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The Mechanism Influencing Impulsive Buying Behavior in Live Streaming Commerce: From the Perspectives of Live Streaming Characteristics and Consumers' Psychological States

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ABSTRACT

Live streaming commerce (LSC) has received extensive attention from both academic and business communities around the world since its rapid growth in user numbers and market size in recent years. However, there are still gaps regarding current practical problems, such as declining industrial profitability and anchors' improper emotional control, as well as the lack of relevant theoretical studies. This study, based on the stimulus-organism-response model and incorporating the theory of social presence and the theory of emotional contagion, constructs a new research framework to explore the impact of LSC characteristics (including consumer and anchor interaction, consumer and consumer interaction, anchor's positive emotion, and anchor's negative emotion) on social presence, emotional contagion, and impulsive buying behavior (IBB). This study uses Smart PLS to analyze data collected from Chinese LSC users. This method is suitable for testing complex relationship models that include multiple latent variables and mediating effects. According to the analysis of 442 valid questionnaires, this study shows that social presence and emotional contagion are key factors driving consumers' impulsive buying behavior. Consumer and anchor interaction enhances both consumers' social presence and emotional contagion, while consumer and consumer interaction does not. Furthermore, anchors' positive emotion positively influences emotional contagion. Surprisingly, even negative anchor emotions also have a positive effect on emotional contagion. These findings enrich the existing literature on the driving mechanisms of IBB in the context of LSC. It provides practical implications for improving the management of the LSC industry, while also offering feasible suggestions and valuable references to address current problems.

Keywords: Live Streaming Commerce, Impulsive Buying Behavior, Social Presence, Emotional Contagion, Consumer-Anchor Interaction
JEL Classifications: M31, D12, L81, O33

1. INTRODUCTION

The rise of live streaming commerce (LSC) has significantly changed people's online purchase behavior and attitudes. Today, more and more online users tend to stay in the live room, listening to the anchor's enthusiastic explanations while completing purchases by clicking on product links (Chen and Chen, 2024). LSC is defined as a new e-commerce model that integrates online shopping, real-time video technology, and social e-commerce, enabling consumers to complete purchases instantly during the process of watching and interacting (Wang et al., 2022; Zhang et al., 2022; Luo et al., 2025). Since its emergence in 2016, LSC has developed into one of the most influential forms of online retail models around the world (Yao and Yu, 2020; Ma et al., 2022; Statista, 2022a). Particularly in China, it has shown significant growth in both market size and the number of users. In 2023, the market size of LSC approached 5 trillion RMB, nearly 12 times that of 2019 (Statista, 2024). The number of LSC users continued to grow between 2020 and 2024, reaching nearly 597 million users in 2024 (CIECC, 2025). In addition, live streaming commerce's success is also reflected in its ability to achieve a high level of profitability in a short period of time (Yao and Yu, 2020; Zhang

et al., 2025). According to The Paper (2024) reported that top anchor Dong Yuhui gained nearly three million followers in 4 h during a live stream on the evening of January 09, 2024. Its gross merchandise volume (GMV) exceeded 100 million yuan. These remarkable figures inevitably reflect a significant proportion of impulsive buying behavior (IBB). China Consumers Association (2020) pointed out that 44.1% of Chinese respondents admitted to making impulse purchases during live streams. The rapid economic value created by LSC is highly related to how its features influence IBB. Specifically, with the help of live streaming technology, LSC builds a virtual display space—the live streaming room. This room provides a dynamic environment where the anchors and consumers are able to interact and express their emotions synchronously (Lin and Chen, 2021; Sjöblom and Hamari, 2017; Huang et al., 2024). Unlike the static display and passive information reception of traditional e-commerce, the anchor dominates the entire shopping process during live stream (Wang et al., 2022; Wongkitrungrueng et al., 2020). The anchor is not only a presenter of product or service information but also a builder of the interactive pace and emotional atmosphere of the live room, which allows them to interact with consumers in real time and express their emotions (Lo et al., 2022; Zhang et al., 2025; Wu et al., 2025). Meanwhile, customers are no longer independent, static, and passive recipients. Consumers can see the anchor's facial expressions and actions in real time, thus directly perceiving how the anchor's emotional changes affect their own emotional state (Wang et al., 2024; Wu et al., 2025). Impulsive buying behavior (IBB) is regarded as an intense, sudden, and unplanned purchase behavior (Rook, 1987; Lee and Chen, 2021). Consumers' psychological states, like social presence and emotional contagion, are important factors that can instantly trigger IBB (Zhang et al., 2022; Li et al., 2024a). Therefore, LSC is not only a transaction method, but also a highly social and emotion-driven shopping context (Sun et al., 2023; Li et al., 2025; Zhang et al., 2025; Wu et al., 2025).

However, after several years of rapid expansion, the industry entered a new phase in 2024 and 2025, with some LSC companies experiencing significant profit declines or even losses. According to STCN (2025) reported that the revenues and profits of leading live streaming commerce companies, such as Yowant Technology, Be Friends Holding, and east buy, all declined significantly in 2025 compared with 2024. The reasons for the insufficient profitability of these mainstream companies May from two aspects. For one thing, the poor effectiveness of interaction in live rooms is one of the important reasons for the insufficient sustainable profitability. In some live rooms, the audience interaction rate, such as comments and likes, constitutes only a very small proportion of the total number of audiences, which frequently results in a situation where the total number of audiences is high, but the number of audiences who remain and continue watching is low (Ye et al., 2022; Xu et al., 2024; Zhongguancun Magazine, 2024). For another, improper emotion management by anchors is also a important reason why some businesses are unable to achieve profitability (The paper 2023; Li et al., 2023). As the traditional low-price sales methods of anchors become increasingly ineffective, incidents of anchor's improper emotional expression have become increasingly frequent, triggering trust crises among businesses and ultimately leading to financial losses (China Economic Net, 2023; The paper, 2024).

Although the LSC industry in China is facing various problems and risks, current theoretical research still has not fully focused on these issues. Existing studies have contributed to the literature on how different LSC characteristics influence customers' buying behavior, while these research on LSC characteristics has mainly focused on single scenarios (Oh et al., 2018; Gong et al,2020; Xu et al, 2024; Luo et al., 2025). However, as a newly e-commerce model that enables interaction and emotional expression in real time, LSC should examine both interactions as live scene characteristics and anchor's emotions as the anchor' characteristic simultaneously. Moreover, although previous studies have repeatedly confirmed that interaction is one of the key characteristics of LSC, and that it significantly influences buying behavior by affecting their inner psychological states, such as social presence, emotional responses and flow experiences (Zhang et al., 2022; Dong et al., 2023; Li et al., 2024a; Huang et al., 2024; Li et al., 2025), previous research on interaction has not specified the types of interaction, and there is very limited research on how the consumer-anchor and consumer-consumers interaction, affects the consumer's psychological state and subsequent IBB research. Furthermore, prior studies have mainly focused on how a communicators' emotions influence recipients' emotions and behaviors under the scenario of online shopping (Howard and Gengler, 2001; Pugh, 2001; Kramer et al., 2014). Studies on the impact of anchor's emotion (including positive and negative emotions) on emotional contagion and IBB in the context of LSC are very limited and need to do further exploration. Furthermore, although social presence and emotional contagion are both considered important psychological states influencing consumer purchasing behavior (Kramer et al., 2014; Zhang et al., 2022; Luo et al., 2025; Li et al., 2025), existing research lacks further discussion on the exploration of the relationships among consumers' psychological states in the scenario of LSC.

