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Original Paper

Live Streaming Channel Selection and Sales Strategy of Brand Suppliers Based on Consumer Purchase Intention

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Abstract

As an emerging sales mode, live streaming e-commerce is currently a hot spot and has attracted much attention. Different from the existing literature, this paper takes an empirical perspective and conducts a questionnaire survey and empirical analysis on the influencing factors of channel selection and purchase intention among live streaming e-commerce consumers, and deduces the optimization strategy of live streaming e-commerce of brand suppliers from the perspective of consumers. First, we screened out two major factors influencing purchase intention, product characteristics and anchor characteristics, through offline interviews and literature review. Then, we refined and extracted five independent variables: product quality, price preference, anchor professionalism, anchor interactivity, and anchor attractiveness. Secondly, we investigated consumers' preferences for live streaming channels through questionnaires, especially introduced the type of live streaming channels as a moderator into the analysis of factors affecting consumers' purchase intention. Finally, according to the results of data analysis, we put forward optimization suggestions for brand suppliers' live streaming channel selection strategy and sales strategy. The research results have certain reference significance for brand suppliers' live streaming channel selection and sales strategy.

Keywords

Live streaming e-commerce, Supply chain, Channel selection, Sales strategy, Empirical analysis

1. Introduction

1.1 Research Background and Significance

1.1.1 Research Background

The rapid advancement of the Internet has dramatically transformed people's lifestyles, particularly

with the emergence of e-commerce platforms and the proliferation of mobile Internet. Renowned brand suppliers and e-commerce platforms have gradually earned consumer trust through a variety of promotional activities, superior after-sales services, and the establishment of a robust reputation system. With the widespread adoption of mobile applications, consumers have grown accustomed to using smartphones, tablets, and other mobile devices for online shopping, thereby enjoying a more convenient shopping experience. This trend towards mobility has become a new norm in online consumption. In 2016, platforms such as Mushroom Street, Alibaba, and JD.com pioneered a new marketing model that combined “e-commerce + live streaming”, heralding the advent of the first year of e-commerce live streaming. By 2019, after three years of evolution and amidst the outbreak of the COVID-19 pandemic, consumer lifestyles shifted from “outdoor” to “home”, significantly impacting offline consumption. In the realm of online shopping, live streaming e-commerce has emerged victorious from the traditional e-commerce model, boasting significant price advantages and a multi-dimensional live format. Consequently, the live streaming e-commerce industry has entered a period of explosive growth. As of June 2023, the number of live users of e-commerce in China has reached 526 million, accounting for 48.8% of the total Internet users (China Internet Network Information Center, 2023).

In recent years, the rise of social media has led consumers to place greater emphasis on the socialization and personalization of goods. They gather product information through social media, share shopping experiences, and even make purchases directly on content platforms. The short video platform has emerged as a popular new marketing platform, leveraging its vast user base, daily live traffic, and time bonus (Wang, Luo, Luo, & Xu, 2023). This trend has given rise to we media live delivery and the integration of major content platforms into the live streaming e-commerce sector, including platforms like Kwai, Tiktok, Bilibili, and Xiaohongshu, which have all launched live streaming e-commerce modules. Currently, the primary live streaming e-commerce platforms can be categorized into two types: traditional e-commerce platforms and live streaming e-commerce modules derived from content platforms. As an emerging e-commerce industry flourishing under the influence of the pandemic, live streaming e-commerce has introduced a novel sales model to a multitude of brand suppliers. Under this sales model, two new supply chains have emerged: the KOL (key opinion leader) live streaming channel represented by celebrities and online influencers, and the brand self-built live streaming channel based on the platform. For numerous brand suppliers, live streaming e-commerce undoubtedly serves to bridge the gap between them and end consumers, thereby streamlining the supply chain, enhancing efficiency, and mitigating risks.

1.1.2 Research Objectives

Based on the aforementioned development background of live streaming e-commerce, this paper delves into the decision-making processes of brand suppliers when choosing live streaming channels and sales strategies from the perspective of consumers. It aims to provide pertinent recommendations for live streaming based on the research findings. The specific research objectives are as follows:

(1) To comprehend consumers' perceptions and biases towards different live streaming channels. By examining consumers' viewing habits, purchase intentions, and evaluations of various live streaming formats, this study uncovers consumers' preferences and needs regarding live streaming channels.

(2) To analyze the selection factors for brand suppliers' live streaming channels. In line with consumers' purchase intentions and channel perceptions, this paper evaluates the primary decision-making indicators that influence suppliers' choices of live streaming channels.

(3) To analyze the live streaming sales strategy of brand suppliers. By investigating the main factors influencing consumers' purchase intentions, this study offers recommendations concerning the live streaming sales strategies of brand suppliers.

1.1.3 Research Significance

The research objectives outlined in this study hold significant importance both from a theoretical and practical standpoint. Here's a breakdown of the implications:

(1) Theoretical significance. The current body of research on live streaming e-commerce, especially concerning brand suppliers' channel selection and sales strategy, is relatively limited. Existing literature predominantly utilizes game theory models to analyze the topic from a merchant's perspective, focusing on the advantages and drawbacks of live marketing versus traditional retail and offering decision-making advice. However, there is scarce analysis from the consumer's viewpoint. This proposed study aims to bridge this gap by investigating consumers' preferences and needs regarding live streaming channels and strategies, thereby providing a fresh perspective and a robust theoretical foundation for future academic research in related fields.

(2) Practical significance. As the live streaming e-commerce industry experiences rapid expansion, various operational modes have emerged, including brand suppliers creating their own live streaming rooms, hiring influencers for live promotions, and hybrid modes combining these approaches. In a supply chain system that comprises brand dealers, hosts (anchors), and live streaming e-commerce platforms, the two primary live streaming methods—brand store self-streaming and brand dealers employing anchors for merchandise promotion—will inevitably impact pricing and quality decisions within the live streaming e-commerce supply chain. These impacts will ultimately influence consumer behavior. Conducting a reverse analysis from the consumer's perspective, this study seeks to offer brand suppliers valuable recommendations on selecting live streaming channels and formulating sales strategies. This guidance will empower brand suppliers to leverage live streaming channels more effectively for product sales and brand promotion. The outcomes of this research can serve as a valuable reference for the e-commerce live streaming sector at large, fostering development and encouraging innovation within the industry.

1.2 Research Contents and Methods

1.2.1 Research Content

This paper explores the burgeoning live streaming e-commerce industry, scrutinizing brand suppliers' channel choices and sales strategies from a consumer vantage point. Employing methods such as

literature reviews, questionnaire surveys, and research, the study endeavors to discern consumers' views on these aspects within the realm of live streaming commerce. Initially, by elucidating concepts and theories pertinent to live streaming e-commerce and its supply chain, juxtaposed with an overview of its prevailing state, the manuscript encapsulates potential influencing factors and devises a questionnaire accordingly. Subsequent to this, through questionnaire data gleaning, actual determinants are distilled. Predicated on these findings, the study proffers recommendations for brand suppliers concerning the establishment of e-commerce live streaming conduits and strategic merchandising, thereby bolstering the sustainable growth of the sector. The composition is segmented as follows:

Section 1 delineates the research backdrop, chronicling the evolution and status quo of live streaming e-commerce, underscoring the salience of this inquiry. It encapsulates the principal investigative thrust and objectives, detailing the methodologies deployed. Section 2 constitutes a literature review, which, derived from an exhaustive search and perusal of texts, furnishes theoretical underpinnings crucial for this academic endeavor. Section 3 addresses the criteria selection for suppliers' live streaming channels and the formulation of sales strategy indices. Informed by scholarly insights, a model is architected, complemented by pertinent indicator design, and a preliminary questionnaire draft undergoes pilot testing. Section 4 presents empirical analyses, wherein collected questionnaire data undergo scrutiny. Leveraging SPSS 26.0 and AMOS 23.0 for reliability, validity assessments, and factorial examinations, insights into consumer preferences regarding brand suppliers' channel selections and sales strategies are extracted. Section 5 dissects and encapsulates Section 4's findings, extending pertinent directives for the live streaming e-commerce domain. Section 6 offers a synopsis and future outlook, encapsulating the core investigational elements and conclusions, while prognosticating prospective trajectories.

