

Understanding Online Impulse Buying in China's Live E-Commerce: The Role of Key Opinion Leaders and Perceived Trust

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ABSTRACT

In the current environment where live streaming e-commerce is booming, creating key opinion leaders has become a very common and effective marketing strategy. Perceived trust, an important antecedent factor influencing consumers buying behaviour, deserves more exploration. This study examines the impact of key opinion leaders on the live streaming e-commerce industry in China, focusing on the interaction and expertise dimensions of key opinion leaders and their influence on consumers' impulse buying behaviour. A quantitative research method was adopted, and data were collected through a questionnaire survey on Questionnaire Star forms. The survey participants were 203 users of Douyin, Kuaishou, and Taobao Live aged between 18 and 34, currently residing in Guangxi, Jiangxi, and Anhui provinces in China. The existing measurement items were adjusted accordingly for the live streaming e-commerce industry, and the data were analysed using SmartPLS 4.0. The results show that only expertise has a direct effect on perceived trust, which in turn mediates the relationship between the expertise of key opinion leaders and consumers' online impulse buying behaviours. In contrast, the interaction dimension of key opinion leaders does not have a direct or indirect effect on online impulse buying behaviour. The findings of this study provide valuable insights for the live streaming e-commerce industry, which is on the rise in this digital age.

Keywords: *expertise, interaction, key opinion leaders, live e-commerce, online impulse buying behaviour, perceived trust*

INTRODUCTION

Online impulse buying refers to sudden purchasing behaviour in an online environment driven by external stimuli or internal emotions without careful consideration or planning (Verhagen & Van Dolen, 2011). It is fundamentally different from planned buying, hedonic buying, and compulsive buying in terms of core motivations, psychological mechanisms, and behavioural consequences (Darrat et al., 2016). In the past, studies on impulse buying generally believed that such frequent irrational consumption may lead to economic pressure or subsequent regret for consumers (Lee & Johnson, 2010). However, nowadays, due to the rapid popularisation of mobile shopping, the rapid expansion of

personalised advertising algorithms, visual appeal, and the social influence of live broadcasts, consumption barriers have been significantly reduced, impulsive inducements have been amplified, and consumers are more likely to accept the instant decision of "click to buy" (Chan et al., 2017). In recent years, research on impulse buying has grown significantly and rapidly, and website design, psychological traits, marketing strategies, and emotional states have all been explored as key antecedents to impulse buying (Franjković et al., 2022; Kholis et al., 2023; Anoop & Rahman, 2024), which also reflects the fact that understanding this behaviour is crucial for both academics and practitioners.

In China, live streaming e-commerce has experienced rapid growth, with suppliers increasingly leveraging this medium to enhance sales efficiency (Hu & Ming, 2019). Live streaming e-commerce has completely changed how consumers shop because of the ability to watch live videos and communicate with merchants in real time. Qing & Jin (2022) believed live streaming e-commerce has more advantages than traditional online shopping. Merchants can quickly respond to customer enquiries through e-commerce live streaming platforms, display the necessary details of goods in real time, and guide consumers to make impulse purchases. Key opinion leaders of live streaming e-commerce can use their reputation, expertise, and interaction to enhance consumers' trust and emotions, inject emotional attributes into online shopping, and shorten consumers' purchase decision time (Zhao et al., 2024). Therefore, understanding the important factors that affect impulse buying behaviours is crucial for merchants to attract new users, improve conversion rates, and gain competitive advantages in the market.

Previous studies have been more about offline impulse buying. Some experts believe that offline physical stores provide higher levels of sensory stimulation than online shopping, making triggering emotional and subconscious reactions easier, thereby prompting impulsive purchases (Le et al., 2024). However, given the rapid development of live streaming and e-commerce, the results of earlier studies may not apply to the live streaming environment. Live streaming often triggers impulsive purchases due to its high engagement and sensory stimulation (Zhang et al., 2023). Integrating social and commercial activities has attracted consumers' attention in recent years. When users browse social media, they are exposed to information from various sources, including merchants, news media, friends, celebrities, and experts, often leading to impulse buying (Shamim & Islam, 2022). Therefore, given that the triggers of online impulse buying behaviour may differ from those in traditional environments, it is extremely urgent to fill the gap in the research on online impulse buying behaviour.

There are many separate studies on key opinion leaders, perceived trust, and impulse buying behaviours, but there is a lack of research on how these factors affect each other. This study employs SOR theory and persuasion theory to examine the traits of key opinion leaders that influence consumers' impulse buying behaviour, and it aims to verify whether perceived trust mediates the relationship between these traits and impulse buying behaviour through empirical research. This research provides a systematic contextual framework for future studies in live streaming marketing and establishes a theoretical foundation for subsequent investigations.

