

An Empirical Study on the Impact of Localised Content on Consumer Purchase Intentions in Cross-Border Live-Streaming E-Commerce: The Mediating Role of Perceived Value

Jinjie Fang

International Chinese College, Rangsit University, Pathum Thani, Thailand
E-mail: 1073668546@qq.com

Abstract

Cross-border live-streaming e-commerce has experienced rapid growth, but this has also been accompanied by cultural mismatches that have led to a prominent “high traffic, low conversion” problem. Based on the S-O-R theory, this study deconstructs localized content into localized content presentation and localized social interaction, constructs a “localized content—perceived value—purchase intention” model, and examines the mediating role of perceived value. The results show that both localized content presentation and localized social interaction have a significant positive impact on consumers’ perceived value; perceived value plays a significant mediating role between localized content and purchase intention; and dynamic social interaction-based localization is more effective than static content presentation. This study extends the application of the S-O-R model and perceived value theory to cross-border live-streaming scenarios, providing practical guidance for cross-cultural operations and conversion rate improvement in live-streaming e-commerce.

Keywords: *Cross-Border Live Streaming E-Commerce, Localized Content, Perceived Value, Purchase Intention, S-O-R Model*

1. Introduction

As digital transformation continues to deepen and Web 3.0 rapidly evolves, the cross-border e-commerce industry is undergoing significant changes. Traditional sales methods, which primarily relied on image displays, have been replaced by new forms of live-streaming retail such as TikTok Shop, Shopee Live, and AliExpress Live. Digital transformation has propelled cross-border live-streaming e-commerce to become a new engine of growth for foreign trade. However, each country and region exhibits distinct differences in linguistic contexts, aesthetic preferences, social customs, and value systems, which collectively shape heterogeneous cultural environments (Hoskins & Mirus, 1988). If live streaming content fails to align with the needs of local consumers, regardless of superior product quality or cutting-edge technological advancement, it will be unable to elicit consumer interest or stimulate purchase intention, thereby significantly undermining the performance of cross-border live streaming commerce. With the industry’s transaction volume growing by over 150% in 2023. However, the phenomenon of “cultural discounting” remains widespread, leading to high traffic but low conversion rates and creating a bottleneck for industry development.

To date, existing literature has insufficiently explored the dimensional deconstruction, underlying mechanisms, and boundary conditions of localized content. Scholarly inquiry into the concept of “localization” remains in its nascent stage: most studies have conceptualized and examined it as a holistic capability, and while some scholars have touched upon discussions of its essence and theoretical significance, there is still a dearth of systematic elaboration on the interrelationships among its internal constituent elements (Cyr, Head & Larios, 2009; Gao & Xu, 2022).

Cross-border live-stream shopping can be viewed as a process where environmental factors influence consumers’ physiological and psychological states, thereby triggering purchasing behavior. The S-O-R model proposed by Mehrabian and Russell in 1974 provides an excellent framework for explaining this process. Although there has been extensive discussion of e-commerce issues based on the S-O-R model, most scholars have conducted research from a single cultural perspective, neglecting the impact of cultural diversity on this process. This paper, grounded in Berry’s (1997) theory of cultural adaptation, examines the role of cultural adaptation in consumer cognition and behavior, and attempts to propose a theoretical

framework capable of explaining how live streamers and audiences interact and co-develop in a cross-cultural communication environment. Zhang and Zhao (2025) conducted a meta-analysis of the application of the SOR model in the cross-border e-commerce sector over a 15-year period and found that perceived value was the most consistent mediating variable, accounting for an average of 42.7% of the variance.

Using the S-O-R theory as a framework, this study categorizes localized content into content presentation localization and social interaction localization. It examines the mediating effect of perceived value and reveals the transmission mechanism of “localized content—perceived value—purchase intention,” thereby providing empirical evidence for the refined operation of cross-border live streaming. This study addresses the following key research questions:

RQ1: What impact does content presentation localization have on consumers’ perceived value?

RQ2: What effect does content presentation localization have on consumers’ purchase intention?

RQ3: What effects does social interaction localization have on consumers’ perceived value and purchase intention, respectively?

RQ4: Does perceived value play a significant mediating role in the relationship between localized content and consumers’ purchase intention?

2. Objectives

This paper examines issues related to localization in the field of cross-border live streaming, summarizing and distilling the key challenges: “geographical adaptability of content expression” and “cultural integration of social interaction.” Through a multi-level analysis, the study investigates how these factors—specifically environmental fit, visual consistency, alignment of cultural values, compatibility with etiquette and customs, and audience acceptance—influence the target audience’s perceptions and decision-making processes.

Based on the research questions outlined above, the objectives of this study are as follows:

- 1) To clarify the causal relationships between various dimensions of content localization and consumers’ perceived value and purchase intent.
- 2) To investigate how various dimensions of social interaction localization influence consumers’ perceived value and purchase intent.
- 3) To verify the mediating role of perceived value in the relationship between localized content and consumer purchase intent.
- 4) By comparing the relative strengths of different localization dimensions, this study aims to provide practical strategies for the refined operation of cross-border live-streaming e-commerce.

3. Literature Review

The cross-border live streaming commerce examined in this study is an emerging business model built upon digital streaming media, with cross-border e-commerce platforms serving as its core operational carrier. Compared with the “shelf-based” shopping paradigm of traditional cross-border e-commerce, cross-border live streaming commerce is distinguished by two core attributes: First, real-time synchronicity. In conventional shopping scenarios, consumers typically act as passive recipients of information; by contrast, in live streaming contexts, they can transform into content producers as well as critical participants that shape transaction outcomes (Sun & Li, 2019). Second, situated immersion capability. Enabled by its multimedia properties, live streaming integrates multi-modal elements including text, images, audio, and video to deliver an immersive experience with multi-layered interactivity for viewers. To a certain extent, this mechanism mitigates cognitive biases arising from information insufficiency (Short, Williams & Christie, 1976).

