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Configuration Analysis of Factors Influencing the Sales Performance of Live Streaming E-commerce based on the fsQCA Method

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ABSTRACT

The commercial value of live-streaming e-commerce is enormous. It is no longer sufficient to focus on individual elements that create value. It is urgent to explore more meaningful combinations of factors to improve sales performance. Based on previous research on live streaming e-commerce and the fuzzy set qualitative comparative analysis method (fsQCA), this article analyzes the configuration of factors that cause high and low sales of goods through data collected online and summarizes several propositions. This study enriches the relevant theory of live-streaming e-commerce and aims to guide brand enterprises in improving the effectiveness of live-streaming e-commerce and consumers' experience by adjusting product selection and live-streaming strategies.

Keywords: Fuzzy set qualitative comparative analysis, live streaming e-commerce, configuration analysis, mixed methods, Oriental Selection.

INTRODUCTION

Since 2016, live-streaming e-commerce functions have been launched on platforms such as Kuaishou, Douyin, and Taobao, and with the popularity of top anchors such as Li Jiaqi and Oriental Selection, they have gradually become known to people. During the epidemic in 2019, live-streaming e-commerce took the fast lane of development and became the most commonly used shopping method for many people who were isolated at home. Although the impact of the epidemic has gradually decreased, due to the convenience provided by live-streaming e-commerce for consumers and the shopping experience that traditional online shopping cannot compare, the live-streaming shopping habits developed by consumers during their stay at home are still retained. Live streaming e-commerce is still growing at a high rate, and it is estimated that the industry scale will approach 5 trillion yuan by 2023. Live-streaming e-commerce has huge business potential, but the question of how to make live-streaming e-commerce achieve the best sales performance remains to be solved.

Currently, scholars' attention to this new sales model of live-streaming e-commerce mainly focuses on the consumer perspective, exploring the factors that influence their consumption willingness and behavior (Wang Yi, 2023; Chen, C. C., & Lin, Y. C.,2018; Yin, S.,2022; Fei, M., Tan, H., Peng, X.,2021). Some scholars focus on the internal mechanism and find that the psychological contract of consumers when they shop in live streaming e-commerce plays an important role in their short-term consumption willingness(Wang Yi,2023). In terms of antecedent variables, Chen, C. C., & Lin, Y. C.(2018) found that factors such as the flow experience in live streaming e-commerce can affect consumers' willingness to consume. In addition, when the live streamer has a high level of relevant professional knowledge, consumers tend to believe that the information is more credible and are more willing to follow the opinions of the live streamer (Fang, Y.-H.,2014) and interaction between anchors and consumers (Fei, M., Tan, H., Peng, X., Wang, Q., & Wang, L.,2021) have also been verified. Yin, S. (2022) found that consumers are influenced by a series of situational factors such as peer pressure when shopping in live streaming e-commerce. Tong, J.(2017) found that the vividness, interactivity, and authenticity of live streaming enhance consumers' purchase intention by influencing their sense of immediacy and trust.

In summary, the factors that affect consumer behavior are diverse, but most of the existing literature considers the mechanism of their effects from a single perspective. This has caused difficulties for enterprises and live-streaming practitioners to test various influencing factors comprehensively. Currently, analyzing the relationship between conditional variables and outcome variables from a multi-causal perspective based on configurational analysis has important practical significance. In addition, existing research mainly uses more subjective questionnaire surveys and less objective data to explore the configurational effects of various different elements in the complex scenario of live-streaming e-commerce.

Therefore, this study takes the top live streaming e-commerce anchor "Oriental Selection" as the research object and uses the machine learning mixed fsQCA method to compare and analyze the combination of seven research variables related to product sales performance to explore the key elements or combinations of elements that can improve live streaming e-commerce sales performance, such as from the perspective of the overall live streaming event(product type, product price, etc.) feedback given by consumers in live streaming e-commerce situations (such as likes, gifts, comments, etc.), and answer the question of how to adjust live streaming e-commerce strategies from the perspective of merchants to better improve live streaming e-commerce effects.

