

# **The Influence of Webcast Interactivity on Customer Value Co-Creation: The Moderating Effect of Perceived Platform Risk**

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## **Abstract**

The webcasting industry is constantly developing, and the same-industry and cross-industry competition is also going on. Value co-creation can solve their own difficulties for many enterprises. This study proposes the impact of webcast interactivity and perceived risk on customer value co-creation. This study adopts the method of distributing questionnaires online, and the samples are mainly concentrated in Guangdong Province, which has the largest number of Internet users in the country. Research samples were collected by means of purposive sampling and then analyzed by correlation analysis and structural equation modeling analysis. The results show that the interactivity of webcast positively affects customer participation behavior and customer citizenship behavior, and perceived platform risk plays a negative moderating role.

**Keywords:** Webcast Interactivity ; Customer Value Co-Creation; Perceive Platform Risk

## **1. Introduction**

With the continuous popularization of mobile portable devices such as mobile phones and the upgrading of network technology and communication technology, the Webcast industry is gradually connected with all aspects of people's lives. Due to the different characteristics of the webcast industry from traditional media, it has been fully developed with the progress of economy and technology and the change of people's habits of using electronic products. It provides convenience and creates a good experience for people in all walks of life.

This study attempts to combine the relevant knowledge of psychology and consumer behavior, based on the perspective of perceived platform risk, comprehensive Considering the interactivity of webcasting and customer value co-creation, and discussing its mechanism, it is hoped to provide decision-making suggestions for the webcasting industry to take advantage of customer value co-creation.

The main purpose of this study is to explore the factors that affect the interaction of webcasting on customer value co-creation, and the role of perceived platform risk in it. It is hoped that it can provide some theoretical suggestions for the stakeholders of live broadcast interaction in the marketing process.

## **2. Methodology**

### *2.1 Customer Value Co-Creation*

The definition of customer value co-creation. The service logic that appeared successively. Such as service science, service ecosystem and other value co-creation theories (Lou Yun, Ding Jianchao, 2020). Prahalad and Ramaswamy (2000) defined the theory of value co-creation as the core of realizing the joint value creation between enterprises and consumers, which requires enterprises and consumers to create personalized consumption experience together. Heinonen et al. (2010) defined value co-creation based on customer-led logic. In the process of value co-creation, consumers should be dominant. They believed that the ultimate value is that customers use the products provided by the enterprise and their own knowledge and skills. created in practice. The other party creates value, and value is jointly created by both parties. Customer value co-creation is proposed on the basis of service-dominant logic. The definition of customer value co-creation used in this study follows the definition of customer value co-creation by scholar Grönroos (2012) . Customer value co-creation behavior means that customers increase the value of products or services by participating in and developing the service process.

## *2.2 Webcast Interactivity*

The interactive definition of webcasting, Tan Chang et al. (2018) defined webcasting as being provided by webcasts without recording or video recording, relying on the Internet and mobile phones or computers to provide live broadcasts on webcasting platforms, synchronously Live broadcasting, multi-party display, and instant interaction with the audience through barrage or comments are network content service forms. At the same time, it is summarized that the characteristics of network live broadcasting are strong timeliness, strong interaction, and relying on mobile networks. Fan Xiaojun et al. (2020) defined the interactivity of mobile live video as the psychological experience experienced by users in the process of watching mobile live video. This study defines the interactivity of webcasting as the customer watching the live broadcast provided by the webcaster without recording or video, relying on the Internet and mobile phones or computers to provide live broadcasting on the webcasting platform, simultaneously broadcasting live, showing in multiple ways, and interacting with the audience through The subjective psychological feelings experienced during the instant interaction of barrage or comments (Tan Chang et al., 2018; Fan Xiaojun et al., 2020).

### *2.2.1 The Impact of Webcast Interactivity on Customer Engagement and Behavior*

Customer participation behavior is a behavior within the customer role, and it is a necessary behavior for customers to complete service delivery with service or product providers (Yi & Gong, 2013). Baumann and Meunier-FitzHugh (2014) have shown through research that good interaction can promote Customers have positive purchase behavior intentions. The interactivity itself includes the process of information exchange and interaction in various contexts. Cai and Wohn (2019) stated that live broadcasting is a kind of mixed media, which has unique attributes such as simultaneity and authenticity, and is a kind of synchronous media. Based on the above information, this study believes that audiences interact through subtitles or chatting during live broadcasting. The strategy is to improve the efficiency of obtaining desired service or product information, which in turn will increase the intention of customers to generate active purchase behavior. The occurrence of purchase behavior will make customers enter the role, prompting them to produce behavior within the role. According to the research of the above literature, the interactivity in the webcast will have an impact on the four aspects of customer participation behavior, so this study hypothesizes:

H1: The interactivity in webcast will positively affect customer participation behavior.

