

Impact of Venue Atmosphere on Brand Intimacy In E-Commerce Live Streaming

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Abstract. Live streaming with e-commerce as a significant feature of the new retail model is providing a new interpretation and significance for the elements of people, goods, and the marketplace. This study focuses on how the atmosphere in e-commerce live broadcasting elements affects and enhances brand value, especially from the perspective of brand intimacy in brand value. Through empirical research using questionnaire survey data and structural equation models, this paper explores the mechanism by which the factors of people, goods, and venues in e-commerce live broadcasting affect consumer brand intimacy. The study found that the atmosphere support of the venue affects brand intimacy. This study constructs a theoretical framework for the relationship between the factors of people, goods, and venues in online celebrity live broadcasting and brand intimacy.

Keywords: Brand Value; Model Mechanism; Brand Intimacy.

1. INTRODUCTION

As a new business form, live e-commerce in China has been developing rapidly in recent years. According to the 51st Statistical Report on Internet Development in China released by CNNIC, by December 2022, the scale of China's online live streaming users reached 751 million, an increase of 47.28 million compared to December 2021, accounting for 70.3% of the total number of netizens. The maturity of mobile communication and equipment technology, the expansion of the user base of online live streaming, the rapid growth of short video platforms, and the perfection of the logistics distribution system have provided favorable conditions for the development of live streaming with e-commerce.

Live e-commerce, with a new way of displaying goods, empowers the development of enterprises and brands. Its essence is social e-commerce, which can better establish a trust relationship between the brand and consumers. There are already relevant literature studies on the impact of live e-commerce on brand value, such as Shen Zhanbo and Dai Liang, who start from the perspective of brand value and study the marketing mechanism of influencer live streaming. Kong Huanhuan and others explore the different types of hosts that play a key role in the value of the brand and brand marketing. Brand intimacy belongs to the category of consumer brand relationships, and the interpersonal relationship between the brand and consumers will directly affect the brand's sales volume and consumers' loyalty to the brand, thus affecting brand value. There is still a lack of literature directly studying the relationship between consumer brand intimacy and live e-commerce. This paper starts from enhancing brand value, through the analysis of the core elements of live e-commerce and the core paths of brand management, to explore the relationship between them.

This study concentrates on the impact and enhancement of brand value through the atmosphere created by elements in e-commerce live broadcasting, particularly emphasizing the dimension of brand intimacy within brand value. Utilizing empirical research methods, including questionnaire survey data and structural equation models, the paper delves into how the factors involving people, products, and settings in e-commerce live broadcasts influence consumer brand intimacy. The findings reveal that the supportive atmosphere of the broadcast setting plays a role in shaping brand intimacy. Furthermore, this study establishes a theoretical framework that elucidates the relationship

between the factors of people, products, and settings in online celebrity live broadcasts and brand intimacy.

The structure of this paper is as follows: the second part is literature review and research hypotheses, the third part is research design, the fourth part is data analysis and hypothesis testing, and the fifth part is the conclusion.

2. Literature Review and Research Hypotheses

This paper aims to explore the relationship between live e-commerce and brand intimacy in brand value. It first conducts a literature analysis from two aspects: the elements of live e-commerce and brand intimacy, and proposes research hypotheses. Live e-commerce is a new form of retail [1-3]. Liu Guanhua and others believe that compared with traditional new retail, the core subjects of new retail are still the three elements of people, goods, and place. Previous scholars have proposed an analysis model of the elements of people, goods, and place in live e-commerce, such as Wu Na, who conducted exploratory research on the factors under the live e-commerce marketing model through the encoding of interview data, and summarized three main categories - people, goods, and place. Wang Baoyi believes that essentially, starting from optimizing the system goals of "cost, efficiency, and experience [4-6]," live e-commerce must be reconstructed around these three core elements of "people, goods, and place."

2.1. Elements of People, Goods, and Place in Live E-commerce

Live e-commerce gives new meanings to the traditional elements of people, goods, and place. First, the core of live e-commerce is people, who generally refer to the hosts in the live broadcast room. The host displays goods to consumers in real-time video form, according to their preferences or consumer needs. Xiang and others believe that the professionalism and similarity of KOLs affect consumer repurchase intentions through variables such as consumer satisfaction. Bansal and Voyer analyzed the impact of professionalism and interactivity on consumer purchase intentions. Another research found that KOLs' professional knowledge encourages consumers to make purchase decisions [7-8].

