

Factors Driving Irrational Purchase Behavior of Live Streaming E-commerce: The Mediating Effect of Consumer Purchase Intention

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ABSTRACT

Driven by the e-commerce live broadcast, the irrational purchase phenomenon of consumers has become more and more prominent. Based on SOR theory and social identity theory, this paper builds an intermediary effect model by collecting 286 questionnaires, aiming to deeply explore the causes of consumers' irrational purchase behavior under the background of e-commerce live broadcast, and propose corresponding solutions. The results show that price promotion, anchor characteristics and live broadcast interactivity all have a positive impact on irrational purchase behavior, and consumers' purchase intention plays a partial mediating role in this process.

KEYWORDS

Live streaming e-commerce; irrational purchase behavior; purchase intention

INTRODUCTION

With the advancement of internet technology and the digital era, live-streaming e-commerce has rapidly emerged as a new and thriving internet sales model. The widespread adoption of mobile internet technology and the maturation of social media platforms have fueled explosive growth in live-streaming e-commerce. However, as live-streaming e-commerce becomes more prevalent, consumers' irrational purchasing behavior has become increasingly prominent, raising concerns and prompting people to contemplate the issue.

According to data released by the China Internet Network Information Center, as of December 2022, the number of internet users in China has reached 1.067 billion, with a staggering 751 million users engaged in live-streaming activities, accounting for 70.3% of the total internet user base. With such a massive user base, live-streaming shopping has become an important marketing tool for businesses. However, while live-streaming e-commerce drives consumption, it has also led some consumers into the whirlpool of irrational purchasing.

The academic community has already recognized the issue of irrational consumption triggered by live-streaming e-commerce. Researchers have extensively explored this phenomenon from various perspectives, including consumer psychology, purchasing behavior, social influences, and policy regulation. Scholars attempt to uncover the underlying reasons behind this phenomenon and propose targeted solutions. However, despite the increasing amount of research on irrational purchasing behavior in the context of live-streaming e-commerce, there are still limitations and shortcomings in the existing studies. Therefore, this paper, based on the Stimulus-Organism-Response (SOR) theory, analyzes the influential factors of environmental factors, stimulus factors, individual responses, and consumer irrational purchasing behavior. It delves into the interaction between these factors, aiming to understand consumer behavior and psychology during the

purchasing process. The goal is to conduct in-depth research on consumer irrational purchasing behavior in the context of live-streaming e-commerce, analyze its causes and impacts, explore the psychological process of consumer purchasing, and provide a theoretical foundation and practical guidance for businesses to expand their sales channels and provide better services. Additionally, when businesses showcase their products online, they should meet consumers' psychological enjoyment and diverse psychological needs, which can enhance their sales competitiveness and contribute to improved business performance. From the consumer perspective, it is important to help individuals recognize their genuine needs, understand the reasons for their irrational consumption during live-streaming shopping, and propose corresponding strategies for resolution. This can provide theoretical support and practical guidance for the healthy development of the live-streaming e-commerce industry.

The structure of this study is as follows: The second part is the theoretical background and research hypothesis. This part first sorts out the relevant research literature on live e-commerce, irrational purchase behavior and its influencing factors. On this basis, we construct a consumer irrational purchase behavior analysis framework based on the Stimulus-Organism-Response theory; the third part of this study are the research method, using multiple linear regression model to conduct regression analysis on the collected data. Through the interpretation of the regression results, the hypotheses proposed in this paper are verified, and on this basis, the causes and effects of consumers' irrational purchase behaviors are further analyzed; the fourth part is the findings, this part analyzes the regression results in detail, The impact of environmental factors, stimuli and individual responses on consumers' irrational purchasing behavior in the context of live e-commerce is discussed; the last part is the conclusion, including research limitations, deficiencies and future prospects.

LITERATURE REVIEW

Theoretical Background

Stimulus-Organism-Response (SOR) Theory

The Stimulus-Organism-Response (SOR) model originated in the field of psychology and has been widely applied in marketing research. It focuses on the marketing environment, such as promotional stimuli, and how they influence consumer purchasing behavior. When the marketing environment affects individuals, it can trigger physiological, psychological, cognitive, and perceptual changes, thereby influencing their purchase decisions.

