Emotional arousal as a psychological bridge: how digital stimuli shape hedonic and impulsive consumption

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Received: April 26, 2026; Revised: June 4, 2026;
Accepted: June 5, 2026; Published: July 21, 2026

Abstract

In the rapidly evolving digital landscape of Indonesia, the psychological mechanisms driving live streaming commerce (LSC) remain conceptually fragmented. This study seeks to bridge this gap by investigating how streamer attractiveness, para-social interaction, and information quality collectively shape consumer behaviors within the Stimulus-Organism-Response (S-O-R) framework. This research utilizes a quantitative design, whereby 273 valid responses from Indonesian consumers were collected via purposive sampling. Data were rigorously analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with Smart-PLS 4.0 to validate both direct and mediating effects. The findings reveal that all environmental stimuli significantly drive emotional arousal, which functions as the absolute primary catalyst converting digital engagement into hedonic and impulsive consumption behaviors. Notably, arousal serves as a functional substitute for traditional trust in collectivist markets, representing a massive driver for shopping pleasure. This study advances the S-O-R framework by validating emotional arousal as the critical psychological bridge to spontaneous consumption. Managers should prioritize "relational commerce" by fostering "digital friend" personas to sustain affective resonance in high-velocity digital environments.

Keywords: *arousal; hedonic consumption, impulsive consumption, live streaming commerce, S-O-R framework*

Introduction

In the current era of rapid technological shifts, digital consumption patterns have fundamentally transformed human lifestyles. Live Streaming Commerce (LSC) has emerged as a dominant trend, integrating marketing processes with real-time social media broadcasts. This format allows sellers to demonstrate products dynamically while fostering direct, personalized interactions between streamers and viewers. The scale of this market in Indonesia is significant; internet users reached 221 million in 2024, representing a 79.5% penetration rate (APJII, 2024). Beyond general market growth, recent evidence highlights the efficacy of live commerce in boosting sales within the fashion industry (Adibah & Sufiati, 2024) and driving purchase intentions for electronic goods (Erlangga et al., 2025). Recent scholarly discourse within the South East Asian management landscape has further explored how interactivity and influencer marketing shape purchase decisions through consumer trust (Irfan et al., 2025), while industry-sSpecific research has demonstrated the role of perceived value in driving intentions within emerging sectors such as the green beauty market (Munandar et al., 2025). Globally, this shift was accelerated by the COVID-19 pandemic, with China leading the transition as platform users reached 638 million (Lim et al., 2020). Consequently, consumer behavior has migrated toward experiences that are

DOI: https://doi.org/10.24123/mabis.v25i2.1134
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increasingly interactive and impulsive (Caesalpinia & Suryawardani, 2025).

Despite this growth, the existing literature remains fragmented. Most studies treat streamer attractiveness, para-social interaction, and information quality as isolated silos, failing to capture their synergistic power. A recent systematic literature review by Li et al. (2025) emphasizes that while research is predominantly concentrated within Chinese contexts, there is a lack of consensus on the integrated psychological mechanisms driving impulse buying (Lee et al., 2025). To analyze this, researchers frequently employ the S-O-R model to explain how environmental stimuli influence a consumer's internal state (organism), which subsequently dictates their purchasing behavior (response) (Lee & Gan, 2020). Recent behavioral reviews emphasize that digital triggers in e-commerce, such as urgency-based marketing and social proof, often reduce the consumer decision-making process by bypassing rational evaluation through heightened emotional states (Chaudhary et al., 2025). This framework is robust for understanding how information quality (and arousal levels mediate the relationship between streaming elements and purchasing decisions (Sheng et al., 2022). The complexity of this evolution is synthesized in recent systematic reviews, which emphasize the need for integrated conceptual frameworks to understand the multi-faceted antecedents of online impulse buying in the digital era (Kaur & Sharma, 2024). This investigation is particularly relevant as recent literature suggests that perceived quality and antecedents for specific platform features do not necessarily align with those of the platform as a whole (Kosimwidjaja & Hadiprawoto, 2025).

While previous literature has explored these variables, many studies examine them in isolation. For instance, research establishes that streamer attractiveness (SA) impacts purchase intentions (Stein et al., 2024) and emotional responses (Angelina & Henuk, 2024). Specifically, eye-tracking evidence confirms that attractive facial features capture higher visual attention, creating a 'beauty premium' that directly influences emotional experiences and purchase intentions (Shi et al., 2024). Similarly, para-social interaction (PSI) creates vital emotional bonds (Dewantara et al., 2023), which are further intensified by immersion (Sipur & Amadi, 2025) and local presence (Feby et al., 2024). Furthermore, cognitive reactions to vividness and multisensory cues have been found to have positive impacts on the emotional states consumers associate with specific products (Li et al., 2025). However, these studies often overlook the concurrent synergy between human-centric and content-led stimuli. While information quality influences consumer trust (Yanagisawa, 2021), there remains a significant research gap regarding a comprehensive model that integrates these diverse elements into a single, holistic framework, particularly within the emerging Indonesian digital market.

