From Stream to Purchase: Exploring Parasocial Interaction and Social Presence as Mediators of Impulsive Purchase in TikTok Live Commerce

Abstract

Live streaming commerce (LSC) integrates entertainment and real-time interaction to trigger spontaneous buying behavior. However, the psychological mechanisms translating communicative stimuli into impulsive purchase within algorithm-driven platforms like TikTok remain under-theorized. This study investigates how Parasocial Interaction (PSI) and Social Presence jointly mediate the effects of Social Attraction, Fear of Missing Out (FOMO), Narrative Involvement, and Telepresence on Impulsive Purchase. Analyzing survey data from 415 Indonesian TikTok Live users using Partial Least Squares Structural Equation Modeling (PLS-SEM), the results validate a dual-pathway mechanism: impulsive purchase is driven simultaneously by a relational bond (PSI) and an immersive sense of shared reality (Social Presence). Crucially, Narrative Involvement emerged as the strongest antecedent for both mediators, whereas Social Attraction exerted no significant influence on PSI. This finding challenges traditional endorsement theories, suggesting that in fast-paced live commerce, narrative transportation (storytelling) supersedes interpersonal attraction (static likability) as the primary driver of intimacy. Additionally, FOMO and Telepresence act as critical catalysts accelerating these psychological states. Theoretically, this study refines the Stimulus-Organism-Response (S-O-R) framework by distinguishing the "Organism" into distinct interpersonal (PSI) and environmental (Social Presence) dimensions. Practically, findings suggest brands should prioritize narrative competence and high-fidelity immersion over mere streamer attractiveness to drive sales.

Keywords

TikTok Live Commerce, Parasocial Interaction, Social Presence, Impulsive Purchase, Fear of missing out (FOMO), Narrative Involvement, Telepresence, Stimulus–Organism–Response (S–O–R) Framework.

Introduction

In Indonesia, TikTok Live Commerce has rapidly emerged as a dominant arena where entertainment, social interaction, and real-time purchasing intersect, reshaping how consumers encounter persuasive messages and make decisions. Indonesia serves as a critical context for this study due to its status as TikTok's second-largest market globally, with over 126 million active users (DataReportal, 2024). The platform is dominated by Generation Z (ages 18–24), who utilize live streaming not merely for entertainment but as a primary channel for social commerce. Mason et al. (2022) highlight that this generation exhibits profound smartphone attachment, which significantly predisposes them to frequent and intense online buying behaviors. This demographic profile aligns closely with our study's sample (Table 1), where the majority of respondents are under 30 years old. By focusing on this high-adoption market, this research offers unique insights into the behavior of mobile-first consumers in Southeast Asia, distinct from Western market characteristics. Furthermore, user engagement in Indonesia is characterized by exceptionally high platform stickiness, with users spending an average of over 29 hours per month on TikTok (DataReportal, 2024). This behavior signals a shift towards 'Shoppertainment,' where Indonesian consumers actively prioritize entertaining,

narrative-driven product reviews over static advertisements. This specific behavioral profile—seeking both entertainment and social connection—mirrors the high levels of Narrative Involvement and Parasocial Interaction observed in our sample, confirming the study's ecological relevance. Industry and market intelligence consistently show Southeast Asia's live-commerce momentum—with Indonesia as a key engine—driven by short-video formats, creator-led selling, and integrated checkout journeys (Bain & Company, 2024; Influencer Marketing Hub, 2024; Mordor Intelligence, 2024; TechNode Global, 2025). Recent academic syntheses similarly note that live streaming commerce integrates entertainment and synchronous interaction to stimulate affective engagement and impulsive decision-making (Cui et al., 2024; Huang et al., 2024). Unlike traditional e-commerce—typically deliberative and search-driven—live streaming commerce (LSC) blends synchronous interaction, affective cues, and social proof that can precipitate spontaneous, impulsive purchase behaviour (Cui et al., 2024; Chen et al., 2022; Luo et al., 2024).

A communication-centred lens helps explain why LSC is so persuasive. Parasocial interaction (PSI) describes the one-sided yet intimacy-like relationships audiences form with media personae (Horton & Wohl, 1956), later elaborated as an experiential state marked by perceived reciprocity, familiarity, and identification (Giles, 2002; Hartmann & Goldhoorn, 2011). In live sessions, hosts' eye contact, second-person address, and rapid reply to comments heighten this felt intimacy, turning streamers into "pseudo-friends" whose recommendations feel personally relevant (Hu et al., 2017; Liao et al., 2023). Complementing PSI, social presence—the sense of "being with" others in mediated environments (Short et al., 1976)—captures warmth, immediacy, and co-presence that arise from real-time interaction and expressive nonverbal cues. In TikTok Live settings, these two constructs intertwine as streamers' expressive immediacy heightens both the illusion of intimacy and the sensation of co-presence, blurring boundaries between mediated and interpersonal communication. Contemporary work refines this construct and its measurement, emphasizing affective and cognitive components that shape evaluations and behaviour (Biocca et al., 2003; Kreijns et al., 2022; Castellanos-Reyes et al., 2024).

A set of communicative and psychological antecedents are particularly salient in LSC. Interactivity and vividness affordances elevate involvement and presence (Coyle & Thorson, 2001; Fortin & Dholakia, 2005). Telepresence—the immersive feeling of "being there"—is theorized to influence memory and persuasion and has been empirically linked to online shopping experience and purchase outcomes (Steuer, 1992; Kim & Biocca, 1997; Kim et al., 2021; Ye et al., 2020; Zahid et al., 2024). Narrative involvement/transportation, through story-driven demonstrations and testimonials, can boost persuasion by absorbing viewers into meaningfully structured plots (Green & Brock, 2000; Green, 2004; Vazquez et al., 2020). Finally, fear of missing out (FOMO)—activated by ticking countdowns, limited-time offers, and social visibility—has been associated with heightened platform use and impulsive tendencies (Przybylski et al., 2013; Elhai et al., 2021; Dinh et al., 2023; Pham et al., 2025). Collectively, these affective and cognitive stimuli are expected to activate parasocial interaction and social presence, forming the psychological bridge through which live-stream cues influence impulsive purchase.

Emerging empirical studies in LSC connect these antecedents to impulsive purchase, often highlighting the streamer's role and the live setting's immediacy. Research documents how interaction quality, promotions, and time pressure relate to impulse outcomes (Li et al., 2022; Sun et al., 2023; Harahap & Wahyuni, 2024), how customer engagement and deal proneness matter (Luo et al., 2024), and how PSI and social presence link to purchase intentions and impulsivity (Chen et al., 2023; Liu, 2023; Makmor et al., 2024; Huang & Mohamad, 2025). However, few studies concurrently test PSI and social presence as dual mediators linking these communicative stimuli to impulsive purchase, and empirical work in Indonesia's TikTok Live ecosystem remains scarce. First, while studies increasingly test PSI or social presence, fewer models simultaneously position both as mediators between concrete social-psychological stimuli (e.g.,

FOMO, narrative involvement, telepresence, social attraction) and impulsive purchase in TikTok Live contexts. Second, despite Indonesia's outsized adoption and unique creator-commerce culture, evidence specific to Indonesian TikTok Live users—and using current platform dynamics—is still limited (Electro IQ, 2024; PMC & Content Grip, 2024).