### *2.2.2 The Influence of Webcast Interactivity on Customer Citizenship Behavior*

As an extra-role behavior, customer citizenship behavior is a behavior that customers spontaneously show that is beneficial to the enterprise. It is manifested in customers' feedback on the products or services provided by the live broadcast platform, advocating for the live broadcast platform to provide products or services, and helping to buy the same brand. Other customers of products or services have a certain tolerance for live streaming platforms (Yi & Gong, 2013). Bozkurt et al. (2021) proved through empirical research that when customers think that the brand is highly interactive on social media, they will provide feedback and suggestions to improve the brand. Bhati and Verma (2020) research mentioned that when consumers interact deeply with brands, they will become "brand advocates" and these advocates will provide others with positive word-of-mouth about the brand. And because the interactivity of webcast has characteristics such as synchronization, responsiveness, and authenticity that will increase the interactive experience (Tan Chang et al., 2018; Steenkamp and Hyde-Clarke, 2014), according to the research of the above literature, it is shown that Interactivity will have an impact on customer citizenship behavior, so this research hypothesizes:

H2: The interactivity in live webcast will positively affect customer citizenship behavior.

### *2.3 Perceive Platform Risk*

Bauer and Cox (1967) defined perceived risk as "the combination of uncertainty plus the seriousness of the results involved". the opinion of". Featherman and Pavlou (2003) define perceived risk in the context of Internet e-service adoption as "the possibility of suffering losses in pursuit of the expected outcomes of using e-services." Liebermann and Stashevsky (2002) stated in the context of the Internet and e-commerce that perceived risk is often defined by subjective assessments of uncertainty about the financial, physical, and social consequences experienced by consumers. Based on the collation and study of the above literature, this study combines the definitions of perceived risk by Bauer and Cox (1967) and Dowling and Staelin (1994) in the context of webcast interaction, and defines perceived platform risk in webcast interaction as customers watching In the process of live broadcasting programs and interacting with them or purchasing products (or services) during the live broadcast, subjectively perceive the combination of uncertainty of the platform and the seriousness of the results involved.

#### *2.3.1 The Influence of the Relationship Between Perceived Platform Risk Webcast Interactivity and Customer Participation Behavior*

According to the literature, as long as the audience subjectively perceives the risk of the platform during the live broadcast interaction, it will arouse their attention to the potential resource loss, including financial, performance, social, time, psychological and privacy factors. In the process of live broadcast interaction, there may be false product or service introductions due to the negative evaluation of the platform by the network squadron, the professional ability of the anchor, or the intention of making profits, resulting in inconsistencies between the publicity or expression information and the information known to the audience. Inconsistent or inconsistent information will increase uncertainty (Stern, Lamb & MacLachlan, 1977), and according to Cox's (1967) the uncertainty of the increase in inconsistency will lead consumers to perceive platform risks and reduce customers' willingness to buy. The customer participation

behavior is a kind of in-role behavior. To sum up, this study believes that after customers perceive platform risks in live webcast interaction, customers will refuse to enter the role of consumers, thereby reducing the in-role behavior of customer participation behavior. Therefore, this study hypothesizes:

H3 : Perceived platform risk negatively regulates the impact of webcast interaction on customer participation behavior

### 2.3.2 The Impact of Perceived Platform Risk Webcast Interactivity on the Relationship between Customer Citizenship Behavior

Self-improvement will lead to the occurrence of customer citizenship behavior (Choi & Lotz, 2016). This study argues that customer citizenship behavior in webcast interactions is influenced by other people watching the livestream. The audience and related staff are present. However, inconsistent information in real-time interactions increases uncertainty and motivates customers' perceived risk. When citizens are unsure whether they are right, they may make mistakes and create embarrassing situations (Mandel, 2003). This study argues that under such circumstances, customers will reduce the occurrence of citizenship behaviors. Therefore, it is proposed that perceived risk affects the relationship between webcast interaction and customer citizenship behavior. This study assumes that:

H4 : Perceived platform risk negatively moderates the impact of webcast interaction on customer citizenship behavior.