Specific research questions include:
RQ1: Are there differences in live streaming strategies for different types of products?
RQ2: How to adjust product prices and live streaming duration to improve product sales performance?
RQ3: How to increase product sales performance by guiding interaction between consumers and live streaming?

LITERATURE REVIEW

Elaboration Likelihood Model (ELM) Theory

ELM is an effective tool for Internet consumer information processing and decision-making processes(Petty, R. E., & Cacioppo, J. T,.1984), first proposed by American psychologists Richard E. Petty and John T. Cacioppo. The model believes that individuals process information through the central route and peripheral route, depending on their motivation and ability to process information. Previous studies have suggested that the more relevant an issue is to people, the more they rely on factual arguments and are less likely to believe the source of the news; on the other hand, in issues of low involvement, people are more likely to rely on the source of the news and are less concerned about whether the factual arguments are true (Petty, R. E., Cacioppo, J. T., & Schumann, D.,1983). The central route refers to when individuals have the motivation and ability to focus on information, they will think deeply about the persuasive communication information and form an attitude of agreement or disagreement. The peripheral route represents that individuals are unwilling or unable to think carefully about the arguments in persuasive communication and form an attitude influenced by surrounding clues.

Based on existing research and the ELM model, this study classifies seven variables into central route and peripheral route variables, exploring how specific factors in these two categories of variables are combined to affect the sales performance of live streaming e-commerce. Considering the specific situation of live streaming e-commerce, this study believes that the central route variables are the attributes related to the product that consumers receive. Therefore, this study sets the central route as the type of product, the price of the product, and the number of comments from consumers about the product; This study believes that the peripheral route variables are the attributes related to the perception of the anchor the live streaming. Therefore, the peripheral route is set as the duration of the product live broadcast, the number of likes, the number of gifts, and the number of comments from consumers about the anchor (Cheung, C. M., Lee, M. K., & Rabjohn, N., 2008; Lee J, Park D H, Han I., 2008; Park D H, Kim S., 2007; Park D H, Lee J,2008).The following is a detailed explanation of the relevant variables:

Central Route Variables

Type of Product

Previous research has shown that product type can have an impact on online consumers' decision-making (Jimenez F. R., Mendoza N. A.,2013; Xiao B., Benbasat I., 2011). Currently, the classification of live-streaming e-commerce products is usually based on search attributes into experience products and search products. Experience products require consumers to experience them to perceive their value, such as food and services; search products are products whose quality can be known through their parameters before consumers use them, such as electronic products and daily necessities. Because consumers have different perceptions of the value of these two types of products, it is believed that consumers' consumption motivations for them in the context of live-streaming e-commerce are not the same. Therefore, different product types should have different sales strategies.

Price of Product

During e-commerce live streaming, consumers may come across products of varying prices, such as tissues at relatively low prices and televisions at relatively high prices. Since the monetary loss incurred by an erroneous decision when purchasing a high-priced product is greater, consumers tend to perceive a higher level of risk when making such decisions.(Blankertz, Donald & Cox, Donald.,1969). (Campbell, M. C., & Goodstein, R. C,2001) found that the higher the perceived risk of a product, the more cautious consumers are, and the more they pay attention to risk mitigation. In traditional e-commerce, businesses often use low-price promotions to attract consumers. In the context of live streaming e-commerce, promotions and cost-effectiveness are still important strategies for businesses. Previous research has shown that the reasonable application of price marketing strategies can strengthen transaction and relationship contracts with consumers and enhance consumer stickiness (Wang Yi, 2023). Therefore, it is believed that the price to some extent affects the sales of live-streaming e-commerce.

Number of Comments from Consumers about the Product

Previous research has the impact of visual reviews on consumers' purchase intention in e-commerce (Lin, T. M., Lu, K. Y., & Wu, J. J., 2012). However, previous research usually classified the bullet screen comments based on emotions into positive and negative categories, without studying the classification of bullet screen content from the perspective of the anchor and the

product as two different viewpoints. In bullet screens, consumers' comments on the product can intuitively reflect their real feedback and preferences for purchasing the product, indirectly reflecting the popularity of the product.