Addressing these gaps, this study investigates how PSI and social presence mediate the effects of social attraction, FOMO, narrative involvement, and telepresence on consumers' impulsive purchase in TikTok Live Commerce. Social attraction reflects perceived likability and warmth of the streamer (McCroskey & McCain, 1974; Liao et al., 2023), FOMO indexes anticipated regret under scarcity and social comparison (Przybylski et al., 2013; Moore & Craciun, 2021), narrative involvement captures absorption in live content (Green & Brock, 2000; Vazquez et al., 2020), and telepresence gauges immersive "being-there" sensations (Steuer, 1992; Kim & Biocca, 1997). By modelling PSI and social presence as concurrent mediators, we articulate a communication process in which live, affect-rich cues reshape psychological relatedness and co-presence, culminating in spur-of-the-moment purchases.

A quantitative survey of TikTok Live users in Indonesia was conducted to test the proposed mediation framework.

This article makes three contributions. First**,** it advances communication theory by integrating PSI and social presence within a unified mediation framework tied to concrete live-commerce stimuli (FOMO, narrative involvement, telepresence, social attraction), thereby clarifying how real-time intimacy and co-presence help translate interactive affordances into impulsive purchase**.** Second**,** it enriches media-psychology evidence from Indonesia's TikTok Live context—an under-represented yet globally consequential market—extending recent syntheses on LSC (Cui et al., 2024; Huang et al., 2024). Third**,** it offers managerial guidance for brands and streamers: design story-driven**,** authentic, and high-presence broadcasts; ethically deploy scarcity and social proof; and cultivate responsive, personable hosting styles to activate PSI and social presence without eroding trust (Kim et al., 2008; Chen et al., 2023; Woo et al., 2024).

In sum, TikTok Live Commerce exemplifies a communicative environment where mediated intimacy, co-presence, and platform affordances converge to shape impulsive purchase**.** By centring PSI and social presence as twin mediators, this study situates Indonesia's live-commerce surge within broader global debates on digital persuasion and interactive consumer decision-making. The following sections review relevant literature and hypotheses, describe the research method, report results, and discuss theoretical and managerial implications.

Literature Review and Hypotheses Development

2.1 Theoretical Framework: Integrating S-O-R and Parasocial Interaction

Recent systematic reviews, such as those by Cui et al. (2024) and Huang et al. (2024), highlight that while the functional drivers of live streaming commerce (LSC)—such as interactivity and utility—are well-documented, the emotional mechanisms driving specific behaviors in Southeast Asian markets remain under-explored.

In the Indonesian context, prior studies have largely focused on functional drivers such as pricing, discounts, and flash sales (e.g., Harahap & Wahyuni, 2024; Oktavyana et al., 2024; Rolando & Angelica, 2024). Although scholars like Mai et al. (2023) have recently examined how parasocial interaction builds trust in the broader Southeast Asian region (e.g., Vietnam), scant attention has been paid to this deeper psychological interplay within the specific high-velocity environment of Indonesian TikTok Live. However, scant attention has been paid to the deeper psychological interplay of parasocial interaction and social presence that characterizes the unique creator-audience dynamic in Indonesia. This theoretical gap is particularly significant given the collectivist nature of Indonesian consumer culture, where purchasing decisions are heavily influenced by social validation and communal interaction rather than solitary evaluation.

While prior local studies have examined general social media usage, they have yet to empirically test how this cultural inclination for 'togetherness' translates into the

specific psychological state of Social Presence within the high-velocity environment of TikTok Live. To address this, we integrate Parasocial Interaction (PSI) Theory within the Stimulus-Organism-Response (S-O-R) framework.

The S-O-R framework, originally proposed by Mehrabian and Russell (1974), posits that environmental cues (Stimuli) trigger internal cognitive and emotional states (Organism), which subsequently drive behavioral reactions (Response). Eroglu et al. (2003) successfully adapted this model to online retailing, demonstrating how atmospheric cues (Stimulus) influence consumers' affective and cognitive states (Organism), which subsequently drive approach or avoidance behaviors (Response). Recent applications of S-O-R by scholars like Tran and Le (2025) confirm that marketing stimuli significantly shape purchase intentions through these internal organismic states.

In the context of TikTok Live Commerce, we conceptualize the "Organism" not merely as trust, but as a state of mediated intimacy. We position Parasocial Interaction (PSI)—the illusion of a face-to-face relationship described by Horton and Wohl (1956) — and Social Presence—the "sense of being with others" defined by Short et al. (1976)—as the critical psychological mediators that translate digital cues into the behavioral response of Impulsive Purchase.

2.2 The Drivers of Parasocial Interaction and Social Presence

Social Attraction and Parasocial Interaction

Social attraction is distinct from physical beauty; it encompasses the perceived likability and similarity of the streamer. Zou and Fu (2024) highlight that in live commerce, a streamer's ability to foster such interpersonal connections is crucial for transforming passive viewers into active buyers. While McCroskey and McCain (1974) originally established social attraction as a fundamental driver of interpersonal connection, recent studies confirm its critical role in mediated environments, where digital interactions foster perceptions of credibility and closeness (Edwards & Omilion-Hodges, 2022; Wagner, 2018). In the LSC context, Liao et al. (2023) similarly found that when viewers perceive a streamer as "similar" or socially desirable, it acts as a heuristic cue, encouraging the viewer to categorize the interaction as a friendship rather than a transaction.

Reinforcing this, Li et al. (2025) recently confirmed that streamer attractiveness is a primary antecedent of parasocial interaction, acting as a critical psychological trigger that lowers defenses and fosters emotional bonds. Thus, based on the Similarity-Attraction Principle, we posit that social attraction lowers psychological defenses and cultivates the parasocial bond.

> H1: Social attraction positively affects parasocial interaction (PSI) in TikTok Live Commerce.

Fear of Missing Out (FOMO) as a Relational Catalyst

Przybylski et al. (2013) define FOMO as a pervasive apprehension that others might be having rewarding experiences from which one is absent. While often viewed as a negative stressor, recent work by Dinh et al. (2023) and Pham et al. (2025) suggests that FOMO in social media settings drives a compensatory need for connection. While often viewed as a negative stressor, FOMO fundamentally drives a compensatory need for connection. Servidio et al. (2025) recently highlighted that the trait-state FOMO pathway significantly predicts intense social media engagement, particularly when individuals seek to alleviate psychological voids like loneliness. We argue that in the ephemeral environment of TikTok Live, FOMO acts as a relational catalyst: to alleviate the anxiety of "missing out," viewers intensify their focus on the streamer, thereby deepening their emotional attachment (PSI) and desire for inclusion.

