

# Influence of Live Commerce on Consumer Purchase Intention: Based on Internet-famous Food Research

Wei Zhang

School of business, Audencia business School, Nantes, France

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## ABSTRACT

In recent years, with the improvement of residents' living standards, "foodie" has gradually become a new character label. People like to try a variety of delicacies and share them on social media in their leisure time. It seems that sharing treats and punching in delicacy is becoming a new fashion lifestyle. Due to the popularization of the Internet + technology, online shopping, and the live broadcast economy come into view with a brand-new format. The host vividly explains and promotes products to consumers while consumers ask the host about the details of the product through the dialog box. By watching the live broadcast and ordering food online, it breaks through the limitations of time and geography, and not only brings great value of sales and profitability to the merchants, but also brings great convenience to consumers at the same time, making the shopping process full of entertainment and interaction. Consumers' willingness to buy is affected by a variety of external factors. This article mainly studies the factors that affect consumers' desire to purchase food in the live broadcast room. Based on the SOR model, the influencing factors are divided into reward mechanism and anchor influence. We introduce the perceived value and emotional identity of intermediate variables, use SPSS software to process the data collected by the questionnaires, and finally draw conclusions and make recommendations.

## KEYWORDS

Live commerce; Consumer purchase intention; SOR model; Internet celebrity economy; AISAS marketing model

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## 1. INTRODUCTION

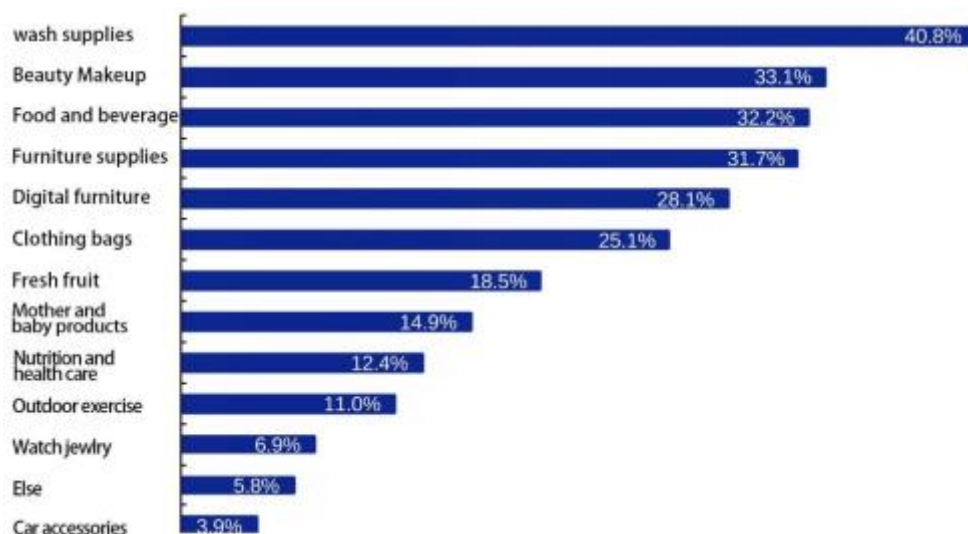
In China, people consider the live broadcast economy to be in a stage of barbaric growth. Not only the categories of live broadcasts products are numerous, including daily necessities, clothing and luggage, beauty products, and foods, but also the number of anchors has increased exponentially. From 2012 to 2020, the scale of online shopping users in China has increased by 293.5%. By December 2020, the scale of online shopping users in China has reached 710 million [1], as shown in Figure 1.



**Figure 1.** Online shopping user scale

Data source: AI media data center

With the advent of the digital economy and the penetration of digital technology in various fields of society, marketing methods have also undergone significant changes. As an emerging online marketing method in the era of "Big Smart Cloud" in China, live broadcasting has actively tried to meet the individual needs of consumers, strengthened user technology and shopping experience, and improved online customer stickiness. According to relevant statistics, the current live broadcast e-commerce market is close to 500 billion yuan. Chinese four major online platforms Taobao, Douyin, Kuaishou, and JD, have strongly promoted the conversion of e-commerce. Some Internet celebrities' fans have snowballed, and the marketing monetization effect has initial results gradually. Food accounts for a large proportion of China's online commodity sales in 2020. As shown in Figure 2.



**Figure 2.** Proportion distribution of online commodity sales in China in 2020

Data source: AI media data center

For example, the Internet celebrity Li Ziqi has more than 40 million Douyin fans. With live broadcast and video promotion, she launched the hot-selling "River Snails Rice Noodle" and achieved about one million sales in a month. In 2019, a large number of Portunus crabs in Zhoushan City, Zhejiang Province, were unsalable with the price of 10 yuan/500g. However, in 2020, the live-streaming fishing boats had not yet docked, the Portunus crabs were robbed on the Internet at 50 yuan/ 500g, the crabs were widely promoted in the way of live broadcasting, and the income of fishermen increased, which boosted the local economy. Since the Covid-19 epidemic, the new retail format of live broadcast has played an enormous potential in promoting the country's economic development. In the first half of 2020, China's national e-commerce live broadcasts exceeded 10 million, the number of active anchors exceeded 400,000, viewers exceeded 50 billion, and the number of products on the

shelves exceeded 20 million. More than 80% are born in the 85s and 90s, and some middle-aged and elderly audiences born in the 50s and 60s are not inferior. However, under the background of live streaming, society also has doubts about its long-term marketing effect, which is often reported in newspapers. Because of the low-cost and high-yield model of live broadcasts, the problems of mixed anchors, data fraud, malicious price competition, and counterfeit and inferior products have come into view. This article will analyze the factors that influence consumers to buy food in the live broadcast room, point out the potential problems in the live broadcast of food, and then make recommendations.

## **2. LITERATURE REVIEW**

### **2.1. Background**

With the rapid development of Internet technology, the economy of web celebrities has appeared in a brand-new form worldwide. In China, especially since the outbreak of the pandemic in 2020, the physical retail industry has been hit seriously. A large consumer group has pushed live commerce to a climax. By watching live broadcasts on the platform, the time cost for consumers from understanding products to completing their purchase is considerably sharpened, and web celebrities use this method to increase sales while also enhancing interaction with their fans.

Consumers' purchase intentions in live broadcast rooms are affected by numerous factors. In the literature review, we will compare the opinions of previous researchers on this issue and point out their advantages and disadvantages. Based on the precious research content, this article will study the current status of live commerce of food category.

### **2.2. Sources and Processing Methods of Literature**

This article mainly analyzes the factors affecting consumers' purchasing intention when buying food under the background of the boom of live streaming by web celebrities and explores the starting point from the development status of live streaming in China and comparing the economic development models of domestic and foreign web celebrities.

All paper references come from libraries, reading rooms, academic journal websites, related newspapers, etc. The references are mainly obtained through the following channels: Using Library by Audencia and the electronic reading room of the Shenzhen University Library, we read many economic journals to study or analyze the influencing factors of consumers' purchase intentions with live streaming; browsing Wanfang Data and CNKI, we found relevant journals and papers on electronic resources and relevant books on the new economy and new marketing patterns.

First, carefully sort out various literature materials, and make timely records of the more critical points; according to the topics we choose, we prioritize finding recent journals with complete content. We also collect original materials according to the references at the back of the literature. The documents found are first browsed and then read in categories. Second, collect during reading, and follow up to collect and read according to the clues found in the reading. Third, read the primary basis for analyzing the article, understand the main points of the article, and extract the main content of each piece, including technical methods, essential data, primary results, and discussion points, while preparing for writing. Finally, process the materials that have been read, which is a necessary preparation process for these papers. Organize according to the theme of the thesis, sort, and arrange.

## 2.3. Analysis of Literature

### 2.3.1. The background of live commerce

Tan (2021) commented that the online live broadcast means the use of live broadcast methods that can ensure instant communication under the support of the Internet to provide a new type of product promotion service [12]. Because of the particular unique characteristics of live broadcasts: interactive, interesting, instantaneous, etc., coupled with the development of new media and the advancement of communication technology, more and more consumers are noticing and become enthusiastic about this kind of consumption model. Zhai (2020) believes that live broadcast (“carrying goods”) as the most novel form of economic activity in the past five years, has gradually become a powerful force influencing consumption [15]. In 2020, the total turnover of TikTok products had reached an astonishing 500 billion, far exceeding the target set at the beginning of the year, which is about 100 to 150 billion. At the same time, because the behavior of viewing and purchasing is happening simultaneously in the live broadcast, there is no need for consumers to have additional multi-link complicated operations, which is also convenient for middle-aged and elderly people to purchase. The competition of the same kind of live streaming is also very fierce, resulting in extremely cheap products appearing in the live streaming. These factors have attracted a vast number of consumers.

**Table 1.** Characteristics of Live Streaming

Scholar	Advantages
Li (2020) [9]	(1) great development potential
	(2) drive public welfare
	(3) promote the development of mainstream media
Zhang and Wang (2020) [19]	(1) Strong user stickiness
	(2) The consumption process is practical and aesthetic
	(3) Product diversification
Ding et al. (2021) [4]	(1) Drive the development of the fast-moving consumer industry
	(2) Strong sense of experience
	(3) Strong feedback
Scholar	Disadvantage
Zhao (2021) [16]	(1) False publicity
	(2) Counterfeit and inferior products

The Table 1 summarizes previous scholars' research on the characteristics of live streaming, which laid an excellent foundation for our study. And it summarizes that the advantages of live streaming are user stickiness, strong attractiveness, real experience, freshness, and high feedback. In today's information age, these characteristics of live streaming can be favored by consumers. This new kind of retail model will continue to develop and keep pace with the times. At the same time, because of the high profit and low threshold of live streaming, it has also attracted many famous celebrities or web celebrities to participate in this economic wave. The main disadvantages are the false propaganda and the sale of fake and inferior products that the live broadcast may generate. Consumers are easily driven by emotions and deceived or made impulsive consumption.

