What Factors Cause People to Choose to Buy in the Live Streaming in China?

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The development of social media which makes shopping in live streaming more and more popular, the conversion from traffic to income is important. And then the live streaming has become a crucial business and economic model. So, this topic deserves great attention and research. This paper uses many methods, first, the basic characteristics of customers will be analyzed by descriptive statistics to get overview of consumer samples. Then through the one-way ANOVA method to find whether there are statistical differences in consumers' purchase intention under different customer characteristics, for getting the main factors affecting consumers' live shopping. Finally, through the cluster analysis classify customer groups, find the main influencing factors of different classified customer groups. The research results show that the characteristics of anchors have a significant impact on consumers' purchasing behavior in the live streaming.

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1. Introduction

1.1 Research background

According to The China Internet Information Center report, Chinese internet users have got 940 million, and 749 million internet users have experience of e-commerce, which proportion is 79.7%. So, shopping online has a connection with people lives. E-commerce not only breaks the limitation of time and space, but also changes people lifestyle and shopping habits, at the same time, consumption behavior of people has also changed gradually. Compare with traditional shopping in physical stores, shopping online is more convenient and faster than traditional physical stores, but there are also disadvantages that consumers cannot directly touch the product online or judge whether the product online gets expectation of consumers, so consumers will get more understanding of product online through the product evaluation and network reputation and other aspects. But the network information is so complex, and consumers cannot collect information quickly and accurately which they think it is value for them. With the development of social media and 5G, information spread faster, and the content is more interesting and more frequent interaction. People can exchange knowledge and share useful information to each other in the internet, so social media platforms have become the famous one of selling product market. Because the information communication and interaction on the internet and the product online give consumers the strong feeling in product usefulness and ease of use, which have an important impact on consumer purchasing behavior. Other than that, the opinion leader also plays a very crucial role in the live streaming. They are more professional in the product online recommendation, and help consumers distinguish the unqualified products online before selling, which can help many consumers know more about the product more efficiently. The growth of social media and E-commerce has also let the live streaming more and more develop. In addition, for the consumers, they cannot get the valuable information efficiently and quickly in numerous information, so lots of consumers prefer to buy the products which are useful or affordable or well-known anchors recommend. While the live streaming takes a series of new opportunities for economic development, a lot of platforms and consumers also need to face new challenge. First of all, with the increasing of lots of forms of the live streaming, which make consumers feel aesthetic fatigue, and decrease the desire of buying; secondly, the unqualified products in some live streaming will also increasing the shopping cost of consumers; third, the industry of live streaming with goods also cultivate a lot of anchors, so consumers need to spend more time to screen which anchors can take them real value and information, and which products that anchors recommend are worth to buy, so those may lead to a reduction feeling of desire to buy.

1.2 Research significance

First of all, there is little research essay on this aspect, such as consumer behavior purchasing factors in E-commerce. Secondly, there are a big difference in the social media environment, thus the previous research only has a little reference significance, and it cannot be completely stand by the scene of live streaming with goods. And the research of consumer purchase behavior factors is still in a beginning of stage, so this article is also research on the purchase factors of consumers of the live streaming with goods.

1.3 Research content and method

Through empirical research, this article analyzes lots of factors which include platform reputation, perceived usefulness, product price concessions, product ease of use, interactive experience and opinion leaders, and analyzes and puts forward corresponding suggestions and conclusions which according to the questionnaire results and one-way variance.
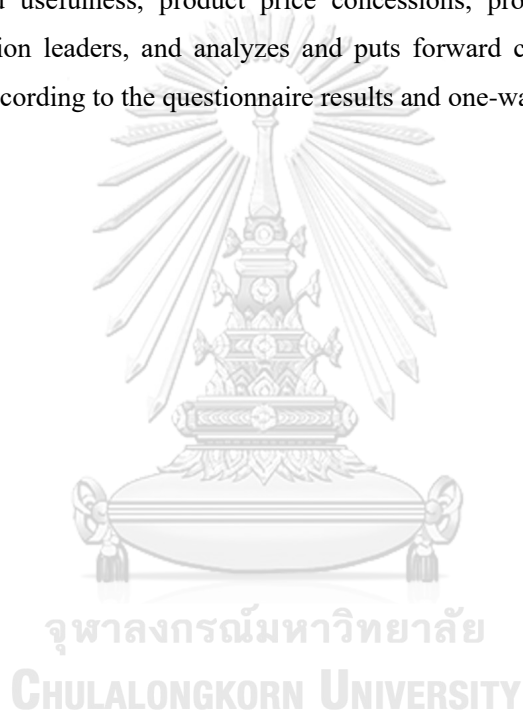
2. Advantages and disadvantages in shopping in live streaming

2.1 Advantages

2.1.1 Merchant marketing costs and user decision-making costs are low

Compared with the traditional way of e-commerce with goods, the cost of entering the live broadcast room for marketing through a live broadcast with goods is greatly reduced, and even only a mobile phone can be live broadcast with marketing anytime and anywhere. Of course, in the future, live broadcast with goods will also develop towards the direction of specialization. Traditional video marketing requires businesses to find well-known celebrities, especially stars, with the help of stars' social fame and appeal to drive the sales volume of products, but consumers gradually do not buy it, the products endorsed by stars may not be used by stars, so the quality and the effect of the product have great uncertainty. The endorsement fee of contracted star endorsement is very high, and it also needs a lot of money to shoot advertisements and find a platform. However, the audience is not necessarily accurate and not targeted, so that the average marketing cost is higher. And through the broadcast with goods the cost of marketing is relatively small, cooperation with the anchor only need to pay tens of thousands of yuan of pit fee, and in the face of marketing objects are really wanting to buy consumers, cooperation with well-known anchor can also ensure considerable sales, marketing profit and cost have certainty. Due to the low marketing cost of the live broadcast room, so the live broadcast with goods has become a popular marketing way for many merchants.

At the same time, in the competition of survival of the fittest, in order to attract loyal fans, the anchors of the studio will strictly check the cooperative merchants and products, so that some products with poor quality and use effect and the merchants with low visibility and no after-sales guarantee will be screened out. After this step, the products entering the studio will be better than the quality of most of the products that fans buy on the shopping platform. Users can rest assured to buy the goods recommended by the anchors in the broadcast room, which saves the decision-making cost of the fans. This feature of the broadcast room actually strengthens the advantage of online shopping convenience and saving time.

2.1.2 Strong interactivity and shopping experience

The marketing method of live broadcast with goods is not only highly interactive, but also the interaction of live broadcast marketing is two-way. In the process of the live broadcast, the live broadcast and sales activities can be carried out at the same time. While the anchors convey the live broadcast content to their fans, the fans can also immediately express their opinions or share the experience in the form of messages and bullet screens. Therefore, with the help of live broadcast, on the one hand, enterprises can immediately receive the use feedback from the consumers; on the other hand, after receiving the feedback from the live audience, the marketing party or anchor can adjust the marketing strategy according to the live feedback in the first time,

find a form that can more stimulate the audience to buy, enhance the marketing effect, and better achieve the marketing purpose. Live streaming with goods is positioned as "consumer live streaming", allowing users to "buy while watching", which effectively solves the pain point of customers' lack of product information in online shopping. In traditional online shopping, users lack the actual experience when buying, and often the physical objects do not consistent with the pictures. Live streaming with goods perfectly solves these problems, not only allowing users to see the various details of the product intuitively, but also the trial experience of anchors. This form is more intuitive than only showing a little over modified pictures, and easy to stimulate consumers' desire to buy. Through the live broadcast, we recommend all kinds of good things to fans and help them solve problems in various daily scenes, so as to strengthen user stickiness and improve the conversion rate of goods.