This study addresses this gap by deriving key research variables from the S-O-R framework to specifically explain the unique Indonesian consumer context. Live streaming allows sellers to promote products with high engagement (Xu et al., 2020). In collectivist cultures like Indonesia, this process is further intensified by cultural traits that amplify the role of PSI, as cultural collectivism has been found to strengthen the link between idol characteristics and purchase intentions (Du et al., 2025). This study proposes a model to examine how these elements shape consumer behavior (Chebolu et al., 2022) through a specific affective state. In this context, arousal serves as the dominant organismic mechanism, as evidence indicates that external triggers consistently heighten arousal levels even when other emotional dimensions like pleasure remain insignificant (Ngo et al., 2024).

Streamers with attractive appearances trigger positive emotional responses (Lady et al., 2024), while PSI increases affective trust through strong emotional engagement (Qin et al., 2022). Furthermore, accurate information quality enhances emotional satisfaction, strengthening the link between arousal and hedonic consumption (Liao, 2021). Recent evidence suggests that social presence also plays a vital role by triggering customer inspiration and positive emotions, which act as intermediaries for impulsive shopping (Liu et al., 2025). Prior research by Shukun & Loang (2024) and Rahmi et al. (2025) has suggested that broadcasters' social presence and persuasive content drive impulsive consumption through arousal mediation (Hashmi et al., 2020). However, since these findings are largely confined to the Chinese context, their direct applicability to the Indonesian market, which possesses distinct cultural consumer characteristics and platform usage patterns, remains a critical research question (Immaculata et al., 2025).

By incorporating environmental stimuli and psychological states, this study addresses the persistent fragmentation in live streaming commerce research by proposing an integrated framework that centers on emotional arousal as the primary driver of consumption behavior. Unlike the prevailing body of literature that often examines digital triggers in isolation, this investigation illuminates the concurrent synergy of human-centric and content-led stimuli in shaping the consumer's internal state. It contributes to the academic discourse by shifting the focus from purely transactional perspectives to the heightened emotional activation required to facilitate spontaneous outcomes. Ultimately, this study provides empirical evidence from the Indonesian market to optimize digital features that effectively heighten arousal and drive spontaneous consumption during live streaming sessions.

Literature Review

Originally introduced by Hovland in 1953, the S-O-R framework is now widely applied in communication science to explain human internal processing (Aruman et al., 2025). This theory posits that human psychological states, comprising cognition, affection, and conation, undergo transformation when environmental stimuli interact with the organism (Lady et al., 2025; Rahma & Utami, 2025). In the context of live commerce, this model is particularly effective in explaining how real-time digital triggers intensify internal emotional states to facilitate immediate behavioral responses (Ngo et al., 2024).

Within this model, communication is a cyclical process where specific signals trigger internal responses designed to enhance interest and drive behavioral or attitudinal changes (Balaskas et al., 2024). The model consists of three core elements: (1) Stimulus (S), the initial signals sent to influence an individual; (2) Organism (O), the recipient's internal processing specifically conceptualized in this study as emotional arousal; and (3) Response (R), the subsequent action manifested as hedonic and impulsive consumption.

In e-commerce, visual stimuli significantly dictate consumer attention; for instance, specific facial expressions draw more focus to products than neutral ones (Hou et al., 2020). High SA acts as a potent catalyst for capturing attention and amplifying consumer responses (Herlina, 2023; Li et al., 2022). While excessive physical appeal may occasionally cause cognitive distraction (Guo & Sun, 2022), empirical evidence confirms that SA directly heightens emotional arousal in live shopping, functioning as an initial emotional anchor that activates the viewer's sensory experience (Angelina & Henuk, 2024; Shukun & Loang, 2024).

H1: Streamer attractiveness has a positive effect on arousal.

Furthermore, PSI creates digital relationships characterized by mutual adjustment and emotional attachment (Lim et al., 2020; Lee & Gan, 2020). High engagement with media personas dictates emotional responses and shapes product attitudes (Sheng et al., 2022; Stein et al., 2024). In collectivist cultures such as Indonesia, these digital bonds are intensified, whereby cultural traits significantly strengthen the link between streamer characteristics and the viewer's internal state (Du et al., 2025). These interactions, intensified by immersion, significantly influence arousal through increased affective involvement and enjoyment (Sipur & Amadi, 2025; Dewantara et al., 2023). This research argues that PSI serves as the primary engine for digital intimacy in the Indonesian marketplace.

H2: Para-social interaction has a positive influence on arousal.

