

# Research on the Factors Influencing the Purchase Intention of Young People in E-commerce Live Streaming Rooms: A Case Study of Beauty Live Streaming Rooms

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**Abstract.** As 5G technology and the Internet have advanced, live streaming has emerged as a new kind of commerce. In this context, brands have also begun to open up a new sales model - live streaming. This article conducts an empirical study on this using beauty products as an example. This article briefly reviews the E-commerce live streaming's present state and uses quantitative methods to investigate the determinants of consumers' perceived value and intention to buy. This article demonstrates how product discounts significantly improve consumers' perceptions of value and intention to buy, as well as how the features of internet live broadcasts positively affect these same metrics. Both the association between product discounts and purchase intention and the relationship between online live broadcast qualities and buy intention are mediated by perceived value. Thus, the researcher proposed the following ideas for the live broadcast room's optimization: construct a two-way communication channel, improve the atmosphere in the live broadcast room, and establish a competitive commodity system.

**Keywords:** Live streaming, live streaming features, consumer behavior.

## 1. Introduction

In recent years, live streaming e-commerce has rapidly emerged in China, providing more sales methods for various shopping festivals, and consumers are becoming more familiar with and accepting of this shopping method. During the epidemic, also known as an important consumption method, it accelerated the economic recovery. Compared with traditional online sales methods, live streaming sales are closer to consumers, more interesting and interactive. In addition, the development of 5G and technology will also bring more possibilities and better consumer experiences for live streaming rooms. Therefore, live streaming for marketing is an unavoidable trend.

Yin Xiaonan and Chang Min mentioned that e-commerce live streaming is a type of online business strategy that benefits anchors, brands, and users. Brands use the traffic of e-commerce platforms to realize monetization, and the final effect will be directly reflected in the sales guidance [1]. Peng Chuanyu and Sun Jimin consider "e-commerce + live streaming" to be a new business strategy that links people, goods, and venues, bringing consumers a convenient and intuitive shopping experience, and providing new marketing and sales channels for brands. This will become a new trend and new normal in the retail industry [2]. Lili et al. mentioned that live streaming platforms have strong drainage functions, and the internet celebrity economy also has strong monetization capabilities. At the same time, consumer shopping methods are gradually becoming fragmented, which has promoted the evolution of live streaming sales in e-commerce [3].

Warinrampai believes that the emergence of opinion leaders in the live sales model is a major development. They use 2 minutes to review products, introduce products to consumers, encourage them to place orders immediately, and bring benefits to brands. In addition, to maximize the value of opinion leaders, three points need to be achieved: their image must be consistent with the product characteristics; they need to have professional knowledge; and establish an equal and friendly relationship with consumers [4]. Hou Fangfang et al. demonstrated through empirical analysis that attractiveness and social status as well as the interactivity between the anchor and the audience play a significant role in the audience's behavioral intention in live broadcasts [5].

Prior studies on live streaming for e-commerce has mostly been conducted from a macro perspective. There is relatively little discussion on how beauty brands or companies can use it to achieve marketing goals. At the same time, by analyzing and studying the current situation of live streaming sales in the beauty industry, optimization suggestions are proposed for existing live streaming problems to improve daily operations by incorporating e-commerce live streaming sales marketing tactics.

This study aims to provide optimization recommendations for live streaming rooms and examine the state of e-commerce live streaming sales in the cosmetics sector.

Product discounts and live streaming room features are considered independent variables in this study, while consumers' willingness to purchase is the dependent variable. The perceived value of the live streaming room is considered a mediating variable. Researchers will select a young population of 18-30 for the study.

## **2. Research Method**

### **2.1. Research Variables**

This paper chooses the product discount as the independent variable. Product discounts are mainly reflected in direct price reductions, increased giveaways, exclusive red envelopes in live streaming rooms, and other methods. Comparing these values with the usual prices. The more the difference, the bigger the discount, and the more customers believe this is a good deal, the more likely they are to buy it.

As the other independent variable, online live streaming's features mostly consist of the live streaming room's visibility, entertainment, engagement, and authenticity. If live streaming can better enhance visibility, interactivity, entertainment, and authenticity, it can increase customers' propensity to buy by assisting them in better understanding the product's details and obtaining more comments about it.