LITERATURE REVIEW

This literature review outlines the theoretical framework underpinning this study and analyses the relevant theories applied. It then focuses on online impulse buying behaviour in the context of live e-commerce, emphasising the dynamic mechanisms of online impulse buying and pointing out the persistent research gaps in this area. Subsequently, this chapter proposes a conceptual framework that outlines all relevant variables, clarifies the relationships between the various constructs, and proposes several hypotheses based on the established framework. This review draws on existing research results from multiple disciplines, such as education, psychology, and sociology, to fully understand these concepts and their interactions.

2.1 Theoretical Overview

2.1.1 S-O-R Theory

The SOR model, which originated in psychology, explains how environmental characteristics affect user behaviour and psychology. It was first proposed by Russell & Mehrabian (1974). The model believes that external stimuli affect the internal states of individuals, thereby shaping their behavioural responses. Initially, the application of the S-O-R model focused mainly on offline physical stores, such as retail and service environments, to study how personal physical conditions affect responses to situational factors in behaviour. However, in the past decade, with the popularity of online shopping, research has shifted to virtual environments. Eroglu (2001) applied the S-O-R theory to e-commerce web pages based on environmental psychology research. He viewed e-commerce characteristics as external stimuli and focused on perceived usefulness and pleasure, thereby conceptualising consumers' cognitive and emotional processes. With the rise of live e-commerce in recent years, scholars have used the S-O-R theory to analyse impulse buying behaviour. Gong (2021) integrated persuasion theory, meaning maintenance, product involvement, and the S-O-R model, to examine the host behaviour, consumer cognition, product attributes, and scene atmosphere in live e-commerce, and systematically explored impulse buying behaviour. Sun et al. (2023) established a model of the connection between time pressure, perceived pleasure, and impulse buying behaviour based on the S-O-R theory and combined with the characteristics of e-commerce live streaming. Chen and Yue (2023) constructed a three-stage model to link the characteristics of online celebrities, live streaming scenes, flow experience, and impulse buying intention, and used hedonistic shopping values as a moderating factor.

This study adopts the S-O-R model to explore factors influencing impulse buying behaviours in e-commerce live streaming. The study explores how external stimuli, such as interactions with key opinion leaders and experts, affect consumers' perceived trust, thereby triggering impulse buying behaviour. In summary, the SOR model shows that during live streaming, external stimuli affect consumers' internal state, affecting their impulse buying behaviour. Understanding these dynamics can help marketers and anchors optimise their content and promotions to take advantage of the impulse buying phenomenon.

2.1.2 Persuasion Theory

Persuasion theory from the field of psychology aims to help people better understand and influence their decision-making process (Petty & Cacioppo, 1986). It is widely used in psychology, marketing, and other fields in modern times (Gardikiotis & Crano, 2015). The process by which consumers watch e-commerce live broadcasts, receive information from e-commerce live broadcast rooms, and generate online purchase intentions is a persuasion process (Song et al., 2024). Although persuasion theory has rarely been applied in the e-commerce live streaming industry and related research on purchase intention, its research has shown a rapid growth trend. Adaji et al. (2020) pointed out that persuading online consumers is a challenge because users can easily compare multiple quotes in an online environment; on the other hand, they cannot try the products in advance. Turhan & Özbek (2013) found that when consumers have a positive attitude towards the seller's persuasion attempts, their satisfaction will significantly affect their willingness to share knowledge and purchase intention. Zhao et al. (2024) used persuasion theory for the first time to confirm that well-known, professional, and attractive product anchors, effective and prominent product information, and interactive behaviour will positively enhance users' online shopping behaviour when watching live broadcasts. In summary, the model connotation of persuasion theory is highly consistent with the process orientation of online purchases in e-commerce live streaming. Therefore, based on the perspective of persuasion theory, this study explores the impact of external stimulus factors on e-commerce live streaming to further enrich persuasion theory.

2.2 Key Opinion Leader

The concept of key opinion leaders originates from the two-step flow theory of communication. The theory holds that the information transmitted by the media does not reach the audience directly but

through the mediation of key opinion leaders, who integrate and summarise the information with their own views and experiences and then pass it on to the audience (Nisbet & Kotcher, 2009). As influential figures in consumer shopping, key opinion leaders attract consumers with their unique personalities. Key opinion leaders can select products that meet consumer needs from a large inventory, thereby reducing information asymmetry in online transactions (Kuksov & Liao, 2019). Therefore, consumers are more inclined to seek information from key opinion leaders with higher expertise. Key opinion leaders have high popularity, can build fan communities, generate star effects, and stimulate consumers' willingness to buy (Fakhreddin & Foroudi, 2022).

There are multiple perspectives on the definition of key opinion leaders in academia, but expertise, credibility, attractiveness, and interaction are the most commonly used dimensions (Thuy et al., 2024). Among them, expertise covers knowledge reserves, domain authority, and information accuracy and is generally considered to be the most influential. Credibility emphasises the authenticity and credibility of key opinion leaders; interaction refers to the ability to communicate and interact with the audience in real time; attractiveness covers physical attractiveness and personal charm (Li et al., 2022). This study chooses expertise and interaction as the key dimensions of key opinion leaders because they are more likely to affect consumers' psychological state and stimulate consumers' impulsive purchasing decisions (Chen et al., 2024).

