

# The Impact of E-Commerce Live Broadcasts on Consumers' Purchase Intention

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**Abstract:** E-commerce live broadcast has an important influence on consumers' purchase intention. The three dimensions of live broadcast content in the broadcast room are the number of comments, product quality, and live content as independent variables. A theoretical model is constructed with perceived value and risk as intermediaries and the consumers' purchase intention as the dependent variable, and corresponding hypotheses are put forward. We designed the scale, collected relevant data, and tested the model hypothesis using Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structure (AMOS) software. The study found that the number of comments and product quality had a significant impact on perceived value, perceived risk, and consumers' purchase intention. From this conclusion, it is suggested that businesses should control the number of comments, strengthen the product quality of comments, and distinguish the repetition degree of the content of live broadcasts.

**Keywords:** Livestreaming e-commerce; Perceived value; Perceived risk; Purchase intention

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## 1. Introduction

With the outbreak of the web celebrity economy and Internet live broadcasts becoming more popular, network live broadcasts with goods have developed rapidly in recent years<sup>[1]</sup>. Shopping in the virtual studio has become a new shopping fashion trend. The public comments in the broadcast room have become a direct form for consumers to obtain the reputation of consumer products. The situation of consumers shopping in the broadcast room is different from that of offline shopping. The information obtained by consumers shopping in the broadcast room is limited, forming information asymmetry<sup>[2]</sup>. Therefore, when consumers shop in the broadcast room, they are easily affected by the comment information in the comment section of the broadcast room in the broadcast room and change their attitude. Most consumers will be affected by whether they buy the product or not when shopping online because of the favorable comments about the product<sup>[3]</sup>.

This paper intends to discuss whether e-commerce live broadcasts affect consumer purchase intention, explore the perceived value and time, and financial risk in consumer purchase decisions, and examine the impact of network comments on consumer groups in online shopping, to make corresponding management

countermeasures, optimize the studio shopping environment <sup>[4]</sup>.

## **2. Research hypothesis and study model**

### **2.1. Variable determination**

The comments in the broadcast room are taken as the independent variable, the purchase behavior of consumers is taken as the dependent variable, and the perceived value and perceived risk of consumers are taken as the intermediate variables between the independent variables and the dependent variables. At the same time, it discusses the correlation between customers' desire to buy products and the perceived value of products and the content of the comments in the network broadcast room <sup>[5]</sup>.

### **2.2. Study hypothesis is proposed**

#### **2.2.1. The impact of the comments on consumers' purchase intention**

This paper combines the characteristics of the comments in the commentary studio, and this paper makes research assumptions on the number of comments, product quality, and content of live broadcast:

- (1a) The number of comments has a significant impact on consumers' willingness to buy.
- (1b) Product quality has a significant impact on consumers' purchase intention.
- (1c) Content of live broadcasts has a significant impact on consumers' willingness to buy.

#### **2.2.2. The role and effects of perceived value and perceived risk**

Based on the academic research, two assumptions about the buyer's perceptions are:

- (2a) Perceived value plays a mediating role in the number of comments and consumers' purchasing intentions.
- (2b) Perceived value plays an intermediary role in product quality and consumers' purchase intention.
- (2c) Perceived value plays a mediating role in the content of live broadcasts and consumers' purchase intention.
- (3a) Perceived risk plays a mediating role in the number of comments and consumers' purchasing intentions.
- (3b) Perceived risk plays an intermediary role in product quality and consumers' purchase intention.
- (3c) Perceived risk plays an intermediary role in the content of live broadcasts and consumers' purchase intention.
- (4a) Perceived value has a significant impact on consumers' purchase intention.
- (4b) Perceived risk has a significant impact on consumers' willingness to buy.

#### **2.2.3. Theoretical model construction**

The main objective of this study is the evaluation of the commentator in the broadcast room, and the content is to discuss the perceived value and risk as the key influencing factors, which play a role in customers' awareness of purchasing behavior. The characteristics of comments are summarized according to the three levels of product comment quantity, product quality, and repetition of content, and the intermediary variables are perceived value and perceived risk <sup>[6]</sup>. The study's theoretical model is shown in **Figure 1**.