Finally, consumers' perceived value and final willingness were selected as mediating variables and dependent variables respectively. Value perception is frequently used by researchers to examine customer purchase intention as a mediating variable, according to a review of earlier research. Customers' subjective assessment of the worth of the information they are given is known as perceived value.

#### **2.1.1. Research hypothesis**

H1 Product discounts have a positive promoting effect on purchase intention

H2 The characteristics of online live streaming have a positive promoting effect on purchase intention

H3 Purchase intentions and product discounts are mediated by consumer perceived value.

H4 Online live streaming characteristics and buying intention are mediated by consumer perceived value.

### **2.2. Research Method**

A quantitative analysis will be used in this study to investigate the factors impacting consumers' purchase intentions in beauty live streaming rooms. By distributing questionnaires to the respondents, the researcher will employ quantitative research techniques to examine the issue. To more intuitively convey the research findings, researchers aim to quantify the influence of influencing elements in the data as much as possible in order to estimate consumers' purchasing intentions. In the meantime, scientists think that quantitative research will yield more consistent findings than previous approaches.

### 2.3. Data Collection

#### 2.3.1. Primary data collection and sampling selection

To gather primary data for this study, a questionnaire survey was employed. The questionnaire method is a way for researchers to collect reliable data by using quantifiable questions to measure the thoughts of respondents. The interviewee fills in their answers based on the questions in the table. The sample selected by the researchers is young people aged 18 to 30. Because e-commerce live streaming is a relatively emerging shopping method, it has a higher acceptance among young people. Most of the respondents selected in this paper are students or have just started working for a few years, with a high level of acceptance of emerging things, but relatively lower disposable income compared to middle-aged people.

#### 2.3.2. Questionnaire design

In the first section of the questionnaire, fundamental information such as age, gender, average monthly consumption amount, and frequency in the living room will be surveyed in order to examine the respondents' basic features and composition. The second part will use the Likert five point scale to quantify the research question, which includes product dimension, live streaming feature dimension, consumer perceived value dimension, and final consumption intention dimension.

#### 2.3.3. Questionnaire collection status

This study collected 170 questionnaires from October 28, 2024 to November 1, 2024. A total of 156 valid questionnaires were gathered after excluding invalid ones with a valid questionnaire collection rate of approximately 91.8%.

## 3. Research Result

### 3.1. Descriptive Statistical Analysis

**Table 1.** Basic situation of the respondents

Type		Number	Percentage
Gender	Male	27	17.31%
	Female	129	82.69%
Age group	18-22	36	23.08%
	23-25	70	44.87%
	26-30	50	32.05%
Monthly cost on internet	below 300	9	5.77%
	201-1000	17	10.9%
	1001-2000	26	16.67%
	2001-3000	34	21.79%
	above3000	70	44.87%
Ever watched beauty live room	Yes	143	91.67%
	No	13	8.33%
Ever bought beauty product in live room	Yes	143	91.67%
	No	13	8.33%
the frequency of watching beauty live room	many times everyday	10	6.41%
	once every 1-2 days	12	7.69%
	once every 3-5 days	22	14.1%
	once every 6-10 days	58	37.18%
	seldom	54	34.62%

For demographic data, as shown in table 1 female respondents accounted for 82.69% of the total, which may be due to the selection of beauty products in this study. Meanwhile, among the respondents,

those aged 23-25 were the most numerous, making up about half of the total. 91.67% of people have watched and purchased beauty live streaming rooms, and the majority of responders visit live rooms for beauty products on a regular basis.

### 3.2. Empirical Data Analysis

#### 3.2.1. Reliability and validity analysis

**Table 2.** Cronbach reliability

	Correlation item-total correlation(CICT)	Cronbach's Alaph if item deleted	Cronbach's Alaph
Q7	0.688	0.918	0.925
Q8	0.631	0.921	
Q9	0.698	0.918	
Q10	0.706	0.918	
Q11	0.717	0.917	
Q12	0.73	0.917	
Q13	0.699	0.918	
Q14	0.643	0.92	
Q15	0.686	0.918	
Q16	0.688	0.918	
Q17	0.684	0.919	
Q18	0.618	0.921	

Experience has shown that an answer is very dependable. If  $\alpha > 0.8$ , the reliability is reliable. In the table 2, the  $\alpha$  coefficient is 0.925, which is very reliable.

