Development of Live Broadcast Management Model of Fresh Fruit E-commerce for Consumers' Online Purchase in Guangxi, China.

Liu Yanbo [1] *E-mail: 23256734@qq.com*
Sirigarn Phokheaw [2]* *E-mail: luknam756@gmail.com*
Nukul Sarawong [3] *E-mail: kul.srw@hotmail.com*
Natdanai Singkhleewon [4] *E-mail: mar6666@hotmail.com*
Sombat Teekasap [5] *E-mail: sombat.teekasap@gmail.com*

[1] *Doctoral candidate, Graduate School, Bansomdejchaopraya Rajabhat University, Thailand*

[2, 3, 4, 5] *Graduate School, Bansomdejchaopraya Rajabhat University, Thailand*

Corresponding Author. E-mail : luknam756@gmail.com

Abstract

The objective of this research is to develop a live broadcast management model of fresh fruit e-commerce for consumers' online purchase in Guangxi, China. The first step was to study the elements of live broadcast management of fresh fruit e-commerce for consumers' online purchase in Guangxi by interviewing 12 live broadcast experts. The second step was to evaluate consistency of the elements of live broadcast management of fresh fruit e-commerce for consumers' online purchase in Guangxi by another 17 experts. The third step was to create and evaluate the live broadcast management model by another 6 experts. The data analysis methods included frequency, percentage, median, quartile, mean, and standard deviation.

After the above three steps were completed, the following results were obtained: At Step 1, the elements of live broadcast consisted of 8 elements with 46 dimensions; At Step 2, from the appropriate elements, 43 items were retained, 3 items were deleted and 12 texts were revised; and at Step 3, the live broadcast management model was drawn in an appropriate manner, which consisted of 3 contents with 11 classifications, all of which were totally accepted by the experts.

Keywords: Elements; Live Broadcast Management Model; Fresh Fruit E-commerce

Introduction

In recent years, as a new social media based on video, live broadcast has become a global socio-economic phenomenon. With the continuous development of Internet technology in China and people's increasing demand for entertainment, the live broadcaster delivery mode, brings consumers a more intuitive and vivid shopping experience. With its high conversion rate and good marketing effect, it has gradually become a new growth impetus for e-commerce platforms and content platforms.

CCTV Finance (2023) reported that the rapid rise of e-commerce and live broadcast platforms has enabled everything to carry goods live. Live e-commerce has become a popular track for online marketing, meeting people, seeing things and interacting. By June 2023, the number of online shopping users in China reached 884 million. The number of live e-commerce users reached 526 million, and the penetration rate continued to increase. In 2022, the Ministry of Commerce focused on monitoring the cumulative number of live broadcasts of e-commerce platforms to exceed 120 million, with over 1.1 trillion people watching, over 95 million live products and nearly 1.1 million active live Broadcaster. According to estimates, in 2022, the total amount of live e-commerce transactions in China was about 3.5 trillion yuan, with a year-on-year growth rate of 48%. In 2023, the total transaction volume is expected to exceed 4.5 trillion yuan, among which the transaction volume of fruit commodities accounts for a relatively large proportion, which provides a foundation for the development of fruit live broadcast.

With the rapid growth of the e-commerce live broadcast industry, it has become an indispensable bridge between consumers and businesses, attracting widespread attention. Renowned domestic scholars Xie Ying et al. (2019) describe e-commerce live broadcast as an emerging social group in which businesses or their employees use live broadcast platforms to showcase products to consumers in the form of trial and experience sharing, effectively promoting consumer clicks and purchases. With the continuous development of the e-commerce live broadcast industry, we have reason to believe that e-commerce live broadcast will play a more important role in the future e-commerce market.

Jia Weiqiang and Pan Jinwen (2023) pointed out that agricultural product live broadcast e-commerce has become an important part of live broadcast e-commerce with the support of national policies and consumers. Xia Zhihua and Luo Weiyi (2023) believed that physical enterprises can expand brand promotion and influence based on live broadcast marketing.

Fu Duanxiang and Gao Xiang (2023) believe that the live broadcast shopping method is convenient and fast, and the products are cheap and high quality, which are highly favored by consumers. Live broadcast of agricultural products not only brings the most direct and effective solution to the problem of unsalable agricultural products, but also provides great help for the development of China's rural revitalization strategy, bringing new economic development opportunities to rural areas.

Wang Yi (2023) pointed out that in the context of e-commerce live broadcast, consumers' ultimate purchase decisions are influenced by the professionalism of the anchor. In addition, live broadcast e-commerce has visible and intangible pain points, and the anchor can use their own quality characteristics to enhance users' confidence and recognition of the product, thereby effectively breaking through the perceived pain points of "intangible" products in live broadcast e-commerce

According to the China Rural Network (2023), the sales of Guangxi's live fruit products have developed rapidly. In 2022, the fruit planting area in Guangxi has exceeded 20 million mu, with a total output exceeding 30 million tons. The output has reached 3.08 million tons, ranking first in the country for five consecutive years. Among these goods, there are 18 million tons of citrus products, which account for one-third of the country's goods. Persimmon, dragon fruit, passion fruit and other products are among the top in China. Mango, banana, lychee, longan second in the country. Peach, plum, pear, grape and other fruits are also widely planted.