1) Localization of content presentation and perceived value

Localization is defined as the process of implementing a series of targeted adaptations and iterative improvements to products, services, and marketing strategies in accordance with the cultural characteristics of target markets (Pym, 2011). With the advent of the digital era, the scope of localization has expanded to encompass diverse practical dimensions, including visual design, user experience, and value orientation. This

study focuses on the content localization of live streaming platforms, and proposes a refined conceptualization of content localization drawing on the findings of Gao and Xu's (2022) research on TikTok's content ecosystem. Specifically, this construct refers to the extent to which streamers integrate local cultural features of the target market into live streaming content, which comprises three core dimensions: visual symbols, linguistic adaptation, and cultural value alignment. Li et al. (2025) further subdivided the localization of cross-border live streaming into three dimensions: linguistic accuracy, alignment of visual cultural symbols, and alignment of values. They found that visual cultural symbols have a significantly greater impact on consumers in Southeast Asian markets than in European and American markets.

Content localization is a fixed, monolithic approach to cultural adaptation; this paper analyzes its implications and impact on cross-cultural communication from a cultural perspective. Localization aims to mitigate cognitive misunderstandings or disagreements caused by cultural differences, using emotional appeal to foster audience understanding of live content and acceptance of its values. Research also indicates that localization strategies not only enhance viewers' favorable impressions of a program but also significantly increase their level of engagement with it.

Language adaptability, as a form of human social communication, plays a crucial role in cross-border cultural exchange. According to the theory of cognitive fluency (Reber et al., 2004), the degree to which people process information cognitively and their level of favorability toward its source are both related to their level of understanding: the higher the level of understanding, the greater the favorability toward the information and its provider.

H1: Language appropriateness has a significant positive impact on consumers' perceived value.

As part of live streaming, visual presentation plays a crucial role in regulating viewers' emotions and cognition. According to the classic theory of environmental psychology (Mehrabian & Russell, 1974), the external environment can evoke corresponding emotions in people. In the context of live streaming, the spatial layout, colors, lighting conditions, and product displays in the host's environment all serve as visual symbols. These are primary channels for information transmission, capable of creating an immersive experience that evokes corresponding emotions in viewers and influences their purchasing decisions. If these visual symbols align with the cultural aesthetic preferences of the target audience, they generally elicit feelings of pleasure and comfort.

H2: Visual fit has a significant positive impact on consumers' perceived value.

Website design that aligns with cultural preferences explores the semiotic significance of culture and the issue of meaning construction within its broader context. According to Berry's (1997) theory of cross-cultural adaptation, "integration" refers to the process of incorporating the forms, content, and values of heterogeneous cultures into people's consciousness and internalizing them, thereby achieving true cultural fusion. Incorporating cultural symbols familiar to the target audience into the design of a live-streaming room is an active act of cultural integration. This helps foster a sense of cultural identity and belonging among the target audience, thereby fulfilling their deeper sociocultural needs (Pym, 2011). By incorporating emotional elements into the content to enhance the effectiveness of information delivery, the design deepens the audience's understanding and application of the product within the same cultural context, thereby achieving the communication objective.

H3: Designs that align with cultural preferences provide consumers with higher perceived value.

2) Localization of content presentation and perceived value

Social interaction is a vital component of live streaming. By leveraging online interaction methods to provide viewers with an immersive experience, it helps enhance audience engagement and retention. From a sociological perspective, media technology overcomes barriers to communication between people, fostering closer and more frequent interpersonal connections.

As a common form of interpersonal interaction, real-time interaction aligns with reciprocity—a key concept in social exchange theory. Therefore, in this context, the types of honorifics a streamer uses, the social etiquette they observe, and their attitude toward culturally sensitive topics all reflect their level of understanding of and respect for the audience's culture (Ou et al., 2014). Chen & Kim (2024) introduced the concept of "cultural intelligence" among live streamers and found that their sensitivity to local cultural taboos and adherence to etiquette norms are key factors influencing consumer trust and perceived value.

This perception strengthens the connection between customers and the brand, and imbues the buying and selling of goods with deeper social significance. Such interpersonal communication goes far beyond simple commercial transactions and also addresses people's emotional needs.

H4: The normativity of etiquette has a significant positive impact on consumers' perceived value.

The code of conduct system for live streamers refers to a set of standardized requirements formulated specifically for live streaming scenarios, which stipulates explicit norms covering core dimensions including body language, verbal expression, comedic framing, and topic selection. Such a code of conduct must align with the cultural conventions of target audiences and avoid cultural taboos, so as to facilitate effective audience interaction and convey prosocial values. Drawing on the norm of reciprocity from Homans' Social Exchange Theory (Homans, 1958), reciprocity is defined as the act of fulfilling others' needs or meeting their expectations, which functions to strengthen interpersonal bonds and enhance interaction quality.

According to the theory of social presence (Short et al., 1976), the role of media has evolved beyond that of a mere tool for information dissemination; it has become a means of presenting the user's context while ensuring the immediacy of interaction. In live-streaming scenarios, the host's speed in responding to viewer comments, their emotional engagement (affability and attentiveness), and their ability to appropriately incorporate local cultural elements are all critical factors in determining whether viewers experience a sense of immersion. High responsiveness not only makes it easier for customers to perceive service quality and enhances their perceived service quality but also facilitates the effective delivery of personalized services, making it easier to identify target customers. Emotionally, it fosters a positive communication environment, allowing customers to feel valued, thereby strengthening brand loyalty and a sense of belonging. Research indicates that high responsiveness helps new customers build trust in the brand.

H5: Interactive responsiveness has a significant positive impact on consumers' perceived value.