2.2.1 Interaction

Interaction refers to the degree of positivity shown by key opinion leaders in the two-way information exchange between online platforms and consumers (Liu et al., 2019). Consumers feel more at risk in online shopping than in offline shopping. Considering the perceived risk, the information sharing of key opinion leaders is an important source of consumer trust (Ping et al., 2023). He and Jin (2024) found that in the virtual interpersonal network structure of social e-commerce, key opinion leaders can win consumers' trust with their expertise and interactive activity, significantly improving their willingness to buy. Frequent, genuine, and responsive interactions help humanise key opinion leaders, creating a sense of intimacy and relatability (Tran et al., 2025). When key opinion leaders actively engage in communication, such as responding to comments, sharing personal experiences, and providing personalised product recommendations, audiences are more likely to view them as trustworthy and easy to understand (Atiq et al., 2022). Therefore, based on the above findings, the following is hypothesised:

Hypothesis 1: Interaction has a positive effect on perceived trust.

2.2.2 Expertise

Gilly et al. (1998) described the expertise of key opinion leaders as referring to the level of knowledge and experience perceived by consumers. Expertise includes product-related knowledge and experience in product use and service. This expertise enables information recipients to perceive the communicator's familiarity and expertise with the product (Treem & Leonardi, 2017). The professional ability of key opinion leaders can significantly affect consumer trust. Their rich product knowledge and experience allow them to help consumers cope with decision-making challenges (Chen et al., 2024). The certainty brought by their professional skills reduces consumers' perceived risk in the purchase evaluation process, making the opinions of highly skilled communicators more likely to be favoured and adopted by consumers (Li et al., 2020). Internet key opinion leaders have rich product knowledge and consumption experience, which helps solve complex purchase problems, such as product selection involving complex expertise, leading to enhanced consumer trust (Niu et al., 2023). Thus, the following hypothesis is formulated:

Hypothesis 2: Expertise has a positive effect on perceived trust.

2.3 Perceived Trust

Studies on trust have involved many fields, such as ethics, psychology, sociology, management, and marketing. Different disciplines and research topics have different definitions of trust. Rotter (1980) described trust as a belief or expectation. Patton and Wickens (2024) defined trust as a sense of security

and a willingness to rely on someone or something. In e-commerce live streaming, perceived trust refers to an attitude characterised by a tendency to believe that others or online groups can provide benefits to the individual. Some scholars defined perceived trust as an emotional state in which a person encourages another person to trust based on the satisfactory behaviour of another person (Singh & Sinha, 2020). Whether it is a traditional e-commerce platform or social e-commerce, trust is one of the key factors affecting consumers' purchasing behaviour. It can effectively reduce consumers' perceived risks in the virtual consumption environment, thereby increasing the probability of online transactions.

Wu et al. (2016) found that trust has a significant influence on consumers' impulse to purchase online. Specifically, consumers with a longer relationship with retailers tend to trust more and are more likely to have a purchasing impulse. When consumers perceive that online sellers offer good prices and ensure safe, quality transactions, their positive expectations intensify, increasing the likelihood of impulse buying (Lavuri et al., 2022). Furthermore, if consumers feel confident in others' evaluations, they may follow the purchasing choices, thus generating a herd mentality. In this case, consumers' trust in others is an important determinant for impulse buying (Ye et al., 2022). Therefore, it can be inferred that:

Hypothesis 3: Perceived trust has a positive effect on online impulse buying behaviours.

2.4 Online Impulse Buying Behaviour

Beatty and Ferrell (1998) defined it as the strong desire consumers have for immediate purchase after browsing products online based on personal needs. This process will guide consumers to make immediate purchases. Kalla and Arora (2011) referred to impulse buying as a sudden and reckless buying behaviour that occurs without prior planning under the stimulation of a specific environment. Eroglu et al. (2001) believed that online stores provide consumers more convenience, value (quick price comparison), and hedonic consumption opportunities in time and space, making it easier to trigger impulse buying. Chan et al. (2017) studied impulse buying from the perspectives of the shopping environment, price, and time pressure of online promotional websites. The study suggested that online impulse shopping is an unplanned purchasing behaviour, a sudden, strong desire for consumers to buy a certain product after being stimulated by online promotions. Li et al. (2022) believed that when consumers browse products online based on certain needs, they have a sudden, strong, and immediate psychological reaction of purchasing desire after being stimulated by some kind of stimulus. This psychology makes consumers want to buy immediately, prompting them to maximise their instantaneous utility. Online impulse buying behaviour refers to consumers' desire and impulse to buy unplanned, recommended products while watching live broadcasts, short videos, or graphic content (Kathuria & Bakshi, 2024).

