

Exploring the Factors Influencing Consumer Purchase Intention of Luosifen in E-commerce Live Streaming

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Abstract

This study explores the key factors influencing consumer purchase intention of Luosifen in the context of e-commerce live streaming. As an emerging sales model, e-commerce live streaming significantly transforms the retail landscape through real-time product demonstrations, interactive exchanges, and instant feedback, especially during the COVID-19 pandemic, enhancing consumer shopping experience and purchase intentions.

This study analyzes how product symbolism, price discount, influencer impact, and consumer impulsivity traits affect consumers purchase intentions. A quantitative research method was employed, collecting data through a questionnaire survey from consumers who frequently participate in e-commerce live streaming and have purchased Luosifen. Descriptive statistics, reliability and validity tests, correlation analysis, regression analysis was conducted using SPSS and AMOS software. The results indicate that product symbolism, price discount, influencer impact, and consumer impulsivity traits significantly positively influence purchase intentions. Based on these findings, this paper proposes practical recommendations, including Enhance Product Symbolism, Optimize Price Discount Strategies, Leverage Influencer Impact, Cater to Consumer Impulsivity. These strategies are expected to improve consumer purchase intentions, increase sales, and promote brand loyalty.

Keywords: E-Commerce Live Streaming, Purchase Intention, Luosifen, Consumer Behavior

Introduction

As an emerging sale model, E-commerce live streaming has rapidly risen globally in recent years. By showcasing products through real-time video, interacting with audiences, and promptly addressing questions, live streaming in e-commerce effectively reduces the distance between consumers and products, enhancing shopping experiences and purchase intentions. Especially during the COVID-19 pandemic, live streaming in e-commerce has become a crucial

bridge between businesses and consumers, thanks to its convenience and interactivity (Ma et al., 2022).

Luosifen, a traditional specialty food from Liuzhou, Guangxi Province, has gradually gained popularity nationwide and even internationally due to its unique flavor. However, as market demand grows, competition in the sales of luosifen has intensified. To stand out in this competitive market, many luosifen businesses have started using live streaming in e-commerce for marketing and promotion.

Despite the significant advantages of live streaming in enhancing product sales and consumer satisfaction, there are still many uncertainties regarding the sales effectiveness of luosifen, a special fast-moving consumer good, in live streaming e-commerce. Factors such as product symbolism, price discounts, influencer impact, consumer impulsivity, etc., can all influence consumer purchase decisions and intentions.

Therefore, a thorough exploration of these factors' impact on consumer purchase intention of luosifen is crucial for developing effective marketing strategies and improving sales performance.

Research Significance

The aim of this study is to provide scientific guidance for luosifen businesses to formulate more effective marketing strategies in live streaming e-commerce, thereby enhancing consumer purchase intentions. Additionally, this research also seeks to enrich theoretical studies in the field of live streaming e-commerce, promoting further exploration of this emerging marketing model in academia.

By conducting detailed analyses in these areas, this study will systematically explore the key factors influencing consumer purchase of luosifen in live streaming e-commerce, providing valuable insights for businesses and academia.

Problem Statement

E-commerce livestreaming marketing represents a nascent form of interactive marketing integrating social interaction with e-commerce sales, characterized by real-time product demonstrations, comprehensive presentations, user-friendly purchase interfaces, and high interactivity. Nevertheless, due to its relatively recent emergence and the prevalent practice of inducing impulse buying among consumers, the sector has encountered a spectrum of challenges.

According to a report by media Research, the Chinese e-commerce livestreaming market reached a scale of 2.27 trillion yuan in 2022, marking a remarkable 121.5% year-on-year growth (media Research, 2022). Despite this rapid expansion, the industry has faced significant issues. Data indicates that nearly 60% of consumers exhibit post-purchase regret and engage in return behavior following e-commerce livestreaming purchases, underscoring the consequences of impulsive buying (ii media Research, 2022).