In conclusion, drawing on the S-O-R framework, integrated with the theory of social presence and the theory of emotional contagion, the aim of this study is to construct a research model to address the gap by exploring the mechanism of how LSC characteristics affect consumers' psychological states and IBB.

To be more specific, this research seeks to answer the following questions to achieve its research objectives.

RQ1: How does interaction (including consumer and anchor interaction, and consumers and consumer interaction) affect social presence and emotional contagion?

RQ2: How do the anchor's emotions (including anchor's positive emotion and anchor's negative emotion) affect emotional contagion?

RQ3: How does social presence affect emotional contagion?

RQ4: How do social presence and emotional contagion influence impulsive buying behavior?

By answering the above questions, this paper makes the following contributions.

Theoretically, to begin with, the study constructs and verifies a research model to examine how LSC characteristics influence consumers' psychological states and IBB. This new theoretical framework differs from previous studies that focused solely on single scenario, instead, it explores the unique characteristics of both the live scene and the anchor, which provides new insights into a deeper understanding of IBB in the LSC context. Secondly, this study further explores specific characteristics of LSC. The research incorporates the consumer-anchor interaction, consumer-consumer interaction and anchor's positive emotion, negative emotions into the same research framework, breaking away from previous research paradigms that focused only on a single interaction relationship or a single emotional dimension. Lastly, this study contributes to a more in-depth examination of the relationships among consumers' psychological states and their impact on IBB. In practical terms, this study helps the operators develop more refined strategies to improve interaction quality in live rooms and optimize the training of anchors' emotional management, which could help industries solve the practical problems currently faced. Furthermore, the study can provide valuable practical guidance for anchors in improving their live streaming skills, thereby helping consumers achieve a better shopping experience. Effective interaction by valuable anchor allows them to better understand consumers' emotional needs, resonate with them emotionally, and provide greater emotional value during the live stream.

The remaining structure of the study is as follows: firstly, the study reviews existing research literature related to LSC. In the second place, the study explores the relationships between variables, develops research hypotheses and establishes a research model. Then, the research methods are introduced, and the research data are collected and analyzed. Finally, drawing on the discussion of the findings, this study summarizes theoretical and practical implications and explains the limitations and of the study as well as future research directions.

2. LITERATURE REVIEW

2.1. LSC Characteristics

In comparison with traditional e-commerce, LSC, empowered by live streaming technology, possesses unique characteristics in areas such as product display, communication mode, identity recognition, emotional contagion and time limitation (Sjöblom and Hamari, 2017; Oh et al., 2018; Wongkitrungrueng et al., 2020; Zhang et al., 2023; Huang et al., 2024; Wang et al., 2024; Xu et al., 2024). According to the literature review on LSC by Luo et al. (2025), previous studies on the characteristics of live scene characteristics mainly focused on the perspective of live streaming technology empowerment, such as the effects of convenient payment, social cues and platform interface design on users' purchasing behavior (Sun et al., 2019; Fei et al., 2020; Gong et al., 2020). However, in response to the current problems of insufficient profitability due to low-quality interaction in live streaming rooms, this study explores interaction, including consumer-anchor interaction and consumer-consumer interaction as the representative features of live scene characteristics.

The concept of interaction originates from multiple disciplines and fields. Initially, communication researcher Rafaeli (1988) explained interaction as information as an attribute of the communication process, emphasizing the "dependency" between subsequent and preceding information in communication. In digital environments, interactivity is divided into two core levels: Person Interactivity and Machine Interactivity (Hoffman and Novak, 1996). In the context of LSC, interaction is explained as the real-time information exchange between the anchor and the consumer, or among consumers in the live room during live streams, such as promoting products, sharing personal buying experiences and providing instant feedback and comments (Ma et al., 2022; Li et al., 2024a). Interaction methods mainly include bullet comments, likes, sending emoticons, text and voice interaction, sending messages, sharing emoticons, and consumers sending virtual gifts to the anchors (Sun et al., 2019; Wongkitrungrueng et al., 2020; Ma et al., 2022).

In addition, as the most crucial link between consumers and products in the live stream room, the role of the anchor is also an important representative feature of the LSC. Prior research on the anchor's characteristics mainly includes attractiveness, professionalism, entertainment value, and the impact of these characteristics on consumer psychology states and consumption behavior (Tang et al., 2024; Li et al., 2024b; Zhu et al., 2021). However, in response to the current problem of improper emotional regulation among anchors, this study explores the anchor's emotions (including anchor's positive emotions and anchor's negative emotions) as the representative of anchor's characteristics.

Emotions refer to an individual's attitudes toward objective things, along with their related behavioral reaction (Plutchik, 1982). Emotions are widespread in daily interpersonal communication and can take a variety of forms, like voice, body posture, or facial expressions (Manstead, 1991; Xi et al., 2024). In the business field, Russell (1978) views emotions as the emotional reactions of consumers when making decisions during the purchase of goods or services. Verhagen and Van (2011) generally categorize emotions into positive emotions and negative emotions in the context of online shopping. Positive emotions are conceptualized as the extent to which an individual feels enthusiastic, excited, and motivated. Negative emotions are regarded as the degree to which a person experiences troubled, irritable, and anxious. In the context of LSC, the anchor's emotions can be categorized into positive and negative emotions. Positive emotions refer to the feeling of happiness, energy, excitement, boldness, and satisfaction experienced by consumers while watching live streams, while negative emotions refer to the experience of disgust, boredom, sleepiness and annoyance felt by consumers when they live streams (Babin and Attaway, 2000; Sun et al., 2023).

In summary, based on the problems emerging in LSC industry, this research examines both interaction as the live scene characteristics and anchor's emotions as the anchor related characteristic together as representative dimensions of live streaming features.

2.2. IBB

Impulsive buying behavior (IBB) is a very common consumer behavior and an important area of research in marketing.

Numerous scholars have defined IBB from different perspectives. Clover (1950) was the first to describe impulse buying, considering it similar to unplanned buying. Stern (1962) categorized buying behavior into planned, unplanned, and impulse buying, and first proposed the concept of suggestive impulse buying behavior. Subsequently, Rook (1987) and his series of papers elucidated the nature of impulse buying, using psychological impulse theory to argue that this behavior is more emotional, exhibiting a sudden, often strong and persistent immediate buying impulse, accompanied by intense emotional reactions. Some scholars also believe that IBB (Independent Buying By) is a manifestation of consumer psychological conflict (Bayley and Nanearrow, 1998; Wood, 1998). Vohs and Faber (2007) considered it a specific manifestation of self-regulatory failure in impulsive consumption. Furthermore, in comparison with physical stores, online shopping does not have the limitation of time and distance, which leading to an explosive growth in online impulse buying (Verhagen and Van Dolen, 2011; Miranda et al., 2024). Simultaneously, research on IBB has shifted its focus to the online realm, and "online impulse buying" has gradually gained attention from researchers and society (Tronier, 2022; Anoop and Rahman, 2025).

With the rise of LSC and its tremendous commercial success, researchers have begun to focus on the IBB in the context of LSC scenario. According to Li et al. (2025), based on a search of keywords such as "live streaming commerce" and "impulse buying behavior" in authoritative academic databases, including Web of Science and Scopus, it was found that the first study on IBB in LSC was published in 2020, which explored how the exterior design of live streaming platform interfaces can influence consumers' IBB by enhancing users' self-efficacy and psychological ownership (Gong et al., 2020). This article showed the formal beginning of academic research focusing on this field. Subsequent studies on IBB in the context of LSC have predominantly focused on China, demonstrating China's central position in the development of LSC (Ming et al., 2021; Ye et al., 2022; Lo et al., 2022; Li et al., 2025).

