

## Research on the Influencing Factors of Consumer Purchase Intention in the Context of Cross-border E-commerce Live

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**Abstract:** In the past two years, major cross-border e-commerce platforms have added the function of cross-border e-commerce live, and it has become a new and popular branch of cross-border e-commerce. This article is to study the influencing factors and influencing mechanism of consumers' purchase intention in the context of cross-border e-commerce live, focusing on China Mainland. 215 valid responds were collected by questionnaire. We conducted the mediation regression analysis and revealed All independent variables have a significant positive influence on consumers' purchase intention. Anchor information quality, other consumer information quality, brand image, price preference respectively has a significant positive impact on consumers' purchase intentions. However, the positive impact of service quality on consumers' perceived value is not significant.

### 1. Introduction and Literature Review

As international trade fully enters the digital age and economic globalization opportunities, cross-border e-commerce is developing rapidly. In the past two years, cross-border e-commerce platforms have added cross-border e-commerce live functions, and cross-border e-commerce live has become a new and popular branch of cross-border e-commerce. The COVID-19 epidemic has accelerated the development of global e-commerce live, which is getting more and more popular.

The new version of AliExpress' live function was launched in July 2019. According to 2020 "Ebrun"[1], AliExpress has launched more than 10,000 live shows by August 2020. In early 2019, Amazon's gradually improved and upgraded Amazon Live finally won favor in 2020. Shopee launched its live function-Shopee Live in March 2019. According to official data from Shopee, in 2019, Shopee Live's full platform viewing volume reached 500 million. During the 2020 epidemic, cross-border e-commerce lives have increased by 70 times year-on-year. Lazada live function Lazlive was launched in 2018. The data shows that the LazLive live service in April 2020 attracted more than 27 million active users in April.

China has a huge consumer of cross-border e-commerce live and a relatively mature industry ecology of cross-border e-commerce live. China has begun to rapidly develop e-commerce live in 2016. So far, the more mature cross-border e-commerce platforms are: Tmall Global Live, JD Global Live, Koala Haitao Live, etc. CNNIC[2] show that in the first half of 2020, the total number of lives by merchants in China exceeded 10 million, with an average of nearly 1.5 million lives per day, with up to 50 billion views. In 2020, with the stimulation of the "home economy" during the COVID-19 epidemic, live e-commerce will usher in explosive development.

Through reviewing the literature, it is found that there is relatively few research on cross-border e-commerce live, and the exiting literature are mainly about the reasons for the popularity of cross-border e-commerce live, the problems in the process of cross-border e-commerce live platform development and marketing strategy discussions. For example, Sun[3]proposed live video plus online shopping cross-border e-commerce. Meng[4] studied brand marketing strategies under the cross-border e-commerce group live. In the emerging cross-border e-commerce live, there is still little research on consumers' purchasing intention.

The global cross-border e-commerce live is developing rapidly, and China is a relatively mature and representative country of cross-border e-commerce live. So, in this article, take the Chinese Mainland as the research area. Through reviewing related literature, extracted 5 main influencing factors, including anchor information quality, other consumers information quality, brand image, price preference, service quality. Then, proposed research hypothesis and constructed the theoretical framework based on SOR model[5] (stimulus-organism-response model), which is originated from psychology and is mainly used to explain the influence of external environmental factors on users' psychological and behavioral responses (Mehrabian & Russell, 1974) , taking anchor information quality, other consumers information quality, brand image, price preference, service quality as stimulus variables (independent valuables), perceive value as organism variable (mediating variable), purchase intention as response variable (dependent variable). Through the methods of questionnaire, study the influencing factors and mechanism of consumers' purchase intention in the context of cross-border e-commerce live. Calculate and compare the weights of each independent factor, which can provide the marketing suggestions for businesses to highlight the higher weight factor. It also has a certain theoretical contribution to the research in the field of cross-border e-commerce live.

Related variables in this article are as following. Information quality in this study refers to certain information characteristics that meet consumer needs. Brand image refers to consumers' brand cognition and evaluation of cross-border products in cross-border e-commerce live. Price preferences refer to the extent to which consumers' perceived price gains can be stimulated by reducing the original price or promoting sales within the acceptable price range of consumers. Service quality refers to the convenience and reliability of the service provided by the merchant before the consumer generates the purchase intention. Perceived value refers to consumers' perceived benefits of overseas products or services minus their perceived sacrifice, and then they get a subjective evaluation of the product or service. Purchase intention is the consumer's perceived value of the product through external cues of the product.

## 2. Data and Methodology

Research hypothesis were proposed as Table 1 and theoretical framework was constructed as Figure 1 based on SOR model.

Table 1 Research Hypothesis.