2.5 The Mediating Role of Perceived Trust

Under the stimulation of an external environment, individuals will experience changes in their subjective feelings, which affect their decisions and behaviours (Kemp, 2018). When individuals watch e-commerce live broadcasts, consumers tend to have stronger emotional trust in recommended products and have an impulsive desire to obtain and use them as soon as possible (Zhang et al., 2022). When introducing products, key opinion leaders in e-commerce live broadcasts will purposefully guide consumers' thinking to increase sales. In this process, consumers are deliberately tempted, and their favorability and trust in the products surge, thus generating an impulsive willingness to buy (Shamim et al., 2024). In an empirical study, Tian (2024) proved that excellent anchors will enhance consumers' impulsive shopping intentions through the mediating role of perceived trust. Therefore, based on this argument, the following hypotheses are proposed:

Hypothesis 4: Perceived trust mediates the relationship between interaction and online impulse buying behaviour

Hypothesis 5: Perceived trust mediates the relationship between expertise and online impulse buying behaviour

2.6 Research Framework

As illustrated in Figure 1, this study examines how the interaction and expertise of key opinion leaders affect consumers' online impulse buying behaviour, with perceived trust being a mediating variable. The conceptual framework is based on the stimulus-organism-response (SOR) model and persuasion theory and posits that the two dimensions of key opinion leaders, namely interaction and expertise, act as external stimuli (S), affecting consumers' internal psychological states, especially perceived trust (O), and ultimately driving impulse buying behaviour, thereby forming a response (R). This study uses the interaction and expertise of key opinion leaders in e-commerce live broadcasts as independent variables, perceived trust as a mediating variable, and online impulse buying behaviour as a dependent variable. Interaction is derived from previous studies on key opinion leaders (Thuy et al., 2024; Chen et al., 2024), and expertise is derived from studies on persuasion theory and key opinion leaders (Zhao et al., 2024; Thuy et al., 2024; Chen et al., 2024). Perceived trust is a key organismic factor or mediating variable associated with decision-making in online environments (Singh & Sinha, 2020; Li et al., 2023); the concept of online impulse buying behaviour originates from the literature on consumer behaviour (Beatty & Ferrell, 1998; Kalla & Arora, 2011; Eroglu et al., 2001). This framework integrates existing theories and reflects that the path of key opinion leaders in shaping consumer behaviour in live e-commerce is based on perceived trust.

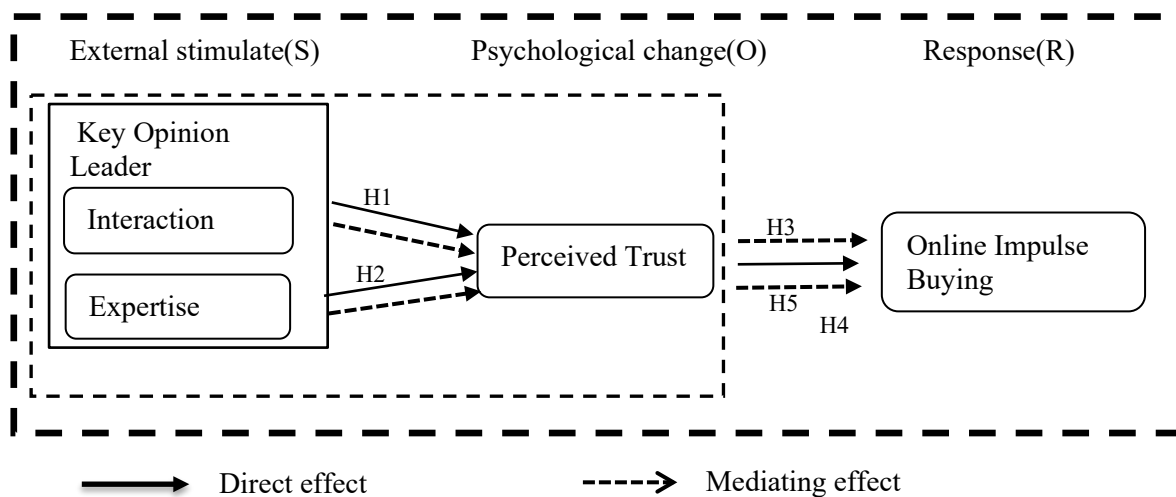


Figure 1: Conceptual framework

RESEARCH METHODS

3.1 Research Design

This study uses a quantitative research design to test the proposed hypotheses and explore the relationships between key opinion leaders, perceived trust, and online impulse buying behaviours. This is a causal study because it explains the relationship between the causal variables and their effects. Data were collected through a self-administered online survey using a questionnaire star form. The choice of this method was based on the assumption that the respondents had access to the internet. In addition, to ensure the reliability and validity of the measurement scale, a questionnaire pre-test was conducted before the actual data collection, including expert review by three experts from Universiti Teknologi Mara and feedback from respondents.