Additionally, information quality is paramount for building trust and perceived value (Yanagisawa, 2021). Well-structured information improves cognitive and emotional experiences, thereby increasing viewer arousal and shopping confidence (Xu et al., 2020) (Chebolu et al., 2022; Amani et al., 2025). Notably, the impact of information quality in live commerce is often feature-specific, wherein the perceived quality of real-time interactive elements can diverge from the overall platform's service quality (Kosimwidjaja & Hadiprawoto, 2025). Reliable content provides the cognitive reassurance necessary to sustain long-term emotional activation during high-velocity broadcasts (Aenaya et al., 2025).

H3: Information quality has a positive effect on arousal.

Emotional arousal influences brand selection and risk-related decision-making (Qin et al., 2022). Recent behavioral reviews emphasize that in live streaming environments, arousal acts as the dominant organismic mechanism; external digital triggers consistently heighten arousal levels even when other emotional dimensions like pleasure remain insignificant (Ngo et al., 2024). High arousal often drives massive, unplanned purchases as consumers aim to capitalize on promotions through imaginative hedonic consumption (Hashmi et al., 2020; Liao, 2021; Szymaniak & Zajenkowski, 2021; Heath & Nixon, 2021). In the Indonesian digital landscape, 'best deal' cues and social proof significantly enhance hedonic value, which dictates the intensity of affective impulsive buying (Silalahi et al., 2025). This trend is evident in the Indonesian market, where high internet penetration facilitates impulsive purchasing for high-growth sectors such as fashion and electronics (Adibah & Sufiati, 2024; Erlangga et al., 2025). The immediacy and social nature of live streaming sessions act as primary catalysts for unintended purchases in the local marketplace (Aenaya et al., 2025).

Platforms utilize elements like music and limited-time offers to stimulate these impulses (Zhang et al., 2023). In such environments, hedonic value serves as a critical engine for impulsive behavior, whereby the perceived fun of the interaction overrides traditional decision complexity (Silalahi et al., 2025; Huang et al., 2024; Sun et al., 2023).

H4: Arousal has a positive effect on hedonic consumption.

H5: Arousal has a positive effect on impulsive consumption.

Arousal serves as the indispensable psychological bridge connecting digital stimuli to behavioral outcomes. Regarding SA, emotional resonance leads to both hedonic consumption and impulsive consumption, driven by spontaneous self-satisfaction and social presence (Valinatajbahnamiri & Siahtiri, 2021; Pearlstein et al., 2022; Liu et al., 2025). Attractive streamers stimulate viewers to act spontaneously, prioritizing immediate emotional gratification (Kang et al., 2020; Huang & Bu, 2022).

H6: Arousal mediates the relationship between streamer attractiveness and hedonic consumption.

H7: Arousal mediates the relationship between streamer attractiveness and impulsive consumption.

For PSI, digital intimacy fosters a sense of 'we-ness' that drives unplanned shopping (Li et al., 2021; Balaskas et al., 2024). These "imaginary friendships," built through real-time responses, motivate viewers to buy goods suddenly (Rasoolimanesh et al., 2022; Rahma & Utami, 2025). This emotional closeness triggers the impulsiveness necessary for unplanned purchases (Zhao et al., 2021; Guo & Sun, 2022).

H8: Arousal mediates the relationship between para-social interaction and hedonic consumption.

H9: Arousal mediates the relationship between para-social interaction and impulsive consumption.

Finally, information quality reinforces consumer confidence during spontaneous decisions (Xia et al., 2024; Shengchao & Loang, 2024). Accurate content strengthens the emotional drive, converting viewing sessions into sales (Shi et al., 2024; Tang et al., 2023). Furthermore, the synergy between social engagement and promotional information specifically enhances the consumer's hedonic experience, which then facilitates immediate, unplanned purchases under perceived time pressure (Silalahi et al., 2025). Promotional strategies effectively trigger hedonic consumption when mediated by a high level of arousal (Chen et al., 2025; Li et al., 2025; Wenting et al., 2022; Gao et al., 2022).

H10: Arousal mediates the relationship between information quality and hedonic consumption.

H11: Arousal mediates the relationship between information quality and impulsive consumption.

The theoretical framework of this research is constructed using S-O-R model to illustrate the psychological path between live streaming stimuli and consumer responses. Within this framework, SA, PSI, and information quality act as the environmental stimuli (S) that initiate the process. These external triggers are processed by the consumer's internal state, leading to a heightened level of emotional arousal (O). This arousal serves as the primary organismic mechanism, capturing the consumer's emotional excitement and sensory activation during the live session. Subsequently, this internal state dictates the behavioral responses (R), manifesting as both hedonic consumption and impulsive consumption. This holistic model suggests that real-time interactive stimuli shift the decision-making focus toward immediate emotional engagement, thereby accelerating the transition from a passive viewer to a pleasure-driven buyer.