1.2.2 Research Methods

This paper mainly uses three research methods, as follows:

(1) Literature research method. A comprehensive exploration of existing literature was conducted to grasp current research out-comes, enriching the knowledge base and establishing theoretical groundwork for further investigation. This included an examination of various scholars' studies on supply chain channel selection in the context of live streaming e-commerce, leading to the formulation of pertinent analytical methods and models.

(2) Questionnaire survey method. Utilizing the Likert five-point scale, a bespoke questionnaire reflective of the study's objectives was crafted. The dissemination and retrieval of these questionnaires were facilitated by Questionnaire Star, furnishing data that underpinned subsequent analysis and informed resulting inferences.

(3) Data analysis method. For empirical processing, SPSS 26.0 and AMOS 23.0 were employed to assess the questionnaire's reliability and validity, confirming its suitability. Factor analysis was subsequently executed to discern factors relevant to the research queries. This analytical foundation offers both theoretical and empirical backing for brand suppliers in their deliberations over live streaming supply chain channel options and marketing strategy decisions.

1.2.3 Technology Roadmap

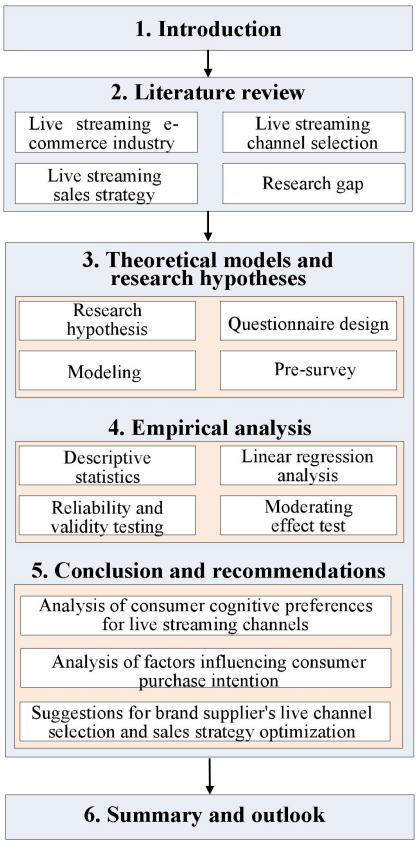


Figure 1. Technical Roadmap

2. Literature Review

2.1 Live Streaming E-commerce

Since 2016, the live streaming e-commerce sector has gradually cultivated a relatively refined industry ecosystem. Numerous scholars have investigated its development trajectory and prospective trends. Wang et al. (Luo, Xu, & Zheng, 2024) explored the maturation of the live streaming industry amidst the information age and the influence exerted by the types of subjects broached by streaming media in live streaming ventures on user engagement. By analyzing the data of ‘Oriental selection’ in China's popular live studio, they discerned that the vocal content of streaming media could be bifurcated into informational subjects and emotional subjects, each wielding distinct effects on user participation across behavioral, emotional, and relational dimensions. Xiao (2024) examined a novel e-commerce paradigm, live streaming e-commerce, which materialized during the COVID-19 pandemic in China. He identified inconsistencies and lacunae within the legal framework pertinent to live streaming e-commerce and accordingly proposed suggestions for legislative reform.

Furthermore, Xu et al. (Xu, Shao, Zhang, & He, 2023) scrutinized an array of tactics employed by retailers to mitigate the detrimental repercussions of consumer returns, encompassing the establishment of proprietary live streaming channels and facilitating online consumers to procure in-store returns via

online platforms. The study revealed that if the vouchers proffered to consumers were comparatively substantial, the introduction of self-operated live streaming channels would diminish the threshold for retailers to furnish Buy-Online Return-In-Store (BORS) services. Wang (2023) delved into the evolution of e-commerce and its repercussions on brick-and-mortar retailers, subsequently discussing strategies that physical retailers could embrace to accommodate the evolving retail landscape. These strategies included adopting an omnichannel approach, enhancing in-store experiences, leveraging data analytics and artificial intelligence, and forging strategic alliances.

2.2 Channel Selection of Live Streaming Supply Chain

The advent of live streaming e-commerce as a novel mode has precipitated the emergence of a distinctive e-commerce supply chain. Numerous scholars have also probed into this burgeoning e-commerce supply chain. For instance, Zhang et al. (2023) dissected the impact of premier streamers and ordinary streamers on the quality decision-making within the live streaming e-commerce supply chain. They engaged the differential game method to discuss the theoretical conditions for optimizing the quality trajectory of live streaming products under these two streamer types. The study revealed that the quality decision-making of the live streaming supply chain was influenced by a multitude of factors, which bore no direct correlation with the streamer types. Liu et al. (2024) contemplated two live streaming strategies: one wherein e-commerce sellers autonomously manage the live streaming channel, and another wherein the streamers manage it. By examining the impact of integrating the live streaming channel on the optimal decisions of e-commerce sellers, they discerned that the pricing of the streaming media's live streaming channel is not invariably lower, as it hinges on the sales prowess of the streaming media.

Additionally, Wang et al. (2023), from the vantage point of supply chain vulnerability, constructed an analytical framework based on six dimensions: policy shifts, price fluctuations, supply and demand variations, interest discords, information bottlenecks, and logistical constraints. This framework established basic hypotheses and corresponding measurement techniques for the impact factors of cross-border agricultural product supply chain vulnerability. Yang et al. (2023) investigated the influence of live selling, an emergent business model, on the equilibrium outcomes of Key Opinion Leaders (KOL) in the collaboration between manufacturers and e-retailers within the dual-channel e-commerce supply chain. They discovered that irrespective of changes in spillover effects and consumer acceptance, manufacturers consistently favored the retailer cooperation scenario over the manufacturer cooperation scenario. Wu et al. (2023) delved into the strategy selection of the agricultural food supply chain, taking into account direct seeding against the backdrop of government subsidies. Through comparative analysis of the optimal strategies of the government, agricultural food suppliers, and streamers under varying circumstances, they ascertained that streamers were disposed to exert greater effort towards the direct seeding of agricultural products with superior preservation qualities.

Conversely, as uncertainty escalated, the mutually beneficial domain between the government and

supply chain members progressively contracted. Huang et al. (2023) scrutinized the impact and strategy of live streaming channels on competing retailers, deriving the equilibrium strategy concerning who should introduce live streaming channels. They found that live streaming channels might not necessarily amplify the demand for importers or advantage retailers servicing free rider consumers.

2.3 Live Streaming Sales Strategy

As an emerging e-commerce sales model, the distinctive sales strategy of live streaming e-commerce exerts a diverse impact on consumers' consumption behavior. Numerous scholars have conducted research on this topic. A significant number of these researchers concentrate on the unique aspects of the anchor and live room compared to traditional e-commerce. Chen et al. (2022) analyzed the behavior of the anchor and discussed the key driving factors for the success of live streaming e-commerce, measured by the total value of goods (Gmv) and the growth of fans. They discovered that a large fan group does not necessarily enhance Gmv, as the positive role of the fan group only exists under certain conditions. Xu et al. (2023) focused on the issue of product sales forecasting in live streaming e-commerce. By designing a multimodal analysis framework for product sales forecasting in live streaming e-commerce, they explored the impact of anchor reputation on product sales, and innovatively considered both historical and real-time reputation signals, proving the effectiveness of the constructed multimodal anchor reputation signal in product sales forecasting.