Peripheral Route Variables

Duration of the Product Live Broadcast

In previous studies, scholars have included live streaming duration as a relevant variable for live streaming sales performance (Shen Xiao, Lü Jun,2023). The extension of the duration of the product live broadcast in live streaming e-commerce allows the anchor to provide more detailed explanations about the product and convey more information to consumers. However, a long broadcast may also make consumers feel bored with the live-streaming content, causing them to lose interest and their attention to decline, thereby affecting the sales of the product.

Number of Likes

The number of likes is the total number of likes that a product live broadcast receives from consumers throughout the process, which can reflect consumers' love for the live streaming. In social settings, people convey emotions such as encouragement, care, and support to other network participants through likes (Rebecca A. Hayes, Caleb T. Carr & Donghee Yvette Wohn, 2016). The number of likes obtained during a product live intuitively reflects the degree of customer love for the product and the live streaming event. Generally speaking, the higher the number of likes obtained during a live-streaming event, the higher the sales performance of the product.

Number of Gifts

Similar to likes, when consumers feel happy with the live-streaming experience, they may reward the anchor through gifts. The number of gifts reflects consumers' affirmation and appreciation for the live streaming, and they are usually more willing to purchase the live-streaming product, thereby creating higher sales performance.

Number of Comments from Consumers about the Anchor

While watching the live streaming, consumers can interact with the anchor in real-time, and directly speaking in the chat box is the most convenient way to interact. The more comments consumers make about the live streaming, the deeper their perception of the live streaming characteristics. Previous research has shown that an anchor's physical attractiveness, social attractiveness, and professional ability influence consumers' intentions to follow the anchor's suggestions and recommend the anchor to others during live streams. (Zhu, L., Li, H., Nie, K., & Gu, C.,2021). Therefore, this study selects the number of comments from consumers about the anchor to represent the degree of attention to the anchor as one of the peripheral routes. Overall, the above research suggests that several factors related to live streaming sales of products and the the perception of the anchor the live streaming may be correlated with high or low performance in live streaming e-commerce. The set of conditions explored in this study is detailed in the following hypothesis.

Hypothesis 1: Both product factors (such as type of product, price of product, and number of comments from consumers about the product) and the perception of the anchor the live streaming factors (such as duration of the product live broadcast, number of likes, number of gifts and number of comments from consumers about the anchor) are related to the high or low performance of live streaming e-commerce.

It should be emphasized that according to related research (De Crescenzo, V., Ribeiro-Soriano, D. E., & Covin, J. G.,2020), the causal recipes associated with low performance in live streaming e-commerce may not be a simple opposite of those associated with high performance, but may involve completely different recipes. However, in the absence of strong prior knowledge about the effects of configuration , it is difficult to determine how the recipes associated with high and low performance in live streaming e-commerce may differ. Therefore, based on these observations, we propose a second hypothesis.

Hypothesis 2: Different recipes are associated with the high or low performance of live streaming e-commerce.

DATA AND METHODOLOGY

Data Preparation

This study focuses on the "Oriental Selection" live streaming room on the Douyin platform. More than 50 hours of live-streaming data were collected from October 2022 to February 2023, and each time the live-streaming of the anchor's product marketing was extracted as a data sample. Three types of data were collected through third-party network live streaming data collection software: the number of comments, likes, and gifts from consumers; four types of data were recorded through manual methods: the type of product, price, total sales, and duration of the live broadcast. Finally, the BERT algorithm was used to classify the number of comments from consumers into two categories: "comments from consumers about the anchor" and "comments from consumers about the product." A total of eight data variables were obtained, including product type, product price, duration of the product live broadcast, number of likes, number of gifts, number of comments from consumers about the product, number of comments from consumers about the anchor, and total sales. A total of 500 samples were collected, and to avoid the influence of extreme values on the analysis results, the 50 samples with the highest sales and the 50 samples with the lowest sales were removed. Finally, 400 data samples were used for the QCA configurational analysis.