### 2.3.2. The definition of Purchase Intention

Live delivery of goods has many levels of influence on consumers' purchasing intentions. After sorting out the literature of related scholars, we collected some scholars' explanations on the definition of purchase intention, as shown in Table 2.

**Table 2.** Purchase Intention

Scholar	Purchase Intention
Ajzen & Driver (1992)	Purchase intention is a process that consumers must go through before purchasing behavior, and it also has a decisive impact on the actual purchase behavior [2].
Amoroso (2016)	Consumers' willingness to purchase is a possibility to purchase a certain product or service. The higher the willingness to purchase, the higher the possibility of actual purchase behavior [1].
Wang Changzheng (2003)	Consumers' purchase intention is a kind of appeal, a way of expression for consumers to purchase goods or services that suit them and meet their inner expectations. The external manifestation of this consumer psychology is also a prerequisite for purchasing decisions [13].

These scholars all believe that purchase intention is the premise of purchase behavior. Among them, Wang Changzheng (2003) emphasized the demand for consumers to purchase products that meet their inner expectations. This article will study the influencing factors of a live broadcast of goods on consumers' purchase intention from the perspective of food retailing. These research results provide us with a fundamental theoretical background [17].

### 2.3.3. SOR Model used in previous research

**Table 3.** SOR Model in different researches

Scholar	SOR Model
Gong et al. (2019)	The "S-OR" model points out that stimuli influence the external environment on the individual. The body is the internal state of each stimulated individual, while the response is the individual's behavior. The external environment stimulates the individual's internal state and further affects the individual's behavior [6].
Cai (2021)	S (environmental stimulus) refers to three factors related to e-commerce live broadcasts, that is, commodity price factors, anchor image factors, and user perception factors. O (Individual State) refers to the personal statistical variables of the sample, such as age, gender, and education level. R (individual response) refers to the dependent variable in the research, that is, the impact of consumers' behaviors in the live broadcast of Internet celebrities [3].
Xiao and Wang (2021)	With personalization, entertainment, and socialization as external stimulation (S), emotional identity and emotional arousal as an organism (O), and consumer final purchase willingness as reaction variable (R), theoretical models are proposed [14].

Researchers typically use SOR model to analyse what impulse consumers generate

buying intention, and different people study in different aspects. Gong et al. (2019) especially point that the atmosphere cue has a significant positive effect on the impulse consumption willingness; the atmosphere cue has a significant positive effect on the heart flow experience; the heart flow experience has a significant positive impact on the impulse consumption willingness, and the flow experience plays a partial intermediary between the atmosphere cue and the impulse flow experience and impulse consumption willingness. The higher the mean thinking, the weaker the mean experience on promoting impulse consumption willingness [7]. In Cai (2021), various e-commerce platforms offer price discounts during the activity, cross-store full reduction activities, invite friends to bargain, do small games and other ways to make the price of goods lower than usual. This decline in price makes consumers willing to buy. It is publicized and described by the anchors vividly and vividly, which is easy to stimulate the consumer impulse consumption psychology, thus producing irrational consumption behavior. The attraction of commodity price and the construction of anchor image is

positively related to the impulse consumption behavior of consumers in the web celebrity live broadcast field. Web celebrity anchors will design their own images according to consumer preferences, according to different consumer groups and commodity attributes, to produce visual stimulation to consumers and affect consumers' behavior. Also, interactivity uses modern information technology to realize the two-way information interaction between participants on the online shopping platform. In the live broadcast, businesses can vividly display the goods and give real-time explanation. Consumers can also timely ask questions and quickly receive the response. This two-way communication stimulates consumers to produce a happy emotional response. Thus, the interaction can stimulate the body and promote impulse consumption behavior [3]. Xiao and Wang (2021) state that the personalization, entertainment, and socialization of the live broadcast has a positive and positive impact on emotional recognition and emotional arouse. Among them, recreational characteristics have the weakest influence on emotional identity and emotional evocation, while personalized characteristics significantly influence emotional identity and emotional evocation. And emotional recognition and emotional arousal have a positive impact on consumers' willingness to buy. Among them, emotional recognition and emotional arousal and standardized estimates of purchase intention are 0.35 and 0.30, respectively, which shows that emotional identity has a greater impact on consumers' willingness to buy [18].

## 2.4. Analysis of Factors That Influence Purchase Intention

After sorting out and summarizing the literature, we give the basic research directions. By actively reviewing domestic and foreign literature, we compiled some representative views about what factors affect consumers' purchase intentions. As shown in Table 4.

**Table 4.** Influencing Factors of Purchase Intention

Scholar	Influencing Factors of Purchase Intention
Lu and Hsiao (2010)	Perceived value, as an important intermediate state variable in the consumer shopping process, is an important antecedent that affects consumers' purchase intention. Facts have proved that the higher the perceived value, the higher the consumer's purchase intention [11].
Gogoi (2013)	Consumers go through six stages (awareness, knowledge, interest, preference, persuasion, and purchase) before purchasing a product [7].
Zhao and Zhang (2004)	The image, safety, reliability, and accessibility of online stores have an impact on consumer willingness. Consumers' willingness to purchase is affected by their emotional changes [17].
Feng et al. (2006)	The difference in consumer's personality characteristics will lead to different responses when they are stimulated [5].
Jiang (2011)	The four factors of product service, safety, reliability, and quality affect the trust of consumers, which in turn affect the willingness to consume [8]
Lu et al. (2012)	It is believed that the size of online transaction costs (product prices) has a greater impact on consumers' willingness to purchase. At the same time, it is also believed that perceived value has a significant impact on purchase intention, which includes perceived product quality, perceived service quality, purchase cost, and perceived risk. Factors [15].
Zhong (2013)	The purchase cost is positively correlated with the customer's purchase intention, while the perceived risk is negatively correlated with the purchase intention.

After sorting out the above literature, the author draws a conclusion: foreign scholars mainly study the factors that affect consumers' purchase intentions based on the sales of physical stores, while domestic scholars conduct research combining online and offline research. The reasons for this

difference in study are not complicated. Foreign supply chain systems are very advanced and complete, while domestic online retail systems are also in full swing due to the development of communication technology. The e-commerce transaction volume in the first half of 2020 reached 5.15 trillion yuan. Although the growth rate has slowed down, it is still very rapid. Therefore, the online retail business has been receiving extensive attention from domestic scholars.

Carefully read the research results of domestic and foreign scholars and found that there are some shortcomings in the research on the influencing factors of consumer purchase intention. Most of the existing research on the influence factors of customer purchase intention is based on previous data and previous research. Business forms are used to study the influencing factors of consumers' purchase intentions, and there is no correlation between different factors, and the various factors are not well combined for specific analysis. At the same time, the detailed research on the retail food industry is also minimal. Therefore, this article the research results can not only enrich the research in this field, but also provide reference suggestions for the relevant participants in the industry and then promote the development of the retail industry in the live broadcast of goods.

To sum up, different scholars are based on their own research content from different perspectives, including many factors such as the safety of the product itself, the perspective of consumer perception of value, consumer's personal factors, third-party influence factors, websites, and other media factors. And so on; this article will study in detail the impact of live streaming in the food retailing industry on consumers' purchasing intentions. It is also essential to keep up with reality and keep pace with the times.

## **2.5. Basic Conclusions and Opinions**

### **2.5.1. The relationship between our study and previous research**

This article mainly summarizes the characteristics of live broadcast delivery as: interactive and interesting. Excellent content, incentive mechanism, unique charm of Internet celebrities, good interaction, and trust in internet celebrities are also related to consumer preference. Through these attributes, and specifically in the branch of food retail, we will study the impact of the live delivery of goods on consumers' purchasing intentions. This article mainly studies the impact of a live broadcast of goods on consumers' purchase intentions at the food retail level and provides theoretical support for this article through research on the strengths and related characteristics of a live broadcast of goods, and ultimately benefits the food retail industry through live broadcasts. Make relevant suggestions.

This article will use a questionnaire survey, starting from an empirical point of view, interviewing consumers who buy food through live broadcast channels, and analyzing the factors that affect consumers' purchase intention. Among them, the food that consumers buy through live broadcast includes household necessities such as cereals, oils, rice noodles and condiments, baby food, online celebrity snacks, fresh fruits, fast food products, and foods sold live on the theme of "helping farmers". In the related literature in the past, most of the researchers based on the SOR model and AISAS marketing theory have found that the factors that affect consumers' consumption through the live broadcast platform are: incentive mechanism (such as preferential prices, etc.), consumer psychology and perceived value ( For example, the interaction with the host and the sense of trust, etc.), consumer reputation (such as other consumers' comments on the product, etc.), the host's personality characteristics (such as the host's personalization, entertainment, and social attributes, etc.), give The research in this article provides a basic theoretical framework.