2.1.3 Large time-limited discounts and high user stickiness

Li Jiaqi represents the top net celebrity anchors rely on the huge flow to talk about prices with suppliers, to obtain lower prices than the official flagship store, often appear "the lowest price of the whole network" discount. In addition, the studio will also issue limited time coupons, carry out seconds to kill activities, fan lottery activities to attract fans to buy. These preferential goods are limited time limited, although the broadcast room marketing goods are generally in ten thousand units, but still need to immediately to get, because this discount and affordable goods are too popular. The studio even has genuine discount activities that can buy one get one free at the official price. Some big products that do not reduce prices, and the studio can also get a lot of gifts, creating a preferential effect of buying one free or 500 or even 20% discount. These attractive time-limited discounts are the reasons that many fans cannot refuse to buy. Therefore, the conversion rate of live streaming delivery mode is strong, which can better guide consumers' purchase behavior. The stickiness of core users is high and can promote the development of marketing activities. Live streaming with goods, find live streaming eye, live streaming eye provides full-link live streaming e-commerce solutions, providing customers with brand live streaming agent operation, talent delivery docking, short video production, brand full case marketing and other services.

2.2 Disadvantages

2.2.1 Live with goods is cost-effective relative to consumers

most of the anchor will run, live down sales hundreds of single, is good for them, but for businesses, especially brand merchants, such operation will cause damage to the brand, found products other channels, then continue to live with goods, profits, brand influence gradually decline, form a vicious circle

2.2.2 Products with goods are also very limited

Clothes, beauty makeup, snacks and so on can be sold, but a little more expensive. For

example: With an anchor selling a 2080ti graphics card, would you buy it? Do you dare to buy it? Generally, the price of goods for goods is not very expensive, which is generally between 1 and 200 yuan. Beyond this price, the anchor cannot sell, and consumers will shop around, not necessarily buy in the live streaming room.

2.2.3 Industry norms are not yet in place

Domestic ethos is what the fire makes what, live with goods like many years ago of TV shopping, now just for personal, TV shopping for a few years completely cool, TV shopping is also guaranteed, choose what is reliable, live with goods selection is full of beautiful things in eyes to unsightly, there is no specific industry norms, industry standards, is individuals can go to sell, this caused all kinds of uneven.

2.2.4 The quality of products is worrying, leading to various problems

Give you an example: a factory price 15 unlicensed jeans, a store listed price 199, employees pretend silly on the wrong price change 119, the boss scream at least 129, anchor pet powder bully open price to sell 99, a live down sale 1000, anchor into 20%, get 19800, the boss cry to earn 64200. For example, some time ago very popular some meat brother and so on.

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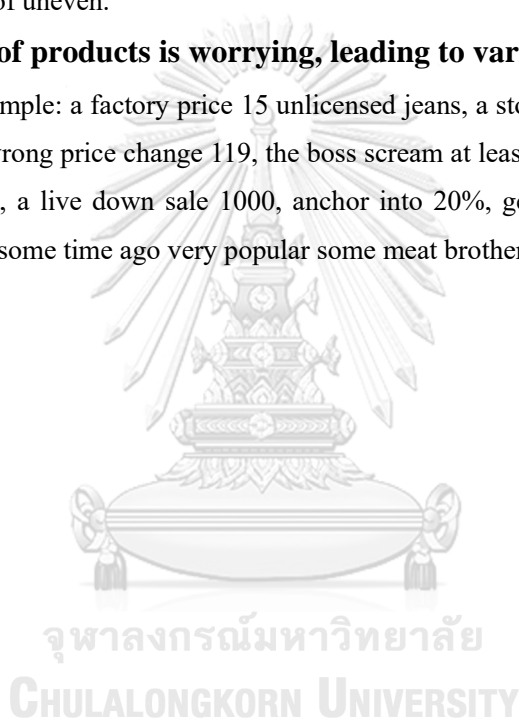
3.Literature review and basic theory

3.1 Literature review

3.1.1 Overview of living streaming with goods

"Live streaming of goods" belongs to the subdivision of the live broadcast industry. Emerging business models that combine live streaming with goods to stimulate consumer behavior. With the rapid development of mobile Internet technology, people can more easily access the new media form of live broadcast, and live broadcast is deeply integrated with the lives of contemporary people (Xing Yuwen, 2020). Liu Yanhua (2020) studied the impact of a live broadcast on public life from the National Well-off Index. Nearly 30% of the interviewees believed that they would be influenced by the host of the live broadcast room when they participated in the live streaming with goods program, resulting in purchase intention or direct participation in the purchase. Compared to TV shopping, live streaming with goods is more promising. However, behind the continued popularity of live streaming with goods, there are also some problems that cannot be ignored. Qi Zhiming (2019) pointed out that false propaganda may occur when anchors display and introduce products in the live broadcast room. The product received by the consumer differs from what displays. Qi Zhiming called on regulators to strengthen supervision to protect the interests of online shoppers.

3.1.2 The influence of living streaming with goods on consumer psychology and behavior

Consumer psychology refers to the psychological activities of consumers in the process of consumption, that is, the process of psychological characteristics and psychological activities during the period from triggering purchase intention to complete consumption activities. Compared with traditional marketing methods, the form of live streaming with goods has multi-faceted and multi-dimensional comprehensive information, can provide consumers with experiential content sharing, and can easily create a live broadcast atmosphere of panic buying, which has a great impact on consumer psychology and the influence of behavior greatly exceeds that of traditional marketing (Li Zhongmei, 2019). Consumers' willingness to continue to use live streaming with goods platform is affected by various factors such as platform characteristics, anchor characteristics, and interaction quality (Zhang Lingchu, 2020). As a marketing method emerging in the new media environment, one of the important reasons why live streaming with goods can be so successful in communication is that it has grasped the psychology of consumers and regards the satisfaction of consumers' psychological needs as a measure of the program with goods. Standard for living streaming. In fact, consumers are in a relatively blind state of consumption psychology in many situations. At this time, in the absence of proper guidance, consumers are likely not to make consumption behavior; and the form of live streaming with

goods can help consumers in their blind psychology. Under certain circumstances, through the introduction and detailed explanation of the product, it helps consumers to understand the attributes and functions of the product, and more importantly, through this process, it affects the satisfaction of consumers' deep psychological needs, thereby improving the success rate of consumer purchase behavior conversion in the live broadcast room.

From the connotation of consumption behavior, consumption behavior refers to the behavior of consumers who choose to buy and consume in order to meet their own material or spiritual need. Based on the SOR model (stimulus-organism-response), on the basis of relevant theories of social psychology and consumer behavior, the factors that affect consumer psychology and consumer behavior in the way of live streaming with goods mainly include interactivity, anchor opinion leader, live broadcast High-quality content, etc. According to the AIDMA marketing theory, the consumer's consumption process can be divided into five stages, in chronological order: attention, interest, desire, memory, action. The consumer's psychology plays a key role in the final consumption decision in the four stages before making a purchase decision; the final consumption behavior is based on the subjective judgment of the consumer's psychology, the consumer's attitude and other factors. Result. External environmental factors and marketing methods are one of the important factors affecting consumer psychology. Consumer psychology can predict the final consumption behavior.