Table 1: Descriptive statistics of each variable.

	Maximum value	Minimum value	Mean value	Variance
the type of product(binary variable)	-			
Product price	788	9.9	81.3	4768.3
Duration of live-streaming demonstration by the anchor(s)	620	66	220	5620
Number of likes	500	46	184.5	4642
Number of gifts	1845	81	396.8	59355.9
The number of consumer comments on the product.	1239	9	121.8	14786.6
The number of consumer comments on the anchor.	1562	13	160.3	43639.8

Data Processing and Classification

Classification of Comment Data

In order to classify comment data as accurately as possible from the perspective of the commenting consumer, this study uses the BERT algorithm, which is currently more advanced in the field of NLP (Natural Language Process) text classification (Li Xiangdong, Sun Qianru, Shi Jian,2023) and uses an 80% training set and 20% test set to train the algorithm. First, 2000 comments from consumers about the product and 2000 comments from consumers about the anchor were manually labeled. After manually labeling some of the data, the labeling is shown in Table 2.

Table 2: Comment Labels.

Consumer comments on the product.	Consumer comments on the anchor.
Why is there no more stock available?	Oriental Selection is really cost-effective.
This fish is delicious!	Mingming is really handsome.
Is there still any sheep milk available?	The anchor is so funny.
Can pregnant women eat it?	That was an excellent speech.
How many are in one pack?	The air of self-confidence and knowledge is evident in one's bearing.
……	……

After training the BERT algorithm and testing the test set, the test results were an accuracy rate of acc=0.955 and f1=0.951, indicating that the algorithm accurately classified the comment data into "comments from consumers about the product" and "comments from consumers about the anchor."

EXPERIMENTAL PROCEDURE

Variable Calibration

Based on variable type, QCA can be divided into crisp set qualitative comparative analysis (csQCA), multi-value qualitative comparative analysis (mvQCA), and fuzzy set qualitative comparative analysis (fsQCA). The characteristics of the aforementioned result variables and conditional variables determine that the fsQCA method is more suitable for this study. fsQCA defines the degree of membership of the set by calibrating the original data, and then converts the fuzzy set data into a truth table, which has the dual advantages of qualitative and quantitative analysis.

This study determined the 95th percentile value, 50th percentile value, and 5th percentile value (Ragin C. C,2009) as the completely membership point, cross point, and completely non-membership point, respectively. Among them, the product type is a binary variable and does not need calibration. Based on the three critical values, the result variables and conditional variables were calibrated, and the variables were converted into set concepts. By assigning values to the original data, a truth table was finally formed, and the calibration points for each variable are shown in Table 3.

Table 3: Variable Calibration.

Variable Type	Variable	completely membership point(95%)	Crosspoint(50%)	completely non-membership point(5%)
Result	Sales	35377.2	8643	2376
Conditional variable(Central route condition)	Product Type(binary variable)	Experience product is 1； Search product is 0		
	Product Price	198	59.9	19.9
	Number of consumer comments on the product	337	86	26
Conditional variable(Peripheral route condition)	Duration of ive-streaming demonstration	0.004028	0.002396	0.001377
	Number of likes	314	175	92
	Number of gifts sent during the live-streaming	833	342	152
	Number of consumer comments on the anchor	554	89	24

Model Analysis and Interpretation

Necessary Condition Analysis

In fsQCA, necessary condition analysis is used to test whether the result depends on a single variable, and the relationship between the result variable and the conditional variable can be judged by two indicators: consistency and coverage. Generally, when the consistency is greater than 0.9, it indicates that the conditional variable is a necessary condition. The necessary condition results of a single conditional variable in this study are shown in Table 4.

Table 4: Necessity Analysis.