In the context of the luosifen market, during the 2021 Double Eleven event, sales of luosifen products via e-commerce livestreaming surged by 78% compared to the previous year, accompanied by a notable 25% return rate (China E-commerce Research Center, 2021). This elevated rate of returns not only squanders societal resources but also undermines consumer trust and satisfaction in e-commerce livestreaming platforms.

Hence, it is imperative to undertake research on the determinants of impulsive buying behaviors among consumers in e-commerce livestreaming environments, enabling businesses to devise effective marketing strategies, mitigate return rates, enhance consumer satisfaction, and foster the sustainable development of the e-commerce livestreaming sector (Khaled et al., 2019).

Limitations

Accuracy of Questionnaire Scale Translation: Since part of the questionnaire uses established scales that include English items, there may be discrepancies during the translation process. Despite repeated revisions and confirmations, these discrepancies may still affect the accuracy and consistency of the items.

Time Span Limitation: The data collection for this study was conducted within a specific time frame, and consumer purchase behavior and intentions may change over time. Factors such as seasonal promotions and market trend changes may influence purchasing behavior, thus the study results may not be fully applicable to other time periods.

Control of Variables: This study focuses on variables such as product symbolism, price discount, influencer impact, and consumer impulsivity traits, but does not fully consider other potential factors that may influence consumer purchase intentions, such as social influence, brand reputation, and product quality. These uncontrolled variables may have potential impacts on the study results.

Literature Review

Search Strategis

Use the following keyword combinations for literature search: "Purchase Intention", "Product symbolism", "Price Discount", "Influencer Impact", "Consumer Impulsivity Traits"

To Ensure the Relevance and Quality of the Literature, The Following Selection Criteria are Set For This Study:

- 1.Type: Includes academic journal articles, conference papers, and systematic review articles; excludes books, book reviews, and non-academic articles.
- 2.Topic Relevance: Literature must directly discuss consumer purchase intention and focus on specific theoretical categories for analysis.
- 3.Research Method: Preference is given to empirical studies and literature with statistical analysis.

Literature and Critique

After comparing and synthesizing research in the field of e-commerce live streaming, we can observe that multiple studies have adopted different theoretical frameworks and methods to explore the influencing factors and mechanisms of consumer behavior.

The impact of product symbolism on consumer behavior has been extensively studied. Products not only possess functional value but also carry symbolic meanings, such as brand personality and product-user image. These symbolic meanings positively influence consumer preferences; for example, the congruence between product personality and consumer self-image can enhance consumer preference for the product (Govers & Schoormans, 2005). Additionally, the role of symbolic design in product evaluation has been confirmed, where

different design dimensions (functional, aesthetic, and symbolic design) have direct and indirect impacts on consumer behavioral responses (Candi et al., 2017).

Price discount as a promotional strategy plays a significant role in enhancing consumer purchase intention. Studies show that consumers are highly sensitive to price discounts, and discount information can significantly influence their purchase decisions. However, different forms of discounts (such as time-limited discounts and buy-one-get-one-free offers) may have varying effects on consumers, requiring further research into the effectiveness of specific discount strategies in different contexts (Hou et al., 2019).

Consumer impulsivity traits have a significant impact on their purchasing behavior. Highly impulsive consumers are more likely to make impulse purchases in e-commerce live streaming, heavily influenced by promotional information and influencer recommendations. These consumers are driven more by immediate emotions and sensations rather than rational analysis in their purchase decisions (Lee, C. H., & Chen, C, 2021).

Xu et al. focused on the effects of influencer attractiveness, parasocial interaction, and information quality on cognitive and emotional states. Influencer impact is crucial in e-commerce live streaming. Influencers with high social impact can attract a large audience through their expertise and personal charm, significantly enhancing the perceived value of products and consumer purchase intentions. Studies have found that influencer professionalism and social influence are key factors in building consumer trust and purchase intentions (Hu et al., 2017). Ma et al. (2023) and Xu et al. (2022) emphasized the critical role of influencers in e-commerce live streaming. Ma et al. explored the effects of influencer language attractiveness, professionalism, and social capital on purchase intention, finding that language attractiveness indirectly influences purchase intention through self-referencing and self-brand congruence.