3) Perceived Value and Purchase Intention

As a core construct in consumer behavior research, perceived value is defined as consumers' overall assessment of a product or service based on their perception of its utility and associated costs. In the e-commerce context, this construct can be further decomposed into multiple dimensions, including functional value, emotional value, and other sub-dimensions (Zeithaml, 1988; Sweeney & Soutar, 2001).

As a core metric capturing consumers' propensity to purchase goods or services in the future, purchase intention (Dodds, Monroe & Grewal, 1991) occupies a pivotal position in the field of consumer behavior research. Given its robust predictive validity, purchase intention can reliably forecast the likelihood of actual purchase behavior to a certain extent. It also plays a critical role in gauging market demand and formulating effective marketing strategies.

According to Zeithaml's (1988) theory of value perception, consumers' purchasing motivation is driven by the pursuit of maximizing their own interests. In cross-border e-commerce live-stream shopping, due to high levels of uncertainty regarding product quality, cross-border logistics times, and after-sales service, consumers face greater risks compared to traditional offline retail channels. Consequently, consumers' purchasing decisions become a process of weighing future benefits against potential losses.

Consumers' purchasing decisions in live-stream shopping are influenced by numerous complex factors, but the decisive factor is the extent to which consumers perceive value in the entire live-stream shopping process.

H6: Perceived value has a significant positive impact on consumers' purchase intention.

4) The Mediating Role of Perceived Value

Several scholars have identified perceived value as a critical mediating variable and called for more systematic analyses of its underlying mechanisms. Liu et al. (2020) found that in influencer live streaming, streamers' professionalism and high-frequency interaction can effectively enhance consumers' functional and emotional perceived value, thereby strengthening their purchase intention. Meanwhile, Guo, Li, Xu & Zeng (2021) also argued that in live streaming commerce, consumers' overall perceived value of products or services exerts a significant effect on purchase behavior, with functional perceived value carrying greater

explanatory power than emotional perceived value. These findings collectively corroborate the critical role of perceived value in consumers' purchase decision-making and elucidate its functional pathways. Wang and Liu (2023) further found that cultural distance moderates the effect of real-time interaction on perceived value; in high-cultural-distance markets, the importance of interaction response speed is 1.8 times greater than in low-cultural-distance markets.

If visual presentation, semantic analysis, and social norms fail to evoke emotions in target consumers or satisfy their psychological needs, positive commercial conversion outcomes will not be achieved. Perceived value plays a crucial role: on one hand, it serves as a cognitive mediator, transforming external information into a meaningful framework for consumers; on the other hand, it acts as a filter, eliminating unnecessary content and highlighting the most essential elements, thereby facilitating consumer decision-making.

According to cultural adaptation theory, in cross-cultural communication settings, the emotional and cognitive interactions of the audience determine their effectiveness in receiving information. Only when the audience understands the values of the presenter's cultural background (including factors such as cultural integration) and perceives the content and its effects will a certain behavioral tendency emerge. This indicates that the significance of localization lies not only in being accepted by the target market but also in integrating into their culture and becoming a part of it. H1g: Physical Evidence has a significant positive impact on customer satisfaction.

Based on the above analysis, this paper proposes the following mediation hypotheses:

H7: Perceived value mediates the relationship between language adaptability and purchase intention.

H8: Perceived value mediates the relationship between visual fit and purchase intention.

H9: Perceived value mediates the relationship between culturally preferred design and purchase intention.

H10: Perceived value mediates the relationship between etiquette conformity and purchase intention.

H11: Perceived value mediates the relationship between interactive responsiveness and purchase intention.

This paper proposes a theoretical framework consisting of five hypotheses to clearly elucidate the causal mechanism between independent and dependent variables ($S \rightarrow O$). The sixth hypothesis (H6) further explores the possibility of a reverse causal effect ($O \rightarrow R$), thereby providing a more comprehensive explanation of the sequential mediation effect in the S-O-R model. At the same time, this model reflects the complex pathways through which local context influences consumers, as well as how these influences operate through the mediating role of "perceived value," exhibiting multifaceted and multilevel effects. In this model, local context does not directly influence consumer behavior but rather guides consumers' final decisions by influencing the aforementioned mediators. The research framework is illustrated in Figure 1.

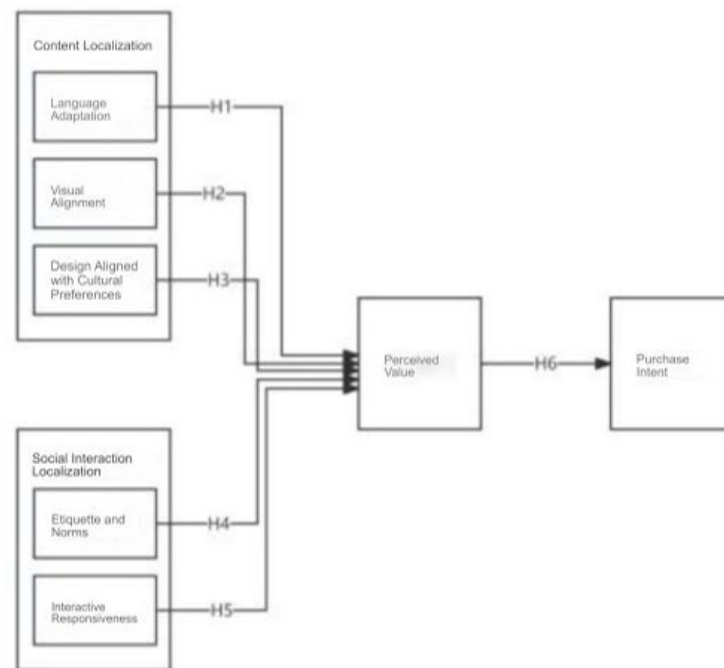


Figure 1 Research Framework

4. Materials and Methods

4.1 Research Methodology

Adopting a systematic literature review approach, this study systematically synthesizes existing research on the Stimulus-Organism-Response (S-O-R) framework, cross-cultural communication theory, and perceived value. Building on the seminal works of Cyr et al. (2009) and Ou, Pavlou & Davison (2014), this study further elaborates on the interrelationships among the core constructs and their underlying interactive mechanisms.