3.2 Literature review of opinion leader

3.2.1 Concept of opinion leader

The concept of opinion leader is discovered and put forward by Lazarsfeld at the beginning, and Lazarsfeld also confirms that opinion leaders will have an crucial impact in the spread of information. Later, he also continue to focus on consumption、trends and practical aspects, which also confirmed the existence of opinion leaders and the crucial role of opinion leaders in affecting the spread of information. Katz and Lazarsfeld think the opinion leaders involved in information spread is more influential and persuasive than the traditional masses, it can change the public concept and view of information in the spread, which makes the communication of interpersonal more crucial. So, opinion leaders in the field of Communication Theory were the first to be studied (Katz E. 1955). Rogers and Cartano think that the public prefers to want opinion leaders to get the valuable information, at the same time, opinion leaders can stimulate consumers attitude to change with evaluation information, but this process is not formal, compared with the general public, consumers trend to believe opinions and views of opinion leaders (Rogers E M 1962). Engle, Blacewell and Kollat think the opinion leaders can have a deep impact on the public. Social media and the rapid development of the internet, which make information spread faster, wider and range, opinion leaders can express their views in many

ways, penetration of field is more diverse, which it also gets more response, according to the information and personal evaluation lead to impact on the public opinion and affect the public attitude and views. So online leaders are gradually becoming attention (Engel J.F. 1995). Yuan chen and Xinyu liu define that the opinion leaders as the network participants that can have some influence in the social network and have the role of information media. Xiaoguang luo and Lulu xi have found that the information transmitted by the opinion leaders is more trust and influential, which spreading faster and wider in the network (Yuan chen and cheng 2015). To sum up, we can see that opinion leaders play a crucial role in influencing consumer purchasing behavior. For example, they are willing to analyze and express some of their opinions and suggestions and they also have some popularity and followers. At the same time, they also have certain professional skills in certain fields, and they also can have an influence on the attitudes, views or behaviors of other people through many media ways (Xiaoguang luo 2012).

3.2.2 Character of opinion leader

The research that characteristic of opinion leaders is relatively extensive from foreign countries. Gatignon and Robertson said that opinion leaders not only have the professional knowledge and skills, but a certain influence (Gatignon H 1985). The Chan and Misra study believes that opinion leaders should be included high product involvement and familiarity, appetite of risk, and personalization of the mass (Chan K K 1990). James H. myers study that it is hard for opinion leaders to have a crucial influence in all leaders, and it just can only affect a particular industry, and could be affected by others. Hyeonjae and Hongchul(1995)show that the opinion leaders have more frequent contact with some relevant product knowledge, information and information on the media platforms than the public; then they are also more willing to explore more relevant information; and they have a higher social status and a wider community. Rogers thought that when interpersonal communication on internet are heterogeneous, the followers tend to find the people who has higher media exposure, higher social status, a broader international macro-vision, and they want to have more connections with the person that has higher innovation. When social culture pays attention to change and innovation, opinion leaders will have more innovation which the followers like; Instead, Innovation is less (E.M. 2003). Fan xinghua(2003)study that the identification of the influence diffusion of the opinion leaders, which will take the activity, attention and the influence as the judge to whether or not opinion leaders can be standard level.

In general, we found that the opinion leaders mainly have three following characteristics
(1) They will have professional ability, knowledge or experience in specific fields.
(2) They will have high activity in social media.
(3) They will have certain influence and lots of followers. And when in the process of live streaming with goods, they will understand or use the recommended products before selling, or

recommend relevant products which based on their own professional field, so they will have a certain professional knowledge and skills (zeng 2011).

3.2.3 Effect of opinion leader

Opinion leaders which due to their personal influence and dissemination of information, and it often influence attitudes of other and decision-making process. The Katz and Lazarsfeld (1995) study that consumers will influence their attitudes because of the opinion leaders intervention, that is the reason that the information of the opinion leaders is more persuasive than in the general public. The Gilly think that the more professional opinion leaders are, the lower the risk which the consumers feel and the greater the willingness to buy the products (Stern B B 1998). Huang Zhuoling and Huang Qinsheng study that in the process of selling products online, the opinion leaders have more influence than the general public influence on consumers, when consumer attitude cognition, and selecting this brand will be very high, the more lasting the cognition of the product, and the opinion leaders can spread feeling of good product, provide a better image for the product (Zhuoling huang 2002). The opinion leaders have a crucial role in promoting and increasing the reputation of products and brands (Zeng Xiaoyang,2011).Research by Alavi, Ahuja and Medury,who bases on an Apple company product survey in social networks, which shows that the consumer networking community can build trust with the opinion leaders and enhance consumer understanding and familiarity on the products (Alavi 2011). Wang Caiyu and Lei Li in the process of studying electronic reputation and market application mechanism study that network opinion leaders often have a crucial influence in the internet community, which have evaluation information about products and its evaluation information can be more widely and quickly spread to other community members, which can influence other members of the consumption decisions at the same time. Even though the development of the internet has made a lot of anchors have lots of similar characteristics with the opinion leaders, there is also lots of intersection between anchors and opinion leaders. So, this article will combine the opinion leaders to analyze the factors that encourage consumers to buy goods in live streaming (Caiyu wang 2013).

3.3 Related basic theory

3.3.1 Perceived usefulness and perceived ease of use

The concept of perceived usefulness first appeared is in research in the field of information systems. Davis, Bagozzi and Warshaw (1998),applied it to the field of information system and proposed the famous TAM(technology acceptance model).The model think that external variables will affect the individual perceived usefulness and perceived ease of use to the system, and then affects the individual attitude when they using the system, then the attitude will influence the behavioral intention and ultimately the use of the corresponding system. And perceived ease of use refers to whether or not it is convenient to operate or use on a certain

product. And this technical acceptance model, perceived usefulness refers to the level of usefulness that the system user feels to himself, while the perceived usefulness is influenced by external variables and perceived ease of use (Xinghua fan 2013), (1988),(1991), (1995)

3.3.2 Trust theory

Deutsch (1962) proposed that trust is a key factor and a necessary condition for cooperation with others. Mayer, Davis and Schoorman (1995) think that trust is a manifestation of a behavioral intent which can reflects an individual affirmation of the behavior of other individuals. Mcallister(1995)divided trust into two level aspects(one is cognitive, the another is emotional)which cognitive trush belongs to subjective trust, which is the individual to other's own social status, ability and information as credibility judgment, this trust cost is low, but the risk is very high. And then cognitive trust is easily affected by other unrelated situations, which has a very high instability; And the trust in the emotional dimension is the emotional basis after a long time or relatively stable relationship, individuals and others take goodwill as the beginning point, thus trust in the emotional dimension is stronger than the cognitive trust, and it is not easy to change the trust by the change of the situation or some events. Dimensions that are very complex are involved in the study of network trust and there is no agreement has been done on which dimensions are included. Trust mainly comes from the credibility characteristics of the recipient, which include dynamism, attraction, trust additional activities which provided by both parties through written, verbal words or other visual way; professionalism; belief (promise and as own obligations);intent; local(the more consistent trust in beliefs, values, the higher the trust, reliability and so on).And most of the other researchers have found that trust includes ability, goodwill, predictability and integrity.