Each factor affects on purchase intention	H1: In the context of cross-border e-commerce live, anchor information quality has a significant positive impact on consumers' purchase intention.
	H2: In the context of cross-border e-commerce live, other consumers information quality has a significant positive impact on consumers' purchase intention.
	H3: In the context of cross-border e-commerce live, brand image has a significant positive impact on consumers' purchase intention.
	H4: In the context of cross-border e-commerce live, price preference has a significant positive impact on consumers' purchase intention.
	H5: In the context of cross-border e-commerce live, service quality has a significant positive impact on consumers' purchase intention.
Each factor affects on perceived value	H6: In the context of cross-border e-commerce live, anchor information quality has a significant positive impact on consumers' perceived value.
	H7: In the context of cross-border e-commerce live, other consumers information quality has a significant positive impact on consumers' perceived value.
	H8: In the context of cross-border e-commerce live, brand image has a significant positive impact on consumers' perceived value.
	H9: In the context of cross-border e-commerce live, price preference has a significant positive impact on consumers' perceived value.

	H10: In the context of cross-border e-commerce live, service quality has a significant positive impact on consumers' perceived value.
Perceived value affects on consumer purchase intention	H11: In the context of cross-border e-commerce live, perceived value has a significant positive impact on consumers' purchase intention.
The mediator of perceived value	H12: In the context of cross-border e-commerce live, perceived value plays a mediator in the influence of anchor information quality on consumers' purchasing intention.
	H13: In the context of cross-border e-commerce live, perceived value plays a mediator in the influence of other consumers information quality on consumers' purchase intention.
	H14: In the context of cross-border e-commerce live, perceived value plays a mediator in the influence of brand image on consumers' purchase intention.
	H15: In the context of cross-border e-commerce live, perceived value plays a mediator in the influence of price preference on consumers' purchase intention.
	H16: In the context of cross-border e-commerce live, perceived value plays a mediator in the influence of service quality on consumers' purchase intention.