Goods refer to products or services. Kotler and others define anything that can be provided to satisfy market desires or needs as a product. Enhancing the connection between consumers and brands is an important indicator of product and service differentiation. Ling and others pointed out that product quality and shopping experience have a positive impact on consumer purchase intentions. Kim believes that product quality has a positive impact on consumer repurchase intentions through trust and satisfaction. Jiang Jiaqi believes that during the live e-commerce process, frequently issuing coupons or lotteries will attract consumer viewing, and if there are some limited products or cost-effective exclusive offers during the live broadcast, it will further promote consumer purchase intentions [9-10].

The venue refers to all factors related to what consumers feel and know in live e-commerce shopping, including the atmosphere of the live broadcast room, the live venue, and multi-platform. Du Wenwen believes that the interactive atmosphere in the live e-commerce environment affects consumers' perceived functional value and perceived emotional value. Sun He's empirical research shows that the atmosphere of the online live broadcast room can make consumers feel satisfied and pleasure in live shopping, which will further affect consumers' value emotional experience. A good live broadcast room shopping atmosphere can provide consumers with a good shopping experience.

In summary, many characteristic factors in the elements of people, goods, and place in live e-commerce are worth in-depth study. For example, many scholars have studied the impact of the professionalism or leadership of the host on consumer purchase intentions and brand influence, or the impact of product quality on brand value, and the impact of the live broadcast room atmosphere on the host, user interaction, and product sales. This paper mainly studies the impact of the professionalism of the host, the cost-effectiveness of the goods, and the atmosphere of the venue on

brand intimacy. The concept of brand intimacy is relatively new, and there are very few domestic researchers, making it a more innovative research highlight in the elements of people, goods, and place.

2.2. Brand Intimacy

The concept of brand intimacy has been widely studied by foreign scholars in recent years. Mario first carefully explained their understanding of the concept of "brand intimacy" in his book "Brand Intimacy: A New Paradigm for Marketing." The emotional science that measures the connection between consumers and the brands they use and love is called brand intimacy. Mario created the Brand Intimacy Model, which consists of the following key components

Users: To be intimate with a brand, you need to repeatedly try or be involved. Considering this issue from the perspective of interpersonal relationships, you cannot be intimate with people you do not know.

Strong emotional connection: Emotional connection is the core of brand intimacy. Not everyone who has an emotional connection with a brand is necessarily intimate with it. However, everyone who is intimate with a brand has a strong emotional connection.

Archetypes: Mario observed how people interpret and define their close relationships with brands. When explaining a person's connection with a brand, people repeatedly use the same types of words and experiences. Mario realized that these marks are one of the most effective tools for building brand intimacy. These six archetypes are satisfaction, identity, enhancement, ritual, nostalgia, and indulgence.

Stages: These stages measure the depth and intensity of intimate relationships. In the three stages (sharing, bonding, and merging) shared by Mario, each stage contains many emotional and rational milestones that are achieved as the brand relationship becomes more intimate.

Brand Intimacy Quotient: In brand intimacy research, the score assigned to each brand ranges from 1 to 100. This score is a simple way to compare within and outside the brand category and can also determine a brand's performance in generating brand intimacy.

There is a lot of foreign literature on the study of brand intimacy. This concept was proposed by Mario in 2017, so the current literature is relatively scarce. The author's understanding of the concept of brand intimacy tends to focus more on the study of interpersonal relationships between brands and consumers. Based on this direction, this paper studies the impact of people, goods, and place on users, emotions, and intimacy in the brand intimacy model. Related literature reviews show that few scholars have combined these characteristic elements with live e-commerce to study their impact relationship and role, which is also a major innovation of this study.

2.3. Research Hypotheses

Dan Mingxiao found through questionnaire surveys and empirical analysis that the personal charm, popularity, and professionalism of the broadcaster are the main factors affecting consumer purchase intentions. The personal charm, popularity, and professionalism of the broadcaster all positively affect consumers' emotional attitudes towards products, thereby affecting consumers' purchase intentions. Zheng Cancan's research indicates that the high cost-performance ratio and discounts of products, especially when the product itself is of high quality and low price, can bring better emotional perception and value to consumers. Tao Jinguo and others believe that whether the products of the host in live e-commerce are discounted will further affect consumers' desire to purchase and influence consumers' emotions. Sun He's empirical research shows that the atmosphere of the online live broadcast room can make consumers feel satisfied and pleasure in live shopping, which will further affect consumers' value emotional experience. Based on the above analysis, this paper proposes the following hypotheses (Fig 1):

H: The characteristic elements of live e-commerce have a positive impact on brand intimacy.

Hg: The atmospheric support characteristic element of live e-commerce venues positively affects users.

Hh: The atmospheric support characteristic element of live e-commerce venues positively affects emotions.