The SOR model has been widely adopted in marketing studies. In recent years, domestic scholars have conducted in-depth research on various consumer behaviors using this model, including purchase intention for sports equipment, purchasing behavior in live-streaming e-commerce, the impact of courier service quality on repurchase intention, and community consumer purchase intention, among others. Some scholars have used the SOR model to investigate consumer purchase intentions and the influence of co-viewers on the purchasing tendency of live-streaming viewers. In the context of e-commerce live-streaming, factors such as the attractiveness of live-stream hosts, the incentives offered during live-streams, and the interactive services provided during live-streams can be considered as environmental stimuli. The "organism" represents the consumer's desire to make a purchase under the influence of these stimuli, and the "response" refers to the consumer's actual purchasing behavior influenced by a series of internal and external stimuli. Therefore, the SOR model provides theoretical support for the selection of predictor variables in this study.

Social Identity Theory

The Social Identity Theory originated in the field of psychology and was proposed by Tajfel and Turner in 1979 (Tajfel, 1975; Turner & Reynolds, 2003). This theory focuses on how individuals define themselves based on the social groups they belong to (such as race, gender, occupation, religion, etc.) and how this identity influences their behavior and attitudes. In the context of e-commerce live-streaming, the Social Identity Theory can be used to understand how viewers shape their self-identity based on their relationship with the live-stream host and other viewers, and how this identity influences their purchase decisions. On one hand, live-stream hosts often serve as representatives of specific communities or groups. Viewers may identify with the host based on their affinity towards them and perceive themselves as part of the corresponding social group. For example, if the host is a brand ambassador, viewers who like that brand may identify with the host and consider themselves as part of the brand's community. On the other hand, the environment of e-commerce live-streaming itself reinforces the process of social comparison. Viewers not only see the host's recommendations but also observe the feedback and purchasing behavior of other viewers. When they witness other in-group members (i.e., other viewers) making purchases of a certain product, they may be influenced to act in the same way due to their preference for the in-group. This behavior also reflects a part of irrational purchasing behavior. By integrating the Social Identity Theory into the analysis, this framework provides insights into how social identity formation and social comparison processes influence consumer behavior in the context of e-commerce live-streaming.

Research Hypotheses

The Influence of Live-streaming E-commerce on Irrational Purchasing Behavior

The social facilitation theory in psychology suggests that individuals are susceptible to the influence of others in their presence, which subsequently affects their behavior and emotions. Pozharliev et al. (2015) validated the social arousal effect through neurophysiological experiments. The study found that when accompanied by others, consumers experience a higher level of arousal that leads to an emotionally motivated state, thereby influencing their purchasing behavior. In live-streaming e-commerce, hosts employ various strategies to attract viewer attention, such as demonstrating product effects, interacting with viewers, and offering limited-time discounts. These tactics often generate strong purchase impulses in consumers within a short period, exacerbating irrational purchasing behavior. During live streams, the price advantage frequently creates a sense of urgency among consumers, fearing they might miss out on discounted opportunities, thus leading to impulsive buying behavior. Despite not initially needing these products, consumers easily make irrational purchase decisions driven by the price advantage. This psychological phenomenon is referred to as "loss aversion" in psychology, where individuals exhibit a greater aversion to potential losses than preferences for gains when facing potential losses and gains. Therefore, in live-streaming e-commerce, consumers may excessively focus on potential losses due to the fear of missing out on discounts, thereby resulting in irrational purchasing behavior. Additionally, price advantages may trigger consumers' mental accounting effect. Consumers may perceive the money saved as additional gains, which further fuels their desire to make purchases and leads to irrational buying behavior. This psychological phenomenon is particularly pronounced in live-streaming e-commerce, as the fast-paced nature of live streams often leaves consumers with limited time for rational deliberation. Based on these premises, we propose the following hypothesis for this study:

H1a: There is a positive correlation between price promotions and irrational purchasing behavior, indicating that higher intensity of price promotions is associated with a greater likelihood of irrational purchasing.

The Social Identity Theory suggests that individuals form self-identity based on the characteristics of the groups they belong to and tend to imitate other members within the group (Reid, 1987). In the context of live-streaming e-commerce, hosts are perceived as representatives of a specific group with certain identities and status. Consumers may develop purchase desires due to their identification with the image and values of the host. The host's appearance, voice, style, expertise, and affability may evoke emotional resonance in consumers (Wang et al., 2021). Consumers may engage in irrational purchasing behavior because of their liking towards the host, especially when the host recommends products. Therefore, in the process of live-streaming e-commerce, the host's emotional display (such as enthusiasm, sincerity, humor, etc.) may influence consumers' emotional states, thereby leading them to make irrational purchasing decisions. Furthermore, the host's expertise and reputation can also impact consumers' buying behavior. Consumers are likely to rely on the host's professional opinions to reduce uncertainty during the purchase process. When the host possesses a high level of credibility, consumers may be more susceptible to their influence, leading to irrational purchasing behavior. Based on these considerations, we propose the following hypothesis for this study:

H1b: There is a positive correlation between host characteristics and irrational purchasing behavior.