## **2.6. Research Direction in This Paper**

In previous research, data showed that most people shopping on TikTok and Kuaishou short video platforms, which accounted for 62.86%, those choosing Taobao and Jingdong to bring goods

accounted for 58.97%. The proportions of Inke and Douyu, Youku and iQiyi, etc., are relatively evenly distributed, indicating that viewers are mostly based on popular platforms watching the live marketing video. However, most of the time spent watching live broadcasts is less than 1 hour (64.03%), which highlights the habit of online consumers to watch live broadcasts and select products quickly under time constraints. The live broadcast and the viewing time with the goods are concentrated from 7:00 to 10:00 p.m., and the corresponding proportions are 87.40% in total, indicating that live broadcast viewers are very active at night significantly. In terms of the types of live marketing products, gourmet food (38.46%), beauty (37.18%), talent (20.51%) ranked the top three, which means that the network consumers' pursuit of personalized and life-oriented marketing.[10]

Since food has the characteristics of low-price elasticity, partial non-acceptance of returns, and a wide range of consumer groups, this article will study consumers' willingness to purchase food as a consumer category through the live broadcast platform and further classify and analyze the subjects of the questionnaire survey. Consumers of different ages, genders, cities of residence, income levels, and education levels prefer live food delivery. At the same time, the shelf life of food is relatively short, and live broadcast Internet celebrities often encourage consumers to buy more than expected through their influence and preferential mechanisms.

Through our study and research, we want to find out the quotation of live food delivery through research, why consumers place an order on the live broadcast platform, and whether they place an order for food they have bought or a novel food, they have never tried. How about evaluating the new foods that the internet celebrity anchors try to persuade consumers to buy, for example, whether the purchased internet celebrity food meets their expectations? How is the food quality that consumers buy at a low price through the "Live Broadcasting to Help Farmers" activity? How about the after-sales service of buying food category?

This article will further use questionnaires to analyze whether consumers will waste food due to impulsive consumption. Combining the research process and research results, respectively, make recommendations to live broadcast anchors, live broadcast platforms, e-commerce companies, and consumers.

### **3. THE SUBJECT OF EMPIRICAL INVESTIGATION SELECTED**

#### **3.1. Country**

Compared with the intensive Chinese live streaming of goods, the live streaming of foreign markets seems to be still in the testing stage. Taking the US market as an example, Coresight data shows that in 2019, the scale of live e-commerce in the US was less than US\$1 billion. In contrast, the scale of China's e-commerce live broadcast market in 2019 has reached 433.8 billion yuan, and it is expected that the total scale will continue to expand in 2020 and is expected to reach 916 billion yuan. There is a huge difference in the scale of live delivery in the Chinese and foreign markets, and the deep-seated reasons are closely related to concepts, logistics and other factors. From a conceptual point of view, in the United States, Internet celebrities like Michael Le have not escaped the category of content production. These Internet celebrities have not yet formed a self-positioning for sales, so their live broadcast delivery process is usually mixed with personal talent displays, and they will not sell as hard as Li Jiaqi and Wei Ya in China. For example, Michael Le would dance to arouse consumer enthusiasm in the Wal-Mart live studio, but this would also result in relatively little interaction with fans, making the delivery effect not obvious. Even during the Wal-Mart event, fans continued to question whether the "live broadcast" of internet celebrities might be recorded. From the perspective of the Amazon Live section, which has already launched the live e-commerce function, Amazon's sales are more inclined to traditional product introduction and evaluation, that is, the one-way promotion of the anchor. Compared with the more emotionally-oriented impulsive consumption of

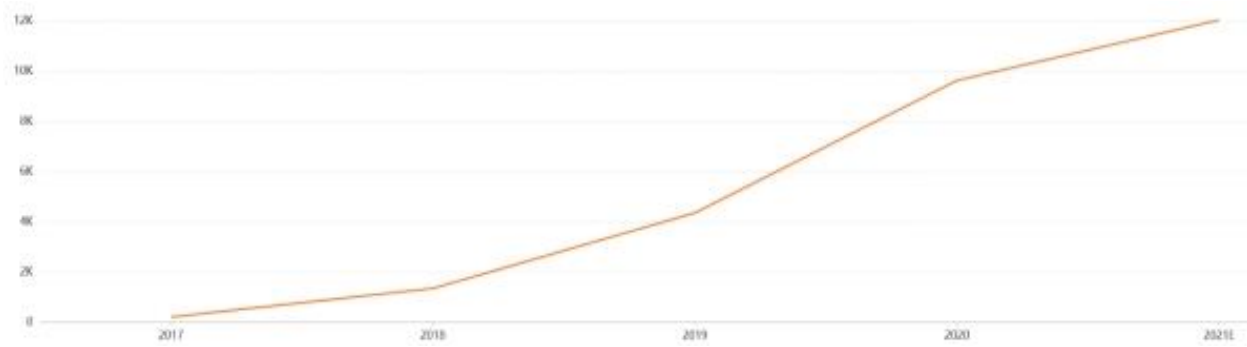
Chinese live streaming, Amazon e-commerce live streaming is more like a replica of TV shopping guide, and the whole scene is more "rational." Overseas e-commerce platforms still have not broken the shackles of clear boundaries between content and sales. This may be one of the reasons why Amazon and Instagram, which have a huge user base, have not cultivated top delivery anchors like Li Jiaqi and Wei Ya. In terms of selling goods, overseas e-commerce platforms do not fully understand the meaning of live e-commerce. In their view, live broadcasts are more used in the e-sports industry, creating multiple income channels through game live broadcasts. This inertia of thinking has caused many companies in the United States to be slightly slower in their deployment in the field of live e-commerce. Many social and e-commerce platforms only accelerated their deployment of live shopping this year. For example, since April this year, Facebook, Google, and Instagram have successively opened live e-commerce functions. Compared with the Chinese live-streaming industry that has received the attention of the mainstream market in 2019, the overall progress is slightly shabby. At the same time, overseas consumers are not as keen to shop on e-commerce platforms as Chinese consumers. Data shows that more than 95% of the transaction volume of Chinese e-commerce comes from e-commerce platforms, but more than 50% of the transaction volume in the US or other markets comes from the brand's official website or online platforms such as Wal-Mart and Carrefour. The dispersion of consumer shopping habits is also one of the factors that make it difficult for overseas markets to form a giant in the live streaming industry. In addition, the development of the live broadcast e-commerce industry is also related to the speed of express delivery. Most areas in China can be delivered within 48 hours on average, while the delivery time in the United States usually takes five to seven working days. This long wait also reduces consumers' enthusiasm for online shopping.

According to iiMedia Research, in the shopping frequency of China's live e-commerce industry from March to April 2020, more than 50% of users consume once a month or more, and more than 30% of users spend once every 1-3 months in live e-commerce, 6.5% and 2.7% respectively Users consume in live e-commerce every 4-6 months and every six months. We can see from the following three charts that in China, live-broadcast E-commerce is in the process of rapid growth, so we choose Chinese market to do our research.

**Table 5.** Correlation analysis

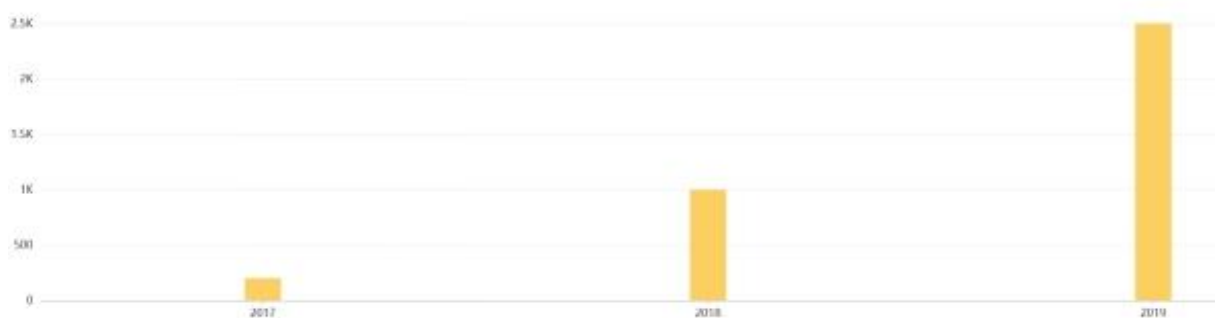
Variable	Reward attributes	influencer effect	Perceived value	Emotional identification	Purchase intention
Reward attributes	1				
Influencer effect	0.417**	1			
Perceived value	0.369**	0.525**	1		
Emotional identification	0.520**	0.505**	0.439**	1	
Purchase intention	0.537**	0.590**	0.553**	0.553**	1

Data source: calculated by SPSS AU platform.



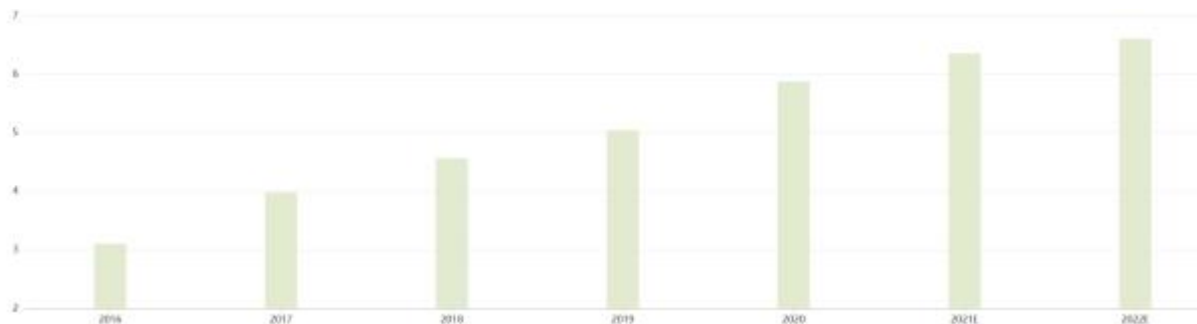
**Figure 3.** 2017-2021 China's live broadcast e-commerce market scale(100 million yuan)

Data Source: data.iimedia.cn



**Figure 4.** 2017-2019 China Taobao live broadcast e-commerce online transaction volume (100 million yuan)

Data Source: data.iimedia.cn



**Figure 5.** The scale and forecast of online live broadcast users in China from 2016 to 2022 (100 million people)

Data Source: data.iimedia.cn

### 3.2. Platform

In China, the main platforms of live streaming are Kuaishou, Douyin, Xiaohongshu, Taobao, JD, Pinduoduo and Weibo. Different platform has different characteristics, as shown in Table 6.