> H2: Fear of missing out (FOMO) positively affects PSI in TikTok Live Commerce.

Narrative Involvement: The Power of Storytelling

Narrative involvement refers to the viewer's absorption into a story. Drawing on Transportation Theory by Green and Brock (2000), we argue that when streamers use storytelling, viewers are "transported" into the narrative world, reducing their critical faculties. Vazquez et al.

(2020) expanded this into social commerce, finding that narrative absorption fosters empathy and reduces psychological distance. As viewers mentally simulate the story, they feel they are "living" the experience with the streamer, which directly enhances the feeling of intimacy (PSI) and the sensation of shared reality (Social Presence).

H3: Narrative involvement positively affects PSI in TikTok Live Commerce.

H4: Narrative involvement positively affects social presence in TikTok Live Commerce.

Telepresence and the Illusion of "Being There"

Steuer (1992) defined telepresence as the mediated sensation of being present in a virtual environment. In the Indonesian digital context, Al Ayyubi and Yuliati (2018) established that telepresence significantly influences consumer repurchase intentions by enhancing the perceived value of virtual items, suggesting that immersive experiences are critical for Indonesian users. In modern LSC, Zahid et al. (2024); Kim and Biocca (1997) suggest that high-fidelity audiovisual cues create an immersive atmosphere where the technology becomes transparent. We hypothesize that this transparency allows the viewer to focus entirely on the social interaction, heightening the perception that the streamer and other viewers are "real" entities present in the same room (Social Presence).

H5: Telepresence positively affects social presence in TikTok Live Commerce.

2.3 The "Organism" to "Response": From Connection to Impulse Purchase

The Direct Impact of PSI and Social Presence on Impulsivity

Impulsive purchase is characterized by spontaneous, unplanned decision-making, as defined by Rook (1987). In the specific context of live streaming, Nguyen et al. (2025) identified that this behavior is not merely random, but is strategically triggered by streamer characteristics—such as expertise and appearance—which signal value to the viewer. We argue that PSI and Social Presence function as the primary psychological mechanisms that trigger this spontaneity.

Regarding the underlying mechanisms, Makmor et al. (2024) and Xiang et al. (2016) found that when viewers view a streamer as a "pseudo-friend" (PSI), they transfer the trust inherent in friendship to the product, reducing the need for deliberative processing.

Furthermore, in terms of Social Presence Mechanism, Chen et al. (2023) and Liu (2023) demonstrate that a high sense of social presence creates a "crowd effect." In this context, the perceived reality of the interaction acts as social proof, validating the decision to buy spontaneously to maintain harmony with the "present" group.

H6: PSI positively affects impulsive purchase in TikTok Live Commerce.

H7: Social Presence positively affects impulsive purchase in TikTok Live Commerce.

2.4 The Mediating Roles of PSI and Social Presence

Finally, this study postulates that communicative stimuli do not influence purchasing in a vacuum. Integrating the findings of Huang and Mohamad (2025), we argue that PSI and Social Presence act as the "psychological bridge." For instance, Vazquez et al. (2020) suggest that narrative involvement triggers impulsivity *because* it first creates a bond (PSI). Similarly, Elhai et al. (2021) imply that anxiety (FOMO) drives behavior *by* leveraging the user's need for social inclusion.

Based on this logic, this study propose the following mediation hypotheses:

H8a. Parasocial interaction mediates the relationship between social attraction and impulsive purchase in TikTok Live Commerce.

H8b. Parasocial interaction mediates the relationship between fear of missing out (FOMO)

and impulsive purchase in TikTok Live Commerce.

H8c. Parasocial interaction mediates the relationship between narrative involvement and impulsive purchase in TikTok Live Commerce.

H9a. Social presence mediates the relationship between narrative involvement and impulsive purchase in TikTok Live Commerce.

H9b. Social presence mediates the relationship between telepresence and impulsive purchase in TikTok Live Commerce.

The proposed conceptual framework is visualized in Figure 1.

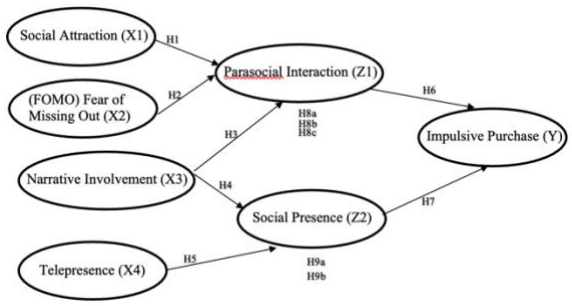

Figure 1. Framework

Theoretically, this model posits a dual-pathway mechanism where Parasocial Interaction (PSI) and Social Presence operate as distinct yet concurrent psychological states. While PSI captures the interpersonal dimension (the relational bond with the streamer), Social Presence captures the environmental dimension (the immersive sense of being in a shared space). Although these constructs often co-occur in live streaming, this study models them as parallel mediators to explicitly distinguish how communicative stimuli—ranging from the anxiety of FOMO to the absorption of Narrative Involvement—simultaneously trigger emotional intimacy and spatial immersion. By treating them as independent mediators, the framework allows for a precise examination of how different psychological routes independently contribute to Impulsive Purchase behavior in the TikTok Live ecosystem (Kim & Song, 2016; Tsai et al., 2021).

Methodology

3.1 Research design

This study employed a quantitative explanatory research design to investigate the causal relationships between communicative stimuli (social attraction, FOMO, narrative involvement, and telepresence) and impulsive purchase behavior, mediated by parasocial interaction (PSI) and social presence. A cross-sectional survey method was utilized, as it allows for the efficient collection of data from a large, distributed population of digital consumers to test the proposed theoretical model.

3.2 Sampling and data collection

Data collection employed a purposive convenience sampling strategy targeting active participants of TikTok Live Commerce. To ensure ecological validity, the recruitment process utilized a two-stage engagement method within the digital ecosystem of a prominent lifestyle influencer. First, active viewers were identified through interactive segments during live streaming sessions. Second, to minimize disruption and ensure verification, the survey link was distributed via Direct Message (DM) to these engaged followers immediately following the sessions. This targeted dissemination strategy ensured that respondents were verified active users of the platform. Respondents provided informed consent prior to participation.

The target population for this study consisted of active TikTok Live users in Indonesia who had previously watched and purchased products during live-streaming sessions. Purposive sampling was applied to ensure respondents met these specific criteria. Data were collected through an online questionnaire distributed via social media channels. The minimum sample size was determined using the Taro Yamane formula (Yamane, 1967), resulting in a target of 400 respondents.