The theory of emotional contagion in psychology suggests that in the context of live-streaming e-commerce, interactions between hosts and viewers can spread emotions within the viewer community, thereby influencing consumers' purchasing behavior (Decety & Jackson, 2004). During live streams, real-time interactions between hosts and viewers create a social atmosphere that can make consumers more susceptible to the influence of emotions and the purchasing behavior of other viewers, leading to irrational purchases. Additionally, hosts may employ marketing strategies such as limited-time promotions, prize draws, etc., to increase interactivity within the live stream, further prompting consumers to engage in irrational purchasing behavior. Based on these considerations, we propose the following hypothesis for this study:

H1c: There is a positive correlation between the interactivity of live streams and irrational purchasing behavior.

The Influence of Live-streaming E-commerce on Purchase Intention

Price promotion is an important marketing strategy in live-streaming e-commerce, involving various promotional methods such as discounts, coupons, limited-time flash sales, buy-one-get-one-free, and more. Price promotions in live-streaming e-commerce have several effects on purchase intention. Firstly, they stimulate consumers' purchasing impulse. By setting limited-time or limited-quantity price discounts, live-streaming e-commerce creates a sense of urgency, which stimulates consumers' purchasing impulse. Consumers may make purchase decisions in advance due to the fear of missing out on the promotions, thus increasing their purchase intention. Secondly, price promotions increase consumers' perceived value. Price promotions reduce the actual price of products, allowing consumers to obtain them at a lower cost, thus enhancing their perceived value. When consumers feel that the value they receive exceeds the price they pay, their purchase intention may increase. Thirdly, price promotions can improve consumers' satisfaction and loyalty. If consumers obtain price advantages and are satisfied with their purchases in live-

streaming e-commerce, they may develop a positive perception of the live-streaming merchants. This can increase their satisfaction and loyalty, which in turn influences their future purchasing behavior. Fourthly, price promotions can attract new consumers. Price promotions also serve as advertisements, attracting the attention and participation of new consumers in live-streaming e-commerce. New consumers may be attracted by the price advantages, enter the live stream, and then become interested in other aspects of the live stream (such as product showcases, host interactions), thereby increasing their purchase intention. Based on these considerations, we propose the following hypothesis for this study:

H2a: There is a positive correlation between price promotions and consumer purchase intention.

The Influence of Live-streaming E-commerce on Purchase Intention

During the decision-making process, individuals are often influenced by others and seek external advice and guidance, especially when they are unfamiliar with the products. Live-streaming e-commerce essentially creates a social environment where hosts play the role of opinion leaders. The host's expertise and reputation can make them a trusted source of information for consumers, thus influencing their purchase decisions. Consumers, while watching live streams, are influenced by various characteristics of the host. The host's appearance and personality may attract consumers, making them willing to pay attention to the host's live stream and recommendations (Wang et al., 2014), thereby increasing their purchase intention. Based on these considerations, we propose the following hypothesis for this study:

H2b: There is a positive correlation between host characteristics and consumer purchase intention.

In the Live-streaming E-commerce environment, interactivity can guide consumers to participate more deeply in the live broadcast, such as asking questions, commenting, voting, etc. Such participation will make them pay more attention to the content of the live broadcast and invest more time and energy. It is also more likely to generate purchase behavior (Liu et al., 2020). The interactivity of live-streaming E-commerce can create a sense of community, making consumers feel like they are part of a community. This sense of belonging can enhance consumers' trust in the anchor and other viewers, and it may also make them more willing to accept suggestions and influences from the community, thereby increasing purchase intentions. At the same time, interactivity can also provide instant feedback, so that consumers' needs and questions can be quickly responded to. This feedback can satisfy consumers' information needs, improve their satisfaction, and may also make them more willing to purchase goods (Han, 2020). Based on this, the following hypotheses are put forward:

H2c: Live broadcast interactivity is positively correlated with consumers' willingness to purchase.