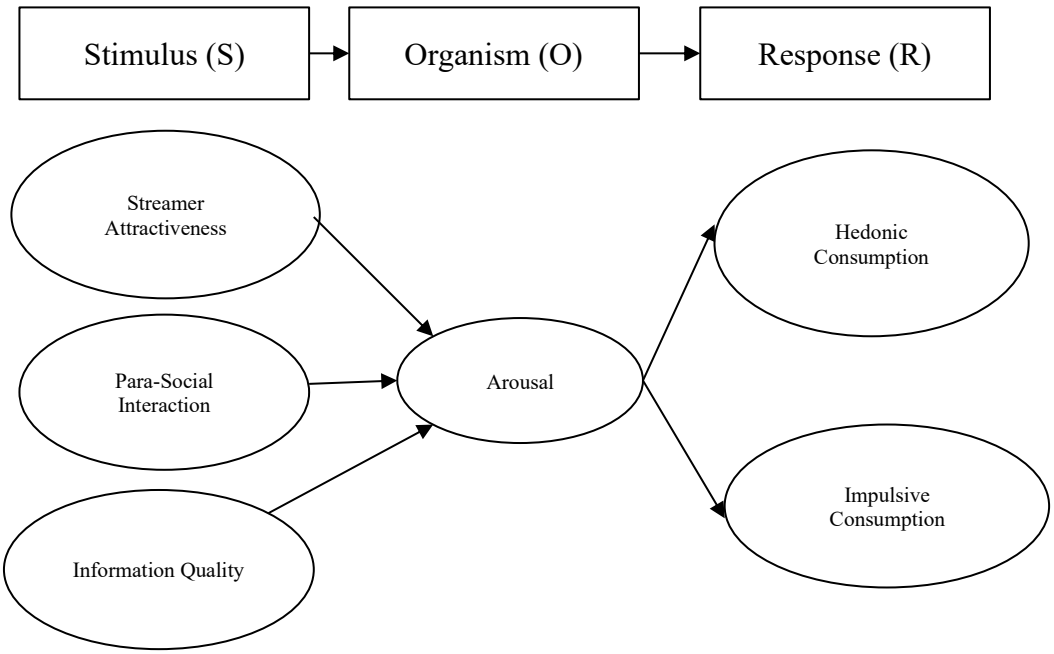

Figure 1. Conceptual Framework

Methods

This study adopts a quantitative research design to provide an objective and systematic analysis of the variables through statistical processing and hypothesis testing (Heath & Nixon, 2021; Valinatajbahnamiri & Siahtiri, 2021). The investigation focuses on the LSC ecosystem in Indonesia, specifically examining consumer interactions within dominant social commerce platforms.

The target population consists of individuals in Indonesia with experience in live streaming shopping. By utilizing a non-probability purposive sampling technique, the study enforced specific inclusion criteria: respondents must have completed at least one transaction via a live streaming platform and be aged 16 years or older. Following the recommendation of a 5-to-10 ratio of respondents for each measurement indicator (Hair et al., 2022), the ideal size for the 24 indicators was 240. To further validate the sample's adequacy, a G*Power analysis was conducted, confirming that the final sample of 273 valid responses provides sufficient statistical power ($1 - \beta > 0.80$) for a model with six constructs (Faul et al., 2009). A total of 310 questionnaires were distributed to mitigate potential invalid data, yielding an effective response rate of 88.06%.

Primary data were collected in 2025 via online questionnaires distributed through WhatsApp and Instagram (Thompson & Utz, 2025; Arrow et al., 2023). Measurement instruments were adapted from (Xu et al., 2020) and measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The research instrument consisted of six constructs, whereby each construct was operationalized through four specific measurement items (Table 1). SA focused on visual appeal and personality, while PSI captured the perceived sense of friendship and togetherness. Information quality assessed the reliability and completeness of content, and emotional arousal measured the level of enthusiasm during the broadcast. Finally, hedonic consumption evaluated the pleasure of the shopping experience, while impulsive consumption focused on spontaneous and

unplanned purchasing tendencies.

Table 1. Operational Definitions and Measurement Items

Variable	Operational Definition	Indicators
Streamer Attractiveness	The perceived visual appeal and personality of the live streamer.	I think that the live stream streamer is talented I think that the streamer has an enjoyable live streaming style I think that the streamer has an interesting personality I think the streamer has an appealing appearance
Para-social Interaction	The perceived sense of togetherness and friendship between viewer and streamer.	In the live stream, I feel as though the streamer and I are friends When I am watching the live stream, I feel a sense of we-ness (togetherness) with the streamer. I feel as though the streamer cares about my responses during the live stream I feel the streamer is like an old friend
Information Quality	The reliability, accuracy, and completeness of product information provided.	I think the content provided by the streamer is reliable (such as product, brand, and use experience) In the live stream, I think the content provided by the streamer is true The streamer provides real-time information to meet my needs in the live stream. In the live stream, I think the content provided by the streamer is complete
Arousal	The level of emotional stimulation and enthusiasm felt during the broadcast.	I feel enthusiastic about taking action while watching the live stream (e.g. shopping or social sharing) I feel exhilarated to participate during the live stream I feel energized to initiate a variety of behaviors (suggestions/responses) during the live stream I feel excited about engaging with the live stream
Hedonic Consumption	The pleasure, fun, and entertainment derived from the shopping experience.	The novelty of the live streaming shopping experience is pleasurable The live streaming shopping entertains me Being involved in the live streaming shopping is a fun experience The live streaming shopping gives me a real high
Impulsive Consumption	The tendency to buy products spontaneously and without prior planning.	While watching the live stream, I buy things that I had not intended to purchase While watching the live stream, I often buy things spontaneously While watching the live stream, I often buy things without thinking While watching the live stream, I feel like buying more things than I need