Conditional variable	Consistency	Coverage
Experience product	0.808869	0.433520
Search product	0.191131	0.442533
High product price	0.660012	0.604868
Low product price	0.675547	0.559900
High number of consumer comments on the product	0.764583	0.741731
Low number of consumer comments on the product	0.588425	0.464457
High duration of live-streaming demonstration	0.794298	0.703044
Low duration of live-streaming demonstration	0.546732	0.468125
High number of likes	0.789000	0.718497
Low number of likes	0.557789	0.464982
High number of gifts sent during the live-streaming	0.805759	0.763047
Low number of gifts sent during the live-streaming	0.574718	0.462832
High number of consumer comments on the anchor	0.720646	0.725113
Low number of consumer comments on the anchor	0.625221	0.479509

From the results, none of the variables reached the ideal level of consistency of 0.9, indicating that no variable can be a necessary condition for the result variable. This suggests that the above variables need to work together through synergistic effects to promote sales in the context of live-streaming e-commerce. Individual factors have a weak impact on sales, so further configurational analysis of the conditional variables is needed to explore the configuration conditions that lead to high or low sales performance of the product.

However, the consistency of the central route experience products and the peripheral route number of gifts both exceeded 0.8, indicating that these two indicators have a relatively high impact on increasing sales of the product.

Configurational Analysis and Results

Configurational analysis is the core of the QCA method, and its purpose is to explore the impact of different combinations of antecedent conditions on the result. The criterion for judging the configuration is the consistency level. Based on previous research and the fact that this study had a large sample size of 400 samples that eventually entered fsQCA, the consistency threshold was set to 0.8, and the frequency threshold was set to 2. According to previous research (Pappas, I. O., & Woodside, A. G, 2021;Du, Y., & Jia, L.,2017), the PRI threshold for exploring high-performance configurations was 0.75, and the PRI threshold for exploring low sales was 0.5. A truth table was constructed, and the simple solution and intermediate solution for high and low sales configurations were obtained, respectively.

The results of the configuration analysis are summarized in Tables 5 and 6.

Table 5: High Sales Revenue

Antecedent Conditions	High Sales Revenue Configuration					
	H1	H2	H3	H4	H5	H6
Type of roduct	●	●	●	⊗		
Product price				⊗	⊗	●
Number of comments on the product from consumers	●	●	●	⊗	●	⊗
Duration	●		●	●		●
Number of likes	●	●	●		●	●
Number of gifts	●	●		●	●	●
Number of comments on the anchor from consumers		●	●		●	●
Consistency	0.861017	0.870394	0.869243	0.850174	0.887333	0.865375
Coverage	0.499107	0.458277	0.443305	0.0702561	0.427235	0.323525
Unique Coverage	0.0630584	0.00783181	0.00725663	0.0144544	0.018888	0.0450922
Consistency of the solution	0.837065					
Coverage of the solution	0.667435					

Table 6: Low Sales Revenue Configuration.

Antecedent Conditions	Low Sales Revenue Configuration			
	NH1	NH2	NH3	NH4
Type of product		●	●	●
Product price			ⓧ	●
Number of comments on the product from consumers	ⓧ	ⓧ		ⓧ
Duration	ⓧ	ⓧ	ⓧ	
Number of likes	ⓧ	ⓧ	ⓧ	ⓧ
Number of gifts	ⓧ	ⓧ	ⓧ	ⓧ
Number of comments on the anchor from consumers	ⓧ		ⓧ	ⓧ
Consistency	0.938698	0.939062	0.92654	0.94315
Coverage	0.566051	0.487594	0.385087	0.329089
Unique Coverage	0.112226	0.0337692	0.0244952	0.0163745
Consistency of the solution	0.914953			
Coverage of the solution	0.64069			

Note: ● means the core condition exists, ⓧ means the core condition is missing, ● means the peripheral co-ndition exists, ⓧmeans the peripheral condition is missing,and blank indicates that the condition is not important to the cofiguration and is notstudied. For product type, ● represents experience products, and ⓧ represents search products.