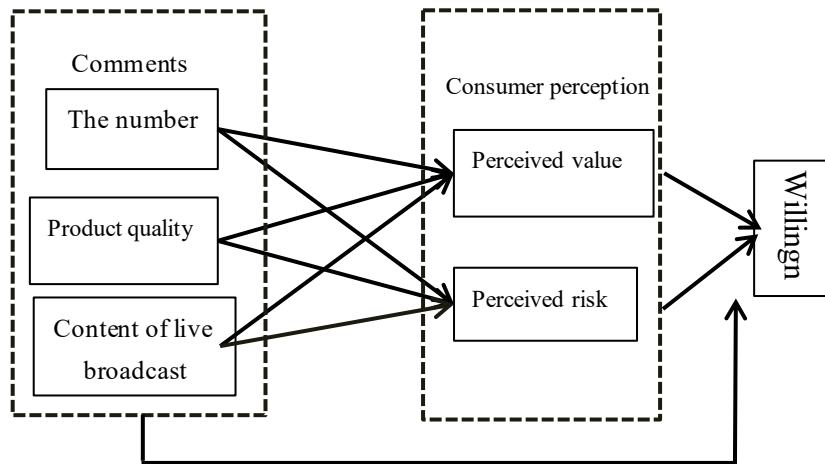


Figure 1. The theoretical model of this study

### 3. Study design

There are six aspects of intermediate variables during the study, which are the number of comments, text quality, content repetition, perceived value, perceived risk, and willingness to buy<sup>[7]</sup>. The study scale studied in this paper is shown in **Table 1**.

Table 1. Scale design

Variable	Code	Measurement problem	Reference source
The number of comments	1-1	Many accounts in the studio will affect my purchase intention	Peter and Olson (1998) <sup>[8]</sup>
	1-2	The number of comments in the studio will affect my willingness to buy	
	1-3	Many people in the studio's praise of the product will affect my purchase intention	
Product quality	2-1	The content of the studio is closely related to the product will affect my purchase intention	Bi (2010) <sup>[9]</sup>
	2-2	The comments in the studio have fully affected my purchase intention	
	2-3	The objective and real comments in the studio will affect my purchase intention	
Content repetition	3-1	Similar emotional expressions will affect my willingness to buy them	Zheng, Han, and Wang (2015) <sup>[10]</sup>
	3-2	The similar words of the comment account in the studio will affect my purchase intention	
	3-3	A lot of repeated comments in the studio will affect my willingness to buy	
Perceived value	4-1	Knowing that the comments may be made by the commentator, I still think the product price is reasonable	Wang (2010) <sup>[11]</sup>
	4-2	Knowing that the comments may be made by the broadcaster, I still think the product is useful	
	4-3	Knowing that it may be the comments made by paid, I still think the studio is very popular, and the comment atmosphere is very good, which makes me have an emotional dependence	
Perceived risk	5-1	The suspected comments made by the broadcaster made me feel that the product price was inflated	Zhou (2011) <sup>[12]</sup>
	5-2	The suspected comments made by the broadcaster made me feel that the product efficacy was false	
	5-6	The suspected comments made by the broadcaster commentator made me feel that the product's reputation was false	
Willingness to buy	6-1	After browsing the reviews, I have the idea of buying the product	Bansal and Voyer (2000) <sup>[13]</sup>
	6-2	I plan to buy the product soon	
	6-3	I would probably recommend the product to a friend	

## 4. Empirical analysis

All data collected were tested for reliability and aggregate validity using SPSS25.0. The overall Cronbach's  $\alpha$  of the whole questionnaire design is 0.927, and the Cronbach's  $\alpha$  coefficient of each variable was higher than 0.7, indicating that the design of this questionnaire is relatively ideal and has high credibility <sup>[14]</sup>. Build a confirmatory factor analysis model to further test the structural validity of the measurement scale <sup>[15]</sup>. The hypotheses were verified by correlation analysis and hierarchical regression, and the validation results are reflected in **Table 2**.