3.3.3 Consumer purchase behavior theory

Consumer purchasing behavior refers to a series activities that consumers are in order to satisfy certain needs include product selection, consumption and use and so on, which also include consumer's inner and subjective attitude and external and objective activities (Philip Kotler,2000).At the same time ,consumer's purchase behavior will have different influence with environmental factors and internal factors. Environmental factors include social factor, economic factor, cultural factor, political factor and family aspects and so on, and internal factors include income factor, lifestyle factor, personal cognition factor and other aspect factors. There are three main kind of models of consumer purchase behavior in research. The first is the rational behavior theoretical model which is proposed by Ajzen and Fishbein, which think that the personal attitude and intention of behave will affect their purchasing behavior (Icek Ajzen 1991). The second is planned behavior theory, which includes five elements: subjective criteria, attitude, perceptual behavior control, behavior tendency and substantive behavior, among which from the first to the third elements are positively related to personal behavior intention; The third is technical

acceptance model that believes that perceived ease of use and perceived usefulness can have a certain influence on consumer behavior intentions and the attitudes. Bowling and Pavlou think that e-commerce environment will take a certain risk, which will have an impact on consumer purchase behavior. Limayem and others (2003) who summarized the online consumer behavior variables through having research in literature, and that include purchasing behavior, purchasing tendency and purchasing attitude, and they also summarized 16 variables which include perceived usefulness, innovation, perceived value, perceived risk, social norms, and so on. In the relevant research on the influencing factors, Cao and Mokhtrian (2005) believes that the characteristics of e-commerce, business characteristics, consumer characteristics and product characteristics of e-commerce play a crucial role. Kuan-Pin and Ruby (2003) point out that the convenience of shopping and product category can affect consumer behavior. Because of the characteristics of online social networking, both cannot talk face to face, which lets it difficult to establish a trust relationship. Gefen points out that enhanced trust between consumers and sellers can effectively promote the consumer purchasing behavior (Matthew K. O. Lee 2001).
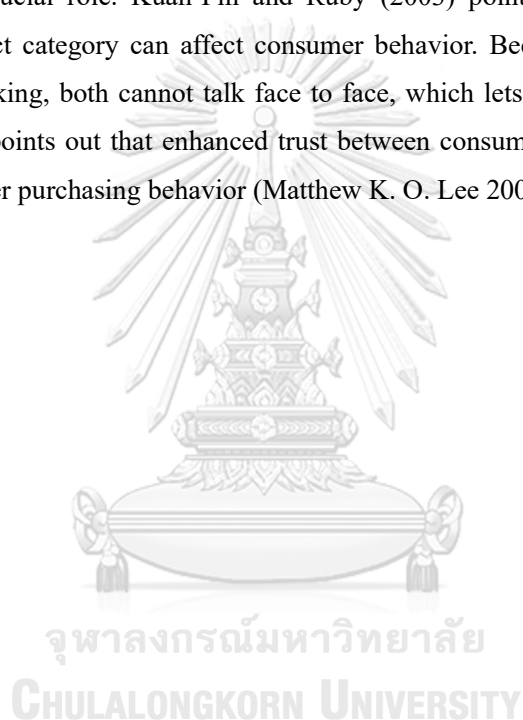
4. Questionnaire design and investigate

The paper uses questionnaire to collect the research data. The procedure of collecting the questionnaire is as following, explain the aim of the survey to the respondents, introduce the research topic, the protection of respondents' privacy to avoid the worries of the respondents and fill in the questionnaire. The questionnaire asked the basic personal information of the respondents, including gender, age, education level, occupation, consumption level to understand the characteristics of the respondents; At the same time, by asking the respondents whether they have the experience of watching e-commerce live broadcast, respondents are screened to improve the accuracy of the questionnaire. The main part is to measure the variables of this study. In order to ensure the reliability of the questionnaire, the theoretical basis of the questionnaire is as follows:

There are many studies to measure the perceived usefulness. Sweeney & Souur put forward the method of measuring the functional value of products by asking seven questions, such as reliable, durable, good workmanship, quality standard and service time. Lapierre improved above questions and measured consumers' evaluation of the functional value of products with four questions: product durability, reliability, product performance and product quality. In conclusion, the paper puts forward the following four question tables:

Variable	Content	References
Perceived usefulness	I can find the goods I want on the live streaming App	(Jillian C Sweeney 2001); (Lapierre 2000)
	Live streaming App can improve my shopping efficiency	
	Compared with traditional shopping websites, they prefer live-streaming platforms with goods	
	The live streaming platform makes my daily life more convenient	

For the measurement of product price discount variable, based on Chan's scale (1996) and referring to the scales of Lin Tong(2017) and (Jiaqi 2019), the paper puts forward the following four items for product price discount:

Variable	Content	References
product price discount	The special price or limited buying of products or services in the live streaming will have an impact on my willingness to buy it	Chan(1996)； Lin Tong(2017); Jiang jiaqi(2019)
	Goods purchased on live streaming are usually more cost-effective than other shopping methods	
	I prefer a live streaming with coupons and rakes and will go and watch it	
	In the process of watching the live streaming with goods, the greater the discount the store made, the stronger my willingness to buy	

Ridings et al (2002) developed a scale including three items: response enthusiasm of others, response enthusiasm of myself and response rapidity; Gouhua Wu (2006) introduces perceived interactivity into online shopping and combine it with the e-commerce shopping situation and perceived interactivity is divided into three dimensions, followed by perceived control, perceived response and perceived personalization. The paper also refers to the scale of Flanagin et al (2001). Based on the mature scale, the paper puts forward the following four items which combines the specific situation of e-commerce live streaming (Sevgin A. Eroglu 2001).

Variable	Content	References
Interactive experience	You can talk with the anchors about the product issues in real time.	Ridings CM(2002)； GouhuaWu(2006); Flanagin et al. (2001)
	In the live streaming, the transaction information sent by the barrage will affect my willingness to buy.	
	The live streaming will issue vouchers, preferential cards from time to time.	
	I think in the live streaming, the host streaming will actively respond to consumer questions.	

(Fei 2012) proposed that opinion leaders have the characteristics of professionalism, product involvement, interactivity and popularity. Combined with the research focus on opinion leaders in the situation of e-commerce live broadcasting mode, the paper puts forward four questions as following:

Variable	Content	References
Opinion leaders	The professionalism of anchors will affect my trust in products	Mengfei (2012)
	I trust the anchors who are very familiar with their products, and the products they recommend	
	The more influential the anchor is in the corresponding professional fields; I will have a certain degree of trust in the recommended products	
	In my opinion, the higher the personal reputation of anchors (high visibility and good reputation, the products recommended during the live streaming are more quality and more guaranteed	

Trust is a multi-dimensional concept. Mayer, Davis and schoolman (1995) proposed that ability, benevolence and integrity are the most commonly used measurement dimensions of trust. Based on the above three measurement dimensions, the paper proposed the trust measurement scale of e-commerce live streaming as following:

Variable	Content	References
Consumer trust	The information of the live streaming and the platform is real and reliable	(Roger C. Mayer 1995)
	The cost of the goods given in the live streaming can be believed	
	The credit rating of the merchants living on the live streaming platform is credible	
	Watching the anchor's introduction of products or services, I will trust products or services	
	Live display of product performance and quality will make me feel that the product quality is more credible	

5. Method

This paper aims to study the main factors affecting consumers' live shopping intention. The research methods are as follows: firstly, the basic characteristics of customers will be analyzed by descriptive statistics to get the overview of consumer samples. Then through the one-way ANOVA method to judge whether there are significant differences in consumers' purchase intention under different customer characteristics, so as to get the main factors affecting consumers' live shopping. Finally, through the method of cluster analysis, classify the customer groups, find the main influencing factors of different classified customer groups, and put forward reasonable suggestions for the customer operation of the live broadcast platform.

(1) Descriptive statistics

The paper uses the method of descriptive statistical analysis to make plane descriptive statistics on the gender, age, income, occupation and education level of customers, so as to get the overall overview of the survey samples.

(2) One way ANOVA

The method of one-way ANOVA will be used to discuss whether there are significant differences in the purchase intention of customers with different gender, age, income, education level and occupation on the live broadcast platform. Through this method, we can find the key factors affecting the shopping in the live broadcast platform.