**Table 6.** Characteristics of live-broadcast platforms in China

Platform	Platform Attribute	Traffic Source	Celebrity Attribute	Product Attribute
Kuaishou	Social+Content	Almost public	Head anchors are scattered	Cheap products less than 100 yuan
Douyin	Social+Content	Almost private	Head anchors are more concentrated	Beauty+closing
Xiaohongshu	Recommend	Public+Private	The head KOL is not outstanding, lack of representative	Mainly beauty
Taobao	E-commerce	Public	Head anchor concentrated, representative person are Weiya and Lijiaqi	All category
JD	E-commerce	Public	Cultivation of vertical anchors, like Wangziru	All category
Pinduoduo	Social+E-commerce	Private or public ad	No head anchor, use celebrity recommendation officer	All category with very cheap price
Weibo	Social+Content	Almost public	Head anchors concentrated	Non-standard category

### 3.3. Sector

At the first Ecological Conference of Douyin E-commerce this year, the concept of Douyin's "Interest E-commerce", which is based on people's desire for a good life to meet people's potential needs and improve customers' living standards, appeared in the public for the first time. In the field of food, this trend is particularly evident: from eight major cuisines to local characteristics, from convenient and fast food to healthy meals, from classic delicacy to trendy tasters...Food is no longer just about satisfying the appetite, but has multiple functions such as body shaping and weight loss, broadening horizons, and healing the soul.

From January to November 2019, the sales of the top three snack food companies, three squirrels, Baicaowei and Liangpinpuzi were 8.1 billion yuan, 4.6 billion yuan and 3.3 billion yuan respectively, with year-on-year growth rates of 37%, 38%, and 23%. However, the scale of China's casual snack industry has exceeded one trillion and is still in a period of medium-speed growth.

The reason for the continued growth of food is mainly because the most important retail consumer group is young people, whether online or offline. Boys and girls, young mothers are the backbone, and most of them don't have to worry about not being able to afford snacks.

"Douyin has changed from an initial entertainment method to a social method and then a lifestyle." As a hot-selling category of Douyin, the food tracking has not only precipitated a broad and stable user market, but also gave birth to several consuming segments with more than 100 million yuan market size, and the pace of the brand entry and live broadcast delivery will be accelerated. According to the statistics of Feigua data, the average monthly sales growth rate of food products has reached 5.16% in the past six months, surpassing the sales growth rate of the entire category.

### 3.4. Theoretical Basis

#### 3.4.1. Internet Celebrity Economy

The "net celebrity economy" is a product of the "fan economy" that conforms to the Internet era. It reduces the requirements of the "fan economy" for celebrities and forms a diversified and multi-dimensional "net celebrity" image. The "Internet celebrity economy" comes from a mature internet celebrity industry chain, which can establish and cultivate many internet celebrity accounts in a short time, gather a large number of highly adherent fan groups, and monetize online traffic. The most important ways of the Internet celebrity economy are e-commerce, advertising, and live broadcast, which seek and develop potential customers from multiple angles and platforms. If the celebrity effect requires celebrities or their teams to create word-of-mouth and gimmicks to attract fan groups for marketing, then high-end internet celebrities, as consumer idols, need to have many fans and personal IPs with particular influence. High-end internet celebrity IP is gradually established by internet celebrity groups by sharing social hot spots on social networking platforms, cooperating with merchants, and recommending products to their fans. The head effect of the Internet celebrity live broadcast economy is pronounced. First, the guest position fee of the head online celebrity anchor is very high, and the guest position fee of the ordinary anchor is low. The second is that the income of the head anchor is very high, and they basically promote big brands products, and the payment of bottom anchor is not optimistic, their endorsements are often some waist products or even self-produced and self-sold products. Unlike the traditional economic model, the online celebrity live broadcast economy has a brand-new platform, brand, industrial chain, and supply chain. Consumers' emotional cognition is transformed from trust in the brand and product to confidence in the host personally. In the live broadcast marketing form, in essence, the personal anchor plays the role of an endorsement and opinion leader. Compared with the reputation of traditional celebrities, the establishment of Internet celebrity IP in the network environment is more accessible, and the influence will be more comprehensive. The impact of high-end Internet celebrity IP even exceeds the impact of traditional celebrity effect on consumers. The success of the Internet celebrity carrying goods is based on the influence of the Internet celebrity IP. The more fan groups an influencer has, the higher the success rate of "planting grass", especially when these fans are mainly youth groups; the consumption trend of the "planting grass" fans of the influencer is also more apparent.

#### 3.4.2. SOR Theory and AISAS Marketing Model

##### (1) SOR Theory

When the human body is stimulated by the external environment, it will react, which will change the inner cognition and subconsciousness, and finally show the external performance. SOR theory is mainly used in the study of consumer behavior and psychological factors. S (environmental stimulus) refers to two factors related to live broadcast in this article, namely, reward mechanism and anchor influence. O (individual state) refers to the individual statistical variables of the sample, which are embodied in the consumer's perceived value and emotional identity in this article, and R (individual response) refers to the dependent variable in the research, that is, the consumer's purchase intention in the live broadcast.

##### (2) AISAS Marketing Model

A: Attention: Customers see the released marketing information from all corners of the Internet to attract their attention.

I: Interest: Customers are interested in the information by discovering their needs from the information on the Internet.

S: Search: After customers are interested in the product, they will analyze and compare relevant information from all aspects of the familiar platforms.

A: Action: After analyzing and comparison, the customer finally makes a purchase decision.

S: Share: After purchasing, customers usually share it on the Internet, such as Weibo, Instagram, etc.

### **3.5. Research Hypothesis**

#### **3.5.1. Reward mechanism**

To ensure their respective price advantages and competitiveness during the event, various e-commerce live broadcast platforms will design different price reward mechanisms, such as discounts across stores, free gifts, inviting friends to bargain, playing small games to red envelopes for consumption. This kind of price concession will make consumers have a strong impulse to buy. Coupled with the host's vivid promotion and description, it is easy to stimulate consumers' willingness to consume. For cheap casual snacks, there are many varieties. Even if consumers have never eaten them before, most of them are willing to buy and try under the recommendation of the anchor. Even if the small snacks do not suit their taste, it is not harmful, but it has dramatically increased sales for manufacturers. For medium-priced beverages, the marketing methods are often discounts, buy two get one free, etc. On holidays, especially Chinese traditional festivals, such as Mid-Autumn Festival, New Year's Day, etc., consumers will be more willing to purchase multiple gift boxes as gifts to friends and relatives on live broadcast platform. For high-end and expensive food ingredients and drinks, the frequency of live broadcast sales are not high, and due to the fixed cost, although the live broadcast room will not be much lower than the daily price, for consumers, in short, a little discount will bring great desire to buy.

Therefore, the following hypotheses are put forward:

H1: The reward mechanism has a significant positive impact on consumers' purchase intentions;

H1a: The reward mechanism has a positive impact on the perceived value of consumers;

H1b: The reward mechanism has a positive impact on consumers' emotional identity (trust);

#### **3.5.2. Anchor influence**

The opinion leader theory in communication studies emphasizes the guiding role of individual characteristics on consumer behavior. In the era of digital media, Kuaishou, Douyin, Xiaohongshu, JD, Tall Mall, Pinduoduo and Weibo have become the main fields for Internet celebrities to vocalize, attract fans, and marketing. In the live broadcast, the unique characteristics of the anchor, such as appearance, language, personality, talent, preference, etc., are easily spread online. Then they are regarded as opinion leaders by specific fans. People believe that attractive Internet celebrities can influence fans during live broadcasts, especially the personal characteristics of fans' preferences and the role of opinion leaders to arouse brand identity. Research has found that Internet celebrities continue to demonstrate differentiated features and deliver professional content to online users. They act as opinion leaders in guiding online consumption and "infect" their favorite products and attitudes to social groups. Correspondingly, because fans themselves prefer certain types of anchors, when the anchors' output "recommendations," it is easy for consumers to have a strong interest in the product, and try to use products of a specific brand like an Internet celebrity, which will result in "shopping rewards". Therefore, the personal charm of Internet celebrities is a critical variable that promotes consumers' buying behavior.

After reading the literature, it is learned that visual attraction and design specifications have a significant impact on the perceived value. A concise and smooth visual design will stimulate consumers' visual perception and make consumers feel happy physically and mentally. Internet celebrity anchors will design their image according to consumers' preferences, different consumer groups, and commodity attributes to produce visual stimulation to consumers and influence consumer behavior.

Therefore, the following hypotheses are put forward:

H2: The influence of the anchor has a significant positive impact on consumers' purchase intentions;

H2a: The influence of the anchor has a positive impact on the perceived value of consumers;

H2b: The influence of the anchor has a positive impact on consumers' emotional identity (trust);

Combining all the above hypotheses, the mediating role of consumers' perceived value and emotional identity can be put forward, and make hypotheses H3 and H4.