The Mediating Role of Purchase Intention

Based on the previous discussions, we can derive a possible theoretical model: Purchase intention may mediate the relationship between live-streaming e-commerce and irrational purchasing behavior. In live-streaming e-commerce, specific stimuli such as interactivity and price promotions may trigger consumers' purchase intention, which further leads to irrational purchasing behavior. The presence of this mediating role helps deepen our understanding of how live-streaming e-commerce triggers irrational purchasing behavior. Therefore, combined with the above discussion, we can make the following hypothesis:

H3a: Purchase intention plays a mediating role between price promotion and irrational purchase behavior.

H3b: Purchase intention plays a mediating role between anchor characteristics and irrational purchase behavior.

H3c: Purchase intention plays a mediating role between live broadcast interactivity and irrational purchase behavior.

The hypothetical model of this study is shown in Figure 1.

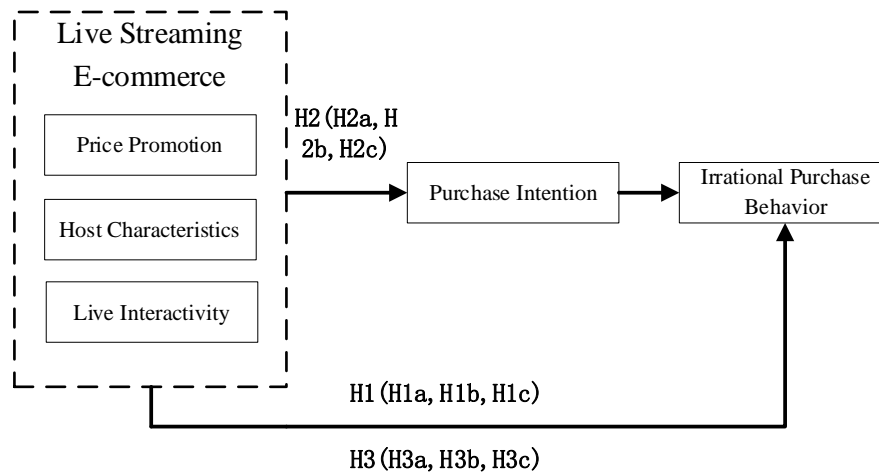


Figure 1. Hypothesized Model

RESEARCH METHODS

Sample and Data Source

In this study, the sample data were collected through a questionnaire. A total of 286 online questionnaires were distributed, and 254 valid responses were collected, resulting in a valid response rate of 88.8%, which meets the requirements for empirical research (Liu & Chen, 2020). The gender distribution of the respondents was balanced, with 48.3% male and 51.7% female.

The questionnaire consisted of two parts. The first part inquired about the respondents' basic personal information, such as gender, age, educational background, income level, whether they have watched live-streaming e-commerce, and whether they have made purchases in live-streaming platforms. The second part consisted of a scale measuring the respondents' purchase intention in live-streaming e-commerce. The scale consisted of 19 items, measured on a 5-point Likert scale, with 1 representing "completely disagree" and 5 representing "completely agree."

Variable Measurement

The questionnaire covered five dimensions: price promotion, host characteristics, live-streaming interactivity, purchase intention, and irrational purchasing behavior. A total of 19 indicator variables were selected, and the sources of each indicator are shown in Table 1.

Table 1. Measurement Scales for Consumer Irrational Purchase Intention

Variables	Measurement Items	References
Price Promotion	Price Promotion I think the discounts in the livestream are very cost-effective, and I often buy more items than I actually need (A1)	Liu and Chen (2020)
	Compared to regular prices, I am very satisfied with the discount mechanisms in the livestream, and I often make purchases due to price temptations (A2)	
Host Characteristics	I always make impulsive purchases in the livestream due to the limited-time discount mechanisms (A3)	Liu et al. (2020); Li and Li (2022)
	Host Characteristics You think the livestream host you watch has special skills and expertise (B1)	
	You think the livestream host you watch has professional knowledge (B2)	
	You think the livestream host you watch has rich experience in using the recommended products (B3)	
	Using personalized and humorous language makes me feel happy (B4)	
	The products recommended by funny hosts are more appealing to me (B5)	
Live-streaming Interactivity	I often watch interesting livestream hosts (B6)	Li and Li (2022)
	Livestreaming Interactivity The host actively responds to my questions during the livestream (C1)	
	Through the host's introduction, I have a better understanding of the quality and features of the products (C2)	
	The host engages in emotional interaction with me during the livestream (C3)	
Purchase Intention	I can interact with other viewers through bullet comments in the livestream (C4)	Liu et al. (2023)
	Purchase Intention As soon as I see the host livestreaming and recommending a product, I immediately want to own it (D1)	
	When I see the host livestreaming and recommending a product, I have a strong desire to purchase it (D2)	
Irrational Purchasing Behavior	As soon as I see the host livestreaming and recommending a product, I feel like it's what I want (D3)	Hair et al. (2018)
	Irrational Purchasing Behavior During the livestream, I buy products that were not originally part of my plan (E1)	
	I find that many products I recently purchased through livestreaming are rarely used (E2)	
	During the livestream, I buy products that interest me without considering if I really need them (E3)	