**Table 2.** Summary of study hypotheses

Hypothesis	Assuming the specific content	Result
(1a)	The number of comments has a significant impact on consumers' willingness to buy	Valid
(1b)	Product quality has a significant impact on consumers' purchase intentions	Valid
(1c)	Content of live broadcasts has a significant impact on consumers' purchase intention	Valid
(2a)	Perceived value plays a mediating role in the number of comments and consumers' purchase intention	Valid
(2b)	Perceived value plays a mediating role in product quality and consumers' purchase intention	Valid
(2c)	Perceived value plays a mediating role in content of live broadcasts and consumers' purchase intention	Valid
(3a)	Perceived risk plays a mediating role in the number of comments and consumers' purchase intention	Valid
(3b)	Perceived risk plays a mediating role in product quality and consumer purchase intention	Invalid
(3c)	Perceived risk plays a mediating role in content of live broadcasts and consumer purchase intention	Valid
(4a)	Perceived value has a significant impact on consumers' purchase intention	Valid
(4b)	Perceived risk has a significant impact on consumers' purchase intention	Invalid

## 5. Conclusion of the study

Firstly, for the audience in the broadcast room, the number of comments, similarity degree of product content, and product quality directly affect their purchase intention <sup>[16]</sup>. Secondly, for the buyers of the broadcast room, the risk perception is not significant, so it can be seen that the buyers have a weak ability to perceive the risk through the comment content in the broadcast room <sup>[17,18]</sup>. Thirdly, the comments of the commentator in the broadcast room have a significant impact on the perceived value of the viewers in the broadcast room, and the perceived value also has a significant impact on the purchase intention of the viewers, indicating that the output of the commentator in the broadcast room can be regulated to affect the purchase intention of the viewers <sup>[19,20]</sup>.

## 6. Management enlightenment

The comments in the broadcast room have a significant impact on the purchase intention of the people visiting the broadcast room. Most people will notice the comments on the bullet screen when shopping in the broadcast room <sup>[21]</sup>. For merchants, guiding customers to shop effectively in the broadcast room is crucial for increasing the transaction volume, making the management of comments particularly important. Through investigation and analysis, this paper explores the influence of the comments on the shoppers and draws the following enlightenment based on the conclusion.

### 6.1 Control the number of comments

The comments in the broadcast room are the key reference basis for the viewing crowd shopping in the

broadcast room, and the number of comments positively affects the purchase intention. Increasing the number of comments is good for increasing the purchase intention and promoting the sales volume <sup>[22,23]</sup>. Properly guiding comments by merchants can increase the number of comments and accounts, increase the popularity of the live broadcast room, and effectively comment around the host and products.

## 6.2. Control the comments on product quality

Comments on the product quality directly affect whether consumers will watch and buy the product. Higher product quality can stimulate the viewer's purchase intentions. Therefore, there is a significant relationship between product quality and purchase intention. Merchants should pay special attention to the accuracy of the product descriptions and avoid exaggeration <sup>[24]</sup>. The length and relevance of the content should be controlled to ensure objectivity, as this content directly reflects the brand image of the product <sup>[25]</sup>. Content that is close to the consumer's tone is more likely to influence purchase intention.

## 6.3. Minimize repetitive comments and content

Comment content too similar can cause consumer aversion. Repetitive content tone, text, and account repetition rate can cause consumers' aversion to buying. Merchants should minimize the similarity of comments and content. Simple product comments can more effectively avoid buyer aversion <sup>[26]</sup>. The high correlation degree of content and product helps buyers to improve the perceived value and thus improve the transaction rate of the situation.

## Disclosure statement

The authors declare no conflict of interest.

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