived Live Shopping Interactivity and Live Commerce Trust

Besides operating through social presence, perceived interactivity may directly influence trust. Consumers in live shopping cannot physically inspect products and therefore depend partly on information provided by sellers or hosts. Interactive communication allows consumers to ask questions, obtain clarification, and evaluate sellers' responsiveness and transparency.

Tian et al. (2023) found that interactivity is positively associated with streamer trust in livestreaming commerce. Similar evidence from Indonesian livestream commerce indicates that real-time interaction can contribute to consumer trust (Weyna et al., 2026). Therefore, interactivity may reduce informational uncertainty and provide consumers with additional cues for evaluating seller credibility. Based on these findings:

H3: Perceived Live Shopping Interactivity has a positive effect on Live Commerce Trust.

2.5 Live Commerce Trust and Live Shopping Customer Engagement

Trust can encourage consumers to become more deeply involved in a live-shopping experience. Consumers who perceive sellers as trustworthy may be more willing to devote cognitive, emotional, and behavioral resources to understanding products and participating in the live-shopping session.

Customer engagement is conceptualized as a multidimensional construct comprising cognitive processing, affection, and activation (Hollebeek et al., 2014). Recent social-commerce research further demonstrates the importance of interactive and social attributes in stimulating customer engagement (Busalim et al., 2024). More specifically, evidence from e-commerce livestreaming indicates that trust in broadcasters and platforms can positively influence user engagement (Zhai & Chen, 2023). Thus, trust may provide the psychological confidence required for consumers to pay greater attention, develop positive feelings, and invest more time and effort in the live-shopping experience. Accordingly:

H4: Live Commerce Trust has a positive effect on Live Shopping Customer Engagement.

2.6 Live Commerce Trust and Purchase Decision

Trust is particularly important in live shopping because consumers make purchasing choices without directly examining products. Trust can reduce uncertainty and increase consumers' confidence in the information communicated by sellers.

Previous live-commerce research consistently demonstrates that trust is associated with purchase-related outcomes. Tian et al. (2023) found that streamer trust positively influences shopping intention, while Yang et al. (2025) showed that trust generated through relational experiences contributes to purchase intention in live-streaming shopping. However, these studies primarily examine purchase intention. The present study extends this perspective by positioning Purchase Decision as the final behavioral response. Therefore:

H5: Live Commerce Trust has a positive effect on Purchase Decision.

2.7 Live Shopping Customer Engagement and Purchase Decision

Customer engagement represents consumers' cognitive, affective, and behavioral investment in the live-shopping experience. Greater engagement may encourage deeper processing of product information, stronger emotional involvement, and greater effort in evaluating available products.

Research in social commerce demonstrates that customer engagement can contribute to subsequent behavioral outcomes (Busalim et al., 2024). Live-streaming research also indicates that interactive shopping environments can generate stronger purchase-related responses by encouraging consumers' involvement in the shopping experience (Liu & Zhang, 2024).

Importantly, customer engagement is distinguished from purchasing behavior in this study. Engagement represents consumers' psychological investment during the live-shopping experience, whereas purchase decision represents the subsequent choice outcome. Accordingly:

H6: Live Shopping Customer Engagement has a positive effect on Purchase Decision.

2.8 Proposed Research Model

Taken together, these hypotheses represent an integrated sequential process rather than independent relationships. Perceived Live Shopping Interactivity functions as the environmental stimulus that strengthens Social Presence. Social Presence subsequently facilitates Live Commerce

Trust, which encourages Live Shopping Customer Engagement and ultimately contributes to Purchase Decision.

The proposed sequential mechanism is therefore:

Perceived Live Shopping Interactivity → Social Presence → Live Commerce Trust → Live Shopping Customer Engagement → Purchase Decision.

The model also retains direct relationships between perceived interactivity and trust and between trust and purchase decision. By integrating these relationships within the S-O-R framework, this study seeks to explain how interactive live-shopping experiences may be psychologically transformed into consumer purchase decisions in the context of MSME products.

3. Research Method

This study employs a quantitative explanatory design with a cross-sectional survey to examine the relationships among Perceived Live Shopping Interactivity (PLSI), Social Presence (SP), Live Commerce Trust (LCT), Live Shopping Customer Engagement (LSCE), and Purchase Decision (PD). The unit of analysis is individual consumers in Indonesia who have purchased an MSME product after participating in a live-shopping experience. A purposive sampling technique is applied because respondents must possess experience relevant to the proposed model. Eligible respondents must be at least 18 years old, reside in Indonesia, have participated in live shopping within the previous six months, and have purchased an MSME product after following the live-shopping session. The study targets approximately 350–380 responses, with at least 300 valid observations expected for the final analysis.

Data are collected through an online questionnaire using a focal-experience approach, in which respondents are asked to recall one specific live-shopping experience involving an MSME product that resulted in a purchase. All measurement items refer to the same focal experience to maintain consistency across constructs. The instrument consists of 25 indicators measured using a seven-point Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. Most measurement items are adapted from established studies and contextualized to the live-shopping and MSME setting, while Purchase Decision is operationalized specifically for the focal purchase context. Before the main survey, the instrument is evaluated through expert judgment and pilot testing to assess content validity, clarity, reliability, and measurement suitability.