(3) Cluster analysis

Through sample clustering, customers can be classified, and portraits of different customers can be obtained. According to the classified customer groups, find the ranking of the factors affecting the shopping of the live broadcast platform, so as to get the key factors.

6. Data analysis and empirical study

6.1 Data processing

A total of 691 valid samples were collected in this questionnaire and the data has no missing. Because this article wants to research the factors influencing consumers' willingness to buy on the live streaming, so the non-target samples haven't watched on the platform about live streaming,81 relevant samples are deleted in this time, thus the final effective samples are 610.

6.2 Data analysis

6.2.1 Consumer characteristics analysis

Now, demographic analysis will be done from the five aspects: consumers' gender, consumers, age, consumers' education level, consumers' occupation and consumers' income. At the same time, combined with the relevant factors of the live streaming platform watched by the consumers and the purchasing willingness, and the characteristics of consumers shopping in the live streaming platform will be comprehensively analyzed, which are as follows:

(1) Gender analysis

Table 1-1 gender distribution

gender	frequency	percentage
men	291	47.7%
women	319	52.3%

Among the consumer group surveyed, men accounted for 47.7%, women accounted for 52.3%,and the gender ratio is 1:1,and the gender ratio was basically equal, so the questionnaire results could objective reflect the results of related questions.

(2) Age analysis

table1-2 age distribution

age	frequency	percentage
Under 20	41	6.7%
21-25	264	43.3%
26-30	148	24.3%
31-40	88	14.4%
Over 40	69	11.3%
Total	610	100.00%

In the five age groups, the largest number of consumers are aged 21-25, which are accounting for 43.3% of the total sample size; and second is aged 26-30, accounting for 24.3% of the total sample size; consumers in the 31-40 ages accounted for 14.4% of the total sample; finally, both under 20 and over 40 years old are 11.3% and 6.7%.It shows that the shoppers of the

live streaming platform are mainly young and middle-aged groups. Considering that shopping in the live streaming has appeared in recent years, so the young people very like it. In addition, considering that the shopping needs of a certain economic foundation, that is the reason why fewer people under 20 years old.

(3) Education level analysis

table1-3 distribution of educational level

education level	frequency	percentage
Dr. and above	19	3.1%
Master	107	17.5%
Undergraduate	302	49.5%
Junior college	127	20.8%
High school and below	55	9.0%
Total	610	100.00%

In terms of academic qualifications, most are junior college and undergraduate degree, accounting for 70.3%, followed by master's degree, accounting for 17.5%.Doctor and above accounted for 3.1%,high school and below accounted for 9%.In general, consumers have high degrees, and highly educated people are inclusive for new things, so it is easier to try and accept new ways of shopping for them.

（4）Occupational category analysis
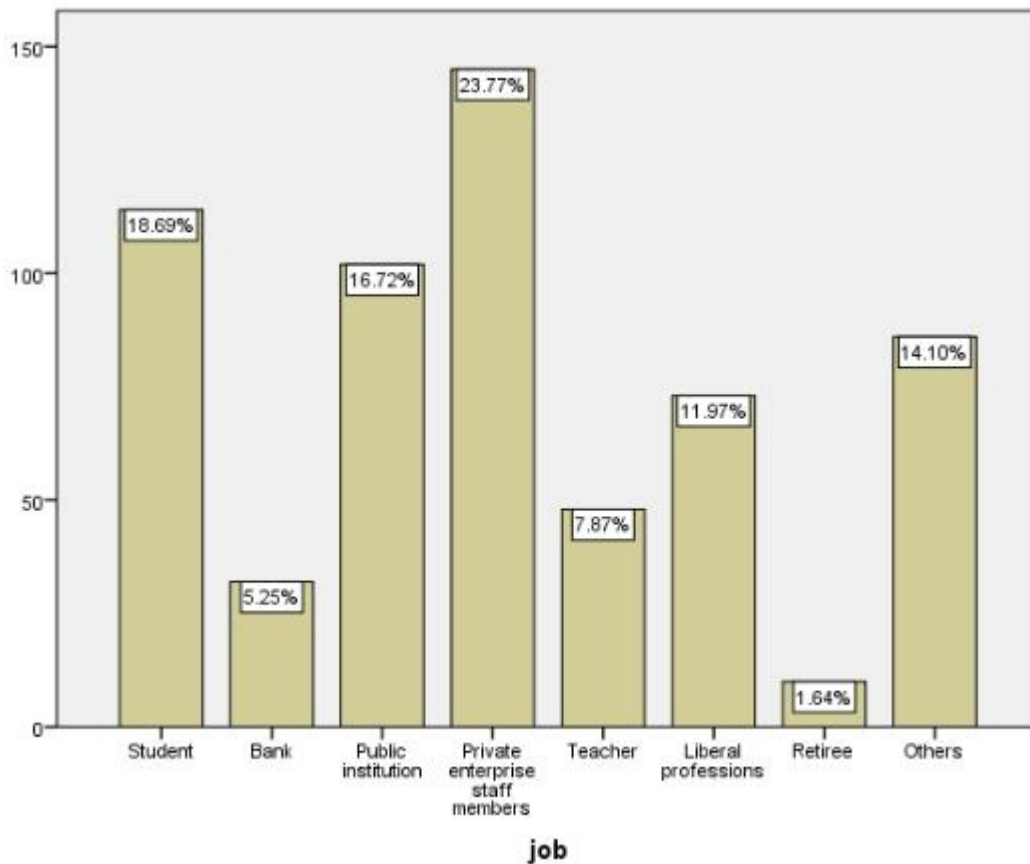
Graph 1-1 occupation distribution

In the consumer occupation survey, private enterprise employees, public institution and students are relatively high,23.77%,16.72% and 18.69%. followed by other occupational and liberal professions 14.10% and 11.97% of the total sample size, and teachers and bank staff, 7.87% and 5.25%, which account for relatively few. The overall occupation distribution is relatively uniform, and private enterprise employees and students have more free time, so they account for a high proportion.

（5）Income analysis

Table 1-4 income level distribution

Monthly disposable money	frequency	percentage
Below 1000yuan	59	9.7%
1001-2000yuan	81	13.3%
2001-3000yuan	113	18.5%
3001-5000yuan	131	21.5%
More than 5001yuan	226	37.0%
Total	610	100.00%

In the monthly disposable amount survey of consumer groups, there is a trend of increasing as the proportion of the monthly amount is increased, among which the monthly disposable amount of more than 5,001 yuan accounted for the highest proportion(37.0%).Considering that shopping in the live streaming needs a certain economic basis, in addition, there are more daily unnecessary goods for selling in the live streaming, so it is reasonable for people with higher income to occupy a high proportion.