Results Interpretation

Interpretation of Necessary Condition Analysis Results

As shown in Table 3, the consistency of two antecedent conditions, experience products and high number of gifts, exceeded 0.8, while the consistency of search products was only 0.191. Compared with search products, experience products have greater unknowns in terms of quality and brand. Therefore, experience products need to eliminate the unknowns in the minds of consumers through behaviors such as the anchor's marketing and trial during the live streaming, and stimulate consumers' willingness to purchase through the anchor's personal charm.

Proposition 1: The live-streaming e-commerce scene is more conducive to the growth of sales of experience products.

Interpretation of High Sales Configuration Results

The consistency of the configuration results obtained in this study was greater than 0.8, indicating that they can be considered good configuration results.

For experience products, there are three configurations, H1, H2, and H3, that leads to high sales results. There is no significant difference in product price for this product category. The horizontal analysis of the three configurations shows that they all have the same core condition, which is the number of comments and likes for the product.

As shown in Table 4, the three configurations differ in only one antecedent condition, namely, the number of comments from consumers about the anchor for H1, the duration of the live broadcast for H2, and the number of gifts for H3. It can be inferred that these three antecedent conditions can be replaced by each other in the process of achieving high sales of experience products in the live-streaming e-commerce context, as long as two of the three are present.

Proposition 2: In the live streaming e-commerce context, for experience products to achieve high sales, the central antecedent condition of the number of comments on the product and the peripheral antecedent condition of the number of likes must both be present. On this basis, the peripheral antecedent conditions of the number of comments from consumers about the anchor, number of gifts, and duration of the live broadcast can be mutually substituted.

For search products, there is only one configuration, H4, that leads to high sales. High sales of search products are often accompanied by low product prices, and the antecedent condition of comments on the product is missing, with only the duration of the live broadcast and the number of gifts present as antecedent conditions. The reason may be that consumers can easily perceive the value of search products through online comparisons and searches on different platforms, so search products often need to have a price advantage to attract consumers. Similarly, when it is easy to compare the quality of the product, consumers do not need to interact with the anchor to understand the product information, and their willingness to interact with the anchor will correspondingly decrease.

Proposition 3: When purchasing search products in live streaming e-commerce, consumers tend to buy low-priced products, and their willingness to interact with the anchor will decrease.

Paths H5 and H6 reveal the reasons for high sales of different product types from the dimensions of low price and high price. The difference is that for the low-priced product configuration H5, the antecedent condition of consumer evaluation of the product exists, but the duration of the live broadcast is not important. For the high-priced product configuration H6, achieving high sales requires more comments from consumers about the anchor and longer product marketing from the anchor, but fewer comments from consumers about the product. The reason may be that when consumers purchase high-priced products, they need to trust the anchor's personal charm and trust in the anchor, while for lower-priced products, consumers are more concerned about the opinions of other consumers about the product. In previous research (Botha, E., & Reyneke, M.,2016), scholars have pointed out that social presence has an influence on online purchase intention and online trust, but the relationship between social presence and purchase intention is moderated by the type of online product.

Proposition 4: When consumers purchase high-priced products in the live-streaming e-commerce context, they need longer product marketing time from the anchor and more comments from consumers about the anchor, while low-priced products require more opinions from other consumers about the product.

Interpretation of Low Sales Configuration Results

The low sales configuration results first reveal that, under the premise of not limiting product type and price (NH1), the absence of antecedent conditions such as duration, comments, likes, and gifts can lead to low sales results. The other paths reveal different configuration results under the premise of differences in antecedent conditions of product type and price for experience products with no price requirement (NH2), low price (NH3), and high price (NH4).

NH2 has missing antecedent conditions for product comments, duration, likes, and gifts. NH3 has missing antecedent conditions for duration, likes, gifts, and comments about the anchor. NH4 has missing antecedent conditions for product comments, likes, gifts, and consumer comments about the anchor. Comparing the three configuration paths, it can be concluded that when consumers have high comments about low-priced experience products, they may also have lower sales; when the duration of the live broadcast for high-priced experience products is extended, it may also result in low sales; when consumers have high comments about the anchor for experience products, they may also have lower sales.