Furthermore, Gong et al. (2022) examined the live streaming strategy of online retailers within a multi-channel sales framework and discerned that the influence of live streaming on the profits of online retailers is contingent upon product standardization and quality. For products that are highly standardized and of superior quality, online live streaming yields the most substantial profits. Conversely, for products that are highly personalized, an increase in live streaming marginally diminishes the retailers' profits. Du et al. (2023) delved into the selection of anchor types and the implementation of limited sales strategies by manufacturers in the context of live streaming sales. Their findings indicated that when the signing fee for celebrity anchors was low (high) and the proportion of potential consumers for celebrity anchors (ordinary anchors) was either minimal or substantial, it was advantageous for manufacturers to opt for celebrity anchors (ordinary anchors) and offer unlimited quantities for sale; when the signing fee was low (high) and the proportion of potential consumers for celebrity anchors (ordinary anchors) was moderate, it was beneficial for manufacturers to choose celebrity anchors (ordinary anchors) and implement limited sales.

Moreover, Li et al. (2024) investigated the optimal strategies for online retailers to sell and distribute products through regular sales or live streaming with spillover effects in a fiercely competitive market. They explored the impact of these strategies on consumer surplus and social welfare, revealing that when live streaming significantly elevates consumers' quality perceptions and its spillover effect is relatively strong but not overwhelming, the integration of live streaming markedly augments consumer surplus and social welfare. Li et al. (2023) analyzed the optimal sales strategy of the live demo mode and the pricing strategy of the omnichannel manufacturer, addressing the dilemma faced by the

manufacturer under the influence of omnichannel retail and consumer showroom behavior when employing the live demo. The outcomes demonstrated that although the live demo enhanced consumers' product quality assessment, the manufacturer could not invariably secure higher profits through the live demo. Additionally, the time-limited promotional measures of the live streaming mode did not consistently benefit manufacturers.

2.4 Research Gap

Summing up the literature research of past scholars, it shows that the live streaming e-commerce industry is currently in the stage of rapid development. However, it is also accompanied by many problems, such as imperfect laws and regulations, insufficient government and market supervision, false marketing, and product quality issues.

There is relatively little research on the selection of live streaming channels. The existing scholars' research mainly focuses on the comparison between the live streaming channel and the traditional retail channel and analyzes the optimal decision of the brand through a game theory model. The difference between this paper and the existing literature is that this paper is based on an empirical point of view, from the perspective of consumers. By studying the channel preference of consumers' live streaming e-commerce shopping, it aims to help brand suppliers establish the selection strategy of live streaming channels.

As for the sales strategy of live streaming e-commerce, most scholars have studied the factors that affect consumers' purchase intention based on the SOR theory. However, most of these studies focus on a single field, such as beauty, sporting goods, fresh agricultural products, etc., and there is relatively little comprehensive comparative analysis of sales strategies between different commodity types. There is a lack of summary of universal sales strategies across various commodities. The difference between this paper and the existing literature is mainly reflected in the fact that, based on the existing literature, this paper selects several important influencing factors of consumers' purchase intention recognized by many literatures and innovatively introduces the type of live streaming channel as the moderating variable to explore its moderating role. This enriches the research results in this field.

3. Research Hypothesis and Model Construction

There are usually two common ways for brand suppliers to introduce live streaming sales: a brand-built live streaming room and cooperation with an online celebrity live streaming room. The brand suppliers' self-built live streaming room covers fewer fans, but the host has better control over the product attributes, and the explanation is more professional. At the same time, it can stream for a long time to meet the normal shopping needs of consumers. While the marketing coverage of the webcast room is wider, and it can guide other channels of the brand side, there are more competitive brand suppliers in the webcast room, less time to explain the products of a single brand, and there are expensive commission rates (Huang, Liu, & Zhang, 2023). However, a hybrid live streaming channel with both may bring high costs or difficult coordination of commodity prices and other business problems for

brand makers. Therefore, the choice of channel between self-built live streaming and online popular live streaming by brand makers has become a hot research topic in the current academic circles.

3.1 Research Hypotheses

3.1.1 Impact of Product Characteristics on Consumers' Purchase Intention

In the live streaming e-commerce environment, the ways of product display and sales have become increasingly diversified. The live selling mode provided by the e-commerce platform is a breakthrough in traditional online shopping. Under the influence of the environment of the live room, the audience will be stimulated in different aspects, which will affect their consumption behavior (Lu, He, & Ke, 2022). However, it cannot be ignored that the essence of live streaming e-commerce is still the sale of products. The quality of products and price preference are important factors affecting consumers' purchase intention. Therefore, this paper chooses ‘product quality’ and ‘price preference’ as two independent variables to study consumers' purchase intention.

(1) Product quality. In this paper, product quality is defined as the evaluation of the product after comprehensive consideration of a series of indicators, such as product information, product function value, product brand, product after-sales service, etc. In the context of e-commerce live streaming, through the anchor's introduction of a series of indicators such as product information, product functions, and after-sales protection, consumers can form a comprehensive and three-dimensional understanding of the product, and consumers may therefore strengthen their trust in the product and promote their purchase intention. Therefore, this paper puts forward the following hypotheses:

H1: Product quality positively affects purchase intention.

(2) Price preference. Price preference mainly refers to the difference between the original price of the product and the original price due to various activity discounts, full discount coupons, and direct product price reduction. The greater the difference is, the greater the preference is. On the contrary, the smaller the preference is. The low price discount of the live studio can often make consumers feel that the goods have high cost performance. Consumers may have impulse consumption due to the high price discount of the live studio. Therefore, this paper puts forward the following hypotheses:

H2: Price preference has a positive impact on purchase intention.

3.1.2 Impact of Anchor Characteristics on Consumers' Purchase Intention

(1) Anchor Professionalism. The professionalism of anchors is mainly reflected in their expertise. The professionalism of the anchor is one of the important characteristics of the e-commerce live streaming host. Professionalism refers to the product expertise, familiarity with the product, experience, and the ability of the anchor to accurately convey product information to consumers (Meng, Duan, Zhao, Lü, & Chen, 2021). The professionalism of live streaming can effectively improve consumers' cognition and trust in products, thereby promoting their consumption. Therefore, this paper puts forward the following hypothesis:

H3: Live streaming professionalism has a positive impact on purchase intention.

(2) Anchor Interactivity. The interactivity of the anchors is mainly reflected in the fact that consumers

and anchors, as well as consumers among themselves, can communicate with each other through the chat screen in the live streaming room. This allows the anchors to better understand consumers' preferences and offer appropriate consumption suggestions. In the process of live streaming, frequent interaction between online celebrities can make consumers feel immersed. At the same time, real-time interaction between online celebrities and consumers can also enhance consumers' understanding of product information and reduce risk perception (He, Li, & Xue, 2022). Additionally, social e-commerce platforms also have features such as likes, raffles, and joining fan groups to strengthen the interaction during live streams. This paper believes that high-quality interaction during live streaming can make consumers feel relaxed and happy, and can also shorten the distance between the anchor and consumers, thereby enhancing consumers' purchase intention. Therefore, this paper puts forward the following hypothesis:

H4: Live interaction has a positive impact on purchase intention.

(3) Anchor Attraction. Anchor attraction refers to the anchor's personal charm, including the anchor's good appearance, humor, and other characteristics. An anchor with strong personal charm is easier to attract audiences to stay in the live room and watch the e-commerce live streaming. Moreover, strong personal charm also makes the information conveyed by the anchor more easily accepted by consumers, thus improving purchase intention (Zhang, Guo, & Li, 2023). Research confirms that anchor attraction has a significant positive impact on consumers' acceptance of the products recommended by the anchor. Therefore, this paper puts forward the following hypothesis:

H5: Anchor attraction positively affects purchase intention.