Hi: The atmospheric support characteristic element of live e-commerce venues positively affects intimacy.

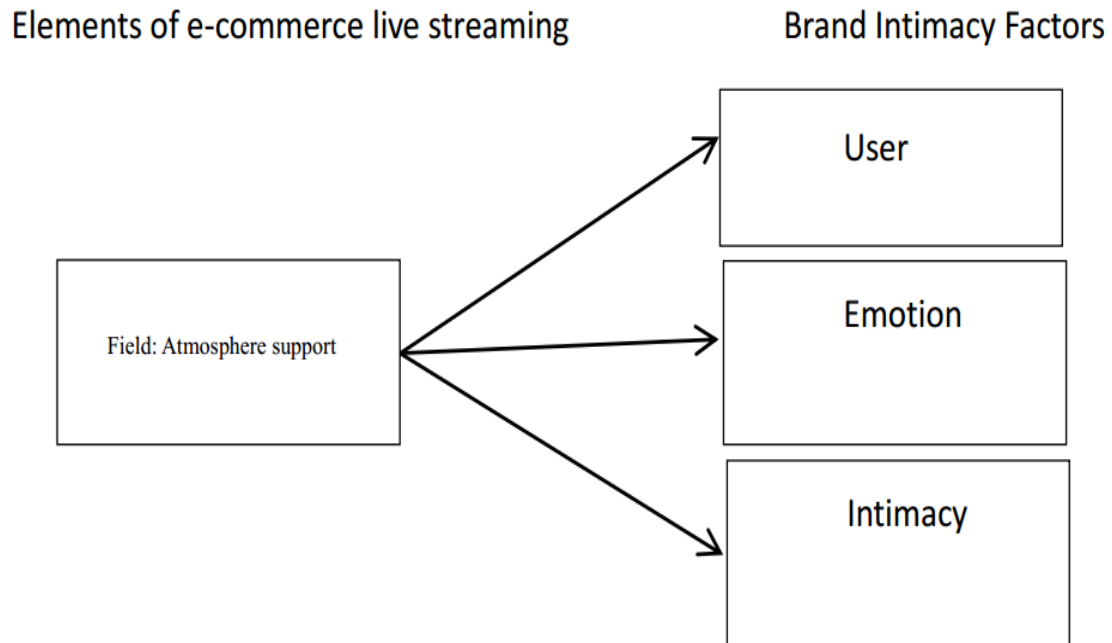


Fig. 1 Theoretical Model

3. RESEARCH DESIGN

3.1. Variable Measurement

This study model includes six dimensions and 23 indicators of professionalism, product cost-performance, and atmospheric support in the characteristic elements of live e-commerce, as well as users, emotions, and intimacy in the brand intimacy elements. The measurement indicators of the scale are compiled based on existing research results and tailored to the characteristics of the study.

3.2. Sample Composition

This study uses online questionnaire platforms such as Questionnaire Star to collect relevant data. After screening, a total of 800 valid sample data were obtained. Among them, there are 422 males and 378 females. The age of the subjects is mainly concentrated between 18-34 years old, with 311 people having a bachelor's degree, accounting for 38.9%. The occupation distribution is mainly students and private enterprise employees, accounting for 36.9% and 26.6% respectively. In the monthly income indicator of the subjects, the income segment of 8000-14999 yuan has the highest proportion, reaching 31.6%. In the consumption amount statistics, the two consumption segments of 5000-9999 yuan and 10000 and above account for 31.5% and 27.0% respectively. The total proportion of participation frequency of once a week and three times a month or less is 75.9%. In terms of activity types, watching live broadcasts and leaving messages for interaction are the main ones, with the number of people choosing 54.1% and 40.5% respectively.

4. DATA ANALYSIS AND HYPOTHESIS TESTING

4.1. Reliability and Validity Analysis

Cronbach's alpha is used to represent the internal consistency reliability of the scale. The calculation results show that the overall reliability of the questionnaire is 0.894, the reliability of the characteristic elements of live e-commerce is 0.912, and the reliability of the brand intimacy elements is 0.883. The reliability of professionalism, product cost-performance, atmospheric support, users, emotions, and intimacy is between 0.835-0.889. The overall stability of the data is relatively good, and the credibility is relatively high (Table 1).

In the confirmatory factor analysis model, $2/df=1.845<3$, $RMSEA=0.033<0.05$, $SRMR=0.036<0.05$, $NFI=0.960>0.9$, $RFI=0.953>0.9$, $IFI=0.981>0.9$, $TLI=0.978>0.9$, $CFI=0.981>0.9$, $GFI=0.957>0.9$, all fit indicators meet the analysis standard requirements and have strong structural validity.

