

The Influence of External Contextual Cues on Consumers' Cross-Border Online Purchase Intentions: A Stimulus-Organism-Response Perspective with Perceived Value Mediation

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Abstract: *Facilitating consumers' online shopping behavior constitutes a critical issue for the sustainable development of cross-border e-commerce. Given that existing research has yet to adequately examine the influence of external contextual cues and perceived value on consumers' cross-border online purchase intentions, this study employs literature induction to identify four key external contextual cues affecting purchase intentions: online promotion cues, content marketing cues, personalized recommendation cues, and social review cues. On this basis, a research framework grounded in the Stimulus-Organism-Response (SOR) model is proposed. Drawing on data from 462 questionnaires, this study analyzes the effects of introducing these four cues into cross-border online shopping contexts on consumers' purchase intentions, and further examines the mediating roles of perceived functional value and perceived emotional value. The empirical results indicate that all four external contextual cues positively influence consumers' purchase intentions, with perceived functional value and perceived emotional value serving as significant mediators in these relationships.*

Keywords: Cross-Border E-Commerce, External Contextual Cues, Cross-Border Online Purchase Intention, Perceived Functional Value, Perceived Emotional Value.

1. INTRODUCTION

With the continuous growth of global trade and the rapid development of the digital economy, consumers are increasingly shopping through e-commerce platforms, which has also stimulated the transformation and upgrading of traditional foreign trade models. E-commerce platforms can offer attractive products to consumers at competitive prices and greatly shorten the spatial and temporal distances between consumers and suppliers. In 2023, the import and export volume of China's cross-border e-commerce reached 2.38 trillion yuan, a year-on-year increase of 15.6%. A number of B2C cross-border e-commerce platform enterprises such as AliExpress and DHgate have emerged in China. Given the importance of e-commerce in the digital strategy, China is committed to opening up digital opportunities for the public and enterprises. Although China's cross-border e-commerce has developed rapidly, its cross-border e-commerce enterprises are still in the growth stage, and there are still many factors restricting consumers' purchase intentions. Therefore, how to attract more online consumers and urgently identify the factors affecting sustainable consumer purchase intentions has become an important issue that needs to be solved for the sustainable development of cross-border e-commerce.

For consumers, cross-border e-commerce online shopping and domestic online shopping are two completely different online shopping scenarios. In the traditional online shopping scenario, even if consumers are not familiar with the attributes of goods, they can avoid potential losses through mechanisms such as the seven-day return and exchange policy and freight insurance. However, in the cross-border online shopping scenario, due to barriers such as international logistics costs, procedures, and tariffs, it is often difficult for sellers to effectively provide such protection mechanisms. Therefore, the factors affecting consumers' cross-border online shopping purchase intentions are quite different from those of domestic e-commerce.

Existing research on cross-border e-commerce has focused more on the positive impact of cross-border e-commerce on the economy and its potential growth. There is not much empirical research on cross-border e-commerce for suppliers and consumers, and there has been no relevant discussion on the impact of cross-border online shopping context cues on consumers' purchase intentions. Therefore, the research questions of this paper are: What are the types of cross-border online shopping context cues? Do cross-border online shopping context

cues have a positive impact on consumers' purchase intentions? Is there a mediating effect of consumers' perception between cross-border online shopping context cues and sustainable purchase intentions? This paper aims to provide relevant insights into how to improve the marketing strategies of cross-border e-commerce enterprises, increase consumers' confidence in cross-border online shopping, and achieve the sustainable development of cross-border e-commerce through the discussion of the above questions.

2. RESEARCH FOUNDATION

2.1 Cross-border Online Shopping Situational Cues

Drawing on the SOR (stimulus-organism-response) theory, stimuli refer to the attributes in the environment that affect an individual's emotional and cognitive states, such as product features, promotions, etc. In the context of cross-border e-commerce online shopping, consumers have fewer internal cues but more external cues that can be directly obtained. Therefore, consumers have to rely on external cues to make purchase decisions. Existing research has shown that the main external cues for consumers' purchase decisions are the visual attractiveness of the website, product price, online reviews, store reputation, etc. (Xu Pengying, 2022). When consumers are faced with a large number of external cues, these cues will play different roles. The information provided by different cues cannot be simply added up. In this study, according to the pushing subject and pushing content, the main cross-border online shopping situational cues faced by consumers are classified into four categories, namely online promotion cues, content marketing cues, personalized recommendation cues and social comment cues.