3.1.3 Regulating Role of Live Streaming Channel Types

In this study, the live streaming channels are mainly divided into two types: Online celebrity channel (including online celebrity own live room and inviting online celebrities to bring goods to the brand live room) and brand self-streaming channel. Through preliminary interviews and the study and reference of existing literature, it is found that there are some differences in product quality, price preference, anchor professionalism, interactivity, attractiveness, and other aspects between the two channels from the perspective of consumers. In the online celebrity live room, consumers are vulnerable to the impact of the atmosphere and low price discounts in the live room, resulting in impulsive consumption. Therefore, this study takes the type of live streaming channel (online celebrity live vs. brand self-streaming) as the moderating variable.

Therefore, this paper puts forward the following hypotheses:

H6: The influence of anchor professionalism on consumers' purchase intention is enhanced under the brand business's self-streaming (vs. online celebrity live streaming).

H7: The influence of anchor interaction on consumers' purchase intention is enhanced under the brand dealer's self-streaming (vs. online celebrity live streaming).

H8: The influence of anchor attraction on consumers' purchase intention is weakened under the brand business's self-streaming (vs. online celebrity live streaming).

H9: The impact of product quality on consumers' purchase intention is enhanced under the brand self-streaming (vs. online celebrity live streaming).

H10: The impact of price preference on consumers' purchase intention is weakened under the brand self-streaming (vs. online celebrity live streaming).

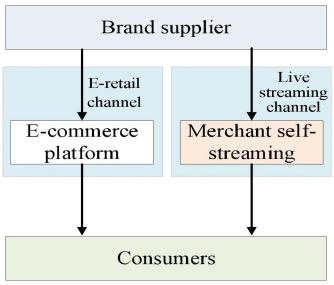
3.2 Model Construction of Influencing Factors of Consumers' Purchase Intention

Based on the above hypotheses and combing the relevant literature, this paper forms the following model construction ideas:

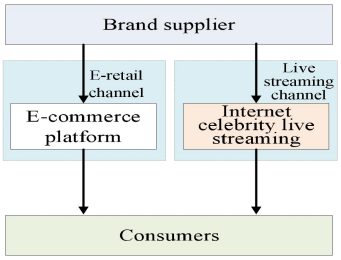
(1) Product characteristics are used as independent variables. In the context of e-commerce live streaming, product quality and price preference are still the most concerned factors for consumers. Higher price incentives are an important reason why e-commerce live streaming stands out from offline purchase channels and online retail channels. The high return rate shows that the product quality of live streaming e-commerce is not enough to guarantee, so ensuring the consistent high quality of products is also the key to the vigorous development of brand suppliers under the wave of e-commerce live streaming.

(2) The anchor feature is used as an independent variable. Referring to the existing literature, in the research on the impact of live streaming e-commerce on consumers' purchase intention, most scholars have adopted the three characteristics of professionalism, interactivity, and attractiveness. In addition, different scholars have added different variables such as entertainment, emotion, and popularity according to their research objects. In this study, three aspects of professionalism, interactivity, and attractiveness are selected as the characteristics of e-commerce live streaming.

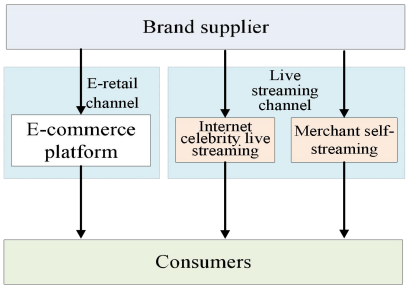
(3) The live streaming channel is selected as the moderating variable. At present, under the background of live streaming e-commerce, the e-commerce supply chain is mainly divided into three modes. On the basis of maintaining the traditional online retail channel, it is divided into the brand side, which only opens the merchant self-streaming channel; the brand side only opens the channel of webcast; at the same time, the brand side has opened three dual channels of merchant self-streaming and online celebrity live streaming. In view of the fact that most small and medium-sized brand suppliers do not have the ability to open up two kinds of live streaming channels at the same time, this paper does not conduct in-depth research on the dual live streaming channels, and mainly studies the moderating effect of the two channels, namely, the online live with goods and the self-built live streaming channels, on the product, live characteristics, and consumers' purchase intention when brand suppliers open up a single live streaming channel.



(a) Brand suppliers can only open merchant self-streaming channel



(b) Brand suppliers only open the channel of webcast



(c) Brand suppliers also open two channels: merchant self-streaming and online celebrity live streaming

Figure 2. Three Different E-commerce Supply Chain Modes under the Background of Live Streaming

(4) Purchase intention is the dependent variable. This study is based on the perspective of consumers to study the selection of live streaming channels and sales strategies of brand suppliers. Therefore, based on the analysis of influencing factors of consumers' purchase intention, the purchase intention is taken as a dependent variable.

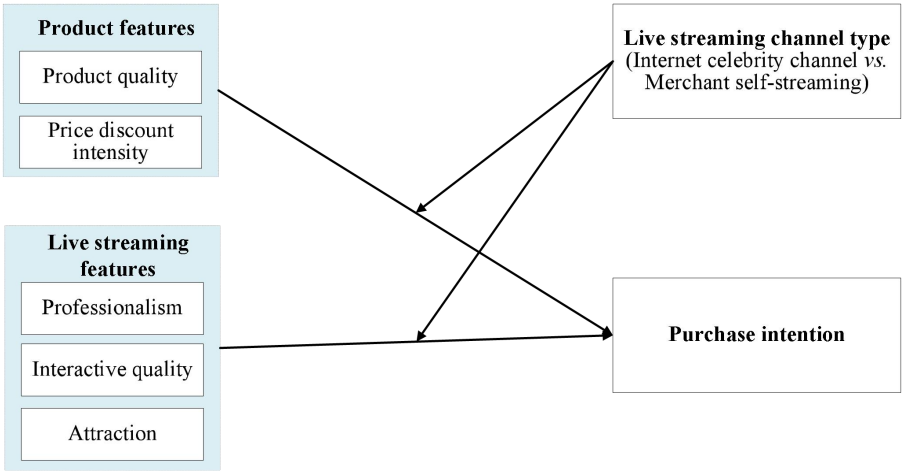


Figure 3. Structural Model of Influencing Factors of Purchase Intention

3.3 Questionnaire Design

According to the survey model of consumers' purchase intention in live streaming e-commerce constructed in this study, a questionnaire was designed to explore the influencing factors of consumers' purchase intention and the moderating effect of live streaming channel selection. The questionnaire is divided into the following three parts:

(1) E-commerce live streaming viewing and consumption

This part of the questionnaire is a simple survey on the frequency and purpose of the respondents watching live streaming, including the frequency of watching e-commerce live streaming, the platform on which they often watch live streaming, the purpose of watching e-commerce live streaming, the channel preference for e-commerce live streaming, etc. Through this information, we can have a general understanding of the respondents' viewing habits regarding e-commerce live streaming.

(2) Scale questions

The scale part is the main research object of this paper. The previous model identified five potential variables, including authenticity, professionalism, interactivity, product quality [23], and price preference, and designed the scale around these six dimensions.

(3) Demographic variables

This part of the questionnaire mainly collects the demographic variables of the respondents, including gender, age, education background, average monthly income range, and occupation type. Through this information, you can have a general understanding of the basic personal situation of the respondents.

The setting of the scale is based on the Likert five-level scale, and its measurement standard from low to high is: very disagree (1 point), disagree (2 points), neutral (3 points), agree (4 points), very agree (5 points). The following table is the scale designed for this study with reference to the mature scales of other scholars. See the Appendix for complete questionnaire details.