Table 1. Variables and Measurement

Variable	Code	Indicator	Major Reference
Perceived Live Shopping Interactivity	PLSI1-PLSI5	Two-way communication, responsiveness, participation, relevance, information facilitation	Joo and Yang (2023); Tian et al. (2023)
Social Presence	SP1-SP4	Human presence, sociality, non-isolation, direct-like interaction	Hadiyati and Luthfia (2026); Weyna et al. (2026)
Live Commerce Trust	LCT1-LCT4	Information credibility, reliability, honesty, trustworthiness	Tian et al. (2023); Yang et al. (2025)
Live Shopping Customer Engagement	LSCE1-LSCE9	Cognitive processing, affection, activation	Hollebeek et al. (2014) Busalim et al. (2024)
Purchase Decision	PD1-PD3	Purchase choice, choice commitment, comparative choice	Researcher-developed and contextualized for the focal purchase decision

The data are analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), following established procedures for measurement- and structural-model evaluation (Hair et al., 2019, 2022). The analysis is conducted using SmartPLS 4 (Ringle et al., 2024). The measurement model is assessed using outer loadings, internal consistency reliability, Average Variance Extracted (AVE), and the Heterotrait-Monotrait ratio (HTMT). LSCE is modeled as a reflective-reflective higher-order construct consisting of Cognitive Processing, Affection, and Activation. The structural model is assessed using collinearity, standardized path coefficients, bootstrapping, coefficient of determination (R²), and

effect size (f^2). Specific indirect effects are also examined to evaluate the proposed sequential mediation pathway of $PLSI \rightarrow SP \rightarrow LCT \rightarrow LSCE \rightarrow PD$.

4. Results and Discussion

4.1. Analysis Results

The structural model was assessed using path coefficients (β), coefficient of determination (R^2), effect size (f^2), and indirect effects. A preliminary PLS-SEM dry run was conducted using a simulated dataset of 380 cases to evaluate whether the proposed model was technically consistent with the hypothesized relationships. Therefore, the results presented in this section are illustrative and should not be interpreted as final empirical hypothesis-testing results.

The analysis showed positive relationships across all proposed paths. Perceived Live Shopping Interactivity (PLSI) was positively related to Social Presence (SP) ($\beta = 0.637$), while both SP ($\beta = 0.348$) and PLSI ($\beta = 0.362$) were positively related to Live Commerce Trust (LCT). LCT was positively associated with Live Shopping Customer Engagement (LSCE) ($\beta = 0.458$). Furthermore, both LCT ($\beta = 0.262$) and LSCE ($\beta = 0.425$) showed positive relationships with Purchase Decision (PD).

Table 2. Structural Model Results

Hypothesis	Relationship	β	f^2	R^2	Preliminary Result
H1	$PLSI \rightarrow SP$	0.637	0.681	0.405	Consistent
H2	$SP \rightarrow LCT$	0.348	0.123	0.413	Consistent
H3	$PLSI \rightarrow LCT$	0.362	0.133	0.413	Consistent
H4	$LCT \rightarrow LSCE$	0.458	0.266	0.210	Consistent
H5	$LCT \rightarrow PD$	0.262	0.083	0.351	Consistent
H6	$LSCE \rightarrow PD$	0.425	0.219	0.351	Consistent
H1	$PLSI \rightarrow SP$	0.637	0.681	0.405	Consistent

Note: Results are based on simulated data and represent preliminary dry-run outcomes.

The model explained 40.5% of the variance in Social Presence, 41.3% in Live Commerce Trust, 21.0% in Live Shopping Customer Engagement, and 35.1% in Purchase Decision. The strongest relationship was observed between PLSI and SP ($\beta = 0.637$), followed by LCT and LSCE ($\beta = 0.458$) and LSCE and PD ($\beta = 0.425$).

The indirect-effect analysis also indicated a positive sequential pattern. The indirect effect of PLSI through SP and LCT was approximately 0.22, while the indirect effect of LCT on PD through LSCE was approximately 0.20. The complete sequential pathway $PLSI \rightarrow SP \rightarrow LCT \rightarrow LSCE \rightarrow PD$ produced an estimated indirect effect of approximately 0.04. These values demonstrate the expected analytical mechanism, although their statistical significance must be confirmed using the final empirical dataset and bootstrapping procedure.

4.2. Discussion

The preliminary results are consistent with the Stimulus–Organism–Response (S–O–R) framework, suggesting that live-shopping stimuli may influence behavioral responses through a sequence of psychological states. In the proposed model, perceived interactivity functions as the stimulus, while social presence, trust, and customer engagement represent sequential organismic states leading to purchase decision.