（6）Distribution of live streaming platforms
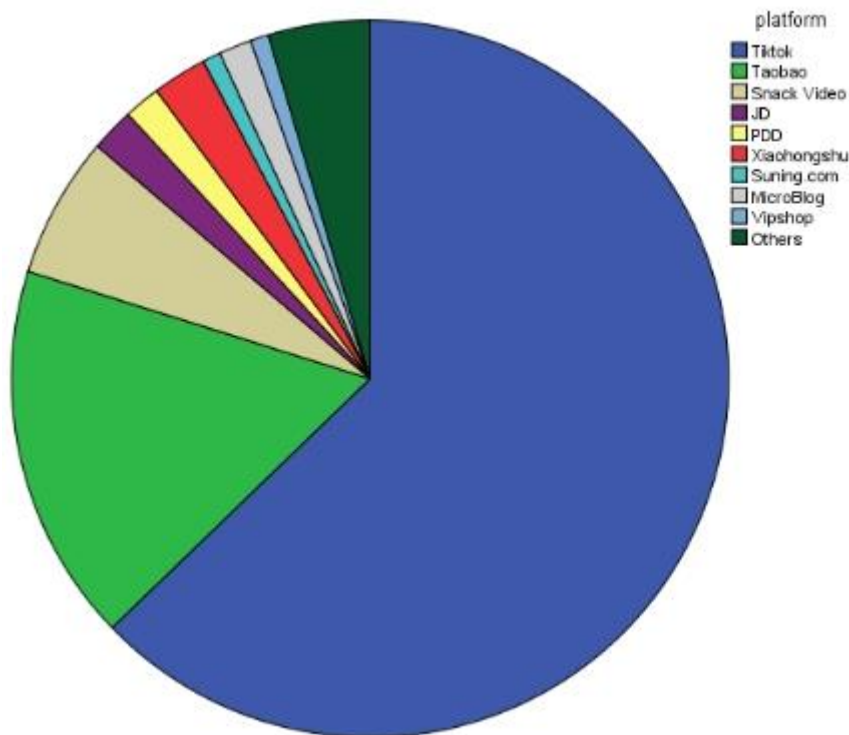
Graph 1-2 distribution of live streaming platforms

In the distribution survey of live streaming platforms watched by consumers, it shows a obvious concentrated trend. Tiktok has more than half of its percentages, followed by Taobao and Snack Video.And other platforms accounting for less than 3%. Considering that the Tiktok is mainly short video, the development of live streaming has a clout base. Taobao is the main online shopping platform which also accounts a certain percentage.

6.2.2 Difference analysis of consumer's willingness to buy

（1）Differential analysis of gender on consumers' willingness to buy

According to Table 1-5 results, there is no significant difference in gender which is in consumers' willingness to buy. And P-value is 0.419, greater than 0.05,so gender is not a key factor affecting consumer willingness to buy.

Table 1-5 One-way ANOVA table of gender for consumer purchase willingness

	Quadratic sum	Degree of freedom	Mean square	F	significance
Between-column	0.489	1	0.489	0.654	0.419
Inter-group	454.586	608	0.748		
Total	455.075	609			

（2）Difference analysis of age on consumer willingness to buy

According to the results of Tables 1-6, there is no significant difference in age about willingness to buy. And P-value is 0.315, greater than 0.05,so age is not a key factor affecting willingness to buy.

Table 1-6 One-way ANOVA table of age for nature conservation awareness

	Quadratic sum	Degree of freedom	Mean square	F	significance
Between-column	3.547	4	0.887	1.188	0.315
Inter-group	451.528	605	0.746		
Total	455.075	609			

（3）Difference analysis of consumers' willingness to buy

According to Table 1-7 result, different occupations show significant differences in consumer willingness to buy, and P-value is 0.02 which is less than 0.05, so occupation is a key factor affecting consumer willingness to buy. According to the average chart, students、private

enterprise staff members、liberal professions、retiree、others are less willing to buy, and less willing to buy for working in bank、public institution and teacher.

Table 1-7 One-way ANOVA table of occupation to consumer willingness to buy

	Quadratic sum	Degree of freedom	Mean square	F	significance
Between-column	12.339	7	1.763	2.397	0.020
Inter-group	442.737	602	0.735		
Total	455.075	609			

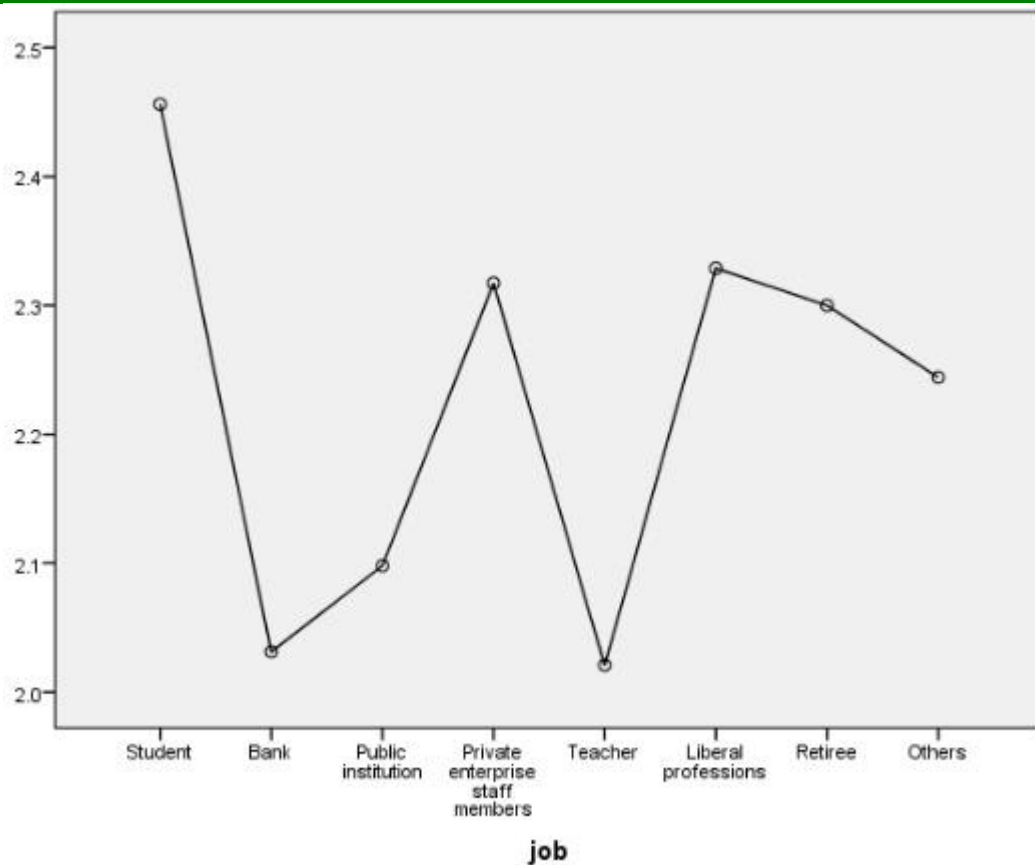
Chart 1-3 Average chart of consumer willingness to buy across occupation

（4）Differential analysis of education level on consumer willingness to buy

According to the results in table 1-8, there are no significant difference in consumer willingness to buy, P-value is 0.524,which is greater than 0.05,so education level is not a key factor affecting consumers' willingness to buy.

Table 1-8 One-way ANOVA table of occupation to consumer willingness to buy

	Quadratic sum	Degree of freedom	Mean square	F	significance
Between-column	2.403	4	0.601	0.803	0.524
Inter-group	452.672	605	0.748		
Total	455.075	609			

（5）Differential analysis of income level on consumers' willingness to buy

According to the results of table 1-9, there are significant differences in consumer willingness to buy, P-value is 0.038,which is less than 0.05,so the income level is a key factor affecting consumers' willingness to buy. According to the average figure, consumers with income levels between 1001 and 2000 yuan and between 3001 and 4000 yuan are willing to buy, while consumers between 2001 and 3000 yuan are less willing to buy.