Sample Description

The questionnaire was completed by a sample in which over 75% of the participants were below the age of 30, aligning with the main target audience of live streaming in our country. 95% of the respondents had obtained a university degree or higher, while 80% of the participants reported a monthly expenditure of 5,000 yuan or less, which corresponds to the consumption patterns of the average working class.

Descriptive statistics were conducted for the variables related to the five dimensions: price promotion, host characteristics, live interaction, purchase intention, and irrational purchasing behavior. The average score for price promotion was 3.553 with a standard deviation of 0.877. Host characteristics had the highest average score of 3.602 with a standard deviation of 0.754, indicating that host characteristics had the greatest impact on consumers. The average score for live interaction was 3.551 with a standard deviation of 0.754. Purchase intention had an average score of 3.291 with a standard deviation of 0.981, while irrational purchasing behavior had an average score of 3.363 with a standard deviation of 0.851 (Table2).

Table 2. Descriptive statistics

Variables	N	Mean	SD	Max	Min
Price promotion	286	3.553	0.878	5.00	1.00
Host characteristics	286	3.602	0.755	5.00	1.00
Live Interactivity	286	3.551	0.754	5.00	1.00
Purchase intention	286	3.291	0.981	5.00	1.00
Irrational Purchasing Behavior	286	3.364	0.851	5.00	1.00

Reliability and validity test

By testing the Cronbach's α value of each facet, it can be seen from Table 3 that the Cronbach's α of each variable is higher than 0.7, the KMO value is greater than 0.7, and the data have a common factor structure.

Table 3. Reliability Test Results

变量	Cronbach's α	KMO
Price Promotion	0.78	0.698
主播特征	0.85	0.887
直播互动性	0.776	0.747
购买意愿	0.851	0.795
Irrational Purchase Behavior	0.719	0.865

Since the data comes from questionnaires, using the Herman single factor test method, the explanation rate of the first principal factor is 39.1% (unrotated), which meets the requirement of the critical point of 40% suggested by Hair et al. (2018), indicating that there is no difference in this study. source bias.

RESULTS AND DISCUSSION

Correlation analysis

Table 4 gives the correlation coefficients and VIF values. Irrational purchase behavior is highly correlated with price promotions, anchor characteristics, live broadcast interaction and purchase intention ($p < 0.01$), and also has a certain correlation with monthly income ($p < 0.1$); purchase intention and price promotion, anchor Features and live broadcast interactivity are highly correlated ($p < 0.01$). We also checked the variance inflation factors, most of them were less than 10, and it was considered that there was no significant multicollinearity among variables.

Table 4. Correlation Analysis

	1	2	3	4	5	6	7	8
Mean	1.58	2.67	2.83	2.53	3.553	3.602	3.551	3.291
Standard Deviation	0.495	0.883	0.614	0.912	0.878	0.754	0.981	0.851
VIF	1.033	1.383	1.046	1.383	2.329	3.548	3.631	2.048
1 Gender	1							
2 Age	-0.014	1						
3 Education	0.045	-0.149*	1					
4 Monthly Income	-0.015	0.486***	0.02	1				
5 Price Promotion	-0.124	-0.076	-0.019	-0.002	1			
6 Host Features	-0.159**	0.057	0.007	0.121	0.721***	1		
7 Live-Stream Interactivity	-0.114	0.088	0.044	0.200***	0.663***	0.806***	1	
8 Purchase Intention	-0.053	0.067	0.030	0.103	0.568***	0.631***	0.696***	1
9 Irrational Buying Behavior	-0.053	0.067	0.030	0.103*	0.679***	0.662***	0.689***	0.698***