H3: Consumers' perceived value has a positive impact on consumers' purchase intentions;

H3a: Consumers' perceived value plays an intermediary role between the reward mechanism and consumers' purchase intentions;

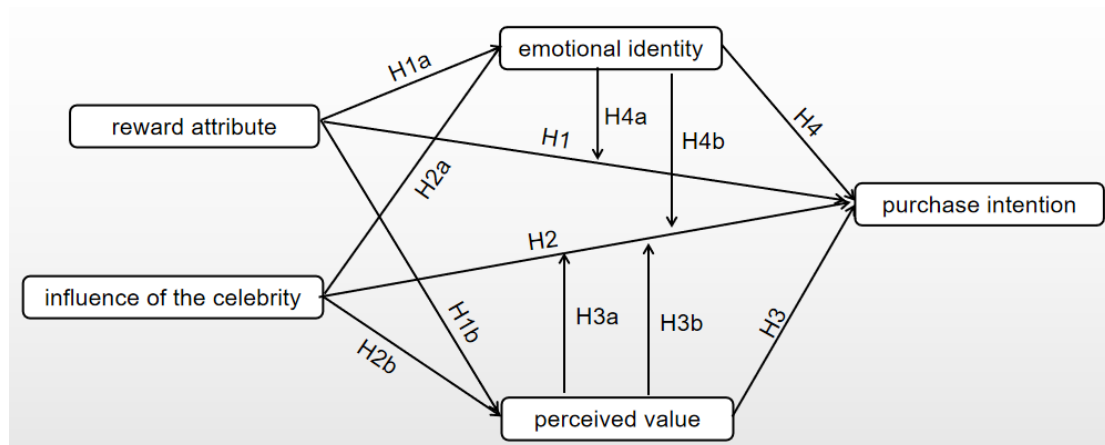
H3b: Consumers' perceived value plays an intermediary role between the influence of the anchor and the consumer's willingness to buy;

H4: Consumers' emotional recognition (trust) has a positive impact on consumers' purchase intentions;

H4a: Consumers' emotional identity (trust) plays an intermediary role between the reward mechanism and consumers' purchase intentions;

H4b: Consumers' emotional identity (trust) plays an intermediary role between the anchor's influence and the consumer's willingness to buy.

It is also illustrated in Figure 6.



**Figure 6.** 8 hypothesis inner 5 factors

## 4. METHODOLOGY

### 4.1. Empirical Analysis

In the research process, to better understand the influence factors of online celebrity live streaming on consumers, the author watched the live broadcasts of major well-known internet celebrities and browsed consumer feedback in the consumer comment section below the live shopping link. At the same time, the post-70s, post-80s, post-90s, and millennial consumers with live shopping experiences around them were invited to conduct in-depth interviews to code the interview content and establish a research model based on theory.

### 4.2. Questionnaire Survey

In order to make the questionnaire meet the research purpose, in the process of questionnaire design, we consulted a large number of literature and studied the previous maturity scale. On this basis, we

designed a questionnaire in line with the content and situation of this study. The design idea of the questionnaire is as follows:

The first part sets up screening items. The questionnaire design takes the first question as an important screening item to screen out effective questionnaires that meet the content of this study. The next five questions are auxiliary items to mainly understand the involvement of qualified respondents in live shopping.

The second part is the basic information of the respondents, including gender, age, monthly income, educational level, occupation and so on.

The third part includes the main reasons why the respondents buy the products recommended by the online Red anchor, and uses the Likert five level scale to evaluate these variables.

The questionnaire on the influence mechanism of the purchase decision-making of fans on the live streaming platform is distributed in two ways, and the distribution time is from May to June 2021. Firstly, distribute the questionnaires to our family members, classmates, and friends in a distributive manner. Secondly, distribute the questionnaires on WJX.cn. Finally, with the help of Internet company online research, the distribution objects are all consumers who have online shopping behaviors, and the distribution process is random and not targeted to specific groups. A combination of online and offline methods was adopted, in which we will distribute 200 questionnaires online, and 150 questionnaires offline. We have received a total of 342 questionnaires, of which 338 were valid. We will conduct SPSS data analysis on the valid questionnaires collected to verify the hypothesis and model.

**Table 7.** Questionnaire

Influencing Factor	Question Item	Score
Incentives	Q1: I will buy it because of the "limited" attribute of Internet-famous food.	[1, 5]
	Q2: I will buy discounted promotional food.	[1, 5]
	Q3: I will continue to watch the live broadcast because of the lucky draw, red envelope, and other activities in the live broadcast room.	[1, 5]
Personal charm of a web celebrity	Q4: I have a specific preference for the live broadcast room celebrity	[1, 5]
	Q5: I would like to buy the same products as celebrities (such as beauty products and slimming products that celebrities eat, etc.)	[1, 5]
	Q6: I have ever bought snacks because Internet celebrities' eating and broadcasting are too contagious even though I'm not fond of the snacks very much before.	[1, 5]
Perceived value	Q7: Buying Internet-famous food will make me feel keep up with the times.	[1, 5]
	Q8: I prefer to like and comment on live broadcasts I have watched.	[1, 5]
	Q9: I can feel that the anchor has spent a lot of thought on the product	[1, 5]
Emotional identification	Q10: The process of watching the webcast sales made me happy.	[1, 5]
	Q11: The process of watching the webcast sales made me bored.	[1, 5]
	Q12: The process of watching the webcast sales made me motivated.	[1, 5]
Purchase intention	Q13: I am willing to share the live link to my friends	[1, 5]
	Q14: I am willing to forward the live connection to Moments	[1, 5]
	Q15: I am willing to forward the live connection to other platforms.	[1, 5]

### 4.3. Scale Design

After the design, the questionnaire consists of two parts. One is to investigate the basic situation of platform fans. This part is used to understand the gender, age, educational background, nature of work,

consumption ability (like monthly revenue), and other information of platform fans, and to design the survey content of food live broadcast marketing preferences to gain general insight into the shopping behavior characteristics of fans. The other one is the specific scale measurement of the influence mechanism of consumers' purchasing decisions in live streaming.

## 5. RESULTS AND ANALYSIS

The descriptive statistical analysis in this section is mainly based on the collected 97 valid questionnaires for analysis. After data integration, the study is carried out to understand the relevant information of the survey objects through the investigation. See Table 8 for details.

**Table 8.** Relevant information of the survey group

Heading	Type	Frequency	Percentage (%)
Gender	Male	44	45.36
	Female	53	54.64
Age	≤18	2	2.06
	19-25	45	46.39
	26-30	19	19.59
	31-35	19	19.59
	≥36	12	12.37
Monthly Income	≤4000 yuan	41	42.27
	4001-8000 yuan	15	15.46
	8001-12000 yuan	16	16.49
	≥12001	25	25.77
Education	High school and below	4	4.12
	Specialist	5	5.15
	Undergraduate	64	65.98
	Postgraduate (Master)	20	20.62
	Postgraduate (PhD) and above	4	4.12
Career	College Students	47	48.45
	Civil servants	2	2.06
	Employee in private enterprise	19	19.59
	Teacher	4	4.12
	Entrepreneur	10	10.31
	Other	15	15.46
	Total	97	100.0

Data source: the author organizes according to the data

(1) Gender. By summarizing the data collected from the questionnaires, we found that the number of women surveyed is more than the number of men in frequency. The proportion of women is 54.64%, and the proportion of men is 45.36%. Buying food through live broadcast has become a new trend in women's consumption. More and more women are inclined to purchase food through the live broadcast network, so the number of viewers exceeds that of men.

(2) Age. Observing the distribution of age, we can find that the proportion of 19-25 years old is relatively the most, which is 46.39%, followed by the 26-30 years old interval and the 30-35 years old interval, both of which are 19.59%. The reason is obvious, live shopping is a brand new thing, and this shopping model will be more attractive to young people, who will like fashion and trendy things. Moreover, the questionnaires are mainly distributed in a university in Shenzhen, which also leads to the relatively high number of people in 19-25 year olds. The group of people in 26-30 years

old range and 30-35 years old range have just started a family, have higher purchasing needs and purchasing power, and have a higher demand for food, and women among them will pay more attention to cost-effectiveness and timeliness (live broadcast buying food can save more time than shopping in the offline supermarket), so they tend to choose to buy food online, so the proportion of this group of people is also relatively high.

(3) Monthly income. After all, buying food in live room is a kind of consumption, so the income of the respondents also needs to be taken into account, which is also a manifestation of purchasing power. The highest proportion of monthly income in this survey is the population below 4000 yuan, and then the population above 12000 yuan. There are two reasons: 1. These questionnaires are mainly filled out by college students who are still studying, and many people do not have formal work, their income come from the family. Some people may do some internships or part-time jobs, but their income are low. 2. The percentage of 12,000 yuan or more is higher because the surveyed group also includes some college teachers, corporate white-collar workers and other groups, all of whom are around 30-40 years old, they have live shopping needs, and the amount is relatively larger. The remaining population with monthly income between 4000-8000 and 8000-12000 accounted for similar proportions: 15.46% and 16.49%.

(4) Educational background. From the data collected in these questionnaires, the highest proportion is bachelor degree, reaching 65.98%, followed by postgraduate (master) with 20.62%, then is junior college, accounting for 5.15%; and finally senior high school and below and doctorate and above, which accounted for the same proportion, 4.12%. This is probably because the majority of people who fill out the questionnaires are college students, and among them, the majority are undergraduate students, followed by postgraduates (masters), and a small number of other groups.

(5) Profession. The occupations of the people who filled out the questionnaires in this survey included college students, civil servants, staffs in private enterprises, teachers and people who started their own businesses. Among them, the top three in proportion are college students: 48.45%, private enterprise staff: 19.59%, and others: 15.46%. This is also in line with the population in the survey, because young people, especially current college students, pursue fashion and freshness, while buying food in live room can satisfy their desire for freshness and desire for purchase at the same time.