Table 1-9 One-way ANOVA table of income levels on consumer purchase willingness

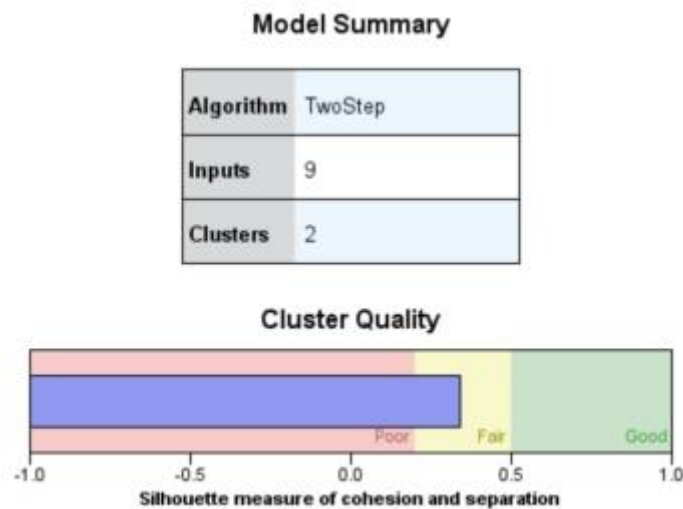|	Quadratic sum	Degree of freedom	Mean square	F	significance
Between-column	7.554	4	1.889	2.553	0.038
Inter-group	447.521	605	0.740		
Total	455.075	609			
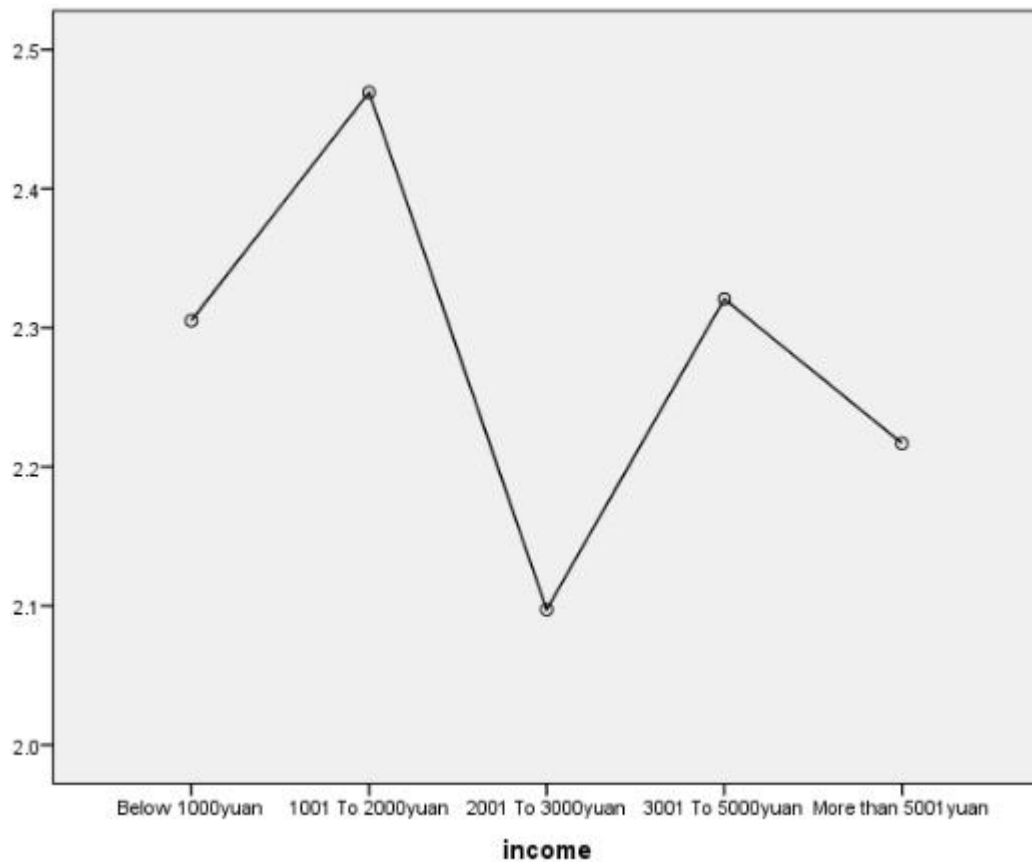
Graph 1-4 Average graph of consumer willingness to buy across different income levels

Element's analysis of consumers' willingness to buy

      Now the characteristics of the live streaming platform are decomposed, which including perceived usefulness、 perceived ease of use、 product price concessions、 interactive experience、 opinion leaders、 platform reputation、 consumer trust and consumer willingness to buy, about this eight aspects through the second order clustering analysis of customer characteristics, and find the main influencing factors of shopping in the live streaming.

First of all, consumers are divided into two categories according to the model analysis results shown in graph 1-5. The classification quality is fair, indicating that the classification results have a certain credibility.

Model Summary

Algorithm	TwoStep
Inputs	9
Clusters	2

Cluster Quality

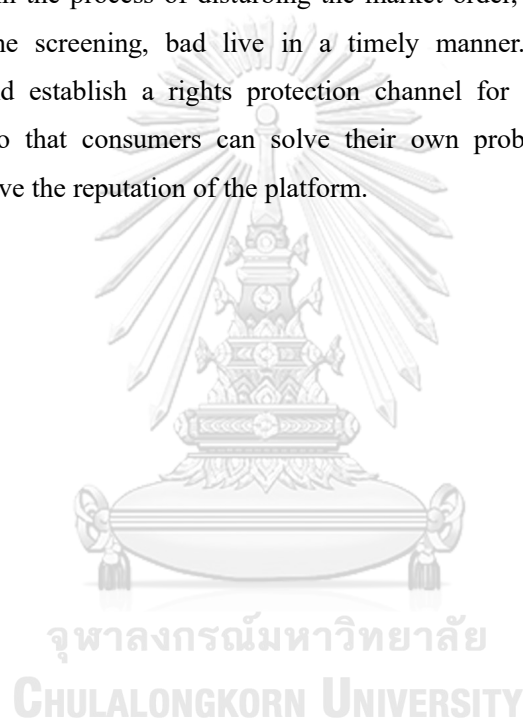Silhouette measure of cohesion and separation

Graph 1-5 Summary of the second-order clustering model

According to the summary graph of cluster characteristics in graph 1-6, it is noted that the first category of the live streaming platform factors are sorted as interactive experience> opinion leaders> commodity price> discount> platform reputation> consumer trust> perceived ease of use> consumers' purchase willingness> consumer willingness to buy> perceived usefulness. The second category of customers focus on the live streaming platform factors sorted for platform reputation> opinion leaders> consumer trust> Perception of ease of use> Interactive experience> Commodity price> Price discount> Consumer willingness to buy> Perception of usefulness.

The first type of customers pays more attention to the real-time interactive experience with anchors and trust the goods recommended by anchors. Interactivity affected the trust of customers positively and perceived functional value of the product, and the quality of content is the most important factor affecting consumers' trust, perceived functional value and perceived emotional value. Products are the core of e-commerce live streaming with goods. In the process of watching e-commerce live streaming, the most important purpose of consumers is to understand the products, communicate with other consumers to ask questions through in the live streaming, and understand that products are the core request of consumers. Therefore, in the procedure of e-commerce live streaming, anchors should learn about the product in advance, interpret ability concisely, show the characteristics efficiently and perform the product function, answer consumer questions in time, provide consumers with more information than just graphic information, show product highlights and help consumers make shopping decisions. In addition, they should strive to introduce knowledge of product,

so that consumers can not only meet the shopping needs, but also gain more additional emotional value, such as gratification and happiness. Providing consumers with high-quality live streaming content can not only enhance consumer stickiness and trust the brand, products and anchors more but also can customers perceive the functional value of the product efficiently and produce emotional value such as a sense of interest and pleasure to the product. The second category of customers pay attention to the reputation of the platform and trust the goods recommended by anchors. To strengthen the maintenance of such customers, from the electricity live platform, on the one hand, the platform to set a scientific and sound access threshold, in advance to merchants and anchor qualification audit, supervision and training, avoid in the process of disturbing the market order, on the other hand also to live content real-time screening, bad live in a timely manner. E-commerce live streaming platforms should establish a rights protection channel for live streaming, shopping and consumption, so that consumers can solve their own problems more quickly, so as to gradually improve the reputation of the platform.