Notes: *** p<0.01, ** p<0.05, * p<0.1

Regression Results

The multiple linear regression analysis was conducted using SPSS 26.0, and the results are shown in Table 5 and Table 6. The results indicate that monthly income was only significant in Model 1 and Model 2, suggesting that the association between monthly income and non-rational purchasing behavior is only significant when the explanatory variable is price promotions. Price promotions had a positive impact on non-rational purchasing behavior ($\beta=0.659$, $p<0.01$), supporting hypothesis H1a. When the mediating variable of purchase intention was added, the influence of price promotions on non-rational purchasing behavior decreased ($\beta=0.412$, $p<0.01$), indicating the presence of mediation, thus supporting hypothesis H3a. Similarly, anchor characteristics had a positive impact on non-rational purchasing behavior ($\beta=0.739$, $p<0.01$), supporting hypothesis H1b. When the mediating variable of purchase intention was added, the influence of anchor characteristics on non-rational purchasing behavior decreased ($\beta=0.41$, $p<0.01$), indicating the presence of mediation, thus supporting hypothesis H3b. Likewise, live interaction had a positive impact on non-rational purchasing behavior ($\beta=0.779$, $p<0.01$), supporting hypothesis H1c. When the mediating variable of purchase intention was added, the influence of live interaction on non-rational purchasing behavior decreased ($\beta=0.441$, $p<0.01$), indicating the presence of mediation, thus supporting hypothesis H3c.

Table 5. Hierarchical Regression Results of Irrational Purchase Behavior on Live-Stream E-commerce

Variables	Irrational Purchase Behavior					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	0.712***	0.419**	0.58**	0.468**	0.614**	0.561**
Monthly Income	0.123**	0.08*	0.049	0.037	-0.006	0.008
Price Promotion	0.659***	0.412***				
Host Characteristics			0.739***	0.41***		
Live Interactivity					0.779***	0.441***
Purchase Intention		0.389***		0.403***		0.369***
R ²	0.479	0.613	0.441	0.57	0.474	0.568
Adj R ²	0.473	0.606	0.434	0.563	0.468	0.560
F	78.153***	89.223***	66.993***	74.821***	76.728***	73.939***

Notes: *** p<0.01, ** p<0.05, * p<0.1

Table 6 results indicate that price promotions had a positive impact on purchase intention ($\beta=0.634$, $p<0.01$), supporting hypothesis H2a. Anchor characteristics had a positive impact on purchase intention ($\beta=0.82$, $p<0.01$), supporting hypothesis H2b. Live interaction had a positive impact on purchase intention ($\beta=0.905$, $p<0.01$), supporting hypothesis H2c.

Table 6. Hierarchical Regression Results of Purchase Intention on Live-Stream E-commerce

Variables	Purchase Intention		
	Model 7	Model 8	Model 9
Constant	1.038***	0.338	0.078
Price Promotion	0.634***		
Host Characteristics		0.82***	
Live Interactivity			0.905***
R ²	0.322	0.398	0.484
Adj R ²	0.318	0.395	0.481
F-value	81.27***	113.109***	160.243***

Notes: *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Further inspection of the mediation effect

To further examine the extent of the indirect effects, we conducted additional testing using the "Model 4" mediation analysis provided by Hayes et al. (8th edition) [15]. We used the SPSS process_v3.5 tool with a 95% confidence interval and 5000 iterations. This method addresses the limitations of stepwise regression and Sobel test, as it does not require assumptions of normal distribution and has higher sensitivity. The results of the mediation analysis are reported in Table 7.

Table 7. The results of the mediation analysis

	Indirect effect	(BootLLCI, BootULCI)	Conclusion	Proportion of mediating effect (%)
Price Promotion→Purchase Intention→ Irrational Purchase Behavior	0.2538	(0.1623, 0.4131)	Partial mediating	38.54
Host Characteristics→Purchase Intention→ Irrational Purchase Behavior	0.3316	(0.2068, 0.4580)	Partial mediating	44.46
Live Interactivity→Purchase Intention→ Irrational Purchase Behavior	0.3334	(0.1941, 0.4756)	Partial mediating	42.89

Table 7 provides the specific sizes of the indirect effects and the proportion of the total effects. The results show that the mediation effects of purchase intention between maincaster characteristics and non-rational purchasing behavior (0.3361) and between interactive features and non-rational purchasing behavior (0.3334) are higher than the mediation effect between price promotions and non-rational purchasing behavior (0.2538). Moreover, all of these mediation effects account for more than 30% of the total effects, indicating significant mediation effects. These findings support hypotheses H3a, H3b, and H3c.