Table 1. Measurement Items of the Scale

Variable	Measurement dimension	Measurement item	Number of items
Anchor features	Professionalism	When watching this live streaming, I think the anchor has professional skills	A1
		When watching this live streaming, I think the anchor has relevant expertise in the recommended products	A2
		When watching this live streaming, I think the anchor can give professional answers to questions related to commodities	A3
	Interactive quality	When watching this live streaming, the anchor actively replied to my questions and comments	B1

		When watching this live streaming, the anchor can provide relevant information in time for my inquiry	B2
		When watching this live streaming, the anchor was very happy to communicate with me	B3
		When watching this live streaming, I think the anchor and I have a good interactive relationship	B4
	Attraction	When watching this live streaming, the reason why I pay attention to the anchor is that he (she) is very attractive	C1
		When watching this live streaming, I thought the host was very humorous and interesting	C2
		When watching this live streaming, I think the anchor is leading the trend on the Internet	C3
Product characteristics	Product quality	The quality of the products purchased in the live studio is good	D1
		The products purchased in the live studio are packaged completely and reliably	D2
		The products purchased in the live studio can meet my needs	D3
		There is no exaggeration about the products purchased in the live studio	D4
	Price preference	I found that the price of the live studio was more favorable	E1
		The low price discount in the live studio can attract my attention	E2
		When I see the discount of goods in the live studio, I will have a desire to buy	E3
		The greater the discount, the easier it will make me want to buy	E4
Purchase intention	Purchase intention	I have a great possibility to consider buying the products recommended by the anchor	F1
		I am willing to buy the products recommended by the anchor	F2
		I will recommend the products recommended by the anchor to others	F3

3.4 Pre-Survey

To verify the reliability and efficacy of the questionnaire design, a preliminary survey was conducted before the official distribution. This survey was disseminated via digital platforms to individuals who had experienced e-commerce live streams, resulting in 58 valid responses.

3.4.1 Reliability Test

Reliability testing, which measures the stability and consistency among variables using Cronbach's α coefficient, was conducted via SPSS 26.0 to ensure the scale's reliability. Typically, an α value exceeding 0.7 suggests good reliability. The results of the data analysis for the scale are shown in the table below.

Table 2. Cronbach Reliability Analysis of each Dimension

Measurement dimension	Cronbach's Alpha	Number of items
whole	0.845	21
Anchor professionalism	0.788	3
Anchor interactivity quality	0.744	4
Anchor attraction	0.794	3
Product quality	0.707	4
Price preference	0.704	4
Purchase intention	0.708	3

The Table shows that the overall Cronbach's α coefficient for the scale surpasses 0.8, indicating high reliability. Moreover, each dimension's Cronbach's α coefficient exceeds 0.7, confirming the good reliability of each individual scale.

3.4.2 Validity Test

Validity testing is employed to assess the suitability of the measurement tool for factor analysis. Common methods for this assessment include the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity. This study utilized SPSS 26.0 to perform exploratory factor analysis on the scale, with the results presented as follows:

Table 3. KMO and Bartlett Test

KMO sampling appropriateness quantity		0.748
Bartlett sphericity test	Approximate chi square	508.927
	degree of freedom	190
	Significance	.000

KMO values range from 0 to 1. Generally, a KMO value greater than 0.7 suggests that the scale is suitable for factor analysis. The closer the value is to 1, the stronger the evidence of construct validity. According to the test results, the KMO value is 0.748, which exceeds the threshold of 0.7, and the significance is 0.000, well below the standard of 0.05, indicating that the scale has good validity. Consequently, it can be used in the subsequent formal questionnaire.

4. Empirical Analysis

The main focus of this study is the viewers and consumer groups of e-commerce live streaming. By utilizing online questionnaire distribution and leveraging the sample feature screening function of the digital platform, individuals who have watched e-commerce live streaming are identified. These individuals are then targeted for questionnaire distribution and collection. A total of 350 questionnaires were distributed in this survey. After data cleaning and eliminating questionnaires that were not filled out diligently, 335 valid questionnaires were obtained, resulting in a questionnaire recovery rate of 95.7%.

4.1 Descriptive Statistics of e-commerce Live Audience

In this section, the demographic variables of the sample are analyzed alongside the viewing and consumption behaviors related to e-commerce live streaming using SPSS 26.0 software. This analysis aims to provide a preliminary understanding of the basic personal information of the surveyed group. The results are presented in Table 4 below:

Table 4. Descriptive Statistics

Statistical variable	Category	Frequency	Percentage
Gender	Male	126	37.6%
	Female	209	62.4%
Age	Under 18	0	0%
	18-23 years old	70	20.9%
	24-29 years old	85	25.4%
	30-35 years old	97	29%
	36-41 years old	44	13.1%
	Over 41 years old	39	11.6%
Educational background	High school and below	8	2.4%
	Junior college	49	14.6%
	Undergraduate course	228	68.1%
	Master and above	50	14.9%
Occupation	Full time student	56	16.7%
	Company staff	212	63.3%

Average monthly income	Individual or freelancer	19	5.7%
	Employees of government or public institutions	40	11.9%
	Other	8	2.4%
	Below 3000 yuan	58	17.3%
	3000-5000 yuan	52	15.5%
	5000-10000 yuan	134	40%
	Over 10000 yuan	91	27.2%
E-commerce live streaming preference	Live streaming of online celebrities (stars and talents)	142	42.4%
	Brand suppliers (official flagship stores, brand stores) self-built live streaming	193	57.6%
Viewing frequency of e-commerce live streaming	Many times a day	112	33.4%
	Once every 1-2 days on average	134	40%
	Once every 3-5 days on average	67	20%
	Once every 6-10 days on average	13	3.9%
	Once every 10 days on average	9	2.7%
Frequently watched e-commerce live streaming platform	Taobao, jd.com and other e-commerce platforms	270	80.6%
	Video platforms such as buffeting and fast hand	305	91%
	Live streaming platforms such as Douyu and Yingke	13	3.9%
	Microblog, wechat and other social platforms	78	23.3%
	Other	5	1.5%
Purpose of watching e-commerce live streaming	Relieve boredom	94	28.1%
	Ease curiosity about live streaming	51	15.2%
	Save time in selecting goods	183	54.6%
	Buy the goods you need at a low price	238	71%
	Understand the details of the product	203	60.6%
	See if there is anything you can	216	64.5%

	buy		
	other	2	0.6%

The statistical data reveal that the gender ratio of men to women is 37.6% and 62.4%, respectively. Women significantly outnumber men in the test group, which aligns with the overall demographic of e-commerce live streaming audiences. This suggests that the sample data are reasonable and representative.

Regarding age, the proportion of young people aged 18-35 reaches 75.3%, indicating that the primary consumer group of e-commerce live streaming consists mainly of young individuals. This age group exhibits a stronger consumption capability and openness to new experiences, making them more susceptible to the influence of live streaming, thereby triggering purchase intentions and consumer behavior. Thus, this data fulfills the research requirements and possesses high reliability. Additionally, minors may have less leisure time on mobile phones, which could explain why this survey did not collect data for the under-18 age group. However, considering minors generally have limited autonomous spending power, the paper concludes that the absence of samples from this age group will not significantly impact the research outcomes.

In terms of educational background, those with an undergraduate degree constitute the largest proportion at 68.1%. The percentages of junior college and master's degrees and above are similar, at 14.6% and 14.9%, respectively, while high school education and below make up the smallest segment at 2.4%. The majority of the survey sample is highly educated, which may reflect the general rise in educational levels; simultaneously, a higher education level often correlates with a higher income level. Consequently, the more educated segment tends to have greater purchasing power and more free time to engage with live streaming. Therefore, the distribution of sample data appears reasonable.