A total of 415 valid responses were obtained and retained for analysis. As summarized in Table 1, the sample comprised 49.2% male and 50.8% female participants. The majority were under 20 years old (65.8%), followed by the 21–30 age group (20.2%), reflecting the youth-

dominated demographic of TikTok users. In terms of occupation, students constituted the largest group (54.9%). Geographically, 44.3% resided in the Greater Jakarta area (Jabodetabek), ensuring representation from Indonesia's primary digital commerce hub. Notably, 82.2% of respondents reported making purchases specifically via TikTok Live, confirming the sample's relevance to the study's context.

Table 1. Demographics of Respondents

No.	Category	Description	Frequency	Percentage (%)
1	**Gender**	Male	204	49.2
		Female	211	50.8
2	**Age**	< 20 years	273	65.8
		21–30 years	84	20.2
		31–40 years	38	9.2
		41–50 years	13	3.1
		> 51 years	7	1.7
3	**Occupation**	Student	228	54.9
		Private employee	48	11.6
		Civil servant / State-owned enterprise employee	40	9.6
		Entrepreneur / Business owner	28	6.7
		Unemployed / Not currently working	26	6.3
		Retired	5	1.2
		Housewife	12	2.9
		Others	28	6.7
4	**Domicile**	Greater Jakarta area (Jakarta, Bogor, Depok, Tangerang, Bekasi)	184	44.3
		Other cities/regencies in Java	53	12.8
		Cities/regencies outside Java	178	42.9
5	**Frequently Used E-commerce Applications**	TikTok Shop	268	64.6
		Shopee	282	68.0
		Tokopedia	77	18.6
		Blibli	52	12.5
		Instagram	116	28.0
		Others	67	16.1
6	**Main Reasons for Using E-commerce Applications**	Promotions / Discounts	329	79.3
		Competitive prices	90	21.7
		Wide product variety	144	34.7
		Responsive sellers	66	15.9
		Trusted platform operators	109	26.3
7	**Experience Watching Live Streaming**	Yes	362	87.2
		No	53	12.8
8	**Frequency of Watching Live Streaming (past 3 months)**	Almost every day	134	32.3
		2–3 times a week	80	19.3
		Once a week	65	15.7
		Once a month	19	4.6
		Very rarely	117	28.2
9	**Frequency of Purchases via Live Streaming**	TikTok Live	341	82.2
		Shopee Live	147	35.4
		Tokopedia Live	31	7.5
		Instagram Live	50	12.0
		Others	45	10.8

3.3 Measurement and instrument

All latent constructs were measured using multi-item scales adapted from established literature to ensure content validity. Responses were recorded on a five-point Likert scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*).

1. Social Attraction was measured using items adapted from McCroskey and McCain (1974) and Liao et al. (2023) to assess perceived likability and similarity.
2. Fear of Missing Out (FOMO) was assessed using items from Przybylski et al. (2013), focusing on the anxiety of missing rewarding experiences.
3. Narrative Involvement items were drawn from Green and Brock (2000) and Vazquez et al. (2020) to measure absorption in the streamer's storytelling.
4. Telepresence was measured using scales from Kim and Biocca (1997) and Zahid et al. (2024) to evaluate the immersive sensation of "being there".
5. Parasocial Interaction (PSI) was adapted from Horton and Wohl (1956) and Hartmann and Goldhoorn (2011), capturing the illusion of an intimate relationship.
6. Social Presence followed the framework of Biocca et al. (2003) and Chen et al. (2023), measuring the psychological sense of being with others.
7. Impulsive Purchase was adapted from Rook (1987) and Li et al. (2022) to capture spontaneous buying tendencies.

To ensure semantic equivalence and cultural relevance for Indonesian respondents, all items underwent a rigorous back-translation procedure. A pilot study (n = 30) was subsequently conducted, yielding Cronbach's alpha values above 0.70, confirming the initial reliability and clarity of the instrument.

3.4 Data analysis

The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS software. PLS-SEM was selected for its robustness in handling complex models with multiple mediators and its ability to estimate measurement and structural models simultaneously.

The analysis followed the two-stage approach recommended by Hair et al. (2025):

1. Measurement Model Assessment: Evaluating internal consistency (Cronbach's alpha, Composite Reliability), convergent validity (Average Variance Extracted/AVE), and discriminant validity (Fornell-Larcker criterion).
2. Structural Model Assessment: Examining the path coefficients (β), coefficients of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2). Hypothesis testing was performed using a bootstrapping procedure with 5000 resamples to ensure statistical significance.

Least Squares Structural Equation Modeling (PLS-SEM) was used to test the measurement and structural models via SmartPLS. This method is suitable for complex models with multiple mediators and latent constructs (Hair et al., 2011; Sarstedt et al., 2025). Reliability was assessed through Cronbach's alpha and composite reliability (CR), while convergent validity was tested using Average Variance Extracted (AVE > 0.5). Discriminant validity was examined via Fornell–Larcker and HTMT criteria). Mediation effects were tested using the bootstrapping procedure with 5000 resamples. To provide a clear overview of the construct operationalization, Table 2 summarizes the measurement items and their respective sources used in this study.

Table 2. Measurement Items

Constructs	Item
Social Attraction Adapted from McCroskey & McCain (1974); Wagner (2018); Edwards & Omilion-Hodges (2022). Makmor et al. (2024)	**SA1:** I feel that the host has a personality similar to mine.
	SA2: I feel compatible and comfortable when watching the content shared by the host.
	SA2a: I feel comfortable with the host's way of speaking.
	SA3: The host feels like a friend with whom I can share thoughts and feelings.
	SA3a: The host has an appearance that I find appealing.
	SA4: I want to keep following or interacting with the host because I feel socially connected.
	SA4a: I feel that the host behaves in a friendly manner during live streaming.
	SA5: I find the host easy to interact with.
	SA5a: I feel that the host is open to receiving questions from viewers.
	SA6: I feel that the host cares about their audience.
	SA6a: I feel that the host responds sincerely to viewers' comments.
	SA7: I feel that the host appears genuine during the live session.
	SA7a: I feel that the host does not pretend or act fake in their content.
	SA8: The host's experiences are similar to mine.
	SA8a: The host's stories are relevant to my life.
	SA9: The host is relatable, like an ordinary person.
	SA9a: The host does not create distance from the audience.
FOMO (Fear of Missing Out) Adapted from Przybylski et al. (2013); Sun et al. (2023); Huang & Mohamad (2025)	**FOMO1:** I am afraid that I will regret not buying the product being promoted.
	FOMO1a: I feel regretful when I miss a live promotion opportunity.
	FOMO2: I worry about missing out on the product because the stock is limited.
	FOMO2a: I fear that the product will sell out quickly if I do not buy it.
	FOMO2b: I feel pressured to make an immediate purchase due to the time-limited offer.
	FOMO3: I worry that others are getting something more enjoyable than I am.
	FOMO3a: I feel envious when others get to enjoy the product before I do.