**Table 3.** Test of Validity

KMO		0.945
Bartlett's test	Approximate chi square	961.004
	df.	66
	Sig.	0.000

The test for determining if variables have enough shared variance for factor analysis is Bartlett's sphericity test ( $p < 0.05$ ). The sample size is suitable for the analysis, as indicated by the KMO value of 0.945 in Table 3. Furthermore, 961.004 is the result of the test ( $df=66, p < 0.001$ ). As a result, it proves the sample is suitable for the study and the validity of the questionnaire is excellent.

#### 3.2.2. Correlation analysis

**Table 4.** The correlation coefficient of variables

	Product	Characteristics of online live streaming	Perceived Value	Purchase intention
Product	1	.733**	.680**	.642**
Characteristics of online live streaming	.733**	1	.772**	.735**
Perceived Value	.680**	.772**	1	.684**
Purchase intention	.642**	.735**	.684**	1

From the table 4, it is evident that every dimension has a strong positive link with every other dimension. Customers' perceived value and buying intention increase with product discounts and online live streaming features.

The qualities of online live streaming and consumer perceived value have the strongest link, showing that consumers' opinions of internet live streaming's worth rise in proportion to its quality.

The qualities of online live streaming and customer purchasing willingness rank second in strength, suggesting that the more high-quality online live streaming, the more likely it is that consumers will make purchases.

**3.2.3. Regression analysis**

**Table 5.** Linear regression analysis results

	Non standardized coefficient		standardized coefficient	t	p	collinearity diagnosis	
	B	Standard Error	Beta			VIF	
constant	1.438	0.247		5.826	0.000		
Product	0.637	0.061	0.642	10.379	0.000	2.16	
Characteristics of online live streaming	0.61	0.084	0.573	7.299	0.000	2.16	
R2	0.564						
Adjusted R2	0.558						
F	98.779(p=0.000)						
D-W	1.836						

It is remarkable in the table 5, the value of R2 is 0.564, indicating that product and online live streaming features can explain consumers' final purchase intention to a degree of 56.4%. Meanwhile, F is 98.779, demonstrating the regression equation's significant explanatory power. The p is less than 0.01, and the dependent variable can be substantially predicted by at least one independent variable. VIF less than 5 and D-W around 2 indicate that there is no multicollinearity between the data.

From the non-standardized coefficients, the final willingness of consumers is positively impacted by both independent variables, and the degree of influence of the product is slightly higher than the features of live streaming on the internet. In addition, the t are greater than 5.286 and p are less than 0.01, indicating that both independent variables have a big influence on customers' intentions to buy.

Hypothesis 1 and hypothesis 2 have been proven.

**3.2.4. Intermediary effect analysis**

**Table 6.** Intermediary effect analysis (product)

	Effect	se	t	p	LLCI	ULCI
Total effect	0.637	0.0614	10.3788	0.000	0.5157	0.7582
Direct effect	0.3252	0.0754	4.316	0.000	0.1764	0.4741
Indirect effect	0.3117	0.0599	/	/	0.1965	0.4305

**Table 7.** Intermediary effect analysis (Characteristics of online live streaming)

	Effect	se	t	p	LLCI	ULCI
Total effect	0.7832	0.0582	13.4678	0.000	0.6683	0.8981
Direct effect	0.5455	0.0883	6.1805	0.000	0.3711	0.7199
Indirect effect	0.2377	0.07	/	/	0.1045	0.3771

From the table 6 and 7, it is evident that the perceived value of the consumer acts as a mediator in both the product--consumption intention and online live streaming feature--consumption intention models. The confidence intervals of both models do not pass through 0, therefore the mediating effect is significant.

Hypothesis 3 and hypothesis 4 have been proven.

## **4. Discussion**

### **4.1. Establish a Competitive Commodity Mechanism**

The research results obtained above indicate that product discounts have a significant influence on customers' ultimate buying intent. Therefore, in order to increase sales, brands must come up with better promotional methods to sell their products.

Previous studies have shown that consumers are sensitive to the prices of some retail products [6]. A good product mechanism is the core competitiveness of a live streaming room. Therefore, brands can use various means such as low prices, diverse choices, more gifts, unique benefits, reducing prices within the allowed range, and getting closer to consumers. . At the same time, more scenarios can be created to promote consumption, such as limited time, limited quantity, and price limit, increasing consumers' sense of urgency and promoting consumption.