In the model aggregate validity test results, the KMO of each variable is between 0.655-0.864, Bartlett's spherical degree test is significant, and AVE is higher than 0.5, CR value is higher than 0.8, each variable has strong aggregate validity.

Table 1 Model regression coefficient calculation and test results

Regression path			<i>b</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>	Test result
Atmosphere support	→	User	0.163	0.149	0.048	3.365	<0.001	Support
Atmosphere support	→	Emotion	0.093	0.097	0.043	2.160	0.031	Support
Atmosphere support	→	Intimacy	0.158	0.151	0.045	3.538	<0.001	Support

4.2. Hypothesis Testing

Based on the results of the reliability and validity test, the structural equation model test method is used to establish a model with atmospheric support as independent variables, and users, emotions, and intimacy as dependent variables. Among them, the model $2/df=2.140<3$, $RMSEA=0.038<0.05$, $SRMR=0.055<0.08$, $NFI=0.953>0.9$, $RFI=0.946>0.9$, $IFI=0.975>0.9$, $TLI=0.970>0.9$, $CFI=0.974>0.9$, $GFI=0.950>0.9$, the model has good structural validity.

The test results show (Table 1), atmospheric support ($b=0.093$, $t=2.160$, $p=0.031<0.05$) have a positive impact on the emotional dimension. Atmospheric support has a positive impact on both User and Emotion, and has a greater impact on User, with a coefficient of 0.149. Atmospheric support also have a significant positive regression impact on the intimacy dimension, with regression coefficients of 0.158 ($t=3.538$, $p<0.001$), respectively.

The reasons behind this result are as follows. First, the real-time interactivity of live e-commerce enhances the connection between consumers and brands. Through real-time communication between anchors and consumers, consumers feel the attention and importance of the brand. This interactivity not only increases the fun and interactivity of shopping, but also makes consumers feel more respected and valued, thereby enhancing brand intimacy.

Secondly, the visual display of live e-commerce allows consumers to intuitively understand the characteristics and actual use effects of the goods. This intuitiveness not only increases the transparency of shopping, but also allows consumers to have a deeper understanding of the goods, thereby enhancing consumers' trust and intimacy with the brand.

In addition, the promotional activities and social attributes of live e-commerce also promote the improvement of brand intimacy. Promotional activities such as limited-time discounts and coupon distribution in the live broadcast room stimulate consumers' desire to buy, and the social attributes of live broadcasts allow consumers to feel the warmth and interaction of the community while shopping. This community effect further enhances consumers' sense of belonging and intimacy with the brand.

5. CONCLUSION

The atmospheric support in the live broadcast room has a positive and significant effect on the formation of brand intimacy elements. Throughout the live broadcast process, real-time interaction between the host and consumers, as well as communication between consumers and other users, can deepen users' emotional experiences and make consumers feel a sense of belonging or recognition. Hypotheses Hg, Hh, and Hi are established.

We found that the live broadcast e-commerce atmosphere has a significant impact on brand intimacy. Live broadcast e-commerce can enhance the trust and stickiness between consumers and brands through real-time interaction, data-driven and authentic characteristics, thereby improving brand intimacy. The professionalism of the anchor, the strategic and continuous nature of the live broadcast, and the traffic boost of the platform enable consumers to continuously obtain low-priced and high-quality goods through the platform, and establish a trust path from weak relationships to strong relationships. For example, in real-time interaction, the anchor can answer the audience's questions in real time during the live broadcast, chat with the audience, and even increase the audience's sense of participation through voting and lucky draws. This interactivity not only enhances the shopping experience, but also enables merchants to better understand consumers' needs and feedback, thereby improving brand intimacy. From a data-driven perspective, live broadcast e-commerce analyzes audience behavior through big data technology to optimize product recommendations and pricing strategies. This personalized recommendation method allows consumers to feel the brand's attention and caring service, thereby enhancing brand intimacy.

In the three basic factors of people, goods, and place in live e-commerce, how to strengthen brand intimacy is a new topic of discussion. Brand intimacy creates a new form of loyalty—loyalty based on emotional connection. Brand intimacy aims to help today's brands establish a two-way relationship, rather than the push-pull dynamics of the past. It affects, attracts, and establishes trust, becoming a more valuable measure than loyalty.

A good atmosphere can drive the atmosphere of the live broadcast room, stimulate consumers' interest in products, and purchase desire. Let consumers remember this live broadcast room deeply, enhance brand awareness, close the distance between the brand and consumers, strengthen the emotional connection between consumers and the brand, and promote the improvement of brand intimacy.

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