3.2 Research Measurement

The questionnaire of this study was created according to the research purpose, the constructed model, and the corresponding scale items. The concepts measured by the questionnaire include

interaction, expertise, perceived trust, online impulse buying behaviour, and basic information statistics, as shown in Table 1.

The measurement scale designed for this study mainly comes from research scales of other scholars. The scale items have been modified according to the current research context so that respondents can understand them correctly. Among them, three items on interaction were adapted from Voorveld et al. (2018), four items on expertise were adapted from Ladhari et al. (2017), four items on perceived trust were adapted from Singh and Sinha (2020), and four items on online impulse buying behaviour were adapted from Wongkitrungrueng and Assarut (2020). The wording of each item has been slightly modified to fit the context of this study. The items of the above questions use a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. The Likert scale is widely used in survey research; it is particularly suitable for subjects such as social sciences, management, marketing, education, tourism, and healthcare to measure opinions and attitudes (Jebb et al., 2021).

In order to ensure Chinese respondents' comprehension and to avoid ambiguity, misunderstanding, and vagueness, the researcher provided questionnaires in both Mandarin and English. The questionnaire was asked in English, then translated into Chinese and reviewed by professional translators. Then, a second independent translator, who was unaware of the original English version, translated the Mandarin version back into English. The original and back-translated English versions were then compared to identify discrepancies in meaning, wording, or nuance. Necessary revisions were made to ensure conceptual and linguistic equivalence.

Table 1: Scale Items

Constructs	No. of Items	Scale
Interaction (INT)	4 items	Five-Point Likert Scale
Expertise (EXP)	4 items	Five-Point Likert Scale
Perceived Trust (PT)	4 items	Five-Point Likert Scale
Online Impulse Buying Behaviour (OIBB)	4 items	Five-Point Likert Scale

3.3 Sampling

The target group for this study is young Chinese consumers who have shopped online through social e-commerce sites, such as Kuaishou, Taobao, and Douyin, and have watched live broadcasts on these platforms at least once. The reason for choosing them is that China has the highest internet penetration rate in the world and is a leader in both live broadcasting and social e-commerce. This study focuses on young people aged 18 to 34 because they have strong purchasing power and are prone to impulse shopping. Research shows that consumers between the ages of 18 and 34 have twice the purchasing power of consumers over the age of 35, and this group is growing at an annual rate of 11% (iResearch, 2023). Due to time and budget constraints, the target population of this study was young people living in the Jiangxi, Guangxi, and Anhui regions in China. Data collection was conducted from September to November 2024. Selected respondents were screened to ensure they met the specified sampling criteria. The minimum sample size calculated using the G*Power application for this study is 123. The data collection process employed a purposive sampling to select respondents. The questionnaire survey was conducted through the "Questionnaire Star" online platform.

3.4 Respondents' Profile

A total of 203 respondents participated in this study. The age distribution of respondents shows that the age group of 18–24 years old accounts for 44.8% (91 people). In terms of gender, the participants comprised 52 male respondents (25.6%) and 151 female respondents (74.4%), which is consistent with the actual situation. In live e-commerce, female consumers dominate, and the proportion

of female practitioners is a significant feature. Female consumers participate more in live shopping and are more inclined to make impulse purchases in the live broadcast room (Long & Tefertiller, 2020).

Regarding mobile phone usage for online shopping, the data indicates that every respondent habitually surfs the internet daily. Notably, the largest group of respondents (46.5%) spends more than 5 hours online each day. Moreover, all respondents have experienced impulse purchases, indicating that they meet the necessary criteria to be considered suitable participants in this study.

DATA ANALYSIS

4.1 Measurement Model Evaluation

This study adopted the PLS-SEM method with SmartPLS 4.0 software, following the recommendations of Henseler et al. (2015). The validity and reliability of the measurement model were assessed following the established criteria proposed by Hair et al. (2019) and Ramayah et al. (2018). The indicators included item loadings, average variance extracted (AVE), and composite reliability (CR) assessments. Therefore, the loading, AVE, and CR should be 0.7, 0.5, and 0.7, respectively.

As shown in Table 2, all loadings except one item (INT1) were considered acceptable because the values of all loadings exceeded 0.7. In addition, all AVE and CR values consistently exceeded the recommended thresholds of 0.5 and 0.7, indicating that all measurements had reliability and internal consistency within the model. In addition, the Cronbach's alpha coefficient values in this study ranged from 0.893 to 0.956, which exceeded 0.7, indicating high reliability. This further confirmed the validity of these measurements by accurately measuring the expected theoretical constructs.