Quantitative analysis was conducted using SPSS 26.0 and the Process plugin to analyze the collected data. Descriptive statistics were used to examine the demographic characteristics of the sample. For the study on consumers' cross-border live-stream shopping behavior, the mean, standard deviation, and other measures were calculated for each variable to understand the overall situation and the central tendency of each variable. Reliability and validity were assessed through expert review and pilot testing to ensure that the items accurately measured the target constructs; Correlation analysis was conducted to calculate Pearson correlation coefficients between variables, determining whether linear, positive, or negative correlations existed and assessing their strength, which aids subsequent regression analysis; multiple regression analysis examined the effects of content localization (H1 – H3) and social interaction localization (H4 – H5) on consumers' perceived value, as well as the mechanism by which perceived value acts as a mediating variable in consumer purchasing behavior (H6); Mediation analysis was conducted using the Process plugin (Model 4), with confidence intervals for the mediating effect obtained via the Bootstrap method (5,000 samples, 95% confidence level). These analytical methods were used to quantify the relationships and mechanisms of action among the variables.

4.2 Research Instruments

The scales cover two core dimensions: independent variables and dependent variables. The independent variables are “Content Localization” and “Social Interaction Localization,” while “Purchase Intention” serves as the dependent variable. “Perceived Value” acts as the mediating variable. The item design for each dimension draws upon established scales from the academic literature to ensure the academic rigor and appropriateness of the measurement tools. Among these, “Content Localization”

serves as an independent variable. Based on relevant research on short video localization, it focuses on two major aspects — “language” and “visual elements” — and proposes five specific indicators for measurement. “Social Interaction Localization” analyzes issues of legitimacy in live-streaming interactions. Building on this, and drawing on research findings regarding cultural norms of “virtual intimate relationships” online, four key factors are proposed to analyze the characteristics of this demographic and the underlying reasons. “Perceived Value” serves as the mediating variable. This study is based on the perceived value theory proposed by Zeithaml (1988). Building upon the emotional and functional value dimensions he identified, and incorporating relevant items from the PERVAL scale, this measure comprehensively reflects consumers’ feelings and overall satisfaction during online live-stream shopping.

This study employs a five-point Likert scale: the dimensions and indicators of the 7P model are scored as 1 – 5. (“Very dissatisfied” is scored as 1, “Somewhat dissatisfied” as 2, “Neutral” as 3, “Somewhat satisfied” as 4, and “Very satisfied” as 5). The higher the score given by respondents, the higher their level of satisfaction.

4.3 Research Participants and Data Collection

The research participants selected for this study are consumers with experience watching cross-border live-streaming. A non-probability sampling method, specifically “purposive sampling,” was employed. The application of this sampling method in cross-border consumption research can be facilitated by data analysis tools provided by online platforms. For example, targeted information pushes and content dissemination can be conducted in influential e-commerce communities such as the “Overseas Shopping” group on “Douban”, the “Cross-border Shopping” topic section on “Rednote”, or on international social media platforms like Facebook and Telegram.

This study employed a questionnaire survey method, distributing questionnaires via the “Wenjuanxing” platform to cover individuals of different genders, ages, educational levels, countries/regions of residence, and income levels. According to the basic principles of mediation analysis, and to ensure the validity and reliability of statistical inferences, the sample size is generally required to be at least 10 to 20 times the number of variables under study. This study involves a total of 16 primary evaluation indicators. After excluding potential missing or outlier values, at least 300 valid samples are required to proceed to the next stage and to enhance the reliability, validity, and stability of the research results. The minimum sample size was calculated using a dual approach that combines the number of scale items with the statistical requirements for multiple groups, based on the formula $n = k \times m$. Here, n represents the baseline minimum sample size. The final determination set the minimum sample size requirement at 160 and the ideal sample size at 240. Given an expected invalid questionnaire rate of 20%, the number of questionnaires to be distributed was set at over 300.

4.4 Sample

The questionnaire collection period was March 2026. A total of 580 questionnaires were distributed, with a response rate of 91.7%. After excluding invalid samples, 500 valid questionnaires were obtained, accounting for 86.2% of the total. Among these, female respondents accounted for 56.8%, and male respondents accounted for 43.2%. Respondents aged 18 – 35 accounted for 84.4%, while 73.4% held a bachelor’s degree or higher, and 93.0% held an associate’s degree or higher. Regarding cross-border live-streaming e-commerce, employees of private enterprises and full-time students were the primary consumers, accounting for 68.0%. Individuals with monthly incomes between 3,000 and 10,000 yuan accounted for 66.0% of the sample and are the primary consumers of online shopping.

In summary, the 500 valid samples from this survey possess the following characteristics:

- 1) The sample is representative: All respondents have experience watching cross-border live-streaming, and their platform behavior and consumption patterns align with the characteristics of the cross-border live-streaming e-commerce category.
- 2) Adequate group representativeness: Demographically, the sample consists primarily of individuals aged 18 – 35 with higher education and middle-to-high incomes, aligning with the target population.
- 3) High data reliability: Respondents demonstrate strong engagement with live streams and authentic purchasing experiences, providing solid support for subsequent empirical research.

- 4) Overall, the sample exhibits no significant bias during the research process and possesses adequate representativeness and validity, making it suitable for subsequent data analysis and related tasks.