## 3. Research Method

### 3.1 Research Frame Diagram

This paper mainly discusses the impact of webcast interactivity on customer value co-creation. The research framework is as follows:

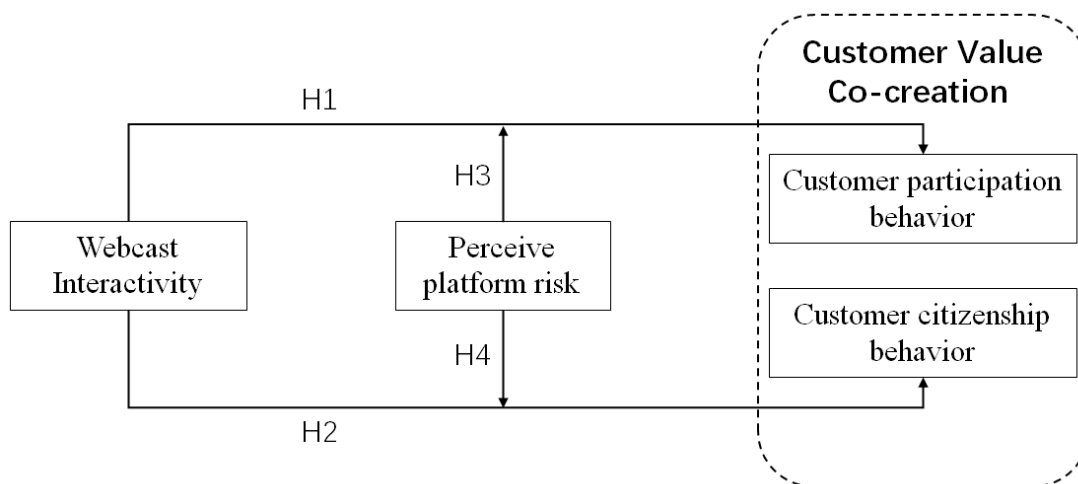


Figure 3.1 Research frame diagram

Source: compiled by this research

### 3.2 Measurement

This study used an online self-administered questionnaire. The survey included webcast interactivity, Customer Value Co-creation, Perceive platform risk, and demographic information. webcast interactivity was measured using nine items employed by Fan Xiaojun et

al. (2020). Refer to the mature questionnaires of scholars such as Li Zeguang (2020), Liao Junyun et al. (2016), and combine the seven items produced for the research purpose of this study to measure Customer Value Co-creation. Refer to the mature questionnaires of scholars such as Wang Jiazhou (2022), Pan Yu et al. (2010), and combine the seven items produced for the research purpose of this study to measure Perceive platform risk.

The sampling method used in this study is purposive sampling. The research object of this study is a specific population of individuals, and the purpose of the research is to gain an in-depth understanding of individuals who have had consumption behavior among webcast customers. In this context, intentional sampling is a more appropriate approach (Chen Yang, 2015).

Sudman (1976) believed that when obtaining samples within a province, the number of samples should be at least 500, so this study requires at least 500 valid questionnaires, which will be distributed in September 2022.

## **4. Data Analysis**

### *4.1 Questionnaire Recovery*

In this paper, a total of 1,117 questionnaires were collected online through Questionnaire Star, and invalid questionnaires were removed (such as incomplete basic information, taking less than 130 seconds or more than 500 seconds, filling out outside Guangdong Province, etc.), and finally 553 valid questionnaires were available 50%.

### *4.2 Descriptive Statistics*

After analysis, it was found that there were no outliers in all items, and the descriptive analysis could be performed directly. The standard reference for judging whether the data conforms to the normal distribution characteristics is that the data kurtosis is lower than 10, and the absolute value of the skewness is lower than 5, which proves that the data conforms to the normal distribution characteristics. The absolute value of skewness of each item of all variables in this study is in the interval of 0.003-0.584, and the absolute value of kurtosis is in the interval of 0.864-1.279, which conforms to the characteristics of normal distribution.

### *4.3 Related Analysis and AVE*

Through the correlation analysis between variables, the analysis results show that the interaction between webcasting and customer participation behavior, customer citizenship behavior and perceived platform risk is significant, and the correlation coefficient is 0.372, 0.379, 0.355, and the correlation coefficient values are all greater than 0, indicating that webcast interaction is positively correlated with customer participation behavior, customer citizenship behavior, and perceived platform risk. After comparing the correlation coefficients of the four factors with the square root of AVE, the correlation coefficients are all smaller than the square root of AVE, indicating that the scale has good discriminant validity.

**Table 4.1**  
*Related Analysis and AVE*

	Webcast interactivity	Customer Participation Behavior	Customer citizenship behavior	Perceive platform risk
Webcast interactivity	0.904			
Customer Participation Behavior	0.372	0.906		
customer citizenship behavior	0.379	0.342	0.908	
Perceive platform risk	0.355	0.298	0.348	0.904

Note : The number of diagonals is the square root of AVE

#### 4.2 Hypothesis Test

This article mainly uses the method of establishing structural equation model to verify the direct effect and the mediating effect, and the method of hierarchical regression to verify the moderating effect:

**Table 4.2**  
*Direct Effect*

	<i>p</i>	Standardization	suppose	result
F1--->F2	***	0.373	H1	support
F1--->F3	***	0.379	H2	support

Note 1 : \*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$

Note 2 : The webcast interactivity is represented by F1 , Customer participation behavior is represented by F2 , Customer citizenship behavior is represented by F3 .