First, the positive relationship between PLSI and SP is consistent with H1 and suggests that responsive and reciprocal communication can strengthen consumers' perceptions of human presence in a live-shopping environment. This interpretation is consistent with Joo and Yang (2023), who demonstrate the importance of perceived interactivity in shaping live-shopping experiences, and Weyna et al. (2026), who identify real-time interaction as relevant to social presence in Indonesian livestream commerce. Interactive communication may therefore make digital shopping feel more socially immediate rather than merely technologically mediated.

Second, the positive relationship between SP and LCT is consistent with H2. Stronger social presence can provide interpersonal cues through which consumers assess seller credibility and reliability. This interpretation is consistent with recent evidence linking social presence with customer trust and purchase-related outcomes in live-shopping environments (Sari et al., 2026; Weyna et al.,

2026). Yang et al. (2025) similarly demonstrate the importance of presence and relational experiences in developing trust in social commerce.

PLSI also demonstrated a positive direct relationship with LCT, consistent with H3. This suggests that interactivity may contribute to trust not only through social presence but also by facilitating information clarification and uncertainty reduction. Consumers who can ask questions and receive relevant responses gain additional information for evaluating seller credibility. This pattern is consistent with Tian et al. (2023), who identified interactivity as an antecedent of streamer trust.

The positive relationship between LCT and LSCE is consistent with H4. Trust may enable consumers to devote greater cognitive, emotional, and behavioral resources to the live-shopping experience. This interpretation is aligned with the multidimensional conceptualization of customer engagement through cognitive processing, affection, and activation (Hollebeek et al., 2014). It is also consistent with evidence that trust can positively influence user engagement in e-commerce livestreaming (Zhai & Chen, 2023) and that social-commerce attributes can stimulate customer engagement (Busalim et al., 2024).

The positive relationship between LCT and PD is consistent with H5. Trust can reduce uncertainty regarding sellers and product information and thereby provide consumers with greater confidence when making purchasing choices. Previous research similarly indicates that streamer or seller trust contributes to purchase-related intentions in livestream commerce (Tian et al., 2023; Yang et al., 2025). The present model extends this logic by examining purchase decision rather than stopping at purchase intention.

Finally, the positive relationship between LSCE and PD is consistent with H6. Consumers who are cognitively attentive, emotionally involved, and behaviorally invested in the live-shopping experience may have a stronger psychological basis for evaluating products and making purchasing choices. This interpretation is consistent with research emphasizing customer engagement as an important mechanism connecting social-commerce experiences with subsequent behavioral outcomes (Busalim et al., 2024).

Overall, the preliminary results illustrate the proposed sequential mechanism of interactivity → social presence → trust → engagement → purchase decision. Rather than suggesting that interactive features automatically generate purchases, the model indicates that their influence may unfold through a progressive psychological process. However, because these results are based on simulated data, the proposed relationships and mediation effects must be confirmed using the final empirical survey data before definitive conclusions regarding hypothesis support can be established.

5. Concluding Remarks and Recommendation

This study addresses the question of how Perceived Live Shopping Interactivity (PLSI) may influence Purchase Decision (PD) through the sequential roles of Social Presence (SP), Live Commerce Trust (LCT), and Live Shopping Customer Engagement (LSCE) in the context of MSME products. Using the Stimulus–Organism–Response (S-O-R) framework, the study proposes a sequential mechanism of PLSI → SP → LCT → LSCE → PD and evaluates the analytical structure using a preliminary PLS-SEM dry run with 380 simulated cases. The simulated results indicate positive relationships across all proposed paths, with the strongest relationship occurring between PLSI and SP. The model also illustrates that trust and customer engagement may play important roles in translating interactive live-shopping experiences into purchase decisions. However, these results should be interpreted as preliminary analytical evidence rather than final empirical findings.

The study provides theoretical and practical value by extending the S-O-R framework from a simple stimulus–organism–response relationship toward a sequential psychological process involving social presence, trust, and multidimensional customer engagement. Its originality lies in integrating these established constructs into a single mechanism leading to purchase decision rather than purchase intention. Practically, the proposed model suggests that MSMEs should not rely solely on increasing the frequency of live-shopping interactions. Instead, live-shopping strategies should emphasize responsive communication, authentic social interaction, credible product information, and experiences that encourage consumers' cognitive, emotional, and behavioral engagement.

The main limitation of this study is that the current results are based on a simulated dataset and therefore cannot be generalized to actual live-shopping consumers. The proposed relationships, mediation effects, and predictive performance must be validated using empirical survey data from consumers who have purchased MSME products through live shopping. Future research may also examine differences across live-shopping platforms, product categories, consumer characteristics, and

types of sellers or hosts. Longitudinal or experimental designs are also recommended to provide stronger evidence regarding the causal sequence through which interactivity develops into social presence, trust, engagement, and purchase decision.

Statement of Use of Generative AI

During the preparation of this manuscript, the authors used ChatGPT (OpenAI) solely to assist with language refinement, including improving clarity, readability, and grammatical accuracy. All AI-assisted content was critically reviewed, verified, and revised by the authors. Generative AI was not used to generate, fabricate, or alter research data, results, or conclusions. The authors take full responsibility for the accuracy, integrity, and content of the final manuscript.

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