5. Results and Discussion

This study conducted reliability and validity tests based on the criteria proposed by Nunnally and Bernstein (1994) and Hair et al. (2019), employing multiple methods to ensure that the research results possess high reliability and validity. The scale comprises seven dimensions, with independent variables including Cross-Cultural Adaptability (CPA), Visual Symbol Relevance (CPV), Cultural Compatibility (CPC), and Compliance with Etiquette Norms (SIN); the primary mediating variable is Perceived Value (PV); and the dependent variable is Consumer Purchase Intention (PI). The scale consists of 22 specific items that align with the content requirements of the survey questionnaire designed for this study.

The scale is divided into seven dimensions: Language Adaptability (CPA), Visual Compatibility (CPV), Design Conformity to Cultural Preferences (CPC), Compliance with Etiquette Norms (SIN), Interaction Responsiveness (SIR), Perceived Value (PV), and Purchase Intention (PI). Cronbach's α for all dimensions exceeds the 0.8 standard, meeting the requirements (see Table 1). This indicates that the scale not only possesses good internal consistency but also effectively distinguishes the essential characteristics of the concepts it measures. The scale demonstrates good internal consistency, structural stability, and measurement validity, effectively reflecting the concepts under examination and the relationships among the various dimensions, thereby enabling accurate and comprehensive evaluation.

Table 1 Summary of Reliability Analysis

Variable	Number of topics	Cronbach's α
CPA	3	0.892
CPV	3	0.885
CPC	3	0.876
SIN	3	0.889
SIR	3	0.904
PV	4	0.912
PI	3	0.864

To assess the suitability of the data for factor analysis, the Kaiser-Meyer-Olkin (KMO) statistic and Bartlett's sphericity test were conducted, with the results summarized in Table 2. Correlation analysis of the scale used in this study revealed a KMO value of 0.896, which exceeds the standard threshold of 0.8. This indicates that the scale possesses good internal consistency and potential higher-order construct validity. In the Bartlett sphericity test, $\chi^2 = 8726.315$, degrees of freedom (df) = 231, and $P < 0.001$. This indicates that the dimensions are correlated with one another, supporting the conduct of exploratory factor analysis.

Table 2 Summary of KMO and Bartlett's test

	KMO	0.896
	approximate chi-square	8726.315
Bartlett's test of sphericity	Degrees of freedom	231
	significance	0.000

Based on the results of the KMO test and Bartlett's sphericity test, the selected data meet the requirements for factor analysis. In this study, principal component analysis was used to extract common factors, and Kaiser's varimax rotation was applied to enhance the explanatory power of each dimension. Seven common factors were extracted. Furthermore, the standardized factor loadings of all 22 observed variables exceeded the threshold value of 0.841, indicating that they all exhibit a high correlation with the latent common factors and that there is no evidence of multicollinearity. The cumulative variance explained by the seven common factors reached 92.297%, exceeding the generally accepted standard (typically 50%). This indicates that the scale developed in this study possesses good construct validity, a high degree of fit for the specific domain, and strong explanatory power.



Table 3 Summary table of the rotated component matrix

	ingredient						
	1	2	3	4	5	6	7
CPA1	0.892						
CPA2	0.885						
CPA3	0.879						
CPV1		0.880					
CPV2		0.874					
CPV3		0.868					
CPC1			0.861				
CPC2			0.855				
CPC3			0.849				
SIN1				0.887			
SIN2				0.881			
SIN3				0.875			
SIR1					0.902		
SIR2					0.896		
SIR3					0.889		
PV1						0.910	
PV2						0.903	
PV3						0.897	
PV4						0.890	
PI1							0.853
PI2							0.847
PI3							0.841

This paper employs Pearson's correlation analysis to examine the pairwise relationships among seven key variables and uses two-tailed tests to determine their statistical significance (with significance levels set at $\alpha = 0.05$ and $\alpha = 0.01$). As shown in Table 4, language adaptability (CPA), visual fit (CPV), cultural fit design (CPC), etiquette compliance (SIN), and interactive responsiveness (SIR) all exhibit a significant positive correlation with purchase intention (PI), with correlation coefficients of 0.376, 0.369, 0.362, 0.384, and 0.395, respectively. This indicates that in a cross-border live-streaming environment, content localization optimization strategies and social interaction methods have a significant impact on consumers' purchasing decisions and provide a basis for further mediation analysis. A test for multicollinearity revealed that the data used in this study does not exhibit multicollinearity issues; the maximum correlation coefficient among variables in the correlation matrix is 0.638, which is far below the multicollinearity threshold (generally considered to be 0.7 or higher). Furthermore, when constructing the multiple linear regression model, the mean value of the variance inflation factor (VIF) for the selected independent variables was less than 1.3, indicating that there are no strong linear relationships among these explanatory variables. Therefore, the data used in this study is reliable and suitable for multiple linear regression analysis.

Table 4 Summary of Correlation analysis matrix

	1	2	3	4	5	6	7
1.CPA	1						
2.CPV	0.326**	1					
3.CPC	0.318**	0.309**	1				
4.SIN	0.331**	0.322**	0.315**	1			
5.SIR	0.342**	0.335**	0.327**	0.338**	1		
6.PV	0.425**	0.418**	0.409**	0.432**	0.446**	1	
7.PI	0.376**	0.369**	0.362**	0.384**	0.395**	0.638**	1

Note: * Significantly correlated at the 0.05 level (two-tailed); ** Significantly correlated at the 0.01 level (two-tailed).

This paper employs a two-level regression analysis framework for a comprehensive study. Based on this framework, we examine the effects of content localization and social interaction localization on consumers' perceived value, and further analyze how perceived value influences consumers' purchase intention and its underlying mechanisms. To enhance the persuasiveness of the results, we use multiple linear regression analysis to test each hypothesis (H1 – H6).