Through a comprehensive discussion of the existing literature, we can see that the impact of e-commerce live streaming on consumer behavior is a complex and multidimensional process. Factors such as product symbolism, price discounts, consumer impulsivity traits, influencer impact, and perceived value play important roles. However, current research still faces issues such as insufficient theoretical integration, limited cross-cultural applicability, lack of dynamic perspectives, and insufficient methodological diversity. Future research can further deepen the understanding of the impact of e-commerce live streaming on consumer behavior by integrating different theoretical frameworks, expanding cross-cultural research scope, adopting longitudinal designs, and employing diverse methods.

Research Questions

The study is guided by the following research questions:

1. What factors influence consumers' purchase intention of Luosifen in e-commerce live streaming?
2. How do these factors affect consumers' purchase intention?

Research Objectives

The objectives of the study as follow:

1. To Explore what Factors, Influence Consumers' Purchase Intention of Luosifen In E-Commerce Live Streaming.
2. To measure how these influences affect the consumers purchase intention.

Research Hypothesis

Based on the research questions and objectives, we propose the following hypotheses:

- H0a: The product symbolism does not have a significant positive impact on consumer purchase intention.
- H1a: The product symbolism has a significant positive impact on consumer purchase intention.
- H0b: Price discounts do not have a significant positive impact on consumer purchase intention.
- H1b: Price discounts have a significant positive impact on consumer purchase intention.
- H0c: Influencer impact does not have a significant positive impact on consumer purchase intention.
- H1c: Influencer impact has a significant positive impact on consumer purchase intention.
- H0d: Consumer impulsivity traits do not have a significant positive impact on consumer purchase intention.
- H1d: Consumer impulsivity traits have a significant positive impact on consumer purchase intention.

These hypotheses aim to empirically validate the key factors influencing consumer purchasing behavior in Luosifen e-commerce live streaming, providing data support and practical guidance for merchants and influencers.

Research Methodology

Research Design

This study uses a quantitative research method, collecting data through a questionnaire survey and using statistical analysis methods to test the proposed hypothesis.

Population

The population of the study includes 18,321 consumers who purchased luosifen in the XZ live streaming room during the Double Eleven e-commerce festival in 2023.

Sample size

The approach is use of a formula below by Yamane (1967) provides a calculation of sample sizes. The formula is:

$$n = \left(\frac{N}{1 + Ne^2} \right)$$

N=population size

n=sample size

E=error

A 95% confidence level are assumed for the equation.

After calculation,the sample size becomes,391 people.

Instrument Used for Data Collection

This study collected data using a questionnaire survey. The questionnaire items were based on existing established scales and were modified and adjusted to fit the specific context of Luosifen e-commerce live streaming. The questionnaire information includes demographic

information, product symbolism, price discounts, influencer impact, consumer impulsivity traits, perceived value, and consumer purchase intention.

Pilot Study

To ensure the reliability and validity of the formal questionnaire, a small-scale pilot study was conducted. The main purpose of the pilot study was to test the reasonableness of the questionnaire's content and structure, ensure the clarity and comprehensibility of the scale items, and conduct preliminary data analysis to verify reliability and validity.

This study distributed the questionnaire through an online platform, collecting a total of 100 questionnaires. After excluding invalid questionnaires, 90 valid questionnaires were obtained. The internal consistency reliability of each scale was tested using Cronbach's Alpha coefficient. The results showed that the Cronbach's Alpha coefficients for all scales were above 0.7, indicating good internal consistency of the scales. Confirmatory Factor Analysis (CFA) was used to test the construct validity of the scales. The results showed that the factor loadings of all scales reached significant levels, indicating good construct validity of the scales.