Occupationally, company employees have the highest proportion at 63.3%, followed by full-time students at 16.7%, with both groups combined making up 80%. When analyzed alongside age, educational background, and average monthly income data, it becomes evident that the main cohort of the survey comprises young individuals with bachelor's degrees or higher who have entered the workforce, followed by full-time college students. These two segments closely match the user profile of e-commerce live streaming viewers. A higher educational attainment typically signifies a better cognitive level, and full-time students tend to have more discretionary time to watch e-commerce live streams, whereas working young adults possess robust purchasing power and desires, validating the data's reasonableness.

Concerning the viewing of e-commerce live streaming, platforms like Taobao, JD.com, as well as video platforms such as Douyin (TikTok) and Kuaishou, are paramount for e-commerce live streaming audiences, with video platforms like Douyin boasting a higher viewership than traditional e-commerce platforms like Taobao. This trend highlights the substantial impact of video platform traffic on e-commerce. Furthermore, 71% of respondents opt to purchase goods at discounted prices during

e-commerce live streams, revealing a widespread perception of lower prices in live streaming venues. In summary, the characteristics of the surveyed groups in this study highly correspond with those of the e-commerce live streaming audience in all respects. It is evident that the sample data from this survey are sufficiently representative, laying a solid foundation for subsequent research.

4.2 Reliability and Validity Test

4.2.1 Reliability Test

A reliability test assesses the stability and consistency among variables, typically utilizing Cronbach's α coefficient as the metric. To ensure the scale's reliability, this study employs SPSS 26.0 for data reliability testing. The analysis results of the scale data are presented in Table 5.

Table 5. Cronbach Reliability Test

Measurement dimension	Cronbach's Alpha	Number of items
Whole	0.880	21
Anchor professionalism	0.761	3
Anchor interactivity quality	0.802	4
Anchor attraction	0.757	3
Product quality	0.791	4
Price preference	0.758	4
Purchase intention	0.743	3

Cronbach's α coefficient ranges from 0 to 1, with values above 0.7 generally indicative of good scale reliability. The overall Cronbach's α coefficient for the scale is 0.880, suggesting high reliability. Additionally, the Cronbach's α coefficients for dimensions such as anchor professionalism (0.761), anchor interactivity (0.802), anchor attractiveness (0.757), product quality (0.791), price preference (0.758), and purchase intention (0.743) all exceed 0.7, confirming the good reliability of each dimension subscale. Thus, the scale employed in this study exhibits strong reliability.

4.2.2 Validity Test

Validity testing assesses whether measurement tools accurately gauge the concepts or constructs under study. This research employed exploratory factor analysis and confirmatory factor analysis to test validity.

1. Exploratory factor analysis

The KMO value and Bartlett's test of sphericity are crucial indicators for determining the questionnaire scale's suitability for factor analysis. The KMO value ranges from 0 to 1, with values greater than 0.7 suggesting the scale is appropriate for factor analysis. Values closer to 1 indicate better scale validity. The results of the KMO and Bartlett's test for this survey are presented in Table 6.

Table 6. KMO and Bartlett Test

KMO sampling appropriateness quantity		0.894
Bartlett sphericity test	Approximate chi square	2118.144
	degree of freedom	210
	Significance	.000

The data revealed an overall KMO value of 0.894 for the scale, with the Bartlett sphericity test showing a significance less than 0.005, confirming the scale's suitability for factor analysis. SPSS 26.0 software was utilized to perform exploratory factor analysis on the scale using principal component analysis.

Table 7. Interpretation of Total Variance

Component	Initial eigenvalue			Sum of squares of extracted loads			Sum of squares of rotating loads		
	Total	Variance%	Cumulative%	Total	Variance%	Cumulative%	Total	Variance%	Cumulative%
1	4.302	20.485	20.485	4.302	20.485	20.485	2.518	11.99	11.99
2	2.477	11.794	32.279	2.477	11.794	32.279	2.481	11.814	23.804
3	2.039	9.712	41.991	2.039	9.712	41.991	2.365	11.261	35.066
4	1.806	8.598	50.589	1.806	8.598	50.589	2.057	9.796	44.861
5	1.624	7.733	58.322	1.624	7.733	58.322	2.027	9.653	54.514
6	1.222	5.82	64.141	1.222	5.82	64.141	2.022	9.627	64.141
7	0.806	3.84	67.981						
8	0.782	3.723	71.704						
9	0.745	3.546	75.25						
10	0.664	3.164	78.414						
11	0.61	2.918	81.332						

	3		
12	0.581	2.765	84.098
13	0.522	2.487	86.585
14	0.471	2.241	88.826
15	0.447	2.127	90.953
16	0.408	1.945	92.898
17	0.393	1.87	94.768
18	0.33	1.571	96.339
19	0.288	1.37	97.708
20	0.252	1.202	98.91
21	0.229	1.09	100

Table 7 illustrates that principal component analysis extracted six factors, with a cumulative variance interpretation rate of 64.141%, exceeding 60%. This suggests that the extracted factors effectively explain the sample data.

Table 8. Composition Matrix after Rotation

	Component					
	1	2	3	4	5	6
A1				0.842		
A2				0.818		
A3				0.762		
B1	0.774					
B2	0.771					
B3	0.718					
B4	0.793					
C1					0.769	

C2				0.783	
C3				0.808	
D1	0.769				
D2	0.767				
D3	0.747				
D4	0.800				
E1		0.706			
E2		0.737			
E3		0.755			
E4		0.794			
F1					0.770
F2					0.807
F3					0.823

Table 8's rotated component matrix shows that 21 variables were condensed into 6 factors, with no issues of redundancy or confusion, indicating the questionnaire items are all reasonable and none need deletion. The factor analysis rotation results reveal that each item's factor load value exceeds 0.6, suggesting effective extraction of questionnaire information and good correspondence between variables and analysis items. This confirms the questionnaire's dimension division as appropriate.

2. Confirmatory Factor Analysis

This study employed AMOS 23.0 for confirmatory factor analysis (CFA). Initially, the fit of the research model established in Section 3 was tested, as depicted in Table 9. The test yielded the following results: $\chi^2/df = 1.979 < 3$; GFI = 0.917 > 0.9; IFI = 0.923 > 0.9; TLI = 0.905 > 0.9; CFI = 0.922 > 0.9; RMSEA = 0.054 < 0.08. Each fit index met the criteria, suggesting the model's fit was satisfactory. Subsequently, convergence validity and discriminant validity were assessed.

Table 9. Overall Fitting Coefficient

Fitting index	χ 2/df	GFI	IFI	TLI	CFI	RMSEA
Detection value	1.979	0.917	0.923	0.905	0.922	0.054
Standard	<3	>0.9	>0.9	>0.9	>0.9	<0.08