2.2 Perceived Value

In the S-O-R model, the organism is the mediator of the relationship between environmental stimuli and responses, which usually refers to an individual's emotional or cognitive state (Shi Feng et al., 2017). Cognition is an important aspect of emotion, referring to the mental behavior of obtaining knowledge and understanding through thought, experience, and sensation. Due to the continuous change of consumer needs, the dimensions of perceived value are also gradually changing. In the context of cross-border online shopping, this study believes that perceived value includes perceived functional value and perceived emotional value. Among them, perceived functional value mainly refers to consumers' perception of the usefulness of various recommended clues received, and emotional value refers to consumers' recognition of the clues reflecting product value.

2.3 Purchase

According to the S-O-R theory, consumer response refers to the approach or avoidance behavior of consumers after emotional and cognitive processes. Approach behavior includes positive responses such as the willingness to purchase products (Wang Yanyan and Chang Jiancong, 2021). Willingness is the personal belief or feeling on which people act. The behavioral willingness of consumers is a functional product cue, such as store image and price, which are positive evaluations of store image, product price, and other cues. These cues will enhance consumers' willingness to repurchase and loyalty. Therefore, this study takes the purchase willingness of cross-border consumers as the ultimate response of consumers to cross-border online shopping context cues.

3. RESEARCH HYPOTHESES

3.1 Cross-border Online Shopping Contextual Cues and Purchase Intentions

In the context of cross-border online shopping, consumers are faced with a large amount of product recommendation information. Most consumers are more sensitive to price promotions, which have an important impact on consumers' purchase decisions. Price promotions can create an economic incentive, satisfy consumers' desire for high-quality products at low prices, attract them to purchase products, and thus increase consumers' purchase intentions. In the context of cross-border online shopping, if two retailers offer exactly the same products except for price, consumers tend to believe that the retailer with a lower price has stronger strength or a higher industry status. Therefore, online promotion cues are conducive to enhancing consumers' purchase intentions. Based on this, the following hypotheses are proposed:

H1: In the context of cross-border online shopping, online promotion cues have a positive impact on consumers' purchase intentions.

Content marketing, as a form of advertising, involves providing information about products in magazines, newspapers, or websites. Marketers use them to convey the characteristics of product content marketing to potential consumers. Different from traditional print ads and banner ads in magazines, newspapers, or websites, content marketing is more detailed than ads and helps consumers understand products more deeply. In the Internet era, the forms and media of content marketing are more diverse, and online content marketing can reduce the requirements for consumers' cognitive abilities. Therefore, online content marketing is often more effective than traditional advertising.

In addition, the concealment of content marketing and the independence of news media enable consumers to obtain pleasure unconsciously and win their trust. Some content marketing created by well-known bloggers can increase fans' purchase intentions for products, enable consumers to focus on online shopping activities, and meet their emotional needs. Based on the above research, the following hypothesis is proposed:

H2: In the context of cross-border online shopping, content marketing cues have a positive impact on consumers' purchase intentions.

Personalized recommendation cues refer to the user preference data mined and processed by cross-border e-commerce platforms. Cross-border e-commerce platforms can use consumers' demographic and shopping preference history information to recommend products that meet consumers' needs. Personalized recommendations play an important role in influencing consumers' decisions. Compared with non-personalized recommendations, the suggestions of personalized recommendations are more easily accepted by consumers and have higher user ratings. In cross-border e-commerce, consumers perceive that the personalized recommendations of the platform are more in line with their product preferences and more personalized needs, thus bringing a significant increase in page views and sales. The degree of personalization perceived by users represents their personal preferences and is used to explain the important role of personalized recommendations in influencing consumers' decisions. Personalized recommendations based on consumers' needs can reduce consumers' shopping time, make the shopping process convenient for consumers, and thus increase consumers' purchase intentions. Based on this, the following hypothesis is proposed:

H3: In the context of cross-border online shopping, personalized recommendation cues have a positive impact on consumers' purchase intention.