2.3. Social Presence Theory

The theory of social presence is a communication theory defined as explaining the degree to which individuals perceive the real presence of others in virtual media interactions (Short et al., 1976). Early scholars focused on media attributes, believing that the social presence's level was determined by the technological characteristics of the media. However, with further research, the essence of social presence has shifted its focus from media attributes to a psychological perception of others' real presence during human-media interaction (Short et al., 1976; Biocca et al., 2003; Oh et al., 2018). Previous studies in the context of e-commerce have repeatedly demonstrated that online interaction can build an immersive virtual world experience for consumers, arguing that interaction on social platforms is a key factor in fostering social presence (Oh et al., 2018; Chen and Liao, 2022; Liu et al., 2022). This suggests that social presence is considered a psychological perception, which can be affected by interaction. Therefore, drawing on social presence theory, this research explores social presence as a consumer psychological state in the context of LSC. Interaction is considered one of the preconditions for social presence.

2.4. Emotional Contagion Theory

The theory of emotional contagion can be traced back to Darwin's (1965) concept of emotional transmissibility. Early researchers attributed an individual's response to the emotions of others to the process of empathy (Deutch and Madle, 1975). Later, some researchers focused on the automatic mechanisms of emotional contagion, pointing out that it is essentially an automatic imitation process (Meltzoff and Moore, 1977; Haviland and Lelwica, 1987). Hatfield et al. (1994) systematically defined emotional contagion, arguing that it refers to an individual's automatic imitation and synchronization with the facial expressions, speech, posture, and actions of others, leading to emotional convergence. Goldenberg and Gross (2020) redefined the concept of emotional contagion in the digital media environment, they pointed out that emotional contagion refers to the process by which an observer's emotions gradually converge with those of the emotional expresser over time. In terms of application, the theory of emotional contagion has been broadly adopted in the fields of service and marketing, with related research focusing primarily on interpersonal interaction strategies in business communication (Meng et al., 2021; Herrando and Constantinides, 2021). As the social environment has evolved and interaction methods have changed, emotional contagion theory has gradually been incorporated into e-commerce research to explain consumers' emotional responses and behavioral decisions (Sun et al., 2019; Kranzbühler et al., 2020; Li et al., 2024a). In the LSC environment, previous research has explored how communicators' positive and negative emotions influence recipients' emotional states and behaviors (Howard and Gengler, 2001; Pugh, 2001; Kramer et al., 2014; Lindquist et al., 2016).

In summary, based on existing theories of emotional contagion, it can be found that emotional contagion is essentially a psychological state during social interaction. This psychological state is manifested in an individual's automatic imitation of the emotions of others and a tendency to maintain emotional consistency. Therefore, this study considers emotional contagion as a type of consumer psychological state within the LSC context. Interaction, the anchor's emotional state, and social presence are considered as preconditions for exploring emotional contagion.

2.5. S-O-R Framework

Drawing on environmental psychology, Mehrabian and Russell (1974) were the first to develop the Stimulus-Organism-Response (S-O-R) framework. This model posits that external stimuli (S) influence people's internal states (O), which subsequently trigger responses (R).

The S-O-R theory has become a magnificent theory for explaining user behavior and has been extensively applied in the fields of business research (Huo et al., 2023). In the context of LSC, previous research draws on the S-O-R framework, has provided a comprehensive analytical method to understanding how external stimuli trigger customer's internal states and ultimately generate buying behavior responses (Luo et al., 2023; Xu et al., 2023; Huo et al., 2023). For example, when consumers perceive external stimuli from live streaming, these stimuli can lead to IBB through internal emotions (Dong et al., 2023; Li et al., 2024a).

The above studies indicate that the S-O-R theory is highly applicable and offers strong explanatory power in understanding the psychological and behavioral mechanisms in online shopping contexts. Therefore, this study draws on previous research on the S-O-R framework, considering LSC characteristics (including interaction and anchor's emotions) are considered as the external stimulus (S), which in turn affects the customer's psychological states (including social presence, emotional contagion), these can also be referred to as Organism(O), and finally, leads the IBB as a response(R). By constructing causal relationships between stimuli, organisms, and responses, a systematic framework is provided to track the impact of LSC characteristics on IBB.

3. RESEARCH HYPOTHESES AND RESEARCH MODEL

3.1. Research Hypotheses

3.1.1. Effect of interaction on social presence

Interaction refers to the process of information dissemination and exchange (Rafaeli, 1988). In the context of LSC, unlike other scenarios, consumers are not only viewers but also content creators (Cao et al., 2022). The interaction between the anchor and consumers, and among consumers themselves in the live room, generates extremely rich and efficient information content, which simultaneously shapes the psychological experience of the viewers (Sun et al., 2019; Kang et al., 2021; Liu et al., 2022). Therefore, interaction is interpreted as the real-time information exchange behavior between the anchor and viewers, or among viewers, during the live streams (Ma et al., 2022; Li et al., 2024). Social presence is defined as how people feel "with a real person" when interacting with others in a media (Short et al., 1976). In the LSC environment, it refers to the degree to which consumers perceive themselves as being with others in during live stream (Chen and Liao, 2022).

Interaction is closely related to social presence. Draw on the theory of social presence, Intimacy and immediacy are regarded as two fundamental dimensions of social presence. Intimacy describes the perceived sense of connection between interacting parties, whereas immediacy refers to the psychological distance between the two parties in an interaction (Short et al., 1976; Oh et al., 2018). Furthermore, previous researchers have explored the positive impact of interaction on social presence in live streaming commerce context. Chen and Liao (2022) investigated the influence of community, emotional support, and interaction on viewers' social presence. Liu et al. (2022) found that the three dimensions of interaction can enhance consumers' social presence, thereby significantly increasing their purchase intention. Shi et al. (2025) explored the impact of interaction on social presence and further investigated their impact on impulsive buying behavior. However, the effects of anchor-consumer interaction and consumer-consumer interaction on social presence require further investigation.

In summary, drawing on the theory of social presence and previous studies, it is predicted that interaction, including consumer-anchor interaction and consumer–consumer interaction, positively influences social presence. Thus, the following hypotheses are formulated:

Hypothesis 1: Consumer and anchors interaction positively affects social presence

Hypothesis 2: Consumer and consumer interaction is positively associated with social presence.

3.1.2. Effect of interaction on emotional contagion

The advent of live streaming has provided consumers with an unprecedented level of social interaction (Sjöblom and Hamari, 2017). Consumers can also engage in real-time interactions with anchors and other customers by Danmaku, sharing information and expressing emotions (Meng et al., 2021; Ma et al., 2022; Chen and Liao, 2022). Interaction is also closely related to emotional contagion. According to the theory of emotional contagion, it is explained as a tendency to lead to emotional consistency through automatic imitation of others (Hatfield et al., 1994). In addition, Barsade et al. (2018) defined emotional contagion as the automatic and continuous imitation of others' facial expressions, voices, postures, movements, and behaviors during interpersonal interactions, thereby achieving the synchronization and transmission of emotions. Existing studies have explored the influence of interaction on emotional contagion in an online context. Bösch et al. (2018) found that the patterns of emotional contagion differ in online environments with low interaction. Meng et al. (2021) found that through various interactions between the anchor and users, emotional experiences such as pleasure, admiration, arousal and emotional trust can be evoked in consumers, thereby achieving an effect of emotional contagion and influencing purchase intention. Han et al. (2024) found that in the context of agricultural product live streaming marketing, interaction plays a significant positive role in consumers' purchase intention through emotional resonance. Emotional contagion and emotional resonance are closely related, empathy facilitates emotional contagion (Chen et al., 2024).