It can be seen from Table 4.1 that the three standardized coefficients are all positive numbers values are all less than 0.01. The results show that webcast interactivity has a significant positive impact on customer participation behavior and customer citizenship behavior. It can be seen that the H1 and H2 hypotheses in this paper are all supported.

**Table 4.3**  
*Moderating Effect*

	Model			Model2		
	Beta	t	VIF	Beta	t	VIF
Constant		6.49	0.00		6.49	0.00
Age	0.03	0.81	1.04	0.07	1.74	1.04
Monthly income	0.05	1.29	1.03	-0.02	-0.44	1.03
gender	0.01	0.21	1.00	-0.02	-0.64	1.00
Webcast interactivity	0.28***	6.85	1.17	0.27***	6.62	1.17
Perceive platform risk	0.17***	4.18	1.16	0.22***	5.54	1.16
Interactive	-0.15***	-3.91	1.05	-0.20***	-5.17	1.05
R <sup>2</sup>	0.196			0.238		
AdjR <sup>2</sup>	0.188			0.230		
F	15.300***			26.730***		

Note1 : \* p<0.05 \*\* p<0.01 \*\*\*p<0.001

Note2 : Interaction term for decentralized webcast interactivity multiplied by decentralized perceived platform risk.

Note3 : M1 dependent variable is Customer Participation Behavior, M2 dependent variable is Customer Citizenship Behavior.

As seen in Table 4.3, the standardized regression coefficients for Model1 and Model2 are negative and significant, and the amount of change in the R-squared is also significant, indicating that perceived platform risk will play a negative moderating role in the relationship between webcast interactivity, customer participation behavior and customer citizenship behavior

## 5. Research Result

### 5.1 Research Conclusion

This study draws on the research results of many scholars, and the final conclusion is that with the increase of webcast interactivity, customer participation behavior and customer citizenship behavior will also increase; the relationship between perceived platform risk in webcast interactivity, customer participation behavior and customer citizenship behavior play a negative regulatory role in.

### 5.2 Research Contribution

#### 5.2.1 Theoretical Contributions

First of all, in the context of the continuous expansion of the webcast industry, this paper mainly discusses the impact of webcast interactivity on customer value co-creation. With the help of social exchange theory and interactive ritual chain theory as the theoretical basis, webcast interactivity is selected as the independent variable research. This paper explores its impact on customer value co-creation, and innovatively adds perceived platform risk to the research framework to explore its moderating effect on the above relationship.

Secondly, taking the webcast interactivity as an independent variable, the relationship model of webcast interactivity, customer participation behavior, and customer citizenship behavior under the webcast scenario is constructed. From the interdisciplinary research of sociology, psychology, and consumer behavior, the above-mentioned relationship proposed in this study

is comprehensively investigated, and its internal mechanism of action is explored, which expands the direction and vision of the research.

Finally, the introduction of perceived platform risk into the research of customer value co-creation expands the influence scope of perceived platform risk. This study empirically finds that perceived platform risk will reduce customer participation behavior and customer citizenship behavior, so this study expands the understanding of the scope of perceived platform risk.

### 5.2.2 Practical Contributions

First of all, the impact of webcast interactivity on customer value co-creation studied in this paper meets the needs of relevant stakeholders of webcast. With the continuous expansion of the webcast industry, the homogeneity among enterprises is becoming more and more serious, and the traditional value creation methods cannot satisfy the competition demands within the industry, and value co-creation is a new value co-creation model, which can combine customers' own knowledge to bring new competitiveness to relevant stakeholders in the live broadcast industry and help them occupy a favorable position in the industry's internal competition. At the same time, for consumers, by understanding the impact of interaction on customer value co-creation, they can better find their own clear positioning in the process of value co-creation between consumers and enterprises, and realize the relationship between enterprises and consumers. Win-win.

Secondly, this study incorporates perceived platform risk into the framework of the impact of webcast interactivity on customer value co-creation, and the conclusions obtained can provide guidance in marketing theory. For example, many webcasting platforms, when interacting with customers in the webcasting services provided, should pay attention to the promotion of products or services corresponding to the known information of customers, and do not carry out false propaganda such as exaggeration and falsehood. Targeted positive publicity on the live broadcast platform. Avoid customers' risk awareness of the live broadcast platform, which leads to the inhibition of value co-creation.

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