Testing the Main Effects of Localization Dimensions on Perceived Value

Using multiple linear regression, perceived value (PV) is treated as the dependent variable, with Cultural Linguistic Adaptation (CPA), Visual Congruence (CPV), Cultural Appropriateness (CPC), Socio-Cultural Normativity (SIN), and Interactive Responsiveness (SIR) as independent variables. Additionally, factors such as gender, age, educational attainment, monthly income, and frequency of cross-border live stream viewing were included as control variables.

We then analyzed the direction, magnitude, and significance of the impact of each independent variable on perceived value based on the regression coefficient table, and used tolerance and VIF to detect multicollinearity issues, as shown in Table 5. This paper explores the mechanism through which cultural linguistic adaptation influences consumer perceived value via empirical research.

As shown in Table 5, the standardized regression coefficient (β) for language adaptability is 0.231 ($t=5.156, p<0.001$), hypothesis H1 is supported. The standardized regression coefficient (β) for visual fit is 0.221 ($t=4.955, p<0.001$), hypothesis H2 is supported; The standardized regression coefficient (β) for design conforming to cultural preferences is 0.212 ($t=4.767, p<0.001$), hypothesis H3 is supported; The standardized regression coefficient (β) for ceremonial normativity is 0.242 ($t=5.356, p<0.001$), meaning hypothesis H4 is supported; The standardized regression coefficient (β) for interactive responsiveness is 0.249 ($t=5.750, p<0.001$), hypothesis H5 is supported;

Table 5 Summary of Regression Analyses

Variable	β	t	p	VIF	R ²	F
CPA	0.231	5.156	0.000	1.117		
CPV	0.221	4.955	0.000	1.160		
CPC	0.212	4.767	0.000	1.152	0.375	58.937
SIN	0.242	5.356	0.000	1.178		
SIR	0.249	5.750	0.000	1.186		

Testing the Main Effect of Perceived Value on Purchase Intention

The binary regression model constructed in this paper treats “purchase intention” as the dependent variable and “perceived value” as the primary independent variable. Control variables were then included, and multivariate statistical methods were used to analyze and validate the data.

According to Table 6, perceived value has a very strong influence on purchase intention ($r = 0.638$), indicating a strong correlation between the two. The adjusted coefficient of determination (R^2) is 0.406, suggesting that the regression equation provides a good explanation and possesses strong statistical significance and predictive power.

The results indicate that the regression model is valid. The F-test value is 342.689, with a corresponding p-value far below 0.001, indicating a significant correlation between perceived value and purchase intention. The standard β coefficient for perceived value is 0.638 ($t=18.512, p<0.001$); hypothesis H6 is supported

Table 6 Summary of Regression Analyses

Variable	β	t	p	VIF	R ²	F
Constant		4.178	0.000			
PV	0.683	18.512	0.000	1	0.407	342.689

Testing for Mediation Effects

This study employs mediation analysis to examine the process by which localization factors influence perceived value and, in turn, affect consumers’ purchase intentions. It also establishes a theoretical model to illustrate the relationships among the variables and their mechanisms of action. The discussion focuses primarily on language adaptability, visual harmony, cultural similarity, etiquette systems, and feedback, analyzing how these factors ultimately lead consumers to make purchase decisions through the mechanism of perceived value, and testing Hypotheses H7 through H11.

1) Three-Step Approach

To test the mediating role of perceived value in the regression model, the main results of the three-step regression are presented in Table 7. All five factors exert a positive influence on consumers’ purchase

intentions, and they all exhibit a very high level of significance ($p < 0.001$) in the regression equations. This lays a solid foundation for further research on the mediating effect and provides strong evidence.

In the second stage, regression analysis was employed to examine the relationship between the five main independent variables and the key mediating variable, “perceived value.” The results of the regression analysis indicate that all independent variables are closely associated with “perceived value” ($p < 0.001$), which plays a crucial role in the subsequent study of the mediating effect.

The mediation analysis examined the pathways through which perceived value influences consumer purchasing behavior. The results indicated a positive correlation between perceived value and purchase intention, with a standardized regression coefficient of $\beta = 0.614$ ($p < 0.001$), demonstrating a statistically significant and practical relationship between the two.

Empirical analysis revealed that both the formality of etiquette and the responsiveness of interactions significantly influence consumers’ purchase intentions ($P < 0.05$), and the standard β values for these two variables gradually decrease as the model order increases. This indicates that perceived value serves as a crucial mediator between these two factors and consumer purchasing behavior.

Table 7: Summary of Regression Results for the Three-Step Method of Perceived Value Mediation

Process	DV	IV	β	t	p	Model Fit Indices
1	PI	CPA	0.224	4.932	0.000	R=0.542 R ² =0.294 F=41.206 p=0.000
		CPV	0.217	4.781	0.000	
		CPC	0.209	4.605	0.000	
		SIN	0.235	5.174	0.000	
		SIR	0.246	5.418	0.000	
2	PV	CPA	0.231	5.156	0.000	R=0.612 R ² =0.375 F=58.937 p=0.000
		CPV	0.221	4.955	0.000	
		CPC	0.212	4.767	0.000	
		SIN	0.242	5.356	0.000	
		SIR	0.249	5.750	0.000	
3	PI	CPA	0.082	1.913	0.056	R=0.665 R ² =0.442 F=54.783 p=0.000
		CPV	0.079	1.842	0.066	
		CPC	0.075	1.751	0.081	
		SIN	0.089	2.078	0.038	
		SIR	0.094	2.193	0.029	
	PV		0.614	14.267	0.000	

2) Bootstrap Robustness Test

We conducted 5,000 bootstrap resamples to examine the stability and reliability of the mediating effects. The results showed that none of the five main independent variables fell within the confidence intervals, indicating that their mediating roles in the process of perceived value formation are significant and statistically valid. This is consistent with the findings of the three-step mediation model; The data reveal that the influence of each variable on perceived value generally exceeds 60%, with language adaptability and etiquette compliance playing the most significant roles (slightly above 63%). In the context of cross-cultural communication in live-stream marketing, perceived value, as a mediating variable, plays a crucial role in consumers’ purchasing behavior.