### **4.2. Create a Better Atmosphere for the Live Broadcast Room**

According to the findings of regression and correlation study, consumers' ultimate purchase intention is positively impacted by superior online live streaming capabilities. Customers' perceived value and purchase intention can be enhanced by a positive environment in the live broadcast room as well as greater interest, involvement, and authenticity.

The increase in fun during live streaming can also help brands gain more favor from consumers. Considering consumers, aligning with their interests, and being close to their interests and needs are essential considerations for brands [7]. Live streaming rooms should create a live streaming environment with good visual effects and a strong promotional atmosphere for consumers. In the scene setting, the brand should choose suitable backgrounds, displays, lighting, and match the brand tone to convey brand value to consumers from the atmosphere of the live broadcast room.

### **4.3. Establish a Two-way Communication Channel**

The aforementioned findings demonstrate that consumers' perceptions of live streaming rooms' worth are positively impacted by their entertainment value. Another significant feature of online live streaming is its interactivity, which makes it easy and engaging for viewers and live streaming rooms to communicate and helps customers better understand products and make decisions about what to buy.

Dodds mentioned that brands solve problems for consumers through interaction, thus establishing trust between brands and consumers. In the context of e-commerce, the more interactive signals consumers receive, the easier it is for them to make purchasing decisions [8]. Firstly, it is necessary to ensure smooth communication channels, respond promptly to consumers' questions, reduce their sense of being undervalued, and avoid misunderstandings. At the same time, when conducting promotions, it is advisable to ask more questions to engage consumers and increase their interaction frequency, which is beneficial for enhancing brand recognition. Finally, it is important to maintain a relaxed atmosphere in the live room. This supports building a connection of trust with customers.

## **5. Conclusion**

According to this study, consumers' perceptions of value and eventual propensity to purchase are significantly enhanced by product discounts and online live streaming capabilities. Consumers who obtain products with higher cost-effectiveness in live rooms are more prone to make purchasing decisions. In addition, when consumers feel stronger interest, interactivity, and authenticity. They are also more inclined to make purchases in the live broadcast room.

Live streaming rooms should consider consumers and set up better product mechanisms. Flexibly utilizing various discounts to increase conversion rates while providing appropriate guidance to consumers. As a highly attractive and interactive marketing method, e-commerce live streaming sales have rapidly emerged and become the choice of many enterprises and brands in a short period of time.

One of the key strategies for firms to draw in customers and boost sales in the future will be e-commerce live streaming. Therefore, brands should fully develop suitable live streaming marketing strategies based on their actual situation and characteristics.

This article has the problem of an uneven ratio of male to female respondents. Meanwhile, there are relatively few literatures on beauty companies using e-commerce live streaming for marketing. As live streaming of online goods becomes more standardized and normalized, brands need to find a live streaming marketing path that suits them.

## References

- [1] Yin XN, Chang M. Construction and communication strategy of e-commerce live streaming brand: Taking Taobao live streaming brand "Viya" as an example. *Audiovisual*, 2021, (3): 164-165.
- [2] Peng CY, Sun JM. The current situation and development implications of network marketing of "Live Streaming + E-commerce" from multiple perspectives. *In the marketing industry*, 2021, (38): 60-62.
- [3] Lu LL, Chen XY, and Chen SJ. Research on E-commerce live streaming mode. *China Collective Economy*, 2021, (33): 65-68.
- [4] Rungruangjit W. What drives Taobao live streaming commerce? The role of parasocial relationships, congruence and source credibility in Chinese consumers' purchase intentions. *Heliyon*, 2022, 8 (6): e09676.
- [5] Hou FF, Guan ZZ, Li BY, et al. Factors influencing people's continuous watching intention and consumption intention in live streaming evidence from China. *Internet Research*, 2020, 30 (1): 141-163.
- [6] Natarajan T, Balasubramanian SA, Kasilingam DL. Understanding the intention to use mobile shopping applications and its influence on price sensitivity. *Journal of Retailing and Consumer Services*, 2017, (37): 8-22.
- [7] Li MC. Research on the influencing factors of user purchase intention on social e-commerce platforms: taking Xiaohongshu as an example. *National Circulation Economy*, 2022, (35): 12-15.
- [8] Dodds WB, Monroe KB, Grewal D. Effects of price, brand, and store information on buyers' product evaluations. *Journal of marketing research*, 1991, 28 (3): 307-319.