CONCLUSION

Theoretical implications

This study has many theoretical contributions:

First of all, it enriches the research boundary of SOR theory, applies the SOR model to the field of live e-commerce, and discusses the impact of live e-commerce on consumers' irrational purchase behavior. By analyzing the relationship between the environmental stimuli (price promotion, anchor characteristics, live broadcast interactivity), individual status (purchase intention) and individual response (irrational purchase behavior) of live broadcast e-commerce, it reveals the impact of live broadcast e-commerce on consumer purchase behavior. It provides a new perspective and theoretical support for the application of SOR theory in the emerging e-commerce field.

Secondly, the study provides new evidence for understanding the role of social identity in consumer purchasing behavior. Social identity theory emphasizes how individuals define themselves based on the social group they belong to, and how their sense of identity influences behavior and attitudes. This study finds that in live e-commerce, viewers may form self-identity through relationships with anchors and other viewers, which in turn influences their purchasing decisions. This shows that anchors play the role of community leaders in live e-commerce, and their characteristics and interactivity have an impact on viewers' purchasing behavior. This finding has important implications for a deeper understanding of the role of social identity in consumer behavior.

In addition, the research also conducts in-depth research on irrational purchase behavior in live e-commerce. By exploring the impact of price promotion, anchor characteristics and live broadcast interactivity on irrational purchase behavior, the study reveals that consumers are vulnerable to stimulation and emotional influence under live broadcast e-commerce, resulting in irrational purchase behavior. This will help us better understand the characteristics of consumer behavior on the live broadcast e-commerce platform, and provide theoretical guidance and practical suggestions for decision makers in related industries.

Practical Implications

The research results show that price promotion, anchor characteristics and live broadcast interactivity have an impact on consumers' purchase intention and irrational purchase behavior. Therefore, in live e-commerce, platforms and anchors can use these factors to guide consumers' purchasing decisions and behaviors. They can enhance consumers' willingness to purchase and stimulate their irrational purchase behavior by setting appropriate price promotion strategies. In addition, the characteristics of the anchor's image, speech and interaction methods also need to be shaped to increase the audience's sense of identity and emotional resonance, thereby promoting the occurrence of purchasing behavior.

In addition, the findings highlight the mediating role of purchase intention between price promotion, anchor characteristics, and live-stream interactivity and irrational purchase behavior. This means that live broadcast e-commerce platforms and anchors can increase the possibility of irrational purchase behavior by increasing consumers' willingness to purchase. Therefore, when designing live broadcast e-commerce activities, we can focus on improving consumers' willingness to purchase, such as strengthening the temptation of price promotions, creating an attractive anchor image and providing an interactive live broadcast experience, thereby indirectly promoting irrational purchase behavior happened.

Finally, the research results also provide some suggestions for marketing strategies in the live e-commerce industry. Price promotions have been proven to have a significant positive impact on consumers' purchase intentions and irrational purchase behaviors. Therefore, live e-commerce platforms can consider increasing product pricing and promotional activities to provide more attractive price concessions. To stimulate consumers' desire to buy and irrational buying behavior. At the same time, the characteristics and interactivity of anchors are also important factors to attract viewers and promote purchase behavior. Therefore, live broadcast e-commerce platforms and anchors can focus on shaping their own image and providing interaction with audiences to enhance audiences' emotional resonance and purchase intentions.

Limitations and Future Research Directions

This study conducted an empirical analysis of consumers' irrational purchase behavior in e-commerce live broadcasts. Although the results have certain research value, the study itself still has limitations.

Limitations: The limitation of the sample is also a major limitation of this study. The research mainly adopts the online questionnaire collection method, and the results may be affected by subjective factors such as the attitude and attention of the respondents. In addition, influenced by the researcher's field of vision, this study focuses on the impact of three dimensions of price promotion, anchor characteristics, and live broadcast interactivity on the purchase behavior of live broadcast e-commerce.

Future Research Directions: Future research can be randomly distributed in multiple online and offline ways to ensure the scientificity and comprehensiveness of the data, and to focus on more factors related to live broadcast marketing, so as to deepen the understanding of live broadcast marketing.

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