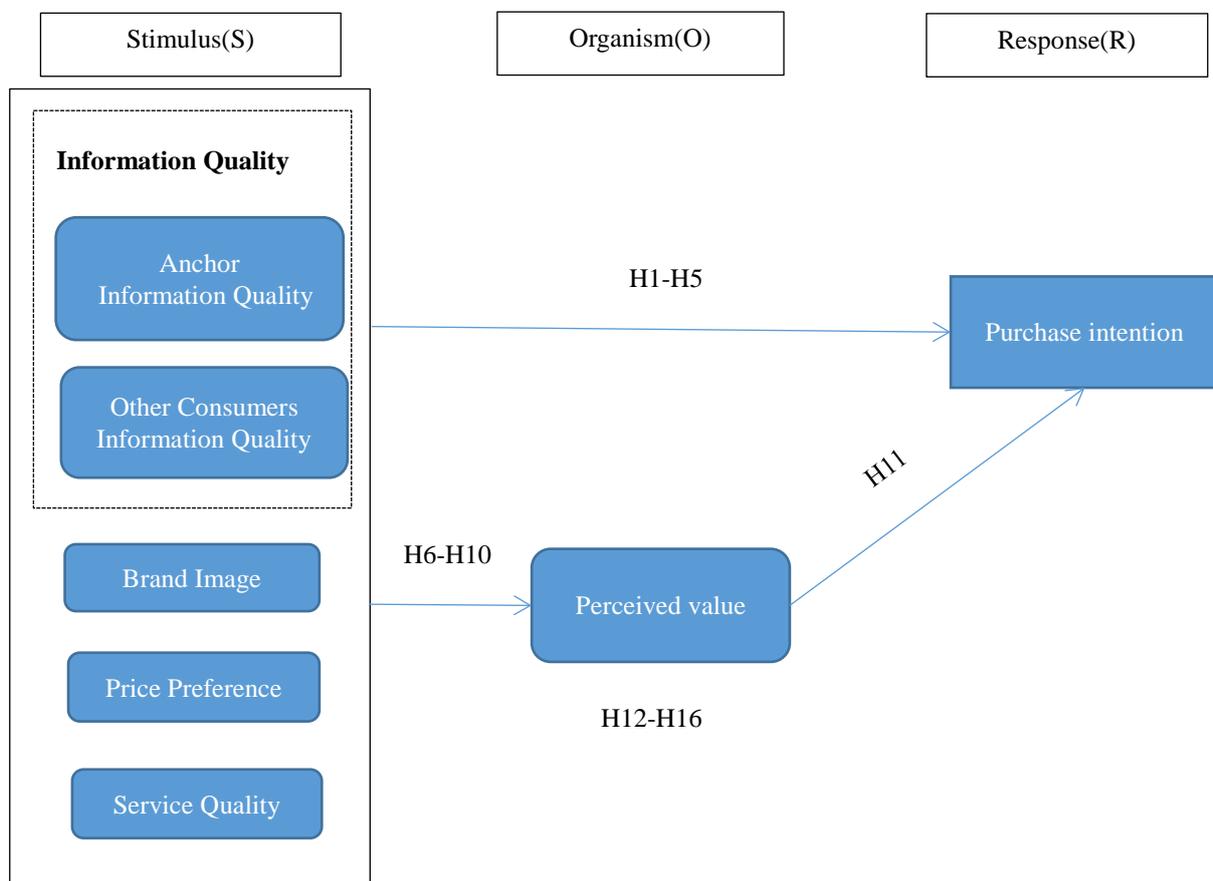


Figure 1 Theoretical Framework.

Questionnaires were conducted to research the influencing factors and influencing mechanism of consumers' purchase intention in the context of cross-border e-commerce live. The design of questionnaire is reference exiting scales which is related and mature one from scholars, and combined with the background of cross-border e-commerce live. Electronic questionnaires were distributed to fans group of cross-border e-commerce live through the Questionnaire Star. And then the questionnaire data were collected and organized, got rid of invalid questionnaires and obtained the valid questionnaires, preprocessed the valid questionnaire data that prepare for descriptive statistical analysis, reliability and validity analysis, correlation analysis, regression analysis on the

recovered valid questionnaire data, and testing the mediating effect of perceived value.

A total of 263 questionnaires were obtained, and invalid questionnaires were screened out, including those that have not watched the e-commerce live and the time to fill in the form was too short. The number of valid questionnaires obtained was 215, and the effective recovery rate was 81.74%.

### 3. Main Findings

The results of the single linear regression and the mediating effect of perceived value are presented in Table 2 and Table 3.

#### 3.1. Results from Regression Analysis

Table 2 Regression Model 1 of Independent Variables to Purchase Intention.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F	Sig.
	.912a	0.832	0.828	0.739	1.929	206.751	.000b
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics
		B	Std. Error	Beta			VIF
1	(Constant)	-8.562	0.59		-14.506	0.000	
	Anchor information quality	0.155	0.034	0.137	4.511	0.000	1.147
	Other consumers information quality	0.281	0.042	0.246	6.745	0.000	1.651
	Brand image	0.399	0.043	0.329	9.36	0.000	1.536
	Price preference	0.342	0.039	0.304	8.798	0.000	1.489
	Service quality	0.292	0.039	0.256	7.424	0.000	1.473

a Dependent Variable: Purchase Intention

It can be seen from Table 2 that the regression model of each independent variable (anchor information quality, other consumer information quality, brand image, price preference, service quality) to purchase intention. The F value is 206.751, which is significant at the 0.001 level and satisfies the F test. The Durbin-Watson value is 1.929, which is in the range of 1.5-2.5, indicating that there is no serial correlation between the variables. The Adjusted R Square value is 0.828, indicating that the model has a good degree of fit. The VIF values are all less than 10, indicating that there is no multicollinearity problem among the variables. The Beta value of the anchor information quality is 0.137, sig<0.001, indicating that anchor information quality has a significant positive effect on the purchase intention. Therefore, H1 is valid. The Beta value of other consumers' information quality is 0.246, sig<0.001, indicating that other consumers' information quality has a significant positive impact on purchase intention. Therefore, H2 is valid. The Beta value of brand image is 0.329, sig<0.001, indicating that brand image has a significant positive effect on purchase intention. Therefore, H3 is valid. The Beta value of the price preference is 0.304, sig<0.001, indicating that price preference has a significant positive effect on the purchase intention. Therefore, H4 is valid. The Beta value of service quality is 0.256, sig<0.001, indicating that service quality has a significant positive impact on purchase intention. Therefore, H5 is valid.

From the regression model coefficient B value, the influence weights of the anchor information quality, other consumer information quality, brand image, price preference, and service quality on consumers' purchase intention are: 0.155, 0.281, 0.399, 0.342, 0.292. Therefore, the influence weight of each independent variable on consumers' purchase intention is: brand image > price preference > service quality > other consumer information quality > anchor information quality.

Similarly, after regression analysis of 5 independent variables to perceived value and regression analysis of perceived value to purchase intention, we knew that H6, H7, H8, H9, H11 is valid, but H10 is invalid.