Therefore, it can be predicted that interaction including both the interaction between the consumer and the anchor and among consumers themselves, may positively influence emotional contagion. This study proposes the following hypotheses:

Hypothesis 3: Consumer and anchors interaction is positively related to emotional contagion

Hypothesis 4: Consumer and consumer interaction is positively related to emotional contagion.

3.1.3. Effect of anchor's emotion on consumer's emotional contagion

Emotions refer to people's attitudes toward objective things and their corresponding behavioral responses (Plutchik, 1982). In the era of LSC, anchor's positive emotions refer to the pleasant feelings consumers experience while watching the live streams, such as excitement, energy happiness and satisfaction. In contrast, the anchor's negative emotions include adverse feelings consumers perceive during the live streams, such as disgust, boredom, annoyance and sleepiness (Babin and Attaway, 2000; Sun et al., 2023).

Emotion and emotional contagion are highly related. Emotional contagion can occur in a variety of different emotional states, which

can be either positive or negative (Barsade et al., 2018). Previous research has partially explored the impact of positive and negative emotions on emotional contagion. Du et al. (2011) found that employees' positive and negative emotions had different effects on susceptibility to emotional contagion during service encounters. In online shopping scenarios, prior studies have explored how the transmitter's positive or negative emotions influence the recipient's emotional state from different perspectives. However, the results in this area remain controversial. Some scholars believe that positive emotions have a greater impact on emotional contagion (Coviello et al., 2014; Ferrara and Yang, 2015), while others believe that negative emotions are more likely to cause emotional contagion (Fan et al., 2016; Fan et al., 2018; Soroka et al., 2019). More importantly, some scholars believe that positive and negative emotions have the same impact on emotional contagion (Kramer et al., 2014). Similarly, in the context of LSC, how the anchor's positive and negative emotions affect the emotional contagion remains unclear. Positive and negative emotions are not simply opposites (Lindquist et al., 2016), Therefore, this issue still requires further exploration.

Based on the theory of emotional contagion and previous research, this study predicts that the anchor's emotion (including anchor's positive emotion and anchor's negative emotion) has a positive influence on the emotional contagion. Consequently, the following hypothesis is developed in this study:

Hypothesis 5: Anchor's positive emotion is positively associated with emotional contagion

Hypothesis 6: Anchor's negative emotion is positively related to emotional contagion.

3.1.4. Effect of social presence on emotional contagion

Social presence is considered a feeling of being "with real people" (Oh et al., 2018; Shi et al., 2025). Due to a highly interactive marketing model of LSC, thousands of viewers can interact synchronously and authentically during the live stream, creating a high level of social presence (Shi et al., 2025). Emotional contagion is defined as "the process by which an individual or group is consciously or unconsciously influenced by other's emotional state" (Barsade et al., 2018; Du et al., 2011; Meng et al., 2021).

Social presence may have a positive effect on emotional contagion. Based on the emotional contagion theory, emotional expression does not exist in isolation but is widespread in social interactions and can influence others (Fan et al., 2018). Therefore, the higher the level of consumers' perception of the real existence of the interaction object, the easier it is for them to receive the other's emotional expression, thereby enhancing the emotional contagion. Furthermore, previous research in live streaming scenarios has found that social presence, as a consumer's physiological state, influences other psychological states (Oh et al., 2018; Csikszentmihalyi, 2008; Huo et al., 2023). Huo et al. (2023) found that social presence alters consumers' cognition and attitudes, positively impacting their flow experience. Similarly, emotional contagion, as another emotional state, may also be influenced by social presence.

In summary, based on emotional contagion theory and previous research, this study proposes the following research hypotheses:

Hypothesis 7. Social presence positively affects emotional contagion.

3.1.5. Effect of social presence on impulse buying behavior

Social presence is regarded as a psychological state in which consumers perceive the presence of others within an interactive virtual environment (Short et al., 1976; Oh et al., 2018; Chen and Liao, 2022). Impulse buying behavior refers to a consumer's instinctive and unplanned purchasing action driven by strong desires and hedonistic emotions, often occurring without considering the consequences (Rook, 1987; Beatty and Ferrell, 1998; Beatty and Elizabeth 1998). In the context of live streaming commerce, impulsive buying behavior can be understood as the immediate purchasing decisions consumers make during live streams, driven by external stimuli that influence their psychological states without thorough consideration (Lo et al., 2022; Huang et al., 2024).

Previous research has explored the close relationship between social presence and consumer buying intention in the context of live streaming commerce. Li et al. (2018) found that situational factors such as social presence positively influence consumers' purchasing intentions. Ma et al. (2022) found that social presence positively influences consumers' purchase intentions. Zhang et al. (2023) demonstrated that social presence has a positive driving effect on impulse buying desire. Based on previous research, impulsive buying behavior may also be influenced by social presence. On this basis, the following hypothesis is developed:

Hypothesis 8: Social presence has a positive impact on impulse buying behavior.

3.1.6. Effect of emotional contagion on impulse buying behavior

In online shopping scenarios, emotional contagion is considered a way for consumers' psychological states to influence their purchasing behavior (Goldenberg and Gross, 2020; Lin et al., 2021; Wang et al., 2024). IBB can be understood as a sudden, unplanned purchase behavior influenced by consumers' emotional states (Lo et al., 2022; Huang et al., 2024). Therefore, there may be a potential relationship between the two. In LSC context, previous studies have explored the impact of emotional contagion on consumers' purchasing behavior. Wang et al. (2024) found that the anchor's positive emotions have a significant impact on triggering group emotions and lead to fewer order cancellations. Li et al. (2024a), based on emotional contagion theory, found that the anchor's characteristics have a significant impact on pleasurable emotions, which is a key factor driving IBB.

Therefore, under the context of LSC, emotional contagion is expected to positively impact consumers' impulsive buying behavior. Accordingly, this study proposes the following hypothesis:

Hypothesis 9. Emotional contagion is positively associated with impulse buying behavior.

3.2. Research Model

This research develops a research model grounded in the Stimulus–Organism–Response (S-O-R) model, combined with social presence theory and emotional contagion theory. Specifically,

this study uses the interaction (including consumer-anchor interaction and consumer-consumer interaction) and the anchor's emotions (including anchor's positive emotion and anchor's negative emotion) as antecedent variables, constructs a mediating path centered on social presence and emotional contagion, and explores the resulting impulsive buying behavior as a behavioral response. The study systematically investigates the influence mechanism of LSC characteristics on consumers' psychological states and IBB. The research model is shown in Figure 1.