Data analysis was executed through Partial Least Squares Structural Equation Modeling (PLS-SEM) utilizing Smart-PLS 4.0. This approach was selected due to its robustness in assessing complex mediation frameworks and its resilience in managing the specific characteristics of consumer behavior survey data (Hair et al., 2022). The analytical procedure followed a rigorous two-stage evaluation process. First, the measurement model (outer model) analysis was performed to establish convergent validity—ensuring Average Variance Extracted (AVE) values exceeded 0.50 and factor loadings were above 0.70—alongside discriminant validity via the Fornell-Larcker criterion and Heterotrait-Monotrait (HTMT) ratio. Second, the structural model (inner model) was evaluated to test the eleven hypothesized relationships, incorporating R^2, f^2, and path coefficients. Hypothesis testing relied on a bootstrapping procedure with 5,000 subsamples, utilizing a *t*-statistic threshold of $t > 1.96$ and a *p*-value of $p < 0.05$.

Result and Discussions

The demographic profile of the 273 valid respondents is presented in Table 2. The sample is dominated by Generation Z, with 80.2% of respondents aged between 16 and 25 years. In terms of gender distribution, the sample is relatively balanced with 52.4% female and 47.6% male participants. Most respondents are full-time students (54.6%), and a significant majority (75.1%) hold a high school diploma as their highest level of education. Regarding financial capacity, 49.5% of respondents allocate between Rp. 2,000,001 and Rp. 5,000,000 for monthly expenditures.

Table 2. Demographic Profile of Respondents

Criteria-Category	Frequency	Percentage
Gender		
Male	130	47.6%
Female	143	52.4%
Age		
16- 25 Years	219	80.2%
26 - 30 Years	48	17.5%
31 - 40 Years	6	2.2%
Education		
High School	205	75.1%
Higher Education (Diploma/Degree)	68	24.9%
Expenditure		
< Rp. 2.000.000	104	38.1%
Rp. 2.000.001 – Rp. 5.000.000	135	49.5%
> Rp. 5.000.001	34	12.4%
Occupation		
Student	149	54.6%
Employee	85	31.1%
Others	39	14.3%

The evaluation of the measurement model was conducted to ensure the reliability and validity of the research constructs. Figure 2 illustrates the visual representation of the Outer Model, displaying the loading factors for each indicator.