Table 2: Measurement Model Analysis

Construct/Items	Loadings	Cronbach's Alpha	CR	AVE
Interaction				
INT1	Deleted	0.811	0.857	0.611
INT2	0.862			
INT3	0.874			
INT4	0.838			
Expertise				
EX1	0.843	0.844	0.893	0.677
EX2	0.837			
EX3	0.785			
EX4	0.824			
Perceive Trust				
PT1	0.827	0.853	0.901	0.694
PT2	0.847			
PT3	0.836			
PT4	0.821			
Online Impulse buying behaviour				
OIBB1	0.845	0.885	0.921	0.744
OIBB2	0.838			
OIBB3	0.858			
OIBB4	0.909			

Finally, HTMT analysis has been used to assess discriminant validity. According to the thresholds specified by Henseler et al. (2015) and Franke and Sarstedt (2019), the HTMT value should not exceed 0.85. Based on the stricter standard and the loose mode standard, the HTMT value should be equal to or less than 0.90. As shown in Table 3, the highest value recorded was 0.677, confirming that the respondents were able to distinguish between variables. In summary, both validity assessments affirmed the reliability and validity of the measurement items.

Table 3: Discriminant Validity

Dimensions	EXP	INT	OIBB	PT
EXP				
INT	0.647			
OIBB	0.176	0.209		
PT	0.273	0.155	0.677	

4.2 Structural Model Evaluation

The path coefficients, standard errors, t-values, and p-values of the structural model are presented in Table 4, following the recommendations of Hair et al. (2019). These statistical indicators were generated using the 5,000-sample resampling bootstrap method described by Ramayah et al. (2018). Lovell (2020) emphasised that the p-value should not be the sole determinant of a hypothesis's significance. Instead, a combination of multiple criteria, including *p*-values, confidence intervals, and effect sizes, should be applied.

Table 4 presents the results of the hypothesis testing. Contrary to expectation, interaction does not significantly affect perceived trust (H1: $\beta = 0.020$, $p = 0.405$). On the other hand, expertise has a positive effect on online impulse buying behaviour, though the effect is marginally significant (H2: $\beta = 0.020$, $p = 0.079$, $f^2 = 0.041$). Perceived trust shows a strong and statistically significant positive influence on online impulse buying behaviour, with a large effect size (H3: $\beta = 0.180$, $p = 0.000$, $f^2 = 0.541$).

With respect to the mediating effects, the indirect effect of interaction on online impulse buying behaviour via perceived trust is not statistically significant (H4: $\beta = 0.012$, $p > 0.05$), indicating that perceived trust does not mediate this relationship; hence, H4 is not supported. Conversely, the indirect effect of expertise on online impulse buying behaviour through perceived trust is statistically significant (H5: $\beta = 0.139$, $p = 0.002$), providing support for H5.

Table 4: Results of Hypothesis Testing

Relationship	Std Beta	Std Dev	t-value	p-value	BCI LL	BCI UL	f^2	Supported
H1: INT -> PT	0.020	0.082	0.241	0.405	-0.111	0.163	0.000	No
H2: EXP -> PT	0.235	0.079	2.982	0.079	0.120	0.370	0.041	Yes
H3: PT->OIBB	0.593	0.049	12.010	0.049	0.512	0.674	0.541	Yes
H4: INT->PT->OIBB	0.012	0.049	0.237	0.406	-0.086	0.081		No
H5:EXP->PT->OIBB	0.139	0.048	2.879	0.002	0.062	0.213		Yes

DISCUSSION

Through empirical analysis, this study found that the interaction of key opinion leaders in live e-commerce scenarios did not have a significant impact on consumers' perceived trust (Hypothesis 1). This conclusion differs from some previous studies (He & Jin, 2024; Tran et al., 2025; Atiq et al., 2022). The outcome may be because in live e-commerce, the fast-paced environment may limit the depth and sincerity of interaction, thus reducing its impact on trust. Audiences may value clear product demonstrations, transparency, and consistent information more than conversational interactions. Although interaction is valuable, it may not directly affect perceived trust unless combined with credible content and professional delivery methods. In addition, with the standardisation of the live e-commerce industry, consumers have gradually formed a multiple trust framework of "KOL-platform-brand." The influence of key opinion leaders' single interactive behaviour has been diluted, and the measurement dimension of key opinion leaders' interaction may not fully capture the key elements of trust construction, and surface interaction may not be transformed into deep trust.

This study's results strongly support Hypothesis 2, which holds that the expertise of key opinion leaders will positively affect consumers' perceived trust. This result is consistent with many previous studies (Chen et al., 2024; Li et al., 2020; Niu et al., 2023), which consistently show a significant association between expertise and perceived trust. In addition, the findings are consistent with the theoretical basis of the "Persuasion Theory." The theory suggests that the expertise and ability of the persuaders (in this study, the key opinion leader) when conveying information can significantly enhance the expertise and credibility of their views. This expertise and ability can substantially impact the effectiveness of their persuasive efforts. The results of this study show that in the live e-commerce environment, consumers rely on cues such as expertise to evaluate the reliability of the information they are exposed to. When consumers view key opinion leaders as professional, they are more inclined to believe in the content they share. This perception helps build a trusting relationship with the audience. Additionally, this highlights that expertise is crucial in establishing consumers' perceived trust in the live e-commerce environment.