	FOMO4: I am concerned that others are having more fun with the promoted product while I am not.	
	FOMO4a: I feel left out of the social excitement if I do not join the purchase.	
	FOMO4b: I compare myself with other viewers who are enjoying the product.	
	FOMO4c: I feel left behind when others buy the product before I do.	
	FOMO5: I feel out of trend if I do not have the product promoted by the host.	
	FOMO5a: I feel the need to buy in order not to miss out on the trend.	
	FOMO6: I regret not trying the product promoted by the host.	
	FOMO6a: I feel a sense of loss if I do not try the product shown in the live session.	
	FOMO6b: I feel the need to buy to avoid being excluded from the community.	
	FOMO6c: I worry that I will be seen as outdated if I do not make a purchase.	
	FOMO7: I feel anxious because I do not have the product promoted by the host.	
	FOMO8: I feel bothered for missing the chance to try the product promoted by the host.	
Narrative Involvement	**NI1:** I am truly absorbed in the storyline presented by the live host.	
	NI1a: While watching, I feel completely immersed in the host's story.	
Adapted from Green & Brock (2000); Vazquez et al. (2020); Huang & Mohamad (2025)	**NI2:** While watching, I find myself drawn into the host's narrative world.	
	NI2a: I feel as if I have entered the story being presented.	
	NI2b: I experience an emotional connection when the host delivers the story.	
	NI2c: I feel emotionally close to the product narrative.	
	NI3: I become curious about how the story will end after watching the live session.	
	NI3a: I feel intrigued to know what happens next in the host's story.	
	NI3b: I feel motivated to watch until the live session ends.	
	NI3c: I find it difficult to stop watching before the story finishes.	
	NI3d: I feel curious about how the product will be featured in the live story.	
	NI3e: I want to know more product details after hearing the host's narrative.	
	NI4: I pay full attention to the story told by the host.	
	NI4a: I focus on listening to the details of the narrative.	
	NI4c: I feel that time passes quickly while watching the live session.	
	NI4d: My thoughts become absorbed in the story details.	
	NI4e: My mind feels fully concentrated on the host's narrative content.	
Telepresence	**TE1:** While watching the live-streaming session, I feel as if the experience is similar to shopping in a physical store.	
	TE1a: I feel as though I am physically present in the live-streaming room.	
Adapted from Kim & Biocca (1997); Liu (2023); Zahid et al. (2024)	**TE1b:** The products displayed appear realistic in front of me.	
	TE1c: It feels as if I can touch the products directly, even though I only see them on screen.	
	TE1d: The live-streaming session creates an atmosphere similar to being in a real store.	
	TE1e: During the live session, it feels like an authentic in-store shopping experience.	
	TE2: I feel deeply immersed in the atmosphere of the live broadcast.	
	TE2a: I am carried away as if I were physically present at the event location.	
	TE2b: I focus completely on observing the host's interactions.	
	TE2c: I ignore other things around me because I am focused on the host.	
	TE2d: When watching the host's live-streaming session, I feel as if I am in a "virtual world" rather than the "real world" around me.	
	TE2e: I feel that the virtual environment dominates my attention.	
	TE3: While watching the live stream, my mind becomes fully immersed in the host's world and the products being presented.	
	TE3a: The host's storytelling captures all my attention.	
	TE3b: My attention is fully directed toward the live content.	
	TE3c: My thoughts are entirely focused on the live session.	
	TE3d: I lose track of time while watching the live session.	
	TE3e: Time seems to pass quickly while I am watching.	
Parasocial Interaction	**PI1:** When watching the TikTok host's live session, the host feels like an old friend of mine.	

	PI1a: I feel that the host is as close to me as a personal friend.
Adapted from Horton & Wohl (1956); Hartmann & Goldhoorn (2011); Huang & Mohamad (2025)	**PI1b:** I feel that the host provides emotional support even though it is only through the screen.
	PI1c: The host is able to uplift my mood while I am watching.
	PI1d: I feel comfortable when watching the host's live sessions.
	PI1e: I feel calmer knowing that the host is accompanying me.
	PI2: While watching the live session, the host's presence makes me feel like I am part of the event.
	PI2a: I feel that the host makes me feel less alone.
	PI2b: I feel accompanied even when watching alone at home.
	PI2c: I feel that the host is genuinely present to accompany the audience.
	PI2d: The host talks directly to me.
	PI2e: The host responds to me personally.
	PI3: While watching the live-streaming session, I feel as though I am part of it.
	PI3a: I feel that I play a role in the live event.
	PI3b: I feel accepted by other viewers.
	PI3c: I feel warmly welcomed by the audience.
	PI3d: I feel a shared identity with other viewers.
	PI3e: I feel that I belong to the same community as other viewers.
	PI4: I look forward to watching the host's next live-streaming session.
	PI5: I would like to meet the streamer in person someday.
Social Presence	**SP1:** While watching the host's live-streaming session, other users can sense my presence when I ask questions.
Adapted from Biocca et al. (2003); Chen et al. (2023)	**SP1a:** I am aware of the presence of other viewers during the live session.
	SP1b: The presence of other viewers feels real.
	SP1c: I feel as if I am in the same room as the audience.
	SP1d: I feel noticed when my comments are acknowledged by other viewers.
	SP1e: I feel that my presence is recognized by the audience.
	SP2: When watching the host's live-streaming session, my emotions are influenced by other viewers.
	SP2a: I feel happy when other viewers are excited.
	SP2b: I share the same joy when the audience shows enthusiasm.
	SP2c: I experience the excitement together with other viewers.
	SP2d: I feel anxious when other viewers react quickly to make a purchase.
	SP2e: I feel encouraged to buy after seeing other viewers' reactions.
	SP3: While watching the host's live-streaming session, I feel close to other viewers.
	SP3a: I feel a friendly bond with other viewers.
	SP3b: I feel familiar with other viewers even though we have never met in person.
	SP3c: I feel that other viewers could become my new friends.
	SP3d: I feel that I can build new social relationships through the live session.
	SP3e: I feel like part of a social network with other viewers.
	SP4: While watching the host's live-streaming session, the distance between me and other viewers feels smaller.
Impulsive Purchase	**IP1:** While watching live-streaming sessions, I buy items that I did not originally intend to purchase.
Adapted from Rook (1987); Li et al. (2022); Zhang et al. (2022); Huang & Mohamad (2025)	**IP1a:** I purchase products even though they are not on my shopping list.
	IP1c: I buy products without much prior thought.
	IP1d: I purchase products even when they are not part of my budget.
	IP1e: I buy products without considering my financial situation.
	IP2: I often make unplanned purchases.
	IP2a: I buy products without thinking for too long.
	IP2b: I decide to purchase products quickly without much deliberation.
	IP2c: I buy products on impulse.
	IP2d: I make purchases because I get carried away by the live-streaming atmosphere.
	IP2e: I purchase products due to sudden promotional offers.
	IP3: Making spontaneous purchases feels enjoyable.