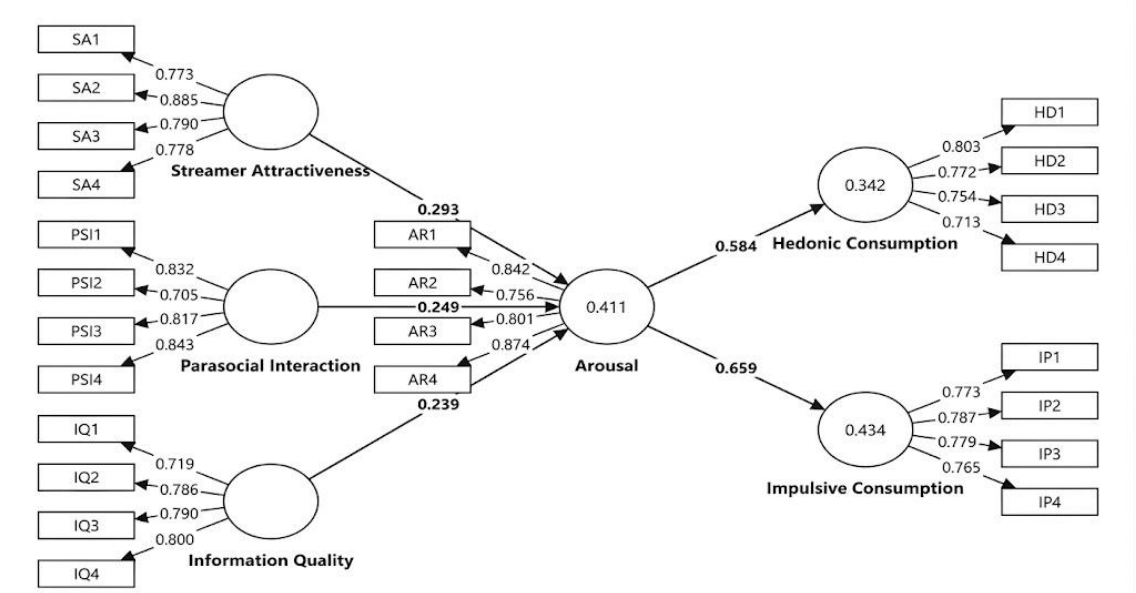

Figure 1. Outer Model

Based on the statistical analysis, construct reliability and convergent validity were established (Table 3), as all variables exceeded the 0.70 threshold for both Composite Reliability (CR) and Cronbach's Alpha. Arousal achieved the highest CR at 0.891, while Cronbach's Alpha scores across all constructs (0.758 to 0.836) confirmed high internal consistency. Furthermore, the AVE values for all variables are above 0.50, satisfying the requirements for convergent validity.

Table 3. Validity and Reliability Results

Variable	Indicator	Outer Loadings	Cronbach's Alpha	Composite Reliability	AVE	HTMT (Max)
SA	SA1	0.773				
	SA2	0.885	0.821	0.882	0.653	0.825
	SA3	0.790				
	SA4	0.778				
PSI	PSI1	0.832				
	PSI2	0.705	0.812	0.877	0.642	0.794
	PSI3	0.817				
	PSI4	0.843				
Information	IQ1	0.719				
Quality	IQ2	0.786	0.777	0.857	0.600	0.844
	IQ3	0.790				
	IQ4	0.800				
Arousal	AR1	0.842				
	AR2	0.756	0.836	0.891	0.672	0.857
	AR3	0.801				
	AR4	0.874				
Hedonic	HC1	0.803				
Consumptio	HC2	0.772	0.758	0.846	0.580	0.857
n	HC3	0.754				
	HC4	0.713				
	IC1	0.773				

Variable	Indicator	Outer Loadings	Cronbach's Alpha	Composite Reliability	AVE	HTMT (Max)
Impulsive Consumptio n	IC2	0.787	0.780	0.858	0.602	0.641
	IC3	0.779				
	IC4	0.765				

Discriminant validity was rigorously evaluated using two methods. First, as shown in Table 3, all HTMT values remained below the conservative threshold of 0.85. Second, the Fornell-Larcker criterion results in Table 4 confirm that the square root of the AVE for each construct (diagonal values) exceeded its correlation with any other constructs. These combined results ensure that there is no excessive conceptual overlap and that each variable is empirically unique.

Table 4. Discriminant Validity Results (Fornell-Larcker Criterion)

Variable	AR	HC	IC	IQ	PSI	SA
Arousal	0.820					
Hedonic Consumption	0.584	0.761				
Impulsive Consumption	0.659	0.642	0.776			
Information Quality	0.515	0.627	0.651	0.775		
PSI	0.515	0.506	0.540	0.488	0.801	
SA	0.545	0.539	0.562	0.525	0.507	0.808

The structural model was evaluated by examining the coefficient of determination (R^2) and the effect size (f^2) to assess the model's predictive power and the strength of the relationships. As presented in Table 5, the model demonstrates substantial predictive accuracy for the primary mediators and outcomes. The R^2 values for arousal (0.617) and hedonic consumption (0.622) indicate that the model explains 61.7% and 62.2% of the variance in these constructs, respectively. This suggests a strong explanatory power within the live-streaming context. For impulsive consumption, the model explains 34.3% of the variance (R^2 = 0.343), which is considered a moderate level of predictive relevance. The f^2 values were analyzed to determine the impact of each exogenous construct on the endogenous variables, using Cohen's (1988) guidelines (0.02 for small, 0.15 for medium, and 0.35 for large effects). As presented in Table 6, the results reveal that arousal has a massive effect on hedonic consumption (f^2 = 1.643) and a large effect on impulsive consumption (f^2 = 0.522). Among the digital stimuli, PSI exerts a medium effect on arousal (f^2 = 0.238), while information quality (f^2 = 0.098) and SA (f^2 = 0.023) contribute small effects.

Table 5. R-Square Results

Endogenous Construct	R^2	R^2 Adjusted
Arousal	0.617	0.612
Hedonic Consumption	0.622	0.620
Impulsive Consumption	0.343	0.341

Table 6. f-Square Results

Path	f^2	Effect Size
Arousal -> Hedonic Consumption	1.643	Large
Arousal -> Impulsive Consumption	0.522	Large
PSI -> Arousal	0.238	Medium

Information Quality -> Arousal	0.098	Small
Streamer Attractiveness -> Arousal	0.023	Small

The structural model was evaluated using the bootstrapping method with 5,000 resamples to test the significance of the hypothesized relationships. The results of the path analysis, as presented in Table 7 and Table 8, substantiate all proposed hypotheses with statistically significant results ($p < 0.05$).