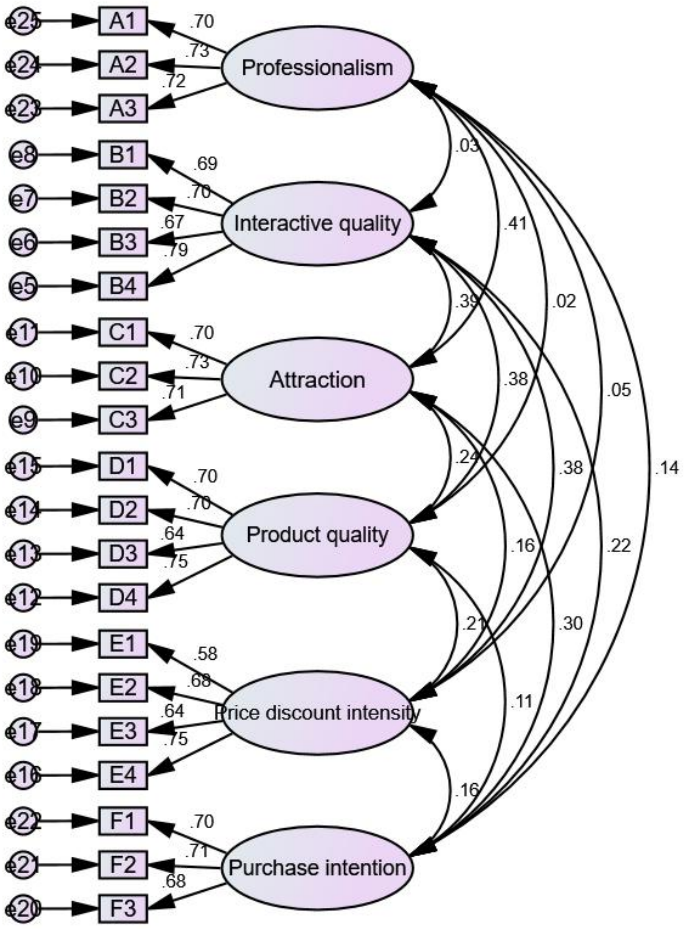


Figure 4. CFA Model Diagram

(1) Aggregate validity

In the aggregate validity test, mean extracted variance (AVE) and composite reliability (CR) are crucial indicators. Generally, AVE > 0.5 and CR > 0.7 indicate good aggregate validity. Table 10's analysis results show that the AVE values for professionalism, interactivity, and attractiveness exceed 0.5, with CR > 0.7, demonstrating satisfactory aggregate validity. The dimensions of product quality, price preference, and purchase intention meet the standard for composite reliability, with AVE values above 0.4. Literature review indicates that Fornell and Larcker proposed that an AVE slightly below 0.5 but with CR > 0.6 still ensures sufficient construct convergent validity [24]. Subsequent scholars, including Purnomo [25], Yin [26], Zhang and Zheng [27], have accepted an AVE range of 0.36-0.5 as reasonable. Thus, this study considers the dimensions of product quality, price preference, and purchase intention to be within acceptable standards for aggregate validity.

Table 10. Aggregated Validity and Combined Reliability of each Dimension

Path			Estimate	AVE	CR
A3	<---	Professionalism	0.722		
A2	<---	Professionalism	0.733	0.516	0.762
A1	<---	Professionalism	0.700		
B4	<---	Interactive quality	0.788		
B3	<---	Interactive quality	0.668	0.506	0.803
B2	<---	Interactive quality	0.697		
B1	<---	Interactive quality	0.685		
C3	<---	Attraction	0.710		
C2	<---	Attraction	0.732	0.511	0.758
C1	<---	Attraction	0.702		
D4	<---	Product quality	0.751		
D3	<---	Product quality	0.644	0.489	0.792
D2	<---	Product quality	0.699		
D1	<---	Product quality	0.698		
E4	<---	Price preference	0.747		
E3	<---	Price preference	0.645	0.444	0.760
E2	<---	Price preference	0.683		
E1	<---	Price preference	0.578		
F3	<---	Purchase intention	0.684		
F2	<---	Purchase intention	0.715	0.491	0.743
F1	<---	Purchase intention	0.702		

Table 11. Discriminant Validity Analysis

Variable	Professionalism	Interactive quality	Attraction	Product quality	Price preference	Purchase intention
Professionalism	**0.516**					
Interactive quality	0.035**	**0.506**				
Attraction	0.411**	0.386**	**0.511**			
Product quality	0.022**	0.384**	0.236**	**0.489**		
Price preference	0.053**	0.384**	0.155**	0.212**	**0.444**	
Purchase intention	0.141**	0.221**	0.303**	0.107**	0.157**	**0.491**
AVE square root	0.718	0.711	0.715	0.699	0.666	0.700

Note. the bold diagonal value in the table is AVE value.

(2) Discriminative validity

Discriminant validity, also known as discriminant validity, can be observed from Table 11. The square root of the AVE for each dimension exceeds the correlation coefficients between that dimension and others, indicating significant discriminant validity among the dimensions.

4.3 Variable Correlation Analysis

Table 12. Correlation Analysis

	Professionalism	Interactive quality	Attraction	Product quality	Price preference	Purchase intention
Professionalism	1					
Interactive quality	.433**	1				
Attraction	.350**	.304**	1			
Product quality	.625**	.514**	.480**	1		
Price preference	.343**	.327**	.228**	.482**	1	
Purchase intention	.540**	.500**	.562**	.631**	.348**	1

Note. * * indicates that the correlation is significant at the level of 0.01 (double tailed).

4.4 Linear Regression Analysis of the Influence of Anchor and Product Characteristics on Purchase Intention

This study employed SPSS 26.0 to perform multiple linear regression analysis on the independent variables (anchor professionalism, interactivity, attractiveness, product quality, price preference) and the dependent variable (purchase intention) to ascertain the relationship between these variables. The results of the analysis are presented in Table 13.

Table 13. Multiple Linear Regression Analysis

	B	*β*	*t*	*p*	*F*	Adjust R2
(Constant)	0.177		0.655	0.513	76.981***	0.532
Professionalism	0.217	0.178	3.643	0.000		
Interactive quality	0.165	0.184	4.135	0.000		

Attraction	0.228	0.312	7.270	0.000
Product quality	0.296	0.262	4.620	0.000
Price preference	0.044	0.030	0.695	0.488

Note. * * * indicates significant level $p<0.001$.

Multiple linear regression analysis revealed a significant regression equation ($F = 76.981$, $p < 0.001$). The anchor's professionalism ($\beta = 0.178$, $p < 0.001$), interactivity ($\beta = 0.184$, $p < 0.001$), attractiveness ($\beta = 0.312$, $p < 0.001$), and product quality ($\beta = 0.262$, $p < 0.001$) have a significant positive impact on purchase intention. However, price preference ($\beta = 0.030$, $p = 0.488$) does not significantly affect the dependent variable's purchase intention. These variables explain 53.2% of the variance in consumer purchase intention. Thus, hypotheses H1, H3, H4, and H5 are confirmed, while H2 is not.

4.5 Analysis on the Adjustment Effect of Live Streaming Channel Types

A regulatory effect test was conducted, with the analysis results presented in Table 14. The interaction between anchor professionalism and live streaming channel type does not significantly influence consumer purchase intention (β = -0.029, P = 0.670). However, the interaction between anchor interactivity and live streaming channel type significantly affects consumer purchase intention (β = 0.145, P = 0.028). The interactions of anchor attractiveness (β = -0.121, P = 0.127), product quality (β = 0.019, P = 0.771), and price preference (β = 0.002, P = 0.984) with live streaming channel type do not significantly impact consumer purchase intention. Therefore, hypothesis H7 is validated, while H6, H8, H9, and H10 are not.

Table 14. Summary of Adjustment Effect Analysis of Live Streaming Channel Types

Hypothesis	Path		β	t	p	Hypothetical results
H6	Professional * type of live streaming channel	→ Purchase intention	-0.029	-0.426	0.670	Not supported
H7	Interactive * type of live streaming channel	→ Purchase intention	0.145	2.212	0.028*	support
H8	Attraction * type of live streaming channel	→ Purchase intention	-0.121	-1.528	0.127	Not supported
H9	Product quality * type of live streaming channel	→ Purchase intention	0.019	0.291	0.771	Not supported
H10	Price discount * type of live streaming channel	→ Purchase intention	0.002	0.020	0.984	Not supported

Note: * indicates significant level p<0.05.