Data Analysis Plan

To validate the hypotheses proposed in this study and to comprehensively understand the key factors influencing consumers' purchase intention of Luosifen in e-commerce live streaming, the following data analysis plan was designed:

1. Descriptive statistics of the sample characteristics, including gender, age, income, and education level, were conducted using SPSS 22.0.
2. The internal consistency reliability of each scale was tested using Cronbach's Alpha coefficient, and the construct validity of the scales was examined using Confirmatory Factor Analysis (CFA).
3. Pearson correlation analysis was used to explore the relationships between variables, and multiple regression analysis was employed to test the impact of each independent variable on consumer purchase intention.
4. A comprehensive analysis of the data results was conducted to validate the research hypotheses, discuss the theoretical and practical implications of the findings, and propose practical recommendations and strategies for the sale of Luosifen in e-commerce live streaming.

Data Analysis*Descriptive Statistical Analysis*

Table 1

Descriptive Statistical Analysis

VARIABLE	Frequency	Percentage (%)	Mean	SD
Gender				
Male	187	48		
Female	204	52		
Age				
Under 18	16	4.2		
18-25	144	36.9		
26-35	154	39.5		
36-45	50	12.9		
46-55	20	5		
Over 55	6	1.5		
Education Level				
High School	80	20.6		
Bachelor's Degree	247	63.2		
Master's Degree	49	12.5		
Doctorate	15	3.7		
Income Level				
Under 1000	91	23.2		
1000-3000	158	40.3		
3001-5000	95	24.4		
5001-7000	29	7.4		
Over 7000	18	4.7		
Product symbolism			3.731	0.91
Price discount			3.449	1.142
Influencer impact			3.540	1.112
Consumer Impulsivity Traits			2.999	1.021
Purchase Intention			3.108	0.961

The results show that 52% of the sample are female and 48% are male. The age is mainly concentrated between 18 and 35 years old. Most respondents have a bachelor's degree or higher. The income level is relatively evenly distributed. From the means and variances of the six variables, no outliers are observed.

Reliability and Validity Testing

Table 2

Reliability

Variable	Cronbach's Alpha	Number of Items
Product symbolism	0.78	4
Price Discount	0.82	3
Influencer Impact	0.85	3
Consumer Impulsivity Traits	0.76	4
Purchase Intention	0.83	3

Although this study used established scales, certain adjustments were made to them. Therefore, the final questionnaire still needs to undergo reliability analysis to ensure the reliability and stability of the sample data. The Cronbach's α coefficients for the five variables are all greater than 0.7, indicating that the questionnaire in this study has good reliability.

Table 3

KMO and Bartlett's Test of Sphericity

KMO	0.851	
	Chi-Square Value	1000.50
Bartlett's Test of Sphericity	df	136
	P Value	0.000

In the context of our study, the KMO value of 0.851 suggests that the data is adequate for proceeding with factor analysis. Bartlett's Test of Sphericity yielded a chi-square value of 1000.50 with a p-value of 0.0, strongly rejecting the null hypothesis, confirming that the data is suitable for factor analysis.

After conducting Confirmatory Factor Analysis (CFA), the results showed that the factor loadings in the questionnaire were all greater than 0.4, and the corresponding relationships were consistent with the expectations of the questionnaire design. The communalities of all research items were above 0.5, indicating that the information of the research items could be effectively extracted. Therefore, the questionnaire has good validity.

Correlation Analysis and Regression Analysis

Table 4

Correlation Analysis

	Product Symbolism	Price Discount	Influencer Impact	Consumer Impulsivity	Purchase Intention
Product_Symbolism	1	0.529	0.503	0.491	0.675
Price_Discount	0.529	1	0.564	0.496	0.648
Influencer_Impact	0.503	0.564	1	0.543	0.631
Consumer_Impulsivity	0.491	0.496	0.543	1	0.554
Purchase_Intention	0.675	0.648	0.631	0.554	1

The correlation coefficient between Product Symbolism and Purchase Intention is 0.675. The correlation coefficient between Price Discount and Purchase Intention is 0.648. The correlation coefficient between Influencer Impact and Purchase Intention is 0.631. The correlation coefficient between Consumer Impulsivity and Purchase Intention is 0.554. These results indicate that there is a significant positive correlation between each independent variable and the dependent variable.