Overall, based on the results obtained using the three-step approach and the Bootstrap method, all mediation hypotheses in this study are accepted. Hypotheses H7 – H1 are all supported.

Table 8 Results of the Bootstrap mediation analysis (5,000 samples)

IV	Mediation Effect Variable	SE	LLCI	ULCI	Proportion of Mediation Effect
CPA	0.142	0.026	0.095	0.197	63.39%
CPV	0.136	0.025	0.091	0.189	62.67%
CPC	0.130	0.024	0.087	0.181	62.20%
SIN	0.149	0.027	0.101	0.205	63.40%
SIR	0.153	0.028	0.104	0.210	62.20%

Based on the above research and after a thorough review of the relevant literature, the proposed hypotheses were empirically tested; hypotheses H1-H11 were supported and found to be valid.

Table 9 Summary of research hypothesis results

	Hypothesis	Result
H1	Language appropriateness has a significant positive impact on consumers' perceived value.	Accept
H2	Visual fit has a significant positive impact on consumers' perceived value.	Accept
H3	Designs that align with cultural preferences provide consumers with higher perceived value.	Accept
H4	The normativity of etiquette has a significant positive impact on consumers' perceived value.	Accept
H5	Interactive responsiveness has a significant positive impact on consumers' perceived value.	Accept
H6	Perceived value has a significant positive impact on consumers' purchase intention.	Accept
H7	Perceived value mediates the relationship between language adaptability and purchase intention.	Accept
H8	Perceived value mediates the relationship between visual fit and purchase intention.	Accept
H9	Perceived value mediates the relationship between culturally preferred design and purchase intention.	Accept
H10	Perceived value mediates the relationship between etiquette conformity and purchase intention.	Accept
H11	Perceived value mediates the relationship between interactive responsiveness and purchase intention.	Accept

6. Conclusion

6.1 The Impact of Content Localization and Social Interaction Localization on Perceived Value

In cross-border live streaming, both static content presentation localization and dynamic social interaction localization significantly boost consumers' perceived value, which is consistent with cognitive fluency theory and Berry' s cultural adaptation theory. For content presentation dimensions, language adaptability ($\beta = 0.231$, $p < 0.001$) delivers the strongest effect: native linguistic expression eliminates information processing barriers and improves cognitive fluency, making audiences more receptive to live content. Visual fit ($\beta = 0.221$, $p < 0.001$) evokes pleasant emotions by matching local aesthetic preferences, in line with environmental psychology perspectives. Culturally aligned design ($\beta = 0.212$, $p < 0.001$) fosters audiences' sense of cultural belonging, though its effect is relatively weaker due to the higher threshold of deep cultural identity.

Notably, social interaction localization outperforms content presentation localization in enhancing perceived value, with interactive responsiveness ($\beta = 0.249$, $p < 0.001$) and etiquette normativity ($\beta = 0.242$, $p < 0.001$) yielding higher regression coefficients. Grounded in social exchange theory and social presence theory, compliance with local etiquette conveys cultural respect and builds interpersonal trust, while timely comment responses strengthen audience engagement and emotional bonding. This finding fills the research gap that prior studies mostly treated localization as a holistic construct without distinguishing static

and dynamic dimensions, and confirms that real-time interactive localization generates stronger value perception in live streaming scenarios. This also explains why many cross-border live streams fail to improve conversion after only completing language translation and visual decoration.

6.2 The Influence of Perceived Value on Purchase Intention

Consistent with Zeithaml's classic perceived value theory, this study verifies that perceived value has a significant positive effect on purchase intention ($\beta = 0.638$, $p < 0.001$). Compared with domestic shopping, cross-border live streaming involves higher perceived risks in product authenticity, logistics timeliness and after-sales service. Consumers make purchase decisions by weighing perceived benefits (functional utility, emotional experience) against perceived costs (monetary expense, time cost, trust risk). When localized content elevates consumers' overall perceived value, it effectively offsets cross-border shopping risks and stimulates purchase willingness. This result also explains the prevalent "high traffic, low conversion" dilemma in the industry: even with large viewership, failure to deliver sufficient perceived value cannot convert traffic into actual orders.

6.3 The Mediating Role of Perceived Value

Perceived value plays a significant mediating role between all five localization dimensions and purchase intention, which validates the complete "localized content (stimulus) — perceived value (organism) — purchase intention (response)" logical chain under the S-O-R framework. The mediating effect accounts for over 62% of the total effect, higher than the 42.7% average level found in Zhang & Zhao's (2025) meta-analysis of cross-border e-commerce, indicating that perceived value plays a stronger mediating role in localized live-streaming scenarios. External cultural adaptation stimuli do not directly trigger purchase behavior; they first reshape consumers' internal cognitive and emotional states, then drive final behavioral responses.

Specifically, static content presentation dimensions (language, visual, cultural design) exert a full mediating effect via perceived value, with no significant direct impact on purchase intention. This means content localization only generates commercial value when it is transformed into consumers' perceived value; purely formal localization without value delivery cannot promote conversion. In contrast, social interaction dimensions (etiquette, responsiveness) show partial mediation: they not only improve purchase intention indirectly through perceived value, but also retain a weak direct effect by building emotional trust between streamers and audiences. This heterogeneous mediation mechanism further reveals the unique advantage of dynamic interactive localization in cross-border live streaming commerce.