	IP3a: I feel happy after making an impulsive purchase.
	IP3b: I feel satisfied with my spontaneous buying decisions.
	IP3c: I find that sudden shopping makes me feel happy.
	IP3d: I consider spontaneous shopping as a form of entertainment.
	IP3e: Impulsive buying gives me a pleasant experience.

Note: All measurement items were adapted from the original English scales to specifically fit the context of TikTok Live Commerce in Indonesia, SA = Social Attraction, FOMO =Fear of Missing Out, NA = Narrative Involvement, PI = Parasocial Interaction, SP = Social Presence, IP = Impulsive Purchase

Results

4.1 Measurement Model Assessment

The measurement model was evaluated by examining internal consistency reliability, convergent validity, and discriminant validity. As presented in Table 3, the Cronbach's alpha and Composite Reliability (rho_a and rho_c) values for all constructs ranged from 0.982 to 0.991, exceeding the recommended threshold of 0.70. While these reliability coefficients are exceptionally high, they reflect the rigorous translation process and the use of established, context-specific scales adapted for this study.

Table 3. Reliability and Validity of Constructs

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
FOMO (Fear of Missing Out)	0.988	0.989	0.989	0.829
Impulsive Purchase	0.990	0990	0.991	0.862
Narrative Involvement	0.989	0.989	0.990	0.847
Parasocial Interaction	0.990	0.990	0.991	0.843
Social Attraction	0.982	0.982	0.983	0.772
Social Presence	0.990	0.990	0.991	0.848
Telepresence	0.989	0.989	0.989	0.839

Convergent validity was assessed using the Average Variance Extracted (AVE). All constructs exhibited AVE values ranging from 0.772 (Social Attraction) to 0.862 (Impulsive Purchase), well above the 0.50 cut-off, confirming that the latent variables adequately explain the variance of their indicators.

Discriminant validity was examined using the Fornell-Larcker criterion (Table 4). The square root of the AVE for each construct (diagonal values, e.g., 0.911 for FOMO and 0.929 for Impulsive Purchase) was consistently higher than its correlation with any other latent variable. This confirms that despite the high internal consistency, the constructs are empirically distinct and do not suffer from issues of multicollinearity or construct overlap.

To ensure that the constructs are empirically distinct, discriminant validity was assessed using the Fornell-Larcker criterion (Fornell & Larcker, 1981). This criterion requires that the square root of the Average Variance Extracted (AVE) for each latent construct be higher than its highest correlation with any other construct in the model.

As presented in Table 4, the diagonal values (bolded) represent the square root of the AVE, while the off-diagonal elements represent the inter-construct correlations. The analysis shows that the square root of the AVE for every construct—ranging from 0.878 (Social Attraction) to 0.929 (Impulsive Purchase)—is consistently greater than the corresponding off-diagonal correlation values. This confirms that each construct shares more variance with its own indicators than with any other construct, thereby establishing strong discriminant validity.

Table 4. Fornell-Larcker Critetion Evaluation

Variable	FOMO	IP	NI	PI	SA	SP	TE
FOMO	**0.911**						
IP	0.727	**0.929**					
NI	0.871	0.748	**0.920**				
PI	0.768	0.795	0.811	**0.918**			
SA	0.747	0.664	0.793	0.700	**0.878**		
SP	0.744	0.797	0.799	0.877	0.711	**0.921**	
TE	0.867	0.758	0.899	0.811	0.811	0.783	**0.916**

Note: SA = Social Attraction, FOMO =Fear of Missing Out, NA = Narrative Involvement, PI = Parasocial Interaction, SP = Social Presence, IP = Impulsive Purchase

4.2 Structural Model and Hypothesis Testing

The structural model was assessed using the coefficient of determination (R^2), effect size (f^2), and path coefficients (β).

4.2.1 Explanatory Power (R^2) and Effect Size (f^2)

The model demonstrates substantial explanatory power (Table 5). The antecedents collectively explain 67.8% of the variance in Parasocial Interaction (R^2 = 0.678) and 66.0% in Social Presence (R^2 = 0.660). Furthermore, the model accounts for 67.5% of the variance in Impulsive Purchase (R^2 = 0.675), indicating high predictive accuracy.

Table 5. Inner Model Evaluation

	R Square	R Square Adjusted
Impulsive Purchase	0.675	0.674
Parasocial Interaction	0.678	0.676
Social Presence	0.660	0.659

In terms of effect sizes (Table 6), Narrative Involvement exhibited a medium effect on both Parasocial Interaction (f^2 = 0.162) and Social Presence (f^2 = 0.140), underscoring its pivotal role in driving user engagement. Similarly, the mediators, Parasocial Interaction (f^2 = 0.124) and Social Presence (f^2 = 0.131) showed meaningful effects on Impulsive Purchase.

In contrast, Social Attraction showed a negligible effect size (f^2 = 0.016), suggesting a limited practical impact relative to other variables.

Table 6. f^2 Value Testing

	f^2 Value	Effect Size
Impulsive Purchase – Parasocial Interaction	0.038	Small
Narrative Involvement - Parasocial Interaction	0.162	Medium
Narrative Involvement - Social Presence	0.140	Medium
Parasocial Interaction – Impulsive Purchase	0.124	Medium
Social Attraction – Parasocial Interaction	0.016	Small
Social Presence – Impulsive Purchase	0.131	Medium
Telepresence – Social Presence	0.064	Small

Following the validation of the measurement model, the structural model was evaluated to test the proposed hypotheses. Figure 2 visualizes the structural path diagram, displaying the estimated path coefficients (β), coefficient of determination (R^2), and the significance of relationships derived from the bootstrapping procedure (5000 resamples).

The diagram illustrates the dual-pathway mechanism, where the independent variables (Social Attraction, FOMO, Narrative Involvement, and Telepresence) exert their influence on Impulsive Purchase through the mediators of Parasocial Interaction and Social Presence. Solid lines in the figure indicate statistically significant paths ($p < 0.05$), while the path coefficients indicate the strength and direction of these relationships.