4. RESEARCH METHODS

4.1. Measurements

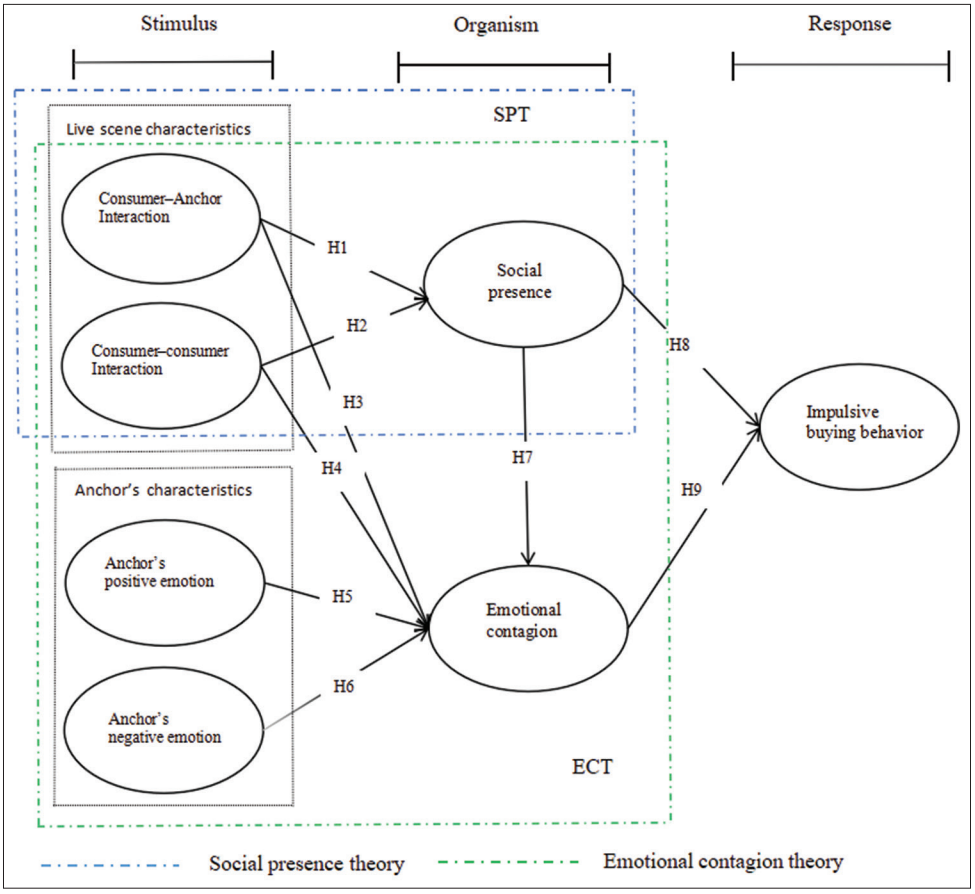
All measurement items used in this study were drawn from established literature and appropriately adjusted to suit the LSC context. Specifically, the measurement items for the two dimensions of interaction (consumer-anchor interaction and consumer-consumer interaction) are referenced from Ma et al. (2022). The anchor's emotions during live streams can be categorized into two types (anchor's positive emotion and anchor's negative emotion), were adapted from Babin and Attaway (2000). The items for measuring social presence are referenced from Chen and Liao (2022). The emotional contagion scale was adopted from Chen and Zhou (2024). The items for measuring impulse buying behavior are referenced from Li et al. (2024). All constructs were measured using a five-point Likert scale (1 = Strongly disagree, 5 = Strongly agree).

Since the study's questionnaire survey was conducted in China, but all questionnaires were originally prepared in English, this study first invited qualified English-speaking experts to translate them into Chinese. Subsequently, six professionals with live streaming buying experience were invited to examine the comprehensibility of the questionnaire items. Based on experts' feedback, some wording of the questionnaire was adjusted to better suit the context of LSC. Finally, to ensure consistency between the two versions, this research invited an another professional translator to back-translate the Chinese questionnaire into English for comparison (Brislin and Freimanis, 2001). In addition, a pre-test was conducted online before the formal questionnaire was completed. The pre-test collected 69 valid questionnaires, and the obtained empirical data were used for reliability and validity testing. After deleting and modifying relevant items, the revised pre-test results met the reliability and validity requirements and was ultimately confirmed for distribution. Detailed information on the final questionnaire is provided in Appendix A.

4.2. Data Collection

This research applied a combined snowball sampling approach and quota sampling for data collection. Since the target population eligible for the study needs to meet the screening requirement of having purchased goods in live streaming scenarios, snowball sampling method can effectively expand the sample source by encouraging potential respondents to share the questionnaire with others who had similar experiences. In addition, to ensure the rationality of the regional population distribution, this study

Figure 1: Research model



allocated the sample according to the population proportions of four major economic regions in China (Eastern Region, 39.93%; Western Region, 27.12%; Central Region, 25.83% and Northeast Region: 6.98%) (NBSC, 2021).

This research used an online questionnaire to collect data in order to test theoretical hypotheses. As Wenjuanxing (https://www.wjx.cn/) is one of the most popular online survey platforms in China (Zhang et al., 2023), this study used Wenjuanxing to design the questionnaire link and collect data. In addition, WeChat is a comprehensive platform integrating social media, live streaming, financial transactions and many other functions. Currently, with its massive active user base, WeChat has become one of the most important internet platforms in China (Dong et al., 2023; Pick et al., 2025). Therefore, this study used the WeChat platform to distribute the questionnaire link to WeChat groups in the four economic regions, and participants were further invited to forward it to their friends or family members in other WeChat groups.

The questionnaire used in this study is composed of three parts. The first part screens participants to ensure they have purchase experience during live streams. The second part collects participants' demographic information and the third part contains the measurement items for the research variables.

The data collection was conducted between February 05th and, March 13th, 2026. A total of 490 questionnaires were obtained during this period. However, 48 responses were discarded due to invalid completion. Following data cleaning, 442 valid questionnaires remained for analysis, representing an effective response rate of 90.20%. In the field of live streaming research, this sample size is acceptable (Li and Peng, 2021; Chen and Liao, 2022; Liu et al., 2022b).

The study used SPSS 29.0 software to conduct descriptive statistical analysis on the demographic characteristics of 442 samples data to understand the distribution of the sample data. Table 1 shows the detailed demographic information of respondents.

Table 1: Demographics of respondents

Category	Item	Frequency	Percentage (%)
Gender	Male	155	35.1
	Female	287	64.9
Age	21-29	101	22.9
	30-39	267	60.4
	40-49	40	9.0
	Over 50	34	7.7
Income	Less than 3000	54	12.2
	3000-6000	128	29.0
	6000-9000	181	41.0
	Over 9000	79	17.9
Education	High school or below	36	7.0
	College	138	31.2
	Bachelors	186	42.1
	Master's or above	82	18.6
Region	Northeast Region	31	7.0
	Eastern Region	173	39.1
	Central Region	116	26.2
	Western Region	122	27.6

Demographics of respondents (N=442)

Among all respondents, the proportions of males and females were 35.1% and 64.9%, respectively. For age, young people remain the main user group, with those aged 21-29 and 30-39 accounting for over 80% of the total sample. The 2026 LSC industry market research report (2026) mentions that the proportion of female users in LSC is high and that users are aged 18-35. The gender and age ratio in the report is consistent with the demographic profile of the sample in this research. Furthermore, the result is consistent with Statista (2022b), which reported that Chinese users are primarily aged 27-35. Regarding income, the largest proportion of users was concentrated in the income ranges of 3,000-6,000 yuan and 6,000-9,000 yuan, constituting 29% and 41% respectively. In terms of education, those with associate's or bachelor's degrees accounted for over 70%, representing the majority of the users' educational background. The trends in income and education levels were generally similar to those reported in existing published studies on LSC (Li and Peng, 2021; Liu et al., 2022a; Liu et al., 2022b). The final population proportions for the regions studied are: Eastern Region, 39.1%; Western Region, 27.6%; Central Region, 26.2%; and Northeast Region, 7%, which are roughly the same as those reported by the National Bureau of Statistics of China (NBSC, 2021). In conclusion, the sample in this research is highly representative in the field of live streaming research.

5. RESULTS

In this research, Smart PLS (Partial Least Squares) 4.1.1.4 was adopted as the tool for statistical analysis and hypothesis verification. SmartPLS-SEM has also been applied in cross-sectional business research involving multiple latent relationships (Hameed et al., 2018). The reasons for using this method are as follows. Firstly, PLS-SEM has relatively flexible requirements for sample size and is suitable for small sample or large sample studies (Hair et al., 2019; Zhang et al., 2023). Secondly, In comparison with covariance-based structural equation modeling (CB-SEM), PLS-SEM has greater advantages in dealing with complex model predictions, exploratory research and theoretical construction (Hair et al., 2012; Lo et al., 2022). Since this study constructs a relatively complex research model and attempts to expand the research fields of the S-O-R framework, PLS-SEM is more suitable for this study.