Direct Effects

As shown in Table 7, all direct paths are statistically significant. SA (H1: $\beta = 0.293$, $t = 4.055$), PSI (H2: $\beta = 0.249$, $t = 4.092$), and information quality (H3: $\beta = 0.239$, $t = 3.012$) exert a significant positive influence on arousal. Subsequently, arousal significantly drives both hedonic consumption (H4: $\beta = 0.584$, $t = 5.125$) and impulsive consumption (H5: $\beta = 0.659$, $t = 7.001$).

Table 7. Direct Effect Results

	Original sample (β)	Sample mean	Standard deviation	t-statistics	p-values	Results
H1: SA → AR	0.293	0.286	0.072	4.055	0.000	Supported
H2: PSI → AR	0.249	0.242	0.061	4.092	0.000	Supported
H3: IQ → AR	0.239	0.229	0.079	3.012	0.003	Supported
H4: AR → HC	0.584	0.563	0.114	5.125	0.000	Supported
H5: AR → IC	0.659	0.642	0.094	7.001	0.000	Supported

Note: SA: Streamer Attractiveness; AR: Arousal; PSI: Para-Social Interaction; IQ: Information Quality; HC: Hedonic Consumption; IC: Impulsive Consumption

Mediation analysis was conducted to examine the specific indirect effects of digital stimuli on consumption behaviors through Arousal. The results in Table 8 confirm that Arousal significantly mediates all relationships (H6–H11). These findings prove that Arousal acts as a vital psychological bridge, whereby external digital stimuli must first trigger an internal emotional state before influencing spontaneous purchase behaviors.

Table 8. Indirect Effect (Mediation) Results

	Original sample (β)	Sample mean	Standard deviation	t-statistics	p-values	Results
H6: SA → AR → HC	0.171	0.163	0.056	3.055	0.002	Supported
H7: SA → AR → IC	0.193	0.185	0.057	3.394	0.001	Supported
H8: PSI → AR → HC	0.146	0.139	0.052	2.829	0.005	Supported
H9: PSI → AR → IC	0.164	0.158	0.052	3.182	0.001	Supported
H10: IQ → AR → HC	0.140	0.135	0.062	2.262	0.024	Supported
H11: IQ → AR → IC	0.157	0.152	0.065	2.426	0.015	Supported

Note: SA: Streamer Attractiveness; AR: Arousal; PSI: Para-Social Interaction; IQ: Information Quality; HC: Hedonic Consumption; IC: Impulsive Consumption

Discussion

These results lend strong empirical backing to the S-O-R paradigm within the Indonesian live streaming arena. We establish that the state of arousal functions as the central psychological conduit (organism) through which environmental stimuli translate into

measurable consumer actions within the Indonesian digital marketplace. The model's superior predictive power indicates that the digital factors introduced are not peripheral additions but are, in fact, the primary shapers of the consumer's inner experience.

How Stimuli Affect Arousal

The data unveils a distinct ranking among the stimuli regarding their capacity to energize the consumer. Streamer Attractiveness (SA) emerges as a powerful antecedent to arousal (H1). A host's skill set and visual appeal constitute the initial emotional magnet (Herlina, 2023; Lady et al., 2024). However, this visual attraction acts more as a foundational requirement—a 'hook'—rather than the main engine of long-term engagement. Similarly, PSI significantly drives arousal (H2). The sense of "we-ness" fosters digital intimacy, making viewers feel more energized (Dewantara et al., 2023; Sipur & Amadi, 2025). In the Indonesian context, this relationship emerges as the most substantial catalyst for arousal. This is driven by cultural collectivism, which allows the 'digital friend' persona to exert a far stronger influence on the viewer's emotional state than physical appearance alone (Du et al., 2025). Furthermore, information quality heightens arousal (H3). While accurate and timely information reduces uncertainty, its role is to provide the necessary substance that allows emotional engagement to feel 'safe' and justified, rather than being the primary source of the excitement itself (Kosimwidjaja & Hadiprawoto, 2025; Yanagisawa, 2021).

These results suggest that brands should prioritize recruiting streamers who are both charismatic and attractive to manage the live atmosphere effectively. Crucially, management must recognize that physical appeal only opens the door; the real 'arousal' is sustained through active, relational communication. Comprehensive product info, supplemented by real-time demonstrations, is empirically proven to provide the cognitive security that fuels viewer arousal.

This study posits that the influence of these stimuli is not merely additive but synergistic. While previous literature often treats streamer charisma and information accuracy as distinct pillars, our findings suggest that in the Indonesian live commerce ecosystem, they form a 'triad of engagement.' The streamer's attractiveness captures the initial visual attention, the PSI builds the emotional bridge, and the information quality provides the necessary substance to prevent that arousal from fading. This synergy implies that for Indonesian consumers, an attractive streamer without substance, or high-quality information without emotional connection, creates a 'psychological gap' that prevents the peak state required for action.