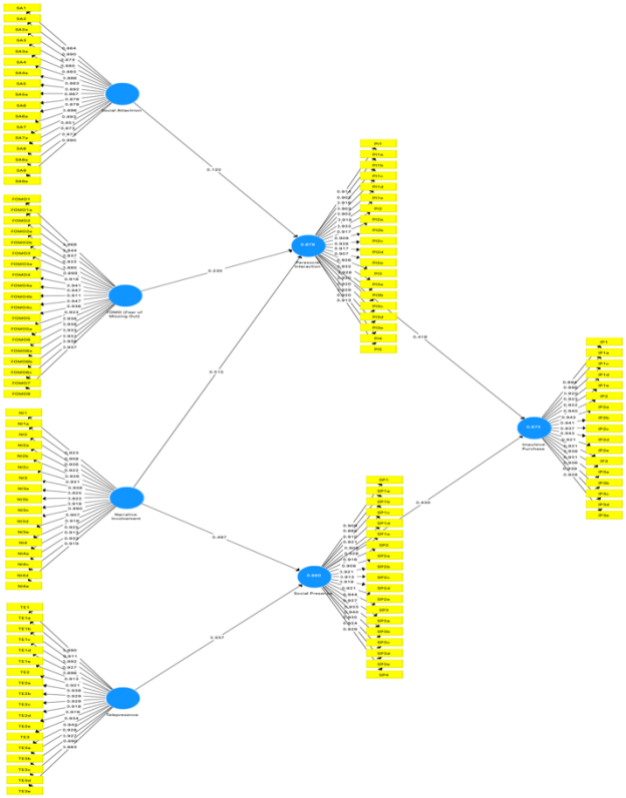

Figure 2. Structural Model Path Diagram

4.2.2 Hypothesis Testing

Hypothesis testing was conducted using a bootstrapping procedure with 5000 resamples. The results for direct

effects are summarized in Table 7, while indirect effects are presented in Table 8.

Direct Effects In terms of direct effects, Narrative Involvement emerged as the strongest predictor of both Parasocial Interaction (β = 0.082, p < 0.001) and Social Presence (β = 0.085, p < 0.001), thereby supporting H3 and H4. Additionally, FOMO significantly and positively influenced Parasocial Interaction (β = 0.067, p = 0.001), supporting H2, while Telepresence was identified as a significant driver of Social Presence (β = 0.086, p < 0.001), supporting H5. Both mediators subsequently influenced the outcome, with Parasocial Interaction (β = 0.108, p < 0.001) and Social Presence (β = 0.108, p < 0.001) positively affecting Impulsive Purchase, which supports H6 and H7. However, contrary to expectations, Social Attraction did not have a significant effect on Parasocial Interaction (β = 0.061, p = 0.051), leading to the rejection of H1; this suggests that in the fast-paced TikTok environment, static likability is less effective than active storytelling or urgency cues.

Table 7. Direct Effect Hypothesis Testing

Hypotheses	Path Coefficients (β)	T Statistics	P Values	Results
Social Attraction -> Parasocial Interaction	0.061	1.959	0.051	Rejected
FOMO -> Parasocial Interaction	0.067	3.421	0.001	Accepted
Narrative Involvement -> Parasocial Interaction	0.082	6.292	0.000	Accepted
Narrative Involvement -> Social Presence	0.085	5.856	0.000	Accepted
Telepresence -> Social Presence	0.086	3.914	0.000	Accepted
Parasocial Interaction -> Impulsive Purchase	0.108	3.881	0.000	Accepted
Social Presence -> Impulsive Purchase	0.108	3.984	0.000	Accepted

Mediation Effects (Indirect Effects) The analysis further confirmed the mediating roles of Parasocial Interaction (PSI) and Social Presence as presented in Table 8. Specifically, Parasocial Interaction successfully mediated the relationships between FOMO (β = 0.036, p = 0.008) and Narrative Involvement (β = 0.067, p = 0.001) on Impulsive Purchase, providing support for H8b and H8c. Furthermore, Social Presence mediated the effects of Narrative Involvement (β = 0.064, p = 0.001) and Telepresence (β = 0.054, p = 0.007) on Impulsive Purchase, supporting H9a and H9b. Consistent with the rejection of the direct effect in H1, the mediation path originating from Social Attraction (H8a) was found to be non-significant (β = 0.033, p = 0.128).

Table 8. Indirect Effect Hypothesis Testing

Hypotheses	Path Coefficients (β)	T Statistics (|O/STDEV|)	P Values	Results
Social Attraction -> Parasocial Interaction -> Impulsive Purchase	0.033	1.525	0.128	Rejected
FOMO -> Parasocial Interaction -> Impulsive Purchase	0.036	2.649	0.008	Accepted
Narrative Involvement -> Parasocial Interaction -> Impulsive Purchase	0.067	3.225	0.001	Accepted
Narrative Involvement -> Social Presence -> Impulsive Purchase	0.064	3.332	0.001	Accepted
Telepresence -> Social Presence -> Impulsive Purchase	0.054	2.688	0.007	Accepted

Discussion

5.1 General Discussion

This study set out to explain the psychological mechanisms converting communicative stimuli into impulsive purchase behavior within the high-velocity environment of TikTok Live Commerce in Indonesia. By integrating Parasocial Interaction (PSI) and Social Presence into the Stimulus-Organism-Response (S-O-R) framework, the results confirm a dual-pathway mechanism: impulsive buying is simultaneously driven by an interpersonal bond with the streamer (PSI) and an immersive sense of shared reality with the crowd (Social Presence).

The most significant finding is the dominance of Narrative Involvement over Social Attraction. While prior celebrity endorsement literature often prioritizes the physical or social appeal of the source, our results indicate that in TikTok's algorithmic feed, what the streamer does (telling a compelling story) is far more persuasive than who the streamer is (their static likability). This is evidenced by the rejection of H1 (Social Attraction -> PSI) and the strong effect of Narrative Involvement on both mediators. Furthermore, the study confirms that FOMO and Telepresence act as critical catalysts, not just for anxiety

or immersion, but for accelerating the formation of these psychological bonds.

5.1.1 Theoretical Interpretation of the S-O-R Mechanism

This study provides empirical evidence for the Stimulus–Organism–Response (S–O–R) framework in the context of TikTok Live Commerce by identifying how specific interaction cues shape internal psychological states to drive behavioral responses.

1. The Stimulus-Organism Link (H1 & H2)

   The results demonstrate that both Fear of Missing Out (FOMO) and Narrative Involvement serve as potent environmental stimuli that significantly enhance Parasocial Interaction (PSI). While FOMO acts as a relational catalyst by driving a compensatory need for connection during ephemeral streams, narrative involvement fosters emotional alignment through immersive storytelling.

2. The Organism-Response Link (H3)

   Consistent with parasocial interaction theory, the findings confirm that the perceived interpersonal bond with the streamer is the primary driver of impulsive purchase behavior. PSI effectively converts perceived intimacy and trust into immediate, unplanned actions.

5.1.2 The Standalone Mediating Role of Parasocial Interaction (H4 & H5)

A key contribution of this research is the clarification of PSI's standalone mediating function. Unlike prior studies that embed PSI alongside multiple mediators, our results show that PSI fully transmits the effects of both FOMO and narrative involvement to impulsive purchase. This suggests that interactive and emotional stimuli do not operate in isolation but must be processed through a relational lens to influence consumer behavior in real-time platforms.