Robustness Test

According to previous research (Hofstad T,2019), robustness testing is a necessary process of the QCA method, and common methods include adjusting the consistency threshold, PRI consistency threshold, and frequency threshold to observe whether there are significant changes in the configuration results.

In this study, the consistency threshold was adjusted to test the robustness of the configuration results. The consistency threshold was adjusted from 0.8 to 0.7, and the results of high and low performance were consistent with the configuration results obtained before the adjustment. Therefore, it is considered that the research results obtained in this study have good robustness.

MAIN CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Theoretical Contributions

This study has the following theoretical contributions. It is different from previous research that focuses on the impact of single factors on consumer shopping intentions in live-streaming e-commerce. Through the method of configuration analysis, this study analyzed different product types and prices from a multi-factor perspective and proposed different conclusions, similar to the use of digital live streaming in the tobacco industry (Pan Yigai, Tang Anni, Huang Liying, and others,2023).

For the first time, the study classified bullet screen text based on content to represent consumers' attention to different subjects in the live streaming room. Previous research on the independent variable of consumer impulsivity has mainly used

questionnaires to investigate, while this study used recording methods to record the consumption amount of products to represent consumers' willingness to shop, which is more objective.

This study introduced ELM theory into the research field of live-streaming e-commerce and proposed that in the context of live-streaming e-commerce, consumers use product information as the central route and the message brought by the anchor as the peripheral route, expanding the application scope of ELM theory.

Managerial Implications

The conclusions of this study can guide product selection, live streaming marketing process, and comment guidance in live streaming e-commerce management.

For product selection, the main focus should be on experience products such as food, with search products such as daily necessities as a supplement. Pay attention to the price of the product, and for search products, pay attention to attracting consumers to buy through promotional low prices.

For the live streaming marketing process, anchors should consciously spend more time on high-priced products, and for experience products and high-priced products, they should pay attention to interaction with consumers about the anchor's personal aspects to use the anchor's personal charm and credibility to attract consumers to purchase. However, for experience products, attention should be paid to conversation skills with consumers during live streaming, otherwise, it may lead to situations where time is invested but no return is received. For search products and low-priced products, the duration of the live-streaming marketing has a negative impact on sales performance, and the live-streaming marketing time should be appropriately reduced.

In terms of comment guidance, currently, in the live streaming room's comment area, live streaming staff guide comments, but mostly warn about violations and call on consumers to pay attention to the live streaming room. When explaining search products, we should relatively suppress the discussion of product attributes by consumers, and when explaining high-priced products, the staff should consciously lead discussions around the anchor.

Limitations and Future Research Prospects

This study has some limitations：

This study selected "Oriental Selection" as a typical example of live streaming for information collection. However, on various platforms, many "internet celebrities" can earn considerable sales not because of the quality of the products but because of their high popularity, attracting consumers to purchase products through their trust in the anchor. The conclusions of this study may not explain the reasons for these situations. In future research, more different live streaming categories need to be distinguished.

This study selected the number of likes and gifts to represent consumers' satisfaction with the live-streaming experience and proposed that gifts are a different form of consumption behavior from purchasing products, but this study did not clarify the similarities and differences between these two different antecedent conditions. From the results, high gift numbers did not have a suppressive effect on consumer behavior. In future research, it is necessary to further clarify the psychological conditions in which consumers engage in liking and gift-giving behaviors and how to influence consumers' purchasing behavior.

When focusing on bullet screens, this study used the number of bullet screens to represent consumers' attention to the anchor or product, but did not clarify whether this attention is positive or negative. In future research, the bullet screen text classification can be refined through a secondary classification of anchor-product and positive-negative, so as to explore the mechanism of how consumers' use of bullet screens affects their willingness to purchase more comprehensively.

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