Table 5
Regression Analysis

		R Square	Adjusted SquareD R2	Std Error of the Estimate
		0.893	0.888	0.348
Variable	B	SE	t	sig.
Constant	0.033	0.261	0.128	0.899
Product_Symbolism	0.41	0.06	6.874	0
Price_Discount	0.32	0.059	5.422	0
Influencer_Impact	0.195	0.06	3.268	0.001
Consumer_Impulsivity	0.12	0.053	2.257	0.026

The overall fit of the regression model is very high, with an R-squared value of 0.893 and an adjusted R-squared value of 0.888. This indicates that the model can explain 89.3% of the variance in the dependent variable. The specific regression coefficients are as follows:

Product Symbolism has a significant positive impact on Purchase Intention, with an unstandardized coefficient of 0.410, a t-value of 6.874, and a p-value of 0.000. Price Discount has a significant positive impact on Purchase Intention, with an unstandardized coefficient of 0.320, a t-value of 5.422, and a p-value of 0.000. Influencer Impact has a significant positive impact on Purchase Intention, with an unstandardized coefficient of 0.195, a t-value of 3.268, and a p-value of 0.001. Consumer Impulsivity has a significant positive impact on Purchase Intention, with an unstandardized coefficient of 0.120, a t-value of 2.257, and a p-value of 0.026.

These results indicate that each independent variable has a significant positive impact on Purchase Intention, consistent with our initial hypotheses.

Findings and Conclusion

The results of the study showed that product symbolism has a significant positive impact on consumer purchase intention, price discounts have a significant positive impact on consumer purchase intention, influencer impact has a significant positive impact on consumer purchase intention, consumer impulsivity traits have a significant positive impact on consumer purchase intention.

Recommendation

Based on the results of the regression analysis, several recommendations can be made to enhance consumer purchase intention in the context of live streaming e-commerce for Luosifen (a traditional Chinese noodle dish). Each independent variable—Product Symbolism,

Price Discount, Influencer Impact, and Consumer Impulsivity—has shown a significant positive impact on purchase intention.

Enhance Product Symbolism

Brand Identity: Strengthen the brand identity of Luosifen by emphasizing its unique cultural and traditional value. Use storytelling techniques in live streams to highlight the history and cultural significance of Luosifen.

Packaging: Invest in innovative and attractive packaging that reflects the product's symbolic value. Use designs that resonate with cultural themes and modern aesthetics to appeal to both traditional and contemporary consumers.

Optimize Price Discount Strategies

Limited-Time Offers: Implement limited-time discounts during live streaming sessions to create a sense of urgency and encourage impulse purchases. Highlight these offers prominently during the live stream.

Bundling and Promotions: Offer bundle deals and promotional discounts that provide greater value for money. For example, bundle Luosifen with complementary products or offer discounts on bulk purchases.

Leverage Influencer Impact

Influencer Collaboration: Partner with influencers who have a strong following and can effectively communicate the product's benefits. Select influencers who align with the brand's image and target audience.

Authenticity and Engagement: Ensure that influencers provide authentic reviews and engage with the audience during live streams. Authenticity builds trust, and interactive sessions can enhance viewer engagement and purchase intention.

Cater to Consumer Impulsivity

Interactive Features: Use interactive features such as live polls, Q&A sessions, and instant feedback to keep viewers engaged and prompt impulsive buying decisions.

Highlight Immediate Benefits: Emphasize the immediate benefits and unique selling points of Luosifen during the live stream. Quick demonstrations and testimonials can trigger impulsive purchases.

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