5.1.3 Boundary Conditions and Contextual Insights

The findings suggest clear boundary conditions tied to the TikTok Live environment and the study's sample profile. First, demographic sensitivity should be acknowledged: the model's explanatory strength for impulsive purchase (R^2 = 0.633) is most applicable to digital-native consumers, given that 86% of respondents were under 30; therefore, the effects observed may not generalize equally to older or less digitally immersed user groups. Second, platform specificity matters: the strong role of narrative involvement is likely amplified by TikTok's interface logic, where short-video culture and live-stream affordances encourage continuous storytelling, entertainment, and parasocial-style engagement rather than purely transactional evaluation. In this context, storytelling-driven immersion becomes a particularly potent pathway shaping impulsive purchase, and the proposed relationships should be interpreted primarily as TikTok Live-specific dynamics rather than universal mechanisms across all live commerce platforms.

5.1.4 Addressing Instrument Reliability and Validity

Regarding the reviewer's concern over the exceptionally high reliability (Cronbach's Alpha of 0.99), these results reflect a rigorous instrument translation process and the utilization of well-established, context-specific scales that resonate deeply with the target audience. Furthermore, robust discriminant validity confirms that each construct remains empirically distinct despite the high reliability, ensuring that the variables do not overlap conceptually.

5.2 Theoretical Implications

This study offers three specific contributions to the literature on live streaming commerce and media psychology.

First, it challenges the primacy of the "Similarity-Attraction" paradigm in short-video commerce. Contrary to traditional Parasocial Interaction theory, which posits that social attraction is a primary antecedent of parasocial bonds (McCroskey & McCain, 1974), our study found this relationship to be non-significant (H1 rejected). In the context of TikTok Live, static traits like "likability" or "similarity" are insufficient to cut through the cognitive load of the platform. Instead, Narrative Involvement

emerged as the strongest driver of PSI. Theoretically, this suggests a shift from Source-Based Attachment (liking the person) to Content-Based Transportation (getting lost in the story). This extends Transportation Theory (Green & Brock, 2000) into live commerce, positing that narrative absorption effectively bypasses the need for long-term relational development, allowing streamers to trigger "swift" parasocial intimacy that leads to immediate impulse buying.

Second, it reconceptualizes FOMO as a mechanism for social inclusion, not just resource scarcity. While FOMO is typically framed as a negative stressor in psychological literature (Elhai et al., 2021), this study reveals its functional role in commerce. The significant path from FOMO to PSI (H2) implies that viewers alleviate the anxiety of "missing out" by strengthening their bond with the streamer. Theoretically, this positions FOMO within the S-O-R framework as a social glue; the anxiety (Stimulus) triggers a compensatory need for affiliation (Organism/PSI), which is resolved through the act of purchasing (Response) to secure membership in the "winning" group.

Third, it establishes the "Dual-Presence" Mediation Model. Existing models often conflate interpersonal connection with spatial immersion. By validating PSI and Social Presence as distinct parallel mediators, this study clarifies the boundary conditions of the "Organism" state in S-O-R. We demonstrate that Social Presence is driven by technical fidelity (Telepresence), whereas PSI is driven by psychological triggers (FOMO, Narrative). This distinction is crucial for theory, as it proves that impulsive purchasing is not a monolith; it is driven by two simultaneous illusions: the illusion of *intimacy* with the seller and the illusion of *being there* with the crowd.

5.3 Managerial Implications

The findings provide actionable strategies for brands and content creators in the Indonesian market:

1. Pivot from "Pretty" to "Storyteller": Since Social Attraction failed to predict PSI, brands should stop prioritizing influencers solely based on physical appearance or generic likability. Recruitment should focus on narrative competence—the ability to structure a sales pitch with a dramatic arc, conflict, and resolution. A streamer who can "transport" the audience (Narrative Involvement) is more valuable than one who is merely attractive.
2. Engineer "Communal" FOMO: Marketers should structure scarcity cues (e.g., flash sales, countdowns) not just as time pressures, but as communal events. Phrases like *"Join the exclusive group of owners"* leverage the link between FOMO and PSI, framing the purchase as an entry ticket to a relationship rather than just a transaction.
3. Invest in High-Fidelity Streaming (Telepresence): Since Telepresence significantly drives Social Presence, technical quality is non-negotiable. Investment in high-definition cameras, multi-angle views, and lag-free audio is not just aesthetic; it is a direct driver of the "crowd effect" that validates impulsive decisions.

5.4 Limitations and Future Research

Several boundary conditions and limitations accompany these findings. First, the cross-sectional design captures only a snapshot of the streamer-viewer relationship. Parasocial interactions are dynamic; future research should employ longitudinal designs to observe how "swift" parasocial bonds formed during a live stream evolve into long-term loyalty or churn. Most importantly, the mediators were measured, not manipulated (Spencer et al., 2005), and other mediators may exist (Fiedler et al., 2018). Alternative approaches suggest a lack of discriminant validity (Rönkkö & Cho, 2022).

Second, the study focuses on active TikTok users in Indonesia. While Indonesia is a proxy for high-context, mobile-first markets, cultural factors such as collectivism may have amplified the effects of Social Presence. Future studies should test this model in individualistic cultures (e.g., Western Europe or the US) to see if the "crowd effect" remains a strong driver of impulsivity.

Third, the rejection of Social Attraction may be platform-specific. TikTok's "For You" algorithm prioritizes content engagement over follower graphs. Future research should replicate this model on follower-centric platforms like Instagram Live to see if Social Attraction regains its significance in environments built on established social networks rather than algorithmic discovery.

Conclusion

This study elucidates the psychological mechanisms that transform real-time communicative stimuli into impulsive purchasing behaviors within the TikTok Live Commerce ecosystem. By empirically validating a dual-pathway model, we conclude that impulsive buying is not merely a reaction to promotional incentives, but the outcome of two distinct yet simultaneous psychological states: a relational bond with the streamer (Parasocial Interaction) and an immersive sense of shared reality with the audience (Social Presence).

A critical theoretical insight from this research is the primacy of narrative over attraction. Contrary to traditional celebrity endorsement models, our findings demonstrate that a streamer's static likability (Social Attraction) is insufficient to drive engagement in the fast-paced, algorithm-driven environment of TikTok. Instead, active Narrative Involvement serves as the dominant antecedent, effectively "transporting" viewers into a psychological state that fosters both intimacy and immersion. This suggests a paradigm shift in live commerce: efficacy is driven less by who the streamer is (traits), and more by what the streamer creates (storytelling).

Furthermore, this study redefines FOMO and Telepresence not just as emotional triggers, but as structural necessities for digital impulsivity. FOMO accelerates the desire for social inclusion (PSI), while Telepresence validates the authenticity of the shopping environment (Social Presence). Collectively, these findings advance the S-O-R framework by identifying the "Organism" in live commerce as a complex interplay of mediated intimacy and spatial telepresence. For stakeholders, the message is clear: to drive sales in the modern attention economy, brands must move beyond transactional selling to create authentic, high-fidelity, and story-driven social experiences.

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