In addition, this study supports Hypothesis 3: Perceived trust positively affects consumers' online impulse buying behaviour. The result is consistent with previous studies, which show that consumers will make impulsive purchases because they trust key opinion leaders or platforms (Wu et al., 2016; Lavuri et al., 2022; Ye et al., 2022). Trust plays an important role. Trust relationships can shorten the consumer's decision-making chain from cognition to action, making trust a key factor in impulse behaviour. The result also confirms that when consumers believe online sellers can provide products with price advantages and guarantee the safety and quality of product transactions, consumers' positive psychological expectations will increase, and they will be more likely to have an impulse to buy. This study contributes to the theoretical framework by incorporating the trust mechanism into the explanatory framework of impulse buying behaviour and affirms the synergy between emotional trust and cognitive trust in live e-commerce.

Consistent with Hypothesis 1, the results for Hypothesis 4 indicate that perceived trust does not play a significant mediating role in the relationship between interaction and online impulse buying behaviour, which contrasts with previous studies that emphasised the importance of trust in influencing consumer decisions. This finding suggests that real-time interaction between key opinion leaders and consumers, such as live chat responses, interactive comments, and personalised recommendations, does not significantly influence consumer trust and therefore does not trigger impulsive buying behaviour. Interaction may affect other psychological elements, such as emotional arousal, a sense of presence, or social identity (Hilken et al., 2017), but not perceived trust. In a highly interactive live-streaming environment, consumers may bypass the trust evaluation stage entirely and instead engage in impulsive behaviour driven by the pleasure of instant feedback, the pressure of group dynamics, or the excitement of an immersive experience. This differs from the traditional linear "trust-to-decision" logic commonly observed in conventional e-commerce settings.

The present study also verifies the mediating role of perceived trust in the relationship between the expertise of key opinion leaders and consumers' online impulse buying behaviour in live e-commerce scenarios (Hypothesis 5). This occurs by shaping consumers' perceptions of trust regarding product quality, motivation for recommendations, and the security of transactions on the platform. In a live broadcast environment where interpersonal interaction is prominent, consumers are more likely to translate their recognition of key opinion leaders' professional capabilities, such as product knowledge reserves and product selection rigour, into trust in the credibility of the content they recommend. This, in turn, reduces the cognitive load associated with purchase decisions and accelerates the formation of impulsive buying behaviours.

THEORETICAL CONTRIBUTIONS AND SOCIAL IMPLICATIONS

In live e-commerce studies, persuasion theory has long been used to understand the relationship between key opinion leaders and purchase intention. However, online consumers' purchasing behaviour is more unplanned and impulsive; how key opinion leaders persuade consumers to make impulsive purchases is relatively unexplored. The present study fills this gap by empirically testing the mediating

role of perceived trust in the relationship between key opinion leaders and impulsive purchases. The conclusions of this study provide valuable contributions to existing research on impulsive purchases and extend the application of persuasion theory and the SOR model to the field of live e-commerce.

In addition, a key aspect of this study is adapting the research tools used in previous studies to live e-commerce, a relatively new and rapidly developing social e-commerce platform. This adaptation involves customising the measurement items to reflect the current trends among young Chinese consumers and the platforms they use most frequently. The study also modified the instrument to ensure respondents correctly understood the measurement indicators. More importantly, these measurement items have undergone rigorous validity and reliability tests, confirming that the tools used in this study are valid and reliable. Finally, it is hoped that the measurement indicators developed in this study can be adopted in the field of e-commerce live streaming in the future (especially in the interaction and expertise of key opinion leaders) and subsequent research on perceived trust.

This study has significant practical implications for live e-commerce practitioners and merchants. The results emphasise the mediating role of the expertise of key opinion leaders, the direct influence of interaction on consumers' impulse buying behaviour, and the lack of transmission effects from perceived trust. This indicates that key opinion leaders' direct interaction (such as barrage response and emotional expression) may directly trigger impulse purchases through non-trust paths, such as emotional engagement and a sense of presence. In contrast, expertise indirectly influences impulse buying decisions through trust building. In order to convert short-term impulses, selecting key opinion leaders with strong interactive skills capable of creating an engaging atmosphere and motivating consumers' impulse buying behaviour through instant feedback and entertaining content is essential. Conversely, key opinion leaders with professional endorsements (such as industry qualifications and knowledge reserves) should be prioritised to build long-term brand trust. This approach strengthens the mediating effect of trust through objective evaluation and knowledge output.

This study offers valuable insights into how the characteristics of key opinion leaders from online anchors and e-commerce enterprises influence consumers' impulse buying behaviour and their psychological activities while watching live broadcasts. In this era, which is characterised by the digital transformation of marketing, the influence of social media anchors, especially key opinion leaders, as trusted sources of information, is increasing. As consumers turn to key opinion leaders for guidance on purchase decisions, this phenomenon reflects that consumers have more complex thinking and judgement processes when making choices and a more fundamental change in consumer behaviour. This study encourages e-commerce anchors to improve the effect of live broadcasts by exploring factors affecting consumers' impulse buying behaviour and to understand the direct and indirect factors influencing impulse buying behaviour based on consumers' psychological mechanisms and their mediating role, pay more attention to communication with consumers, enhance consumers' pleasure and immersion, and improve the monetisation ability of products.