## 5.1. Reliability and Validity Analysis

### 5.1.1. Reliability analysis

Reliability refers to the degree of consistency of results obtained when using the same method to repeatedly measure the same object. It is usually used to measure the reliability of questionnaire data results, and the internal consistency coefficient (Cronbach  $\alpha$ ) is commonly used in academia to test the reliability of data. Cronbach's (1951) criterion of reliability is that  $\alpha < 0.35$  is low reliability,  $0.35 < \alpha < 0.70$  is moderate reliability, and  $\alpha > 0.7$  is high reliability. The higher the value of the a coefficient, the better the reliability of the data, which satisfies the research requirements and can promote the follow-up research.

As shown in Table 9.

**Table 9.** The overall reliability analysis of the sample

Number of items	Sample size	Cronbach $\alpha$
15	97	0.924
Data source: the author analyzes and calculates.		

Next, the reliability of the reward attributes, personal charm of the Internet celebrity, perceived value, emotional identification, and purchase intention can be verified separately.

As shown in Table 10:

**Table 10.** Cronbach reliability analysis

Name	Total Correlation of Calibration Items (CITC)	The deleted $\alpha$ coefficient	Cronbach $\alpha$ coefficient
Q6: Reward Attribute 1	0.781	0.759	0.860
Q7: Reward Attribute 2	0.699	0.845	
Q8: Reward attribute 3	0.750	0.793	
Q9:Influence of Internet celebrities	0.715	0.900	0.889
Q10:Influence of Internet celebrities	0.831	0.802	
Q11:Influence of Internet celebrities	0.809	0.820	
Q12:Perceived value	0.829	0.695	0.920
Q13:Perceived value	0.841	0.884	
Q14:Perceived value	0.849	0.879	
Q15:Emotional identification	0.701	0.695	0.809
Q16:Emotional identification	0.775	0.614	
Q17:Emotional identification	0.517	0.883	
Q18:Purchase intention	0.717	0.930	0.901
Q19:Purchase intention	0.868	0.803	
Q20:Purchase intention	0.844	0.824	
Data source: the author analyzes and calculates.			

From the results, the internal consistency coefficients of reward attributes, influence of Internet celebrities, perceived value, emotional identification, and purchase intention are all greater than 0.7, and the "individual-total correction coefficient" of each observed variable (CorrectedItem-Total Correlation) are greater than 0.50. Therefore, the questionnaire has high reliability.

### 5.1.2. Validity analysis

In the validity analysis, we will use the traditional content validity and construct validity to verify the validity.

**Content validity.** First of all, the scales involved in this questionnaire are all standing on the shoulders of giants, drawing on the results of a large number of previous studies. A small part is formed based on some mature domestic scales and some correct optimizations. Through coordination and revision with the instructor, it can be determined that this scale comes from a scale with good reliability and validity, so the content validity of the scale selected in this study is good.

**Construct validity.** The structure validity is to detect whether the structure of the model is reasonable and effective. The more commonly used method of structure validity analysis in academia is the exploratory factor analysis method. The premise of using this analysis method is to judge whether the variable is suitable for factor analysis through the KMO value of Bart's spherical test. According to industry standards, it is generally believed that when the KMO value is greater than 0.7, it is suitable for factor analysis.

It can be seen from Table 11 that the KMO value of the entire sample is 0.872, and the P value corresponding to the Bart's sphere test is 0.000, so it can be determined that the data is suitable for factor analysis.

**Table 11. KMO and Bartlett's test**

KMO		<b>0.872</b>
	Approximate K <sup>2</sup>	1062.334
Bartlett sphericity test	df	105
	P-value	<b>0.000</b>

Data source: the author analyzes and calculates.

Then analyze the corresponding relationship between the item and the factor, we get 5 main factors, according to the calculation, the variance explanation rate values of the 5 factors are 18.211%, 17.173%, 16.801%, 15.873% and 14.123%. Accumulated after rotation, the variance explanation rate was 82.181% > 50%. It means that the amount of information of the research item can be extracted effectively. (It is generally believed that this index reaches 50%, indicating that the main factor has a strong ability to explain the research content, and it can meet the research requirements.)

As shown in Table 12.

**Table 12. Validity analysis result**

Name	Factor loading factor					Common degree (common factor variance)
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	
Q6: Reward attributes 1	0.192	0.301	0.186	0.775	0.231	0.815
Q7: Reward attributes 2	0.076	0.056	-0.006	0.887	0.174	0.827
Q8: Reward attributes 3	0.096	0.265	0.251	0.802	0.120	0.800
Q9: Influence of Internet celebrities	0.098	0.164	0.837	0.141	0.158	0.782
Q10: Influence of Internet celebrities	0.225	0.320	0.809	0.129	0.206	0.867
Q11: Influence of Internet celebrities	0.349	0.208	0.808	0.112	0.127	0.847
Q12: Perceived value	0.895	0.115	0.185	0.070	0.128	0.869
Q13: Perceived value	0.820	0.287	0.256	0.159	0.125	0.861
Q14: Perceived value	0.875	0.227	0.150	0.129	0.158	0.881
Q15: Emotional identification	0.175	0.137	0.171	0.229	0.847	0.849
Q16: Emotional identification	0.114	0.177	0.138	0.143	0.906	0.905
Q17: Emotional identification	0.179	0.348	0.282	0.243	0.478	0.520
Q18: Purchase intention	0.142	0.800	0.222	0.203	0.111	0.764
Q19: Purchase intention	0.328	0.809	0.204	0.204	0.210	0.889
Q20: Purchase intention	0.237	0.792	0.272	0.198	0.238	0.852
Eigenvalue (before rotation)	7.301	1.715	1.242	1.119	0.949	-
Variance interpretation rate% (before rotation)	48.6%	11.434%	8.283%	7.463%	6.328%	-
Cumulative variance interpretation rate% (before rotation)	48.673%	60.107%	68.390%	75.853%	82.181%	-
Eigenvalue (after rotation)	2.732	2.576	2.520	2.381	2.119	-
Variance interpretation rate% (after rotation)	18.211%	17.173%	16.801%	15.873%	14.123%	-
Cumulative variance interpretation rate% (after rotation)	18.211%	35.384%	52.185%	68.058%	82.181%	-

Data source: the author analyzes and calculates.

## 5.2. Correlation Analysis

Correlation analysis refers to a statistical method of the closeness of the relationship between the variables in the study. It is used to verify whether there is an interrelated relationship among several variable factors in the research hypothesis. In this paper, Pearson correlation coefficient is used to analyze the correlation between variables. Generally speaking, Pearson uses  $r$  to represent the value between -1 to 1. When the absolute value of  $r$  is closer to 1, the correlation between variables is stronger, and  $r$  less than 0.3 indicates weak correlation or irrelevance. We perform correlation analysis on the correlation of each variable in this study, and obtain the correlation analysis results, as shown in Table 5.

The P-value corresponding to the correlation coefficient of all variables in this study is less than 0.01, indicating that all variables are closely related, and the correlation coefficient value is greater than 0, indicating that there is a positive correlation. The absolute correlation coefficient of the value indicates the closeness between the variables. The larger the correlation coefficient value, the higher the closeness between the two variables and the higher the correlation. It can be seen from Table 12 that the P-value corresponding to the correlation coefficient of all variables in this study is less than 0.01, indicating that the correlation between the variables is very strong; all the coefficient values are positive, indicating that there is a positive correlation between the various variables. And then compare the value of the correlation coefficient, the larger the coefficient value, the stronger the correlation. For example, in the relationship between the four variables and purchase intention, the order of correlation from strong to weak is Internet celebrity influence>perceived value=emotional identity>reward attributes.

## 5.3. Regression Analysis

### 5.3.1. Regression analysis of various dimensions of Internet celebrity live streaming and purchase intention

Regression analysis is a more commonly used data analysis method to test whether the causal relationship between variables is established [3]. Using regression analysis to describe the relationship between variables can reflect the degree of influence of one or more variables on the other one variable. We can test the validity of the research hypothesis and model by testing the regression coefficient and the significance level. Regression analysis is performed using the two factors: reward attributes and the influence of the online celebrity in live broadcast as the independent variables, and the purchase intention as the dependent variable, and the linear regression analysis results in Table 13 are obtained.

**Table 13.** Linear regression analysis results (n=97)

Variable	Non standardized coefficient		Standardization coefficient	$p$	VIF	$R^2$	Adjust $R^2$	F
	B	Standard error	$Beta$					
Constant	0.439	0.345	-	0.206	-			
Award	0.409	0.098	0.352	0.000**	1.210	0.450	0.439	F=38.519, p=0.000
Influence	0.461	0.088	0.443	0.000**	1.210			

Dependent variable: purchase intention DW value: 1.886\*  $p < 0.05$ \*\*  $p < 0.01$

The analysis results are mainly tested by the following indicators. For example, if the P-value is less than 0.01, the influence relationship is significant; if the VIF value is less than 5, indicating that there

is no collinearity, and the model is better; the R<sup>2</sup>-value indicates the degree of fit, and the more the R<sup>2</sup>-value is close to 1, the better the fit; the regression coefficient B-value indicates the influence of each independent variable on the dependent variable. The analysis results are as follows:

- (1) The P-value corresponding to each variable in the model is less than 0.05, indicating that the influence relationship between the independent variable and the dependent variable is significant.
- (2) The VIF value of each variable in the model is less than 5, indicating that there is no collinearity problem, indicating that the model is better.
- (3) The R<sup>2</sup> value of the model is 0.450, which means that the influence of Internet celebrities and reward attributes can explain 45.0% of the reasons for the change in purchase intention, indicating that the model is more fitting.
- (4) Through the B value analysis of the influence relationship between the variables, the regression coefficient values of the reward attributes of the two variables and the influence of Internet celebrities are all positive numbers, indicating that the independent variable positively affects the dependent variable. The influence of the independent variable on the dependent variable is: reward attribute > influence of internet celebrity. The results of this analysis verify the validity of the research hypotheses H1 and H2. Therefore, a multiple linear regression equation can be derived: purchase intention = 0.439 + 0.409 \* reward attribute + 0.461 \* influence of internet celebrity.