How to improve the conversion rate of live broadcast of fresh fruits in Guangxi and promote the sustainable and healthy development of the live broadcast market of fresh fruits in Guangxi is an urgent problem that major enterprises need to solve. However, existing research has focused on the subjective quality of live broadcast, the development of online game live broadcast applications, online education, and viewing motivations. Currently, there are few studies on online live shopping behavior, lacking theoretical modeling and empirical analysis of the mechanism of action of online live shopping behavior, and lacking exploration of the degree and mechanism of action of key factors in online live broadcast. Based on the above-mentioned practical background and the lack of theoretical research, this research, through expert interviews and expert evaluation, clarified the elements of live broadcast management for Consumers' online purchase in Guangxi, created and evaluated a live broadcast management model for Consumers' online purchase in Guangxi. Generally speaking, this research has important reference significance for Guangxi fresh fruit e-commerce live broadcast merchants to improve live broadcast efficiency, increase sales, improve service methods, and meet core demands.

Research Methodology

According to literature review, there are 8 questions that make up the interview including live broadcaster analysis, fruit goods display and consistency, live broadcast scene, price setting, live broadcast process, sales services, logistics services and branding. Evaluate the interview form through the objective consistency index (IOC) of experts.

The first step is study the elements of live broadcast management of fresh fruit e-commerce for consumers' online purchase in Guangxi through interviews four groups of experts: group of 3 e-commerce live broadcast presentations with more than 3 years of operation, group of 3 live broadcaster with over 2 years of experience in live broadcast fresh fruits and a fan base of over 10000,group of 3 e-commerce management personnel with over 2 years of experience in live broadcast management of fresh fruits, and group of 3 senior business live broadcast consumers with more than 10 live shopping experiences of fresh fruits. On the basis of collecting in-depth interview records from experts, based on the interview outline, summarize the opinions of 12 experts, and analyze and summarize the opinions to obtain the elements of live broadcast management of fresh fruit e-commerce for Consumers' online purchase in Guangxi. The elements of live broadcast management require frequency value More than 6 and percentage value more than 50%.

The second step is evaluate the elements live broadcast management model of fresh fruit e-commerce for consumers' online purchase in Guangxi by four groups of experts: group of 2 modeling experts with associate professor titles or above, group of 5 e-commerce live broadcast experts with over 3 years of management experience, group of 5 live broadcast marketing experts with over 3 years of experience, and group of 5 successful e-commerce live broadcast entrepreneurs with annual sales of over 5 million RMB for two consecutive years. The collected element evaluation forms are summarized and statistically analyzed, and Mdn and IQR methods will be used to analyze the data. The evaluation result requires a median value of 3.50 and above and an interquartile range of 1.50.

The third step: to create and evaluate the live broadcast management model of fresh fruit e-commerce for consumers' Online Purchase in Guangxi. Evaluate the live broadcast management model through 3 groups of experts: group of 2 e-commerce live broadcast experts with a professorship or above; group of 2 live broadcast marketing experts with more than 3 years of live fresh fruit e-commerce experience and group of 2 successful e-commerce live broadcast entrepreneurs with annual sales of more than 10 million RMB for 3 consecutive years. Calculate the frequency value of experts and summarize the feedback of experts. The evaluation results need frequency value equal to or higher than 5.

Results

1. Results of 12 experts interviewed and analysis for finding elements of live broadcast management of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi.

Results of 12 experts interviewed and analysis for finding elements of live broadcast management of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi can be summarized as shown in table 1.

Table 1 Results of 12 experts interviewed and analysis for finding elements of live broadcast management of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi.

Issue that	Live broadcast management analysis	Freq	%	Mn	IQR
Live broadcaster analysis					
1	Live broadcaster with realism	12	100.00%	5	0
2	Live broadcaster with good communication and interaction with consumers	12	100.00%	5	1
3	Live broadcaster with the knowledge and ability to host	11	91.70%	4	1
4	Live broadcaster with professional knowledge of oral communication	10	83.30%	4	1
5	Live broadcaster with professional knowledge of performing arts	10	83.30%	4	1
6	Live broadcaster with deep knowledge of the fruit goods sold	10	83.30%	4	1
7	Live broadcaster supported by the member teams such as operation, field control and short video shooting	8	66.70%	4	1
Fruit goods Display and Consistency					
1	Colorful fruit goods display that can attract consumers' attention	12	100.00%	5	0
2	A detailed display of fruit goods	11	91.70%	5	1
3	A full display of Fruit goods	11	91.70%	5	1
4	The size of the fruit goods on the live display should be consistent with the size of the fruit goods received by the consumers	10	83.30%	4	1
5	The freshness of the fruit goods displayed live is consistent with the freshness of the fruit goods received by the consumers	10	83.30%	4	1
6	The taste of the fruit goods stated by the Live broadcaster is consistent with the taste of the fruit goods received by the consumers	10	83.30%	4	1