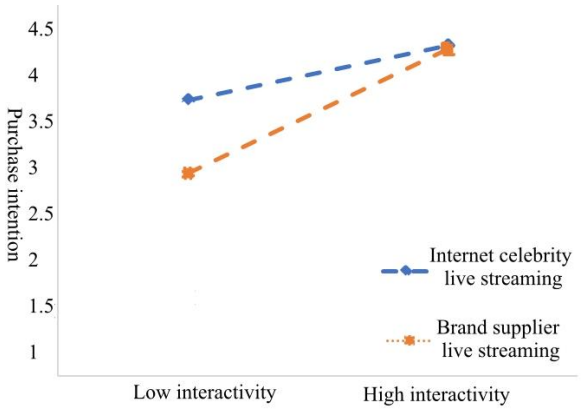


Figure 5. Decomposition of Regulation Effect

The moderation effect analysis results reveal that the influence of anchor interactivity on consumers' purchase intention is significantly enhanced under the brand business's self-streaming channel compared to the online celebrity live streaming channel. The specific moderation effect is illustrated in Figure 5 below.

5. Conclusions and Suggestions

Based on the empirical analysis in Section 4, this Section explains and summarizes the results from two perspectives: consumers' channel preferences in live streaming and factors affecting their purchase intention in live streaming e-commerce. It concludes with recommendations for brand suppliers regarding live streaming channel selection and marketing strategies.

5.1 Analysis of Consumers' Cognitive Preferences for Live Streaming Channels

According to the descriptive statistics in Section 4, 42.7% of respondents preferred online celebrity live streaming, while 57.3% favored brand dealer self-streaming, indicating a higher preference for brand dealer self-streaming in the sample. However, both channels have substantial audiences. For brand suppliers, considering consumer preferences, 57.3% would choose brand dealer self-streaming as their primary e-commerce live streaming option.

Furthermore, platforms like Taobao, JD.com, Douyin (TikTok), and Kuaishou are leading choices for watching e-commerce live streams, with social platforms like WeChat also attracting viewers. This shows that e-commerce live streaming extends beyond traditional platforms. Brand suppliers should consider multiple perspectives when choosing live streaming channels. While maintaining traditional e-commerce platform channels, expanding into emerging platforms like video and social media can effectively increase reach.

5.2 Analysis of Factors Affecting Consumers' Purchase Intention

5.2.1 Impact of Anchor Features and Product Features on Consumers' Purchase Intention

Based on the analysis, anchor characteristics such as professionalism, interactivity, and attractiveness significantly and positively affect consumer purchase intention, confirming the hypothesis. Regarding product characteristics, product quality positively impacts purchase intention, validating the hypothesis. However, the influence of price preference on purchase intention is insignificant, contradicting the hypothesis that price preference stimulates purchase desire.

Given that 71% of participants chose live streaming to find low-priced goods, this paper suggests that the issue lies not with the inability of price preference to enhance purchase intention. Statistical analysis of the sample's demographic variables and product characteristic scales indicates that the primary audience for e-commerce live streaming consists of individuals with high educational and cognitive levels, enabling them to discern the genuine value of ‘low-price discounts’ in live streams. Additionally, some groups have higher incomes and may not be price-sensitive to products featured in live studios.

5.2.2 Impact of Live Streaming Channel Selection on Consumers' Purchase Intention

The previous analysis of the moderating effect of live streaming channel types reveals that compared to online popular live streaming channels, brand self-streaming channels positively moderate the impact of anchor interactivity on consumer purchase intention. This indicates that in the direct selling environment of brand business's self-streaming, anchor interactivity may be more appealing to the audience, thereby enhancing consumer purchase intention. Consequently, enhancing anchor interactivity could potentially increase customer conversion benefits for brand suppliers' proprietary live streaming rooms.

5.3 Suggestions on Selection of Live Streaming Channels and Optimization of Sales Strategies for Brand Suppliers

Empirical analysis of the questionnaire survey results reveals that consumers significantly prefer certain live streaming channels and are influenced by factors such as anchor and product characteristics when making purchase decisions. To aid brand suppliers in maximizing profits within the e-commerce supply chain, this paper offers recommendations on choosing live streaming channels and refining sales strategies from a consumer perspective.

5.3.1 Suggestions on Selection of Live Streaming Channel

For brand suppliers, choosing the right live streaming channel is crucial in their supply chain strategy. Survey data from this paper indicate that when deciding between online popular live streaming and business self-streaming, brands should opt for building their own live streaming rooms. This is supported by nearly 60% of respondents showing a preference for brand-built streams. Additionally, brand-built streams offer long-term stability and lower costs, which are more effective in establishing brand image and enhancing audience loyalty. Regarding platform choice, video platforms like Douyin are recommended as the primary option, followed by e-commerce platforms like Taobao. While e-commerce platforms may offer higher conversion rates, viewers on these platforms typically have strong purchase intentions and are less influenced by live stream characteristics. In contrast, video

platform streams not only attract more viewers, benefiting brand awareness, but also feature audiences with weaker shopping intentions, making them more susceptible to influence and potential purchase. Therefore, brand suppliers should prioritize building proprietary live streaming rooms and consider leveraging e-commerce platforms during specific shopping events if economically feasible. The selection of live streaming platforms should favor video platforms over traditional e-commerce platforms.

5.3.2 Optimization of Live Streaming Sales Strategy

Based on the analysis results, four factors—anchor professionalism, interactivity, attractiveness, and product quality—significantly impact consumer purchase intention. Therefore, brand suppliers should focus on these aspects when developing or refining sales strategies. When inviting KOLs to host live streams, brand suppliers have limited control over the stream, making the KOL's characteristics crucial in influencing purchase intention. Brands should carefully assess KOLs based on their professionalism, interactivity, and attractiveness. When building proprietary live streaming rooms, brands should enhance anchor training to improve professionalism, choose visually appealing hosts or incorporate humor and talent performances to boost room appeal, and crucially, strengthen audience interaction by increasing screen engagement or assigning staff to manage interactions, thus amplifying purchase intent. Moreover, given the significant influence of product quality on purchase intention, brands must rigorously oversee all aspects related to product quality, including the product itself, packaging design, and avoid exaggerating product claims during live stream promotions. Selecting suitable logistics services is also key to maintaining product quality.

6. Summary and Outlook

With the rapid advancement of the Internet, consumer behaviors are evolving, and the emergence of live streaming e-commerce offers both an enhanced online shopping experience and new opportunities for brands to shorten their supply chains and engage directly with consumers. This paper examines the strategy optimization for supply chain channel selection and sales within the context of live streaming e-commerce.

Through a review of various theories and literature, this paper clarifies the concept of the live streaming e-commerce supply chain and factors affecting consumer purchase intention. It defines the research object and model hypotheses based on existing literature. Using questionnaire surveys and data analysis, the study identifies factors influencing consumer cognitive preference for live streaming channels and their purchase intention. Based on these findings, the paper proposes selection and optimization strategies for brand suppliers regarding the live streaming e-commerce supply chain and sales strategy.

Considering the consumer as the supply chain terminal, the choice of supply chain channels and sales strategies by brand suppliers is determined. This study explores the selection of brand suppliers' live streaming e-commerce supply chain from the consumer perspective, focusing on live streaming

viewing behaviors and purchase intention. The research model is constructed using five independent variables related to anchor characteristics and product features, leading to a questionnaire design encompassing three parts: viewing behaviors, factors influencing purchase intention, and demographic variables. After collecting the questionnaires, reliability, validity, correlation, and regression analyses were conducted. The results reveal factors influencing consumer purchase intention and the moderating effect of live streaming channel types.

Based on these analytical outcomes, this paper suggests practical optimization strategies for brand suppliers in selecting live streaming channels and refining live sales tactics. It differentiates between webcast channels and self-streaming channels, offering strategic recommendations that focus on professionalism, interactivity, attractiveness, and product quality. These strategies aim to help brands more effectively leverage live streaming channels for product sales and brand promotion, providing valuable insights for the live streaming e-commerce industry and fostering its development and innovation.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflict of interests

The authors declare that there is no conflict of interests regarding the publication of this article.

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