LIMITATIONS AND SUGGESTIONS

Although this study has made significant contributions to the existing knowledge system regarding the live broadcast e-commerce industry and society, its inherent limitations must be acknowledged. First, the main limitation of this study is that it only focuses on young consumers aged 18–34, whereas the consumption capacity and consumption enthusiasm of middle-aged people are increasing. Future research should include middle-aged consumers to conduct a more inclusive and representative analysis of the impact of live e-commerce on people of different ages. Second, this study only focuses on young people aged 18–34 living in Jiangxi, Guangxi, and Anhui. Third, this study only surveyed users who have used the three major platforms of Douyin, Kuaishou, and Taobao. As times change, new popular live e-commerce platform software may emerge, and existing graphic social platforms could evolve into open live broadcast rooms. Therefore, future research should consider these developments in live broadcast platforms by incorporating samples from various platforms to test how these changes affect consumer psychology and the changing trends of impulse buying behaviour.

In terms of methodological constraints, this study relies on self-administered questionnaires to collect data. Feedback on core constructs such as online impulse buying behaviour and perceived trust may be affected by multiple factors such as social desirability bias, recall bias, and common method bias, thus affecting the accuracy of the research results. Participants may not always be fully aware of their impulsive tendencies, or they may respond in ways they believe are socially acceptable. To address this issue, future studies can incorporate objective behavioural data to enhance the reliability and validity of impulse buying assessments. In addition, the data collected in this study were obtained through questionnaires during a specific period of time (September to November 2024), so it is a cross-sectional design. However, each consumer's trust and behaviour towards opinion leaders will change over time. Due to conditions and time factors, the sample data could not be tracked in this study, so the conclusions obtained through empirical research only reflect the situation within a specific period of time. In the future, the dynamic investigation and tracking of changes in the attitudes and behaviours of respondents may lead to more scientific research conclusions.

Finally, in terms of theoretical limitations, this study adopts a relatively simple framework by focusing on only two dimensions of key opinion leaders and relying on two underpinning theories. Future studies could consider exploring additional dimensions such as similarity, attractiveness, authenticity, and homophily to provide a more holistic view of key opinion leaders' influence. At the same time, incorporating other relevant theories like Signaling Theory, Hedonic Consumption Theory, social norms theory, or flow theory may lead to new discoveries and offer a deeper understanding of online impulse buying behaviour, which is becoming increasingly prevalent in today's digital age.

CONCLUSION

This study sheds light on the relationship between the dimensions of key opinion leaders, perceived trust, and online impulsive buying behaviour in live e-commerce in China, one of the largest e-commerce markets in the world, focusing particularly on youth consumers. The results confirm that only the expertise of key opinion leaders significantly enhances perceived trust, which in turn indirectly promotes impulsive buying. In contrast, interaction does not influence either perceived trust or impulsive online buying behaviour. These findings suggest that young Chinese consumers place greater importance on the expertise of key opinion leaders during live streaming, while their level of interaction is considered less significant. Furthermore, consumers perceive perceived trust as a more critical factor than expertise in driving impulse purchases, as it exerts the strongest influence on their purchasing decisions ($f^2 = 0.541$). In other words, the expertise of key opinion leaders helps build trust in the promoted products or services, ultimately leading to impulsive buying behaviour.

This study extends persuasion theory and the S-O-R model to the field of live e-commerce, especially by considering perceived trust as a mediating mechanism of impulsive buying behaviour and making important theoretical contributions. The study also improves and validates measurement tools tailored to the changing behaviours of young Chinese consumers, providing methodological value for future research. From a practical perspective, the results provide strategic guidance for e-commerce platforms and marketers: key opinion leaders' high expertise can cultivate long-term trust and brand loyalty. Overall, this study advances the theoretical understanding of online consumer behaviour in the live broadcast environment and provides practical insights for optimising key opinion leader.

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AUTHORS' CONTRIBUTION

Cai Shuang led the development of this manuscript as part of his PhD thesis. As the corresponding author, Sylvia Nabila Azwa Ambad managed the submission process and was responsible for the manuscript's review and refinement. Both authors made equally substantial contributions to the research, analysis, and writing.

CONFLICT OF INTEREST DECLARATION

We certify that this article is the original work of the authors and co-author. This article has not been previously published or considered for publication elsewhere. This study/manuscript has not been submitted for publication and has not been published in whole or in part elsewhere. We certify that all authors have made a substantial contribution to the validity and legitimacy of the data and its interpretation submitted to Jurnal Intelek.

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