Social reviews are a combination of user-generated content and social networks, where consumers can share ideas and insights with each other. With the continuous development of Internet media, users often actively communicate and share their thoughts on products and services through blogs and product reviews. Among them, online user reviews, product reviews, and other information in social review cues all have an important impact on consumers' purchase intention. For example, product ratings have a significant impact on consumers' purchase intention, which can reflect whether the supplier is reliable. Positive reviews usually reflect the positive attributes of the product, such as good quality and brand image, while negative reviews usually reflect consumers' lack of confidence in the product's attributes. The emotions inferred from the text of seller reviews can predict consumers' purchase intention. Therefore, social review cues, such as product ratings and online text reviews, are important factors influencing consumers' purchase intention. Based on this, the following hypotheses are proposed:

H4: In the context of cross-border online shopping, social review cues have a positive impact on consumers' purchase intention.

3.2 Mediating Effect of Perceived Value

Consumers' purchase intention depends on the extent to which the perceived value of the product meets their expectations. Existing research has reached a consensus on the direct impact of perceived value on consumers' purchase intention. Scholars mainly focus on exploring the influencing mechanisms of consumers' perceived functional value, perceived emotional value, peer effect and customer consumption intention (Wang Guangqin, 2024). This study believes that in the context of cross-border online shopping, consumers' perceived value plays a mediating role between external cues (online promotion cues, content marketing cues, personalized recommendation cues and social evaluation cues) and cross-border online purchase intention. On this basis, the following hypotheses are proposed:

H5a: External cues affect consumers' purchase intention for cross-border online shopping through the functional

value perceived by consumers.

H5b: External cues affect consumers' purchase intention for cross-border online shopping through the emotional value perceived by consumers.

4. EMPIRICAL ANALYSIS

4.1 Sample Selection and Data Source

Given the differences between cross-border online shopping and domestic e-commerce in terms of tariffs, international logistics, etc., the impact of demographic variables on consumers' cross-border online shopping intentions will be significantly different from that of domestic e-commerce. To control the interference of demographic variables on relevant research hypotheses, this study used demographic variables such as gender, age, and education level as control variables. A total of 600 questionnaires were distributed in this study. The respondents of the questionnaires were consumers with cross-border online shopping experience (cross-border e-commerce platforms such as AliExpress and DHgate). To improve the response rate, online (Questionnaire Star) and offline data were collected. Finally, 462 valid questionnaires were obtained, and the effective recovery rate reached 77%.

4.2 Variable Measurement

Based on the existing research on online purchase intention, perceived functional value, perceived emotional value, online promotion cues, content marketing cues, personalized recommendation cues, and social evaluation cues, the items for measuring each construct were selected.

The measurement of online promotion cues was adapted from the research of Nagadeepa et al. (2015), the measurement of personalized recommendation cues was adapted from the research of Lee and Johnson (2010), the content marketing cues were adapted from the research of Reid et al. (2009), the social review cues were adapted from the research of Animesh (2011), the measurement of perceived functional value and perceived emotional value was adapted from the research of Liang et al. (2019), and the purchase intention was adapted from the research of Wan Hongxia et al. (2024). This study adopted the back-translation method (translating the material from English to Chinese and then back to English; comparing the versions to resolve differences) to ensure the consistency of the Chinese and English versions. The respondents of this study were consumers with cross-border online shopping experience, and the Likert scale method was used for the research, with a score range of 1-5 points. Among them, 5 points indicate strong agreement, 3 points indicate agreement, and 1 point indicates strong disagreement. The specific measurement items are shown in Table 1.