After testing for common method bias, this study used Smart PLS to examine the measurement model first and then assess the structural model.

5.1. Common Method Bias

Since this study employed a cross-sectional design, there is a potential risk of common method bias (CMB). Thus, according to the approach of Lo et al. (2022), this study implemented controls at both the procedural and statistical levels.

In terms of procedural controls, the study made explicit commitments to respondents regarding the anonymity and confidentiality of their answers, and used concise and clear language in the questionnaire design. It also avoided using obscure or uncommon terms through professional assessment feedback, in order to reduce ambiguity in terminology.

In terms of data statistics, this study used Harman's one-way test and exploratory factor analysis (EFA) to assess common method bias that may be caused by questionnaire data. Firstly, the results demonstrated that KMO = 0.908 and Bartlett's test of sphericity was found to be significant ($\chi^2 = 5915.415$, df = 300, $P < 0.001$). According to Hutcheson and Sofroniou (1999) and Hadi et al. (2016), a KMO value above 0.50 is considered adequate for conducting exploratory factor analysis (EFA). Therefore, this research was suitable for EFA. In addition, Taherdoost et al. (2014) and Harerimana and Mtshali (2020) noted that Bartlett's test of sphericity should be significant ($P < 0.05$), showing that the data are suitable for factor analysis. Therefore, Harman's single-factor test was employed in this study to assess common method bias. The unrotated factor analysis showed that seven factors with eigenvalues >1 were extracted, together explaining 73.624% of the total variance. The first factor accounted for 34.831% of the variance, which was below the recommended threshold of 40%. The result shows that no single factor dominates all measurement items, therefore, common method bias is not a problem in this study (Podsakoff et al., 2003; Huo et al., 2023).

5.2. Assessing the Outer Measurement Model

5.2.1. Assessment of internal consistency reliability

This study used Cronbach's α, composite reliability (CR), and ρA to test the internal consistency reliability of the measurement model. As shown in Table 2, the Cronbach's alpha coefficient and composite reliability (CR) for all constructs were higher than the recommended threshold of 0.7 (Fornell and Larcker, 1981). Furthermore, the rho_A values range from 0.816 to 0.893, which also exceeds the criterion of 0.7 (Dijkstra and Henseler, 2015), indicating that the constructs have good internal consistency reliability.

5.2.2. Convergent validity

To assess the convergent validity of the multi-item constructs, this study evaluated the outer loadings of the measurement items and the average variance extracted (AVE). Ideally, outer loadings should be higher than 0.70, and AVE should be no <0.5 (Fornell and Larcker, 1981; Wong et al., 2014; Lo et al., 2022).As shown in Table 2, the out loadings of each item on its respective construct are all >0.7 and the AVE values of all constructs are between 0.696 and 0.768 and >0.5. These results demonstrate that the convergent validity of this study is acceptable.

5.2.3. Discriminant validity

The research further calculated the heterotrait–monotrait ratio (HTMT), and the results showed that the maximum HTMT value was 0.568, which is lower than the strict threshold of 0.85 (Henseler et al., 2015). The results confirm the discriminant validity of the construct. Moreover, this research used the Fornell–Larcker criterion to test discriminant validity. As shown in Table 3, discriminant validity was examined by comparing the correlations among constructs with the square root of the AVE for each construct. The square root of the AVE for each construct was greater than its correlations with the other constructs, which shows good discriminant validity (Fornell and Larcker, 1981).

5.3. Inspecting the Inner Structural Model

5.3.1. Multicollinearity assessment

All variance inflation factor (VIF) values ranged from 1.702 to 2.529, all of which were below the threshold of 3, suggesting

Table 2: Assessment of outer measurement model

Construct	Items	Out loading	Cronbach's alpha	CR	rho_A	AVE
Consumer-anchor interaction	CAI1	0.841	0.869	0.911	0.870	0.718
	CAI2	0.858				
	CAI3	0.846				
	CAI4	0.843				
Consumer-consumer interaction	CCI1	0.857	0.816	0.891	0.816	0.731
	CCI2	0.852				
	CCI3	0.856				
Anchor's positive emotion	APE1	0.854	0.892	0.925	0.893	0.756
	APE2	0.877				
	APE3	0.880				
	APE4	0.867				
Anchor's negative emotion	ANE1	0.845	0.855	0.902	0.859	0.696
	ANE2	0.825				
	ANE3	0.838				
	ANE4	0.829				
Social presence	SP1	0.871	0.849	0.908	0.850	0.768
	SP2	0.887				
	SP3	0.871				
Emotional contagion	EC1	0.878	0.824	0.895	0.827	0.739
	EC2	0.871				
	EC3	0.829				
Impulse buying behavior	IBB1	0.842	0.872	0.912	0.873	0.722
	IBB2	0.844				
	IBB3	0.854				
	IBB4	0.858				

Table 3: Discriminant validity based on Fornell-Larcker criterion

	ANE	APE	CAI	CCI	EC	IBB	SP
ANE	0.834						
APE	0.326	0.869					
CAI	0.271	0.492	0.847				
CCI	0.223	0.325	0.331	0.855			
EC	0.330	0.453	0.449	0.279	0.860		
IBB	0.315	0.455	0.471	0.292	0.410	0.850	
SP	0.351	0.495	0.470	0.241	0.436	0.449	0.876

Note: The square root of the AVE for each multi-item construct is presented in bold along the main diagonal

that multicollinearity was not a concern (Hair et al., 2019; Lo et al., 2022).

5.3.2. Model explanatory power

The coefficients of determination (R^2) were as follows: the model explained of the 25.9% variance in impulsive buying behavior, 22.9% and 32.4% of variances were explained in social presence and emotional contagion. The results are presented in Figure 2. As empirical criteria, R^2 values of 0.75, 0.50, and 0.25 can be considered relatively strong, moderate and relatively weak respectively, However, the acceptable level of R^2 should still be interpreted in the context of the specific research (Hair et al., 2019). In the social sciences, if most of the explanatory variables are statistically significant, a relatively low R^2 value above 0.10 can be considered acceptable (Ozili, 2023). In summary, all the constructs proposed in this study have explanatory power of >0.25 for emotional contagion (R^2 = 32.4%) and impulsive purchasing behavior (R^2 = 25.9%) (Hair et al., 2019). However, their explanatory power for social presence (R^2 = 22.9%) is relatively low, with values slightly <0.25 but >0.1. Considering the context of behavioral research, these results indicate the overall model has acceptable explanatory power (Hair et al., 2019; Ozili, 2023).

5.3.3. Path coefficients and hypothesis testing

This study used Smart PLS 4 to perform bootstrapping with 5,000 resamples to calculate the path coefficients and their significance levels. As reported in Table 4 and Figure 2, in examining the effects of interaction on consumers' psychological states, the results showed that the Consumer-anchor interaction had a significant positive effect on social presence ($\beta = 0.438$, $P < 0.001$) and emotional contagion ($\beta = 0.209$, $P < 0.001$). However, Consumer-consumer interaction was not significantly related to either social presence ($\beta = 0.096$, $P > 0.05$) or emotional contagion ($\beta = 0.074$, $P > 0.05$). Therefore, H_1 and H_2 are supported, while H_3 and H_4 are not supported. In exploring the influence of anchor's emotions on consumers' psychological state, the results showed that: Both anchor's positive emotion ($\beta = 0.196$, $P < 0.001$) and anchor's negative emotion ($\beta = 0.131$, $P < 0.01$) had positive effects on emotional contagion, thus supporting H_5 and H_6. Moreover, this research tested the hypothesized relationship between psychological states and impulsive buying behavior. The results indicate that social presence had a positive effect on emotional contagion ($\beta = 0.177$, $P < 0.01$). Both social presence ($\beta = 0.334$, $P < 0.001$) and emotional contagion ($\beta = 0.265$, $P < 0.001$) had significant positive effects on impulsive buying behavior. Therefore, these findings indicate that H_7, H_8 and H_9 are supported.