### 5.3.2. Regression analysis of various dimensions, perceived value and emotional identity of online celebrity live broadcasts.

- (1) Regression analysis between the dimensions of the online celebrity live broadcast and the perceived value.

In order to test the influence of the two factors of online celebrity live streaming on the perceived value, the reward attribute and influence of the online celebrity are used as independent variables, and the perceived value is established as the dependent variable for regression analysis, as shown in Table 14.

**Table 14.** Linear regression analysis results (n=97)

Variable	Non standardized coefficient		Standardization coefficient	p	VIF	R <sup>2</sup>	Adjust R <sup>2</sup>	F
	B	Standard error	Beta					
Constant	0.844	0.378	-	0.028*	-			
Award	0.205	0.107	0.181	0.059	1.210	0.302	0.288	F=20.379, p=0.000
Influence	0.455	0.096	0.449	0.000**	1.210			

Dependent variable: Perceived value DW value: 1.774\* p<0.05\*\* p<0.01

The analysis results are as follows:

- (a) The P-value corresponding to each variable in the model is less than 0.05, indicating that the influence relationship between the independent variable and the dependent variable is significant.
- (b) The VIF value of each variable in the model is less than 5, indicating that there is no collinearity problem, indicating that the model is better.
- (c) The R<sup>2</sup> value of the model is 0.302, indicating that the influence of Internet celebrities, preferential attributes, instant two-way interaction, and entertainment attributes can explain 30.2% of the reasons for the change in trust. The model has a good fit.

The formula of the model is:  $\text{perceived value} = 0.844 + 0.205 * \text{reward} + 0.455 * \text{influence}$ , and the model  $R^2$  value is 0.302, which means that reward and influence can explain 30.2% of the change in perceived value. The regression coefficient value of the reward is 0.205 ( $t=1.913$ ,  $p=0.059 > 0.05$ ), which means that the reward will not affect the perceived value. The regression coefficient of influence is 0.455 ( $t=4.739$ ,  $p=0.000 < 0.01$ ), which means that influence will have a significant positive influence on perceived value.

The summary analysis shows that influence of the Internet celebrities will have a significant positive influence on perceived value. However, rewards do not affect the perceived value.

(2) Regression analysis between various dimensions of online celebrity live streaming and emotional identity.

In order to test the impact of the two factors of online celebrity live streaming on the perceived value, the reward attribute and the influence of the online celebrity are used as independent variables, and emotional identification is used as the dependent variable for regression analysis, as shown in Table 15.

**Table 15.** Linear regression analysis results (n=97)

Variable	Non standardized coefficient		Standardization coefficient	p	VIF	R <sup>2</sup>	Adjust R <sup>2</sup>	F
	B	Standard error	Beta					
Constant	0.400	0.375	-	0.289	-			
Emotional identity	0.488	0.111	0.384	0.000**	1.210	0.425	0.412	F=34.689, p=0.000
Perceived value	0.394	0.089	0.384	0.000**	1.210			

Dependent variable: DW value of emotional identification: 2.241\*  $p < 0.05$ \*\*  $p < 0.01$

Taking reward and influence as independent variables, and emotional identification as dependent variables for linear regression analysis, as can be seen from the above table. The model formula is:  $\text{emotional identification} = 1.427 + 0.342 * \text{reward} + 0.286 * \text{influence}$ .  $R^2$  value in the model is 0.371, which means that rewards and influence can explain 37.1% of the changes in emotional identity. When the model was tested with F, it was found that the model passed the F test ( $F=27.675$ ,  $p=0.000 < 0.05$ ), which means that at least one of reward and influence will have an impact on emotional identity. In addition, to test the multicollinearity of the model, it is found that the VIF values in the model are all less than 5, which means that there is no collinearity problem; and the DW value is near the number 2, which means that the model does not have autocorrelation and there is no correlation between the sample data and the model is relatively good. The final specific analysis shows that: The regression coefficient value of reward is 0.342 ( $t=4.156$ ,  $p=0.000 < 0.01$ ), which means that reward will have a significant positive influence on emotional identity. The regression coefficient of influence is 0.286 ( $t=3.876$ ,  $p=0.000 < 0.01$ ), which means that influence will have a significant positive influence on emotional identity.

The summary analysis shows that rewards and influence will all have a significant positive influence on emotional identity.

### 5.3.3. Regression Analysis of Emotional Identification, Perceived Value and Purchase Intention.

Analyzing the relationship between emotional identification and perceived value on the purchase intention of the dependent variable, the data obtained are shown in Table 16.

**Table 16.** Linear regression analysis results (n=97)

Variable	Non standardized coefficient		Standardization coefficient	<i>p</i>	VIF	<i>R</i> <sup>2</sup>	Adjust <i>R</i> <sup>2</sup>	F
	B	Standard error	<i>Beta</i>					
Constant	0.844	0.378	-	0.028*	-			
Award	0.205	0.107	0.181	0.059*	1.210	0.302	0.288	F=20.379, p=0.000
Influence	0.455	0.096	0.449	0.000**	1.210			

Dependent variable: purchase intention DW value: 2.160\* p<0.05\*\* p<0.01

And the analysis results are as follows:

The P-value corresponding to each variable in the model is 0.000<0.05, indicating that the influence relationship between the independent variable and the dependent variable is significant.

The VIF value of each variable in the model is less than 5, indicating that there is no collinearity problem, indicating that the model is better.

The R<sup>2</sup> value of the model is 0.425, which means that emotional identification and perceived value can explain 42.5% of changes in purchase intention, indicating that the model fits well.

Analysis of the impact relationship between variables: The regression coefficient B value of emotional identification and perceived value is both positive, indicating that emotional identification and perceived value both positively affect purchase intention. The results of this analysis verify the validity of the research hypotheses H3 and H4.

Therefore, a multiple linear regression equation can be derived: purchase intention =0.400+0.488\* emotional identity +0.394\* perceived value.

## 5.4. Mediation Analysis

### 5.4.1. Test of the intermediary effect between reward mechanism and purchase intention.

First, analyze whether there is an intermediary effect between the emotional identity and the perceived value in the relationship between the reward mechanism and the purchase intention. (Table 17)

**Table 17. Summary of mediation test results**

Term	C	a	b	a*b	a*b	a*b	a*b	a*b	c'	Conclusion
	Total effect			Intermediary effect value	(Boot SE)	(Z value)	(P value)	(95% BootCI)		
Reward = > Emotional recognition = > Purchase intention	0.624**	0.475**	0.332**	0.158	0.006	24.272	0.000	0.033 ~ 0.285	0.322**	Partial intermediary
Reward = > perceived value = > purchase intention	0.624**	0.417**	0.345**	0.144	0.006	25.832	0.000	0.031 ~ 0.242	0.322**	Partial intermediary

\* p<0.05 \*\* p<0.01

Analysis of the mediating effect of testing perceived value: the lower limit of the 95% interval is 0.005, and the upper limit of the interval is 0.095, excluding 0, indicating that the perceived value has a mediating effect. Therefore, the research hypotheses H3a and H3b are verified.

5.4.2. Test of the Mediating Effect between Emotional Identification and Purchase Intention. (Table 18)

**Table 18. Summary of mediation test results**

Term	C	a	b	a*b	a*b	a*b	a*b	a*b	c'	Conclusion
	Total effect			Intermediary effect value	(Boot SE)	(Z value)	(P value)	(95% BootCI)		
Influence = > Emotional identity = > purchase intention	0.614**	0.413**	0.355**	0.147	0.007	19.666	0.000	0.039 ~ 0.327	0.320**	Partial intermediary
Influence = > Perceived value = > Purchase intention	0.614**	0.532**	0.276**	0.147	0.007	20.127	0.000	0.020 ~ 0.297	0.320**	Partial intermediary

\* p<0.05 \*\* p<0.01

Analysis of the mediating effect of testing perceived value: the lower limit of the 95% interval is 0.005, and the upper limit of the interval is 0.095, excluding 0, indicating that the perceived value has a mediating effect. Therefore, the research hypotheses H4a and H4b are verified.