7. Limitations and future research directions

The study sample has certain limitations

the subjects selected were core users from major Chinese cross-border e-commerce live-streaming platforms—primarily highly educated urban youth. However, this does not represent the purchasing habits and demand characteristics of middle-aged and elderly consumers, nor does it cover the diverse situations in international markets. Future research could:

- 1) Increase the sample size and modify data collection methods, selecting representative consumers in other countries for survey research;
- 2) Incorporate demographic factors such as age distribution and income levels, and use time-series analysis to examine the role of localization in brand performance and its evolving trends

The measurement of variables is not fully standardized

"content presentation" and "social interaction" are two commonly used terms, but further research is needed regarding their specific meanings and impacts; issues such as "product fit" and "service localization" have also not been given sufficient attention. Most studies on perceived value provide general descriptions rather than detailed discussions of specific aspects, failing to adequately explain the mechanisms of functional and emotional value or the relationship between them. Future research could:

- 1) Refine variable selection by incorporating the degree of product and service localization as primary independent variables into the model, and use multidimensional perceived value (i.e., functional and emotional) to explain the underlying causes.
- 2) Based on cultural factors and individual preferences, discuss potential interactions and constraints between them to form a more comprehensive theoretical framework and enhance predictive power.

Shortcomings in contextual analysis: The scope of the study is too narrow, making it difficult to systematically compare the effectiveness of localization practices and their differences across various scenarios; furthermore, insufficient consideration was given to platform characteristics. Moving forward, it may be worth increasing the volume of content deployed across multiple platforms.

References

- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review*, 46(1), 5 – 34.
<https://doi.org/10.1111/j.1464-0597.1997.tb01087.x>
- Chen, L., & Kim, S. (2024). Cultural intelligence in live streaming commerce: How streamers' cultural adaptation drives purchase intention. *International Journal of Hospitality Management*, 119, 103789.
<https://doi.org/10.1016/j.ijhm.2024.103789>
- Cyr, D., Head, M., & Larios, H. (2009). Colour appeal in website design within and across cultures. *MIS Quarterly*, 33(3), 395 – 432.
<https://doi.org/10.1016/j.ijhcs.2009.08.005>
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307 – 319.
<https://doi.org/10.1177/002224379102800305>
- Guo, J., Li, Y., Xu, Y., & Zeng, K. (2021a). How live streaming features impact consumers' purchase intention in the context of cross-border E-commerce? A research based on SOR theory. *Frontiers in Psychology*, 12, 767876.
<https://doi.org/10.3389/fpsyg.2021.767876>
- Guo, X., Li, Y., Xu, L., & Zeng, D. (2021b). Perceived value in live streaming commerce: Dimensions and impact on purchase behavior. *Electronic Commerce Research and Applications*, 47, 101058.
<https://doi.org/10.1016/j.elerap.2021.101058>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.
https://books.google.co.th/books/about/Multivariate_Data_Analysis.html?id=0R9ZswEACAAJ&redir_esc=y
- Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology*, 63(6), 597 – 606.
<https://doi.org/10.1086/222355>
- Hoskins, C., & Mirus, R. (1988). Reasons for the US dominance of the international trade in television programmes. *Media, Culture & Society*, 10(4), 499 – 515.
<https://doi.org/10.1177/0163443788010004004>
- Li, S., Wang, H., & Zhang, Y. (2025). Cross-border live streaming localization strategies and consumer engagement: A multi-platform comparison. *Journal of Interactive Marketing*, 67, 123 – 138.
<https://doi.org/10.1016/j.intmar.2024.12.005>
- Liu, F. J., Meng, L., Chen, S. Y., & Duan, K. (2020). The impact of network celebrities' information source characteristics on purchase intention: From the perspective of perceived value. *Nankai Business Review*, 23(1), 57 – 70.
<https://doi.org/10.1016/j.elerap.2020.101002>
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. MIT Press.
<https://psycnet.apa.org/record/1974-22049-000>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.
<https://psycnet.apa.org/record/1994-97122-000>
- Ou, C. X., Pavlou, P. A., & Davison, R. M. (2014). Swift guanxi in online marketplaces: The role of computer-mediated communication technologies. *MIS Quarterly*, 38(1), 209 – 230.
<https://doi.org/10.25300/MISQ/2014/38.1.08>
- Pym, A. (2011). Website localization. In M. Baker & S. Saldanha (Eds.), *The Oxford handbook of translation studies* (pp. 414 – 428). Oxford University Press.
<https://doi.org/10.1093/oxfordhb/9780199548645.013.0018>

- Reber, R., Wurtz, P., & Zimmermann, T. D. (2004). Exploring “fringe” consciousness: The subjective experience of perceptual fluency and its objective bases. *Consciousness and Cognition*, 13(1), 47 – 60.
[https://doi.org/10.1016/S1053-8100\(03\)00049-7](https://doi.org/10.1016/S1053-8100(03)00049-7)
- Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. Wiley.
<https://doi.org/10.1177/002224298805200302>
- Sun, Y., Shao, X., Li, X., Guo, Y., & Nie, K. (2019). How live streaming influences purchase intention in social commerce: An IT affordance perspective. *Electronic Commerce Research and Applications*, 37, 100886.
<https://doi.org/10.1016/j.elerap.2019.100886>
- Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*, 77(2), 203 – 220.
[https://doi.org/10.1016/S0022-4359\(01\)00041-0](https://doi.org/10.1016/S0022-4359(01)00041-0)
- Wang, Y., & Liu, J. (2023). Real-time interaction and perceived value in cross-border live streaming: The moderating role of cultural distance. *Journal of Business Research*, 162, 113892.
<https://doi.org/10.1016/j.jbusres.2023.113892>
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2 – 22.
<https://doi.org/10.1177/002224298805200302>
- Zhang, Q., & Zhao, L. (2025). SOR model in cross-border e-commerce: A meta-analysis of 15 years of research. *Journal of Electronic Commerce Research*, 26(1), 1 – 22.
<https://doi.org/10.1080/10864415.2024.2398765>