Table 4: Results of hypothesis testing (n=442)

PLS path	β	T statistics	Hypothesis Result
CAI->SP***	0.438	8.911	H1: supported
CAI->EC***	0.209	3.814	H2: supported
CCI->SPn.s.	0.096	1.788	H3: not supported
CCI->ECn.s.	0.074	1.588	H4: not supported
APE->EC***	0.196	3.826	H5: supported
ANE->EC**	0.131	2.877	H6: supported
SP->EC**	0.177	3.165	H7: supported
SP->IBB***	0.334	6.904	H8: supported
EC->IBB***	0.265	5.453	H9: supported

Notes: a. * Significant at $p < 0.05$ level. b. ** Significant at $p < 0.01$ level. c. *** Significant at $p < 0.001$ level.d. n.s. Not supported.

6. DISCUSSION

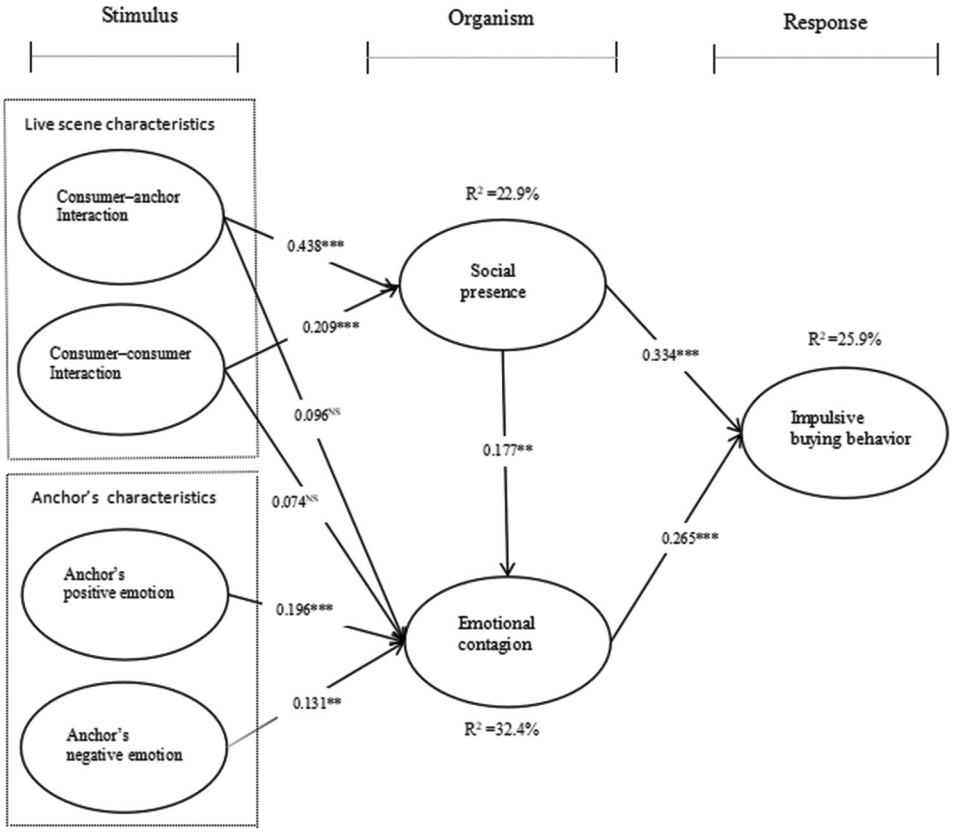
The empirical results obtained from 442 valid questionnaires indicated that 7 of the 9 hypotheses were supported. Among them, H_1, H_2, H_5-H_9 were supported, while H_3 and H_4 were unsupported. The next section offers a comprehensive discussion of the research findings by examining whether each hypothesis was supported.

6.1. Effect of the Interaction on Consumers' Psychological States

Consumer and anchor interaction showed a significant positive effect on social presence, which supported H_1. This result is consistent with prior studies, which suggest that interaction has a significant positive effect on social presence in the context of LSC (Chen and Liao, 2022; Ma et al., 2022). Meanwhile, Consumer and consumer interaction had a significant positive effect on emotional contagion. Therefore, H_2 was supported. This result echoes the findings of Lo et al. (2022), whose study on IBB demonstrated that para-social interaction positively affects affective response. The H_1 and H_2 findings emphasize the significant role of the anchor in the interaction process.

However, this study did not identify the relationship between consumer- consumer interaction and social presence. Therefore, H_3 was unsupported. The result is inconsistent with Ma et al. (2022). Similarly, this study did not reveal the relationship between consumer-consumer interaction and emotional contagion. Therefore, H_4 was not supported, which is also inconsistent with the findings of previous studies (Lo et al., 2022; Han et al., 2024). One possible reason why H_3 and H_4 were not supported is that consumers' sense of realism and emotional responses during live stream are more likely to be primarily driven by the anchor (Ma et al., 2022). Moreover, interaction among consumers is mainly conducted through text-based comments rather than real-time visual communication. Drawing on the theory of social presence, when all other conditions remain the same, a higher or lower level of media richness may increase or decrease social presence (Short et al., 1976; Oh et al., 2018; Ma et al., 2022). As a result, the authenticity and emotional transmission generated by consumer–consumer interaction may be limited, making it difficult to significantly affect consumers' social presence and emotional contagion.

Figure 2: Research model with the estimated results
. *Significant at P < 0.05 level, **Significant at P < 0.01 level, ***Significant at P < 0.001 level, n.s.: Not supported



6.2. Effect of the Anchor's Emotion on Consumers' Psychological States

Anchor's positive and negative emotions have a positive relationship with emotional contagion, supported by H_5 and H_6. Existing literature confirms that positive and negative emotions have varying degrees of influence on emotional contagion. However, it remains controversial which of the two has a stronger effect on emotional contagion (Coviello, et al., 2014; Ferrara and Yang, 2015; Fan et al., 2016; Fan et al., 2018; Soroka et al., 2019; Kramer et al., 2014). The empirical results of this study show that both anchor's positive and negative emotions enhance the emotional contagion, indicating that consumers' emotions in a live streaming context are not solely driven by the anchor' positive emotion. This supports the findings of previous research on emotional contagion in different scenarios. Furthermore, this study also concludes that compared to the anchor's negative emotion ($\beta = 0.131$, $P < 0.01$), the anchor's positive emotions have a stronger impact on emotional contagion ($\beta = 0.196$, $P < 0.001$).

6.3. Effect of Relationships among Consumers' Psychological States

Social presence positively affected emotional contagion, and thus H_7 was supported. This finding can be further explained by the theory of emotional contagion, which suggests that emotional contagion is essentially an automatic mimicry process that leads individuals to converge emotionally with others (Meltzoff and Moore, 1977; Haviland and Lelwica, 1987; Hatfield et al., 1994). In the context of LSC, when consumers perceive a stronger sense of real presence, automatic mimicry and emotional convergence may be strengthened, therefore, emotional contagion is more easily influenced by social presence.