## 6. CONCLUSIONS

### 6.1. Main Conclusion

The 8 hypotheses proposed by the research hypothesis (including 4 main hypotheses and 4 secondary hypotheses) have been verified to be all valid except one is not true, as shown in the table 19:

**Table 19.** Research hypothesis

Serial number	Research hypothesis	Test result
H1	H1 The reward attribute of the product during the live broadcast of the online celebrity has a positive impact on the consumer's purchase intention	Support
H1a	H1a The reward attributes of the product during the live broadcast of the online celebrity's live delivery process positively affect the emotional identity of consumers	Support
H1b	H1b The reward attributes of the product during the live broadcast of the online celebrity's live delivery process positively affect the perceived value of consumers	Not support
H2	H2 The influence of the Internet celebrity during the live broadcast positively affects consumers' willingness to buy	Support
H2a	H2a The influence of the Internet celebrity during the live broadcast positively affects the emotional identity of consumers	Support
H2b	H2b The influence of the Internet celebrity during the live broadcast positively affects the perceived value of consumers	Support
H3	H3 The perceived value of the online celebrity's live broadcast of the goods positively affects the consumer's willingness to buy	Support
H4	H4 Emotional identification in the live broadcast of Internet celebrities positively affects consumers' willingness to buy	Support
H3a	H3a Consumers' perceived value plays an intermediary role between the reward mechanism and consumers' purchase intentions	Support
H3b	H3b Consumer's perceived value plays an intermediary role between the anchor's influence and the consumer's willingness to buy	Support
H4a	H4a Consumers' emotional identification (trust) plays an intermediary role between the reward mechanism and consumers' purchase intentions	Support
H4b	H4b Consumers' emotional identity (trust) plays an intermediary role between the anchor's influence and the consumer's willingness to buy	Support

The conclusions of the hypothesis are:

In the process of online celebrity live streaming, the two factors: reward attributes and influence of online celebrities will significantly positively affect consumers' purchase intentions.

The influence of the four factors of online celebrity live streaming on purchase intention, from large to small, is: influence of Internet celebrity > perceived value = emotional recognition > reward attribute, that is, influence of Internet celebrity has the greatest influence on purchase intention, followed by perceived value and emotional recognition. However, the least influential factor is the reward attribute.

Based on the results of the survey and real-life experience, we can know that if there is a clear personality on the live broadcast platform, a unique label that can be remembered by fans, such as "Xi Ge Xi Sao Seafood", "Chang Ping Seafood", etc. The account number has never lost the "seafood" label since the first video. The iconic apron, hoarse and loud voice, bold commentary, loving family

affection, etc., make the account clear and differentiated. The image of has greatly shortened the distance with fans.

Some foods with advantages of origin, for example, most live-streaming of fresh foods are in cities rich in seafood, such as Lianyungang in Jiangsu, Xiamen in Fujian, Qingdao in Shandong, etc.; nuts, dried fruit, beef jerky and other products are made in Xinjiang. The live broadcast of the company will get more attention from consumers than the live broadcasts in other regions. Relying on the mature supply chain of the origin, they can help fans buy high-quality and cheap local products from the source. Fans also believe that the anchor has such strength, which establishes cognitive value and emotional identity in the hearts of fans. The same is true for other categories, such as clothing if you are in a city like Guangzhou and Hangzhou, you also have the same advantage.

Compared with the hot fresh food in the current market, snacks are typical processed products. It is difficult for anchors to rely on them to establish their own unique labels and influence, and they do not have the advantage of origin. They are not too strict in terms of packaging, storage, and transportation. But it also has a wide audience. In China, snacks are a big category of e-commerce. Only in terms of red dates, the scale of online retail is at the level of tens of billions. Snack products need a reward mechanism to stimulate consumers' purchase intentions, such as snack food packages, which sell well in some festivals. Facts have proved that this decision is also correct. In a certain GMV live broadcast room sales that exceeded 10 million, more than 28% of the sales came from the "big gift package".

Live delivery is a relatively new economic form, but the essence is a "word-of-mouth economy". Consumers are willing to place an order in the live broadcast room, either for the anchor's personal "charm"; or it is a good product in itself but has more discounts in the live broadcast room. As a normalized online consumption format, placing orders in live streaming rooms has become a choice of many consumers, especially young consumers; for fast-moving consumer goods companies, live streaming is no longer just a kind of A short-term attempt, but an important online channel. On live e-commerce platforms such as Taobao Live and Kuaishou, the categories of fast-moving consumer goods and food account for even more than 40%. However, when the live broadcast of goods and the fast-moving consumer industry become closer, the problems exposed also increase. Among them, false propaganda and incorrect products are the most common problems. In the food field, especially food with a certain efficacy, it is also the hardest hit area for false propaganda.

According to data reported by the State Administration of Market Supervision, in 2020, the 12315 platform across the country received a total of 25,500 "live broadcast" complaints and reports, of which nearly 80% of the complaints related to "live broadcast with goods" accounted for a year-on-year increase of 357.74%. The live broadcast e-commerce industry complaint data released by "Black Cat Complaints" in 2020 shows that among the more than 12,000 valid complaints related to live broadcast delivery issues received by the platform, false propaganda is the main cause of complaints, and the number of complaints is the largest, reaching 7,000, which is far beyond the after-sales service, overlord clauses and other reasons for complaints.

Food is closely related to human health, and people will pay more attention to product quality assurance. Once the impression of false propaganda is left to consumers, it will be difficult to re-establish cognitive value and emotional identity. Even if the top stream is like Weiya, it claims that its daily chemical and food product selection rate is as low as 3%-5%, and the food group has established a "Qianxun Joint Quality Center" with a third-party quality inspection platform, the first "Quality Inspection + Live" mode. But just this year, the whole wheat bread sold in her live broadcast room was exposed to calories fraud, which caused the professionalism of Weiya and her team to cause doubts in the industry.

## 6.2. Enlightenment

With the evolution of Internet technology and the exploration of digital marketing, live streaming has become a new trend for retail e-commerce, but the influencing factors of purchase decisions in the marketing process have always been an unsolved mystery. In response to the relatively new topics, this article is based on the actual situation and documentary evidence of the traditional purchase decision made by individuals and society, and highlight the main perspective of platform marketing characteristics. Combined with AISAS marketing theory, on the basis of analyzing the purchase behavior of fans when celebrities carrying goods on live broadcast, try to build a model of the factors affecting the purchase decision of fans, and use questionnaire surveys to obtain large sample data to empirically investigate the influence mechanism of fans' purchasing decisions under the marketing model of live broadcast. The research results generally show that the incentive mechanism, the personal charm of Internet celebrities, value perception, and trust factors are the key elements that affect the purchase behavior of fans on live broadcast.

Specifically, the subdivision conclusions of this article are as follows: First, high-quality content, incentive mechanism, unique charm of Internet celebrities, good value perception and emotional cognition in live streaming can significantly positively affect fans' purchasing decisions. Second, combined with AISAS marketing theory and empirical results in stages, the main links influencing fans' purchasing decisions with live streaming are in the three stages of attention, interest, and search. Among them, the important influencing factors in attention stage are high-quality content and effective consumption incentives, the main influencing factors in interest stage are the unique charm and value perception of Internet celebrities, and the significant influencing factor in search stage is the emotional cognition of consumers. Third, in comparison, the personal charm of Internet celebrities has greater commercial value in promoting fan shopping.

The research conclusions are not only different from the literature on consumer decision-making under traditional "face-to-face" marketing, but also emphasize the role of platform-side marketing entities in the context of new media. It also helps network marketing companies break the traditional marketing boundaries and get rid of difficulty in grasping the limited in thinking and carry out live delivery activities from a new perspective. In addition, the conclusions are inspiring to the development of retail and e-commerce in the post-epidemic era. The traditional food retail industry can actively try the live delivery method for online marketing, and at the same time pay attention to the key factors that affect consumer decision-making in the live delivery of goods. By optimizing content, strengthening promotion incentives, creating anchor characteristics, increasing the frequency of interaction, accumulating the advantages of trust, to promote the effectiveness of live broadcast delivery.

Looking at the cases of selling fake food and beverage products in major live broadcast rooms in the past two years, the behavior of selling fakes is generally divided into two situations. One is the "accidental falsification" of the anchor with the goods, that is, the supplier deliberately deceives and deceives, gains the trust of the anchor and the company that carries the goods by forging documents and product qualifications, and then enters the vision of consumers. For example, the "Sweet Bird's Nest" incident that sparked a heated discussion last year was ultimately judged that the brand involved in the case had concealed the ingredient ratio of the product involved in the process of fulfilling the contract, and misled the Simba team that brought the goods. Another situation is that the anchor team knows that the product is "problematic", but for the sake of commission and pit fees, they choose to deceive consumers with the supplier. For example, some products without quality assurance entered the live broadcast room of an Internet celebrity and turned into an explosion; or some companies whose production licenses had been revoked were "fairly" selling products in the live broadcast room. On the other hand, under the low-price strategy, the anchors mostly sell low-end products. In order to increase sales, the anchors often desperately lower the prices of commodities, trying to negotiate with the supplier companies to provide the so-called "lowest price in history". In this way, the profit

margin of the company will be greatly squeezed. Under this pressure, some companies will find ways to reduce costs, which also provides an opportunity for the emergence of fakes. From another point of view, the coexistence of brands and cargo anchors is a double-edged sword. Some casual snacks that do not have the advantage of origin, all want to get a share of the live broadcast of the head anchor, but while the "greed" anchors are famous, they also bear high pit fees and commissions. These brands also need to provide "the lowest price on the entire network." If the cooperation is successful, it may bring more benefits to the brand; but if there is a problem in a certain link, under the "magnifying glass", the "consequence" that the brand has to bear will also be doubled. On the bright side, such a market environment will encourage all manufacturers and anchors to bring better products to consumers. On the bad side, after all, there is price competition. If market supervision is not comprehensive, it is still easy to have products that do not meet the requirements.

For consumers, the host in the live room itself relies on the influence, interactivity and entertainment of the host to render the shopping atmosphere and prompt consumers to place an order. Consuming wisely, learning to identify products, and promptly complaining when encountering problems to protect one's rights and interests are vital to creating a benign market environment.

## LINK WITH MY INTERNSHIP

As an hrpb intern in the marketing system of Vanke Company, I will contact many people of different ages, so I sent them some questionnaires as the support of thesis data. (data collection)

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