Clusters

Input (Predictor) Importance
1.0 ☐0.8 ☐0.6 ☐0.4 ☐0.2 ☐0.0

Cluster	2	1
Label		
Description		
Size	61.8% (377)	38.2% (233)
Inputs	platform reputation 2.26	intertactive experience
	opinion leader 2.52	opinion leader 1.22
	consumer trust 3.30	price discount 1.18
	ease to use 2.22	platform reputation 1.25
	intertactive experience	consumer trust 1.56
	price discount 2.28	ease to use 1.38
	willing to buy 1.81	willing to buy 1.27
	usefulness 2.18	usefulness 1.52

Graph 1-6 Cluster feature summary plot

7. Conclusion and prospect

7.1 Research conclusion

(1) The main age group of customers on the live shopping platform is 21-30 years old, accounting for 65% of the customer group, followed by more than 30 customers, which is mainly related to customers' ability to accept new things. In terms of education level, undergraduate courses and colleges account for nearly 70%. The occupation distribution is relatively uniform, and there is no relatively concentrated customer group distribution. In terms of income, the main group is the group with an income of more than 5000 yuan. Therefore, the main group of live shopping is people with higher income.

(2) In terms of consumers' purchase intention, there is no significant difference in purchase intention among consumers of different gender, age and education level. However, occupation and income level will significantly affect consumers' purchase intention. In terms of career, students, private enterprise staff members, library professionals, retiree, others are less will to buy, and less will to buy for working in bank, public institution and teacher According to the average figure, consumers with income levels between 1001 and 2000 yuan and between 3001 and 4000 yuan are willing to buy, while consumers between 2001 and 3000 yuan are less will to buy

(3) There are two types of customers in the living streaming platform. The first type of customers pays more attention to the real-time interactive experience with anchors, and more trust the goods recommended by anchors. The second category of customers pay more attention to the reputation of the platform and trust the goods recommended by anchors. To strengthen the maintenance of such customers, from the electricity live platform, on the one hand, the platform to set a scientific and sound access threshold, in advance to merchants and anchor qualification audit, supervision and training, avoid in the process of disturbing the market order, on the other hand also to live content real-time screening, bad live in a timely manner. E-commerce live streaming platforms should establish a rights protection channel for live streaming, shopping and consumption, so that consumers can solve their own problems more quickly, so as to gradually improve the reputation of the platform.

7.2 Strategic suggestion

(1) Introduce product effectively and precisely. Products are the core of e-commerce live broadcasting. The main purpose of consumers is understanding the products, which is the core appeal of consumers. By asking questions to the anchor through the bullet screen and communicating with other consumers, customers can understand that products better and improve the willing to buy products. Therefore, the anchor should understand the products in advance and improve the interpretation ability, display the abilities of the products efficiently, answer the questions of consumers timely, provide consumers with more information, highlight the highlights of products and assistant consumers to make decisions efficiently. In addition, we should strive to

introduce more relevant knowledge in the product field to consumers, so that consumers can buy better products and gain additional emotional value at the same time. Through the process of providing consumers with materials rich in living content, consumers would enhance stickiness and trust the brand, products and anchors more. In the process of the anchor's product introduction, customers can perceive the functional value of products efficiently and have additional values such as interest and pleasure in products.

(2) Realize the importance of opinion leaders and create influential anchors. Consumers trust the product and brand when there are influential, popular, professional opinion leaders in the brand. Therefore, when choosing cooperative anchors, brands and businesses have a certain popularity and influence. Anchors with strong professionalism in the product field can more attract consumers. Through personal influence endorsement, consumers can enhance their sense of trust in products, more strongly perceive the value of products and enhance the trading volume of products. At the same time, self-broadcasters should also value the importance of anchors' cultivation and create influential anchors. Firstly, starting from professionalism, improve professional training of anchor, and improve their understanding of products and product fields. In addition, we should position the image, taste and other personal characteristics of the anchor, spread it with the help of social media, and enhance the influence of the anchor. In terms of e-commerce platforms, businesses should also be provided with live learning opportunities to make the live ecology of the whole platform develop in a healthier direction.

(3) Give appropriate discounts and provide high-quality products. At present, major e-commerce live broadcasting rooms are stimulating users to buy through low-cost modes such as live broadcasting exclusive, but the degree of stimulation of these benefits to users is gradually becoming saturated. In contrast, consumers are more concerned about the quality and cost performance of the goods themselves. On the one hand, businesses should formulate more flexible and diversified preferential strategies for live broadcasting rooms. For example, in addition to price concessions, you can also take gifts, full discounts, coupons and other activities; Carry out promotional activities in combination with specific festivals such as double 11. On the other hand, when broadcasting live, businesses should focus on the introduction of products, not only in the way of preferential promotion to stimulate consumers to buy. Consumers may buy impulsively only because of preferential promotions, but it will also lead to a high return rate. Even consumers will be dissatisfied with brands, businesses and anchors due to quality problems, resulting in a decline in customer satisfaction, which is not conducive to the long-term development of e-commerce live broadcasting.

7.3 Research prospect

This study empirically analyzes and demonstrates the factors of consumers' willing of purchase in the broadcasting plane. Because purchasing products in the live broadcasting is still an emerging thing, there are few influential relevant research literatures. This paper has certain limitations, which lead to some deficiencies, but provides information and conclusions for follow-up to research.

First, there is not too many datasets in the sample. Because the e-commerce live broadcasting begun to develop rapidly in the past few years, the number of people who has related purchase experience is still limited. The questionnaire is mainly filled in online. There are 691 questionnaires collected, of which 610 are valid. The number of samples is small. In the later research, we could increase the sample size with the help of big data to get more universal and specific conclusions which could represents the population.

Secondly, the design of questionnaire has some limitations. The Likert scale is a standard measure of degree. Considering that there may be few samples that would be collected and the subjective willing would have a great impact on the results, this paper adopts the way of questions to correspond to different degrees and let consumers to check in questions. This method can reduce subjective questions to a certain extent, but it also makes the questionnaire less universal to a certain extent. This is the limitation of the questionnaire, which leads to the limitation of the statistical methods used later. The structural equation model cannot be used to measure the relationship between multiple independent variables and multiple dependent variables, which should be improved in the later research.

Finally, the statistical power of the model should be strengthened. The fitting degree of the theoretical model proposed in this study is only within the acceptable range. In the future, we can adjust the variables and modify the model through further research to enhance the explanatory power and matching degree of the model.

According to the above limitations, this paper makes the following suggestions for the future study:

First, increase sample size and collect data diversity. In the future study, we could increase the scope of samples, not only can we collect samples in the internet, but also use the way of random interception on the street to fill in the questionnaire offline, so as to enrich the number of samples. Ensure that the sample covers respondents at different levels of occupation, age and education, so as to make the research results more objective and reliable.

In addition, explore influencing variables and modify the model in the future. Consumers' purchase intention is a comprehensive embodiment under the influence of different conditions, which is a complex process. In the future, with the further development of e-commerce live broadcasting, we can continuously enrich the influencing factors, refine the research content and conduct research by category, so as to increase the pertinence and effectiveness of the research results.

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