6.4. Effect of Consumers' Psychological States on IBB

Social presence has a positive impact on IBB, thus supporting H_8. This finding is consistent with the conclusions of Shi et al. (2025), which find that social presence positively impacts IBB in LSC scenarios. Furthermore, emotional contagion is also positively associated with IBB, supporting H_9. This finding supports the previous view that impulsive buying is an emotion-driven process (Rook, 1987; Beatty and Ferrell, 1998; Lo et al., 2022).

7. CONCLUSION

In response to the current practical problems and theoretical gaps in the field of LSC, the study proposes a relatively comprehensive research framework to explain how the live scene characteristics and the anchor's characteristics jointly affect consumers' psychological states and IBB. Furthermore, the study further emphasizes the relationship between consumers' psychological states. The findings show that social presence positively affects emotional contagion.

Overall, this study is considered a further exploration in theoretical research regarding LSC characteristics, consumer's psychological states and IBB in the LSC field. Moreover, the research offers

practical insights for anchors and LSC merchants, helping platforms develop more effective strategies to address issues related to interaction and anchor's emotions, thereby boosting business performance.

7.1. Implications

In the first place, this research extends the S-O-R framework by incorporating social presence theory and emotional contagion theory to construct and validate a new model in the Chinese LSC context. More importantly, this model integrates the previously fragmented research on LSC studies, incorporating the live scene characteristics and anchor's characteristics into a unified framework, thereby building a theoretical bridge among LSC features, consumers' psychological factors, and IBB.

Secondly, different from previous research on IBB, which has primarily focused on a single interaction relationship (Liu et al., 2022a; Han et al., 2024), this study separately investigated the relationships between consumer-anchor interaction, consumer–consumer and consumers' psychological states. Furthermore, this study addresses a long-neglected but theoretically significant research gap in the LSC literature by examining whether anchor's positive and negative emotions influence the consumer's emotional contagion and which type of emotion has a greater impact on emotional contagion (Kramer et al., 2014; Coviello, et al., 2014; Ferrara and Yang, 2015; Fan et al., 2016; Fan et al., 2018; Soroka et al., 2019). Surprisingly, this study finds that not only anchor's positive emotions but also anchor's negative emotions have a positive effect on emotional contagion. Meanwhile, it also reveals that positive emotion shows a stronger influence on emotional contagion than negative emotion. These findings fill a gap in the existing literature and promote the application of emotional contagion theory in LSC scenarios, providing a more detailed explanation for how the different types of anchor's emotions shape the consumer's psychological states and IBB.

Thirdly, this study also explored the relationship between consumers' psychological states. Unlike previous studies, which typically only considered psychological states such as social presence and flow experience as independent influencing factors (Chen and Liao, 2022; Huo et al., 2023), The research results indicate that social presence not only positively influences IBB but also has a positive impact on emotional contagion, which in turn also positively affects IBB. This suggests that social presence is not only a direct driving factor for IBB, but also closely related to consumers' emotional contagion. In other words, social presence can not only directly enhance consumers' IBB, but may also provide an important psychological basis for IBB by stimulating stronger emotional states.

This research has important practical implications for both anchors and live streaming platforms. For anchors, research findings indicate that they serve as a dominant force in the interaction process and have a positive impact on consumers' psychological state. Therefore, anchors should interact with consumers more actively to enhance consumers' social presence and emotional contagion. For example, anchors can promptly respond to consumers' real-time questions, offer small gifts, or organize lucky draws. Such effective interactions can help enhance consumers' shopping experience.

Furthermore, emotions are a key anchor's personal characteristic. Results show that both anchors' positive and negative emotions positively influence consumers' emotional contagion. Therefore, anchor's emotional management should not be limited to controlling positive or negative emotions, it should focus more on understanding consumers' true emotional needs through more effective interaction, creating emotional resonance with consumers, and thus uncovering the emotional needs of potential consumers. By providing positive emotional value, anchors can further stimulate consumers' impulsive buying behavior and help firms improve profitability.

For live streaming platforms, managers need to recognize the significance of social presence during live streams. This research indicates that social presence positively affects emotional contagion and IBB. Therefore, live streaming platforms should strive to create more vivid live streaming scenarios to provide users with a better shopping experience.

However, the results indicate that consumer and consumer interaction has no significant impact on the consumer's psychological state. The platform could offer richer forms of interaction, such as more realistic and vivid dynamic expressions and smoother private video channels among viewers to enhance the quality of interaction between consumers.

7.2. Limitations and Future Research

The study has several limitations. First of all, the sample source is biased to a certain extent. Due to this, the study collected data through questionnaires, there may be a cognitive bias between the data and actual behavior. Future research could utilize technologies such as web scraping for data collection to further improve the reliability of the results (Li et al., 2024a).

Secondly, although no explicit mediation hypotheses were developed in this study, the results showed multiple mediation relationships, consistent with the theoretical logic of the S-O-R framework, indicating that Organism plays a mediating role in the relationship between Stimulus and Response. In this area, future studies need to explore the mediation relationships within this research framework.

Thirdly, the respondents in this study were only Chinese live streaming users, which may restrict the generalization of the empirical results. Future research could select samples from different countries and cultural backgrounds to investigate differences in consumer buying behavior across different cultural contexts.

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APPENDIX

Appendix A: Construct options measurement item references

Consumer-anchor interaction	CAI1	Through live streaming, I can interact with the anchor in real time.	Ma et al., 2022
	CAI2	When shopping in live streaming, the anchor can reply to my questions and comments in time.	
	CAI3	When shopping in live streaming, the anchor's reply is closely related to my question.	
	CAI4	When shopping in live streaming, the anchor's reply can meet my needs.	
Consumer-consumer interaction	CCI1	In live streaming, I can interact with other consumers.	Ma et al., 2022
	CCI2	In live streaming, consumers can share their own shopping experience.	
	CCI3	In live streaming, consumers can communicate with each other about their product experience.	
Anchor's positive emotion	APE1	When shopping in live commerce, I usually feel the anchor seems excited.	Babin and Attaway, 2000
	APE2	When shopping in live commerce, I usually feel the anchor seems bold.	
	APE3	When shopping in live commerce, I usually feel the anchor seems energetic.	
	APE4	When shopping in live commerce, I usually feel the anchor seems happy.	
Anchor's negative emotion	ANE1	When shopping in live commerce, I usually feel the anchor seems disgusted.	Babin and Attaway, 2000
	ANE2	When shopping in live commerce, I usually feel the anchor seems bored.	
	ANE3	When shopping in live commerce, I usually feel the anchor seems sleepy.	
	ANE4	When shopping in live commerce, I usually feel the anchor seems annoyed.	
Social presence	SP1	I can feel a sense of contact with viewers in the live streaming.	Chen and Liao, 2022
	SP2	I can feel a sense of socialization in the live streaming.	
	SP3	I can feel a sense of human warmth in the live streaming.	
Emotional contagion	EC1	In live streaming, what the anchor says can move my emotions.	Chen and Zhou, 2024
	EC2	In live streaming, anchor's words can touch me.	
	EC3	In live streaming, anchor's words can make me feel the same emotions she/he does.	
Impulse buying behavior	IBB1	I often find myself succumbing to impulse buying tendencies when browsing through products on this live-streaming channel.	Li et al., 2024
	IBB2	During the live streaming, I made an impulse purchase without taking the time to fully consider and evaluate the product.	
	IBB3	There were certain products that had never caught my attention before; however, upon seeing the anchor's recommendations, I found myself buying them impulsively.	
	IBB4	Following the anchor's informative and eloquent presentation, I was struck with a sudden realization of my need for a particular product, which compelled me to make a purchase.	