The most profound revelation of this research is the absolute dominance of emotional activation in dictating the nature of the shopping experience. Arousal significantly impacts both impulsive consumption (H5) and hedonic consumption (H4). The relationship between arousal and shopping pleasure (hedonic) is the most powerful link in the entire model, proving that in Indonesia, the perceived 'fun' of a platform is almost entirely a product of the internal excitement generated during the stream. Within the Indonesian live commerce landscape, emotional excitement is the primary catalyst for unplanned purchases, as the intensity of the moment overrides traditional cognitive filters (Zhang et al., 2023). This reinforces the role of arousal as the dominant organismic mechanism in live streaming, consistently triggering internal activation even when other emotional dimensions are less prominent (Ngo et al., 2024). Real-time interactions and gamified elements, such as flash sales or limited-time vouchers, effectively sustain this high-arousal

state. Furthermore, 'best deal' and social factors are found to specifically enhance the hedonic value for Indonesian consumers, which then serves as a critical engine for affective impulsive buying (Silalahi et al., 2025). The effectiveness of these triggers is amplified by the high-velocity nature of platforms like TikTok and Shopee, which are specifically designed to facilitate rapid emotional transitions (Aenaya et al., 2025).

The confirmation of the mediating role of arousal is a key contribution of this research. Significant indirect effects (H6–H11) demonstrate that external stimuli do not directly result in a purchase; they must first trigger an internal emotional state. Arousal is not just a 'middle step'; it is the 'gatekeeper' of the wallet. This study proves that regardless of how attractive a streamer is or how good the information appears, the commercial outcome remains dormant until a threshold of internal activation is reached. While similar patterns have been observed in the Chinese market (Shukun & Loang, 2024), this study proves that arousal is a universal driver in live commerce, even within Indonesia's distinct cultural context. This underscores that social and promotional triggers effectively enhance the affective state required for spontaneous consumption (Silalahi et al., 2025). This reinforces the findings regarding how social presence and content attractiveness drive emotional mediation in local e-commerce environments (Rahmi et al., 2025). Ultimately, this confirms that if live streaming successfully delivers humor, joy, and elements of surprise, viewers are triggered to engage in both hedonic consumption and impulsive consumption, transforming a passive viewing session into an active commercial event.

The pivotal mediating role of arousal identified in this research reflects a unique cultural-psychological transition in Indonesia's digital landscape. We argue that the high social-media penetration in Indonesia has recalibrated the consumer's 'trust threshold.' In traditional e-commerce, trust is built over time; however, in live streaming, this research demonstrates that arousal serves as a temporary substitute for long-term trust. The intense, real-time nature of the interaction creates a sense of 'digital intimacy' that effectively minimizes the consumer's hesitation. This interpretation suggests that 'arousal' is not just an emotion, but a functional catalyst that accelerates the journey from a viewer to a buyer in a high-velocity market.

Conclusion

This research establishes that emotional arousal serves as the definitive psychological engine within the Indonesian live-streaming commerce ecosystem. The study concludes that the visual appeal of a streamer, the cultivation of digital intimacy, and the reliability of real-time information function as synergistic environmental stimuli that effectively activate a consumer's internal emotional state. This heightened state of arousal is the fundamental catalyst that triggers both pleasure-driven and spontaneous purchase behaviors among Indonesian consumers.

The findings lead to the conclusion that in high-velocity digital environments, consumption is not merely a cognitive decision but an affectively driven response. The synergy between a streamer's persona and the perceived sense of "togetherness" effectively bridges the gap between passive viewing and active commercial engagement. Ultimately, by validating the S-O-R framework, this research provides a comprehensive psychological map proving that emotional resonance is a functional substitute for traditional trust in the modern digital marketplace.

To optimize sales performance, management must pivot from traditional "hard-selling" to a "Relational Commerce" strategy. Brands should prioritize recruiting charismatic streamers capable of developing "digital friend" personas rather than mere presenters. Investment should be directed toward specialized training that focuses on building digital intimacy, as emotional connection is a prerequisite for commercial trust in collectivist markets like Indonesia. Furthermore, managers should balance high-energy "entertailment" with rigorous information quality to provide the cognitive security necessary to sustain long-term audience engagement. This study advances the literature by positioning emotional arousal as the dominant organismic mediator that captures internal activation even when other cognitive dimensions are less prominent. It provides empirical evidence that environmental stimuli in live commerce work concurrently rather than in isolation to reshape the consumer's internal state.

This investigation is constrained by its cross-sectional design, which only provides a momentary snapshot of consumer conduct. Furthermore, the findings are rooted in the specific cultural and operational patterns of the Indonesian marketplace, which may limit generalizability across different global landscapes. Future research should employ longitudinal methods to track the evolution of digital intimacy over time. Additionally, subsequent studies ought to examine how product involvement levels, such as high-stake electronics versus low-stake fashion, moderate these emotional dynamics. Exploring platform-centric features, such as algorithm-driven entertainment versus transaction-centric rewards, will also provide deeper insights into how different digital environments influence the intensity of emotional arousal.

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