Table 1: Measurement Items

Variable	Number	Item
Online Promotion Cue (CX)	CX1	There are many promotion forms for products on cross - border e - commerce platforms.
	CX2	The promotion intensity of products on cross - border e - commerce platforms is high.
	CX3	The promotion frequency of imported products on cross - border e - commerce platforms is high.
	CX4	Cross - border e - commerce platforms can provide sufficient product information.
Content Marketing Cue (YX)	YX1	The content marketing on cross - border e - commerce platforms makes me more familiar with imported products.
	YX2	The content marketing on cross - border e - commerce platforms is very useful for me to be familiar with products.
	YX3	I will pay special attention to the content marketing on cross - border e - commerce platforms.
	YX4	The content marketing on cross - border e - commerce platforms can impress me.
	YX5	I will trust the content marketing on cross - border e - commerce platforms.
Personalized Recommendation Cue (TJ)	TJ1	Cross - border e - commerce shopping knows what I want.
	TJ2	Cross - border e - commerce shopping understands my product needs.
	TJ3	I like the products recommended by cross - border e - commerce platforms.
Social Comment Cue (PL)	PL1	Get a good impression from other residents/avatars in the virtual world.
	PL2	Establish good social relations with other community members.
	PL3	I feel that I am part of the virtual world community and am willing to share my shopping experiences with friends.
Perceived Functional Value (GN)	GN1	Cross - border e - commerce shopping functions well.
	GN2	Cross - border e - commerce shopping is reliable.
	GN3	Cross - border e - commerce shopping well meets my needs.
Perceived Emotional Value	QN1	Cross - border e - commerce shopping makes me feel acceptable.
	QN2	Cross - border e - commerce shopping makes me want to use it.

(QN)	QN3	Cross - border e - commerce shopping is something I will like.
Purchase Willingness (GM)	GM1	I will seriously consider buying imported goods from cross - border e - commerce platforms.
	GM2	I am willing to buy imported goods on cross - border e - commerce platforms.
	GM3	I will now buy imported goods on cross - border e - commerce platforms.
	GM4	I will buy imported goods on cross - border e - commerce platforms within half a year.

4.3 Reliability and Validity Tests

Table 2 shows the reliability and validity analysis results of each variable, specifically including the Cronbach's α coefficient, CR value, and CITC index of the scale. As can be seen from Table 2, the Cronbach's α coefficients and CR values of all latent variables in the scale are greater than 0.700, and the CITC values are greater than 0.35. These three indicators fully demonstrate that the measurement of variables in this paper has high internal consistency. At the same time, the measurement scale of this paper is based on mature scales at home and abroad, and questionnaire items are formed on the basis of combining existing research. After full communication and exchange with relevant experts, the final questionnaire is formed, so it has good validity.

Table 2: Reliability and Validity Tests of Variables

Variable	Item	CITC	Cronbach's α	CR
Online promotion cue (CX)	CX1	0.691	0.751	0.792
	CX2	0.763		
	CX3	0.702		
	CX4	0.816		
Content marketing cue (YX)	YX1	0.693	0.725	0.749
	YX2	0.702		
	YX3	0.716		
	YX4	0.794		
	YX5	0.738		
Personalized recommendation cue (TJ)	TJ1	0.754	0.713	0.705
	TJ2	0.716		
	TJ3	0.709		
Social comment cue (PL)	PL1	0.803	0.794	0.807
	PL2	0.815		
	PL3	0.772		
Perceived functional value (GN)	GN1	0.693	0.702	0.725
	GN2	0.714		
	GN3	0.705		
Perceived emotional value (QN)	QN1	0.729	0.749	0.751
	QN2	0.753		
	QN3	0.748		
Purchase intention (GM)	GM1	0.827	0.802	0.813
	GM2	0.831		
	GM3	0.761		
	GM4	0.783		

4.4 Correlation Analysis

Before the regression analysis, a correlation analysis of the main variables was conducted. As shown in Table 3, the correlation coefficient results indicate that there are significant correlation coefficients between online promotion cues (0.115**), content marketing cues (0.213***), personalized recommendation cues (0.126**), social evaluation cues (0.073**) and purchase intention. The model helps to avoid the influence of multicollinearity (Li Chen and Tian Shuo, 2021).

Table 3: Correlation Analysis

Variable	CX	YX	TJ	PL	GN	QN	GM
CX	1						
YX	0.207***	1					
TJ	0.213***	0.125***	1				
PL	0.126**	0.086**	0.051**	1			
GN	0.073**	-0.139***	0.149***	0.128**	1		
QN	0.137**	0.142**	0.131**	0.159**	0.129**	1	
GM	0.115**	0.213**	0.126**	0.073**	0.075**	0.083**	1

Note: * represents a significance level of $p < 0.05$, ** represents a significance level of $p < 0.01$, *** represents a significance level of $p < 0.001$ (two-tailed test), and the same applies hereinafter.