### 3.2. Results from Mediator Test

Table 3 Regression Model 5 of Mediator Test.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F	Sig.
	.902a	0.814	0.809	0.778	2.004	182.404	.000b
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics
		B	Std. Error	Beta			VIF
5	(Constant)	-8.391	0.622		-13.481	0.000	
	Anchor information quality	0.11	0.038	0.097	2.892	0.004	1.271
	Other consumers information quality	0.313	0.043	0.274	7.226	0.000	1.613
	Brand image	0.367	0.047	0.303	7.749	0.000	1.71
	Price preference	0.34	0.041	0.302	8.24	0.000	1.51
	Perceived value	0.323	0.06	0.228	5.408	0.000	1.996

a Dependent Variable: Purchase Intention

Service quality has no significant impact on perceived value. Therefore, perceived value does not play an intermediary role in the influence of service quality on purchase intention, so H16 is invalid. Remove the variable of service quality in the following mediator test.

F value is significant at the 0.001 level and satisfies the F test. The Adjusted R Square value increased from 0.783 to 0.809, indicating that the model fits better after adding the perceived value to the independent variable. By comparing the regression coefficients of Model 4 and Model 5, after adding the perceived value into independent variable, the Beta value of anchor information quality drops from 0.156 to 0.097, sig<0.01, indicating that the perceived value is partial mediation in the influence of the anchor information quality on purchase intention. Therefore, H12 is valid. The Beta value of other consumers' information quality dropped from 0.332 to 0.274, sig<0.001, indicating that perceived value is partial mediation in the influence of other consumers' information quality on purchase intention. Therefore, H13 is valid. The Beta value of brand image dropped from 0.381 to 0.303, sig<0.001, indicating that perceived value is partial mediation in the influence of brand image on purchase intention. Therefore, H14 is valid. The Beta value of price preference dropped from 0.337 to 0.302, sig<0.001, indicating that perceived value is partial mediation in the influence of price preference on purchase intention. Therefore, H15 is valid.

### 4. Conclusion and Discussion

This article is to study the influencing factors and the mechanism of consumers' purchase intention in the context of cross-border e-commerce live and compare the weight of each influencing factor on consumers' purchase intention, and then provide marketing suggestions for merchants. After questionnaire surveys and data analysis, the following conclusions can be drawn.

**(1) Influencing factors of consumers' purchase intention in the context of cross-border e-commerce live.** After consulting relevant literature, this article extracted 5 main influencing factors that affect consumers' purchase intentions: Anchor information quality, other consumer information quality, brand image, price preference, service quality.

**(2) All independent variables have a significant positive influence on consumers' purchase intention.** Anchor information quality, other consumer information quality, brand image, price preference, service quality respectively has a significant and positive impact on consumers' purchase intentions. The influence weight of each independent variable on consumers' purchase intention is: brand image > price preference > service quality > other consumer information quality > anchor information quality. This shows that consumers care more about the brand image of cross-border products than other factors. Consumers also care more about whether the price is

preference. In cross-border e-commerce live rooms, reducing the original price of products, giving consumers discounts, coupons, etc. that will attract consumers to buy. Provide consumers with safe and diverse payment methods, efficient logistics and reliable after-sales service, such service quality will affect consumers' intention. In the same live room, the comments made by other consumers through the barrage can reflect the quality of the product in real time, thereby affecting consumers' intentions. Anchors can give professional and comprehensive explanations and recommendations of cross-border products. Therefore, the merchants should pay more attention to the construction of product brand image when formulating marketing strategies, to better attract consumers' the favor, and could formulate reasonable price preference, improve service quality, improve the anchor's professionalism of product field and sales ability and guide the consumers in the live room to publish beneficial marketing effects comments through barrage to achieve better marketing effect.

**(3) The influence of independent variables on consumers' perceived value.** Anchor information quality, other consumer information quality, brand image, price preference respectively has a significant positive impact on consumers' perceived value. However, the positive impact of service quality on consumers' perceived value is not significant. Perhaps quality-of-service information is uncertain, and it may be that consumers do not feel a higher purchase value when buying goods.

**(4) Perceived value positively significantly affects consumers' purchase intentions.** In cross-border e-commerce live, the higher the consumer's perceived value, the greater the consumer's purchase intention. Therefore, the merchants of cross-border e-commerce live can improve the perceived value of consumers by improving anchor information quality, brand image, price preference, thereby increasing consumers' purchase intention. This can increase product sales and increases business revenue.

**(5) The mediator of perceived value.** Perceived value plays the partial mediation in the influence of anchor information quality, other consumer information quality, brand image, and price preference on consumers' purchase intention. However, perceived value does not play the partial mediation of service quality on consumer purchase intention. Anchors introduce professionally and comprehensively cross-border products, and other consumers post real-time and real comments through barrage, that can improve the perceived value of consumers, and then increase consumers' purchase intentions. The cross-border products with good brand images can improve consumers' perception of product quality and value, thereby increasing consumers' purchase intention. With preferential product prices, consumers will perceive greater returns, thereby increase consumers' purchase intentions.

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