4.5 Regression Analysis Results

This study uses a logistic regression model with cross-border e-commerce purchase intention as the dependent variable and online promotion cues, content marketing cues, personalized recommendation cues, and social evaluation cues as independent variables. The relevant regression results are shown in Table 4. In Model 2, the correlation coefficient between online promotion cues and purchase intention is 0.103 ($p < 0.001$), indicating that the two variables are significantly correlated at the 0.001 level (two-tailed). In addition, the correlation coefficient between content marketing cues and purchase intention is 0.091 ($p < 0.01$), the correlation coefficient between personalized recommendation cues and purchase intention is 0.137 ($p < 0.01$), and the correlation coefficient between social review cues and purchase intention is 0.126 ($p < 0.001$). Therefore, it is proved that Hypotheses H1, H2, H3, and H4 are valid.

Table 4: Results of Regression Analysis

Control variable	Purchase intention (GM)	
	Model 1	Model 2
Gender	0.031	0.032
Age	0.062	0.063
Educational level	0.057	0.056
Online promotion clue (CX)	-	0.103***
Content marketing clue (YX)	-	0.091**
Personalized recommendation clue (TJ)	-	0.137**
Social comment clue (PL)	-	0.126***
R^2	0.029**	0.088***
ΔR^2	0.02**	0.064***
F value	31.940**	54.785***

This study takes the average value of the four variables of online promotion, content marketing, personalized recommendation, and social evaluation as external cues, and at the same time uses the Bootstrap mediation effect test method to demonstrate the mediation effect of perceived functional value and perceived emotional value. As shown in the test results in Table 5, the indirect effect of external cues on purchase intention through perceived functional value has a confidence interval of [0.103,0.206] at the 95% confidence level, and the interval does not contain 0, indicating that perceived functional value has a significant mediation effect between external cues and purchase intention, and Hypothesis H5a is supported. Similarly, the indirect effect of external cues on purchase intention through perceived emotional value has a confidence interval of [0.081,0.137] at the 95% confidence level, and the interval also does not contain 0, indicating that perceived emotional value has a significant mediation effect between external cues and purchase intention, and Hypothesis H5b is supported.

Table 5: Results of Mediating Effect Test

Hypothetical relationship	Coefficient c	95% confidence interval	
		Lower 2.5%	Upper 2.5%
External cues - Perceived functional value - Purchase intention	0.153	0.103	0.206
External cues - Perceived emotional value - Purchase intention	0.116	0.081	0.137
Control variable	Controlled		

5. MANAGEMENT IMPLICATIONS

In view of the characteristics and purchase intention of consumers in cross-border online shopping, more emphasis should be placed on the marketing method of personalized product recommendations. The display of personalized recommendation information needs to build a cross-border online shopping context. With the good development momentum of social commerce, consumers are more likely to trust the shopping experiences and online reviews of other users when conducting cross-border online shopping. Therefore, cross-border online shopping platforms and sales enterprises should shape and maintain a good reputation among consumers, so that consumers can obtain useful information about products on cross-border e-commerce platforms and make shopping decisions more quickly.

The promotions and content marketing of cross-border e-commerce platforms enable consumers to experience the value and fun of cross-border online shopping. Considering that the most important difference between online

shopping and traditional offline shopping lies in the price advantage, this is what cross-border e-commerce platforms need to grasp. To enhance consumers' purchase intention, promotional means such as discounts can be used, or innovative promotional means can be employed to immerse consumers in the shopping experience, meet their personalized preferences, and thus enhance consumers' purchase intention.

The impact of consumers' perceived functional value on purchase intention is the greatest, followed by consumers' perceived emotional value. Therefore, cross-border e-commerce platforms should first find effective online shopping context clues to improve consumers' perceived functional value in order to stimulate consumers' purchase intention. At the same time, when creating online shopping context clues, cross-border e-commerce platforms should pay attention to increasing consumers' repeat purchase frequency, enabling consumers to obtain as much valuable information about products as possible in a short period of time.

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