Table 1 Results of 12 experts interviewed and analysis for finding elements of live broadcast management of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi. (Continued)

Issue that	Live broadcast management analysis	Freq	%	Mn	IQR
Live broadcast scene					
1	Select a Live broadcast scene background that reflects the original ecology	11	91.70%	5	0
2	Select the Live broadcast scene background that reflects the source of the goods	11	91.70%	5	1
3	Set up Live broadcast scene with mobile phones, supports, lighting fixtures and other equipment	8	66.70%	4	1
4	Set up Live broadcast scene in a relatively quiet place	8	66.70%	4	1
5	More than 5 square meters are required for Live broadcast scene construction	7	58.30%	3	2
Price setting					
1	Equal to or lower than the price of mainstream competitive goods on live broadcast platforms	12	100.00%	5	1
2	Price setting in a tiered manner based on different packaging materials	11	91.70%	5	1
3	Price setting in a tiered manner based on purchasing different weight specifications	11	91.70%	5	1
4	If consumers buy back more than 5 times, they can negotiate with customer services privately	8	66.70%	4	1
5	If consumers buy more at one time, they can negotiate with customer services privately	8	66.70%	4	1
Live broadcast process					
1	Select the target consumers to live in more online time slots	12	100.00%	5	1
2	Sales promotion activities that can attract consumers can forecast the warm market	11	91.70%	5	1
3	Including information about the origin and price of fruit goods	11	91.70%	5	1
4	Including the introduction of product information such as taste, quality of fruit goods and after-sales service	11	91.70%	4	1
5	Emphasize the selling points that are beneficial to the consumers, so that the consumers will have the purchasing motivation	10	83.30%	4	1
6	Attractive promotion activities to guide consumers to purchase	10	83.30%	4	1
Sales services					
1	Pre-sales services with fruit goods picture introduction	12	100.00%	5	1
2	Pre-sales services with quoted prices for Fruit goods	11	91.70%	5	1
3	Pre-sales services with Fruit goods purchase links	11	91.70%	5	1

Table 1 Results of 12 experts interviewed and analysis for finding elements of live broadcast management of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi. (Continued)

Issue that	Live broadcast management analysis	Freq	%	Mn	IQR
4	Timely reply to customer services consultation and on-sale services	10	83.30%	4	1
5	After-sales service with compensation or refund if bad fruit is received	10	83.30%	4	1
6	After-sales service with reissue if missed	9	75%	4	1
Logistics services					
1	Logistics services for delivery within 24 hours	11	91.70%	5	1
2	Logistics services that arrive within 4 days	11	91.70%	5	1
3	Effectively Protect the Logistics Packaging of Fruit goods	11	91.70%	5	1
4	Door-to-door logistics services	9	75.00%	4	1
5	To help consumers to buy logistics insurance	7	58.30%	3	2
Branding					
1	Have brand marks such as the name and logo of the live broadcast room	11	91.70%	5	1
2	Brand reputation with 95% favorable evaluation rate	11	91.70%	5	1
3	There is a brand promotion of high-quality short video drainage	11	91.70%	5	1
4	Brand promotion for buying live platform traffic	8	66.70%	4	1
5	Advertise on new media platforms such as AAuto Quicker and Xiaohongshu for brand promotion	8	66.70%	4	1
6	Advertising in TV, newspapers and other traditional media for brand promotion	7	58.30%	3	2

The elements of live broadcast management of fresh fruit e-commerce for Consumers' online purchase in Guangxi are obtained by interviewing. includes 8 contents: live broadcaster analysis, fruit goods display and consistency, live broadcast scene, price setting, live broadcast process, sales services, logistics services, branding.

Annotate:

In this research, all live broadcasts refer to live broadcasts on mobile phones.

Live broadcaster analysis refer to live broadcaster or anchor, is one of the elements that affect fresh fruit e-commerce for consumers' online purchase.

The price of mainstream competitive goods on live broadcast platforms are collected and counted by specialized research institutions such as Mother Cicada and Tiktok huge amount of Sichuan, and enterprises only need to spend a small amount of money to get reliable competing products prices.

2. The Improvement of live broadcast management elements of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi.

From the analysis and evaluation of live broadcast management elements of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi by experts to find the median (Mdn) and interquartile range (IQR). On a per item basis, the results of the data analysis appear in table 2. There are 43 items with a median value of 3.50 and above and an interquartile range of 1.50 and below is valid and needs to be preserved; 3 items with a median value of 3.50 below and an interquartile range of 1.50 above is invalid and needs to be deleted. Items to be deleted are: more than 5 square meters are required for live broadcast scene construction, to help consumers to buy logistics insurance, advertising in TV, newspapers and other traditional media for brand promotion.

The experts suggested that the text of live broadcast management elements of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi, should be revised in order to make the elements more consistent and complete. which summarizes the improvement results as in the table 2.

Table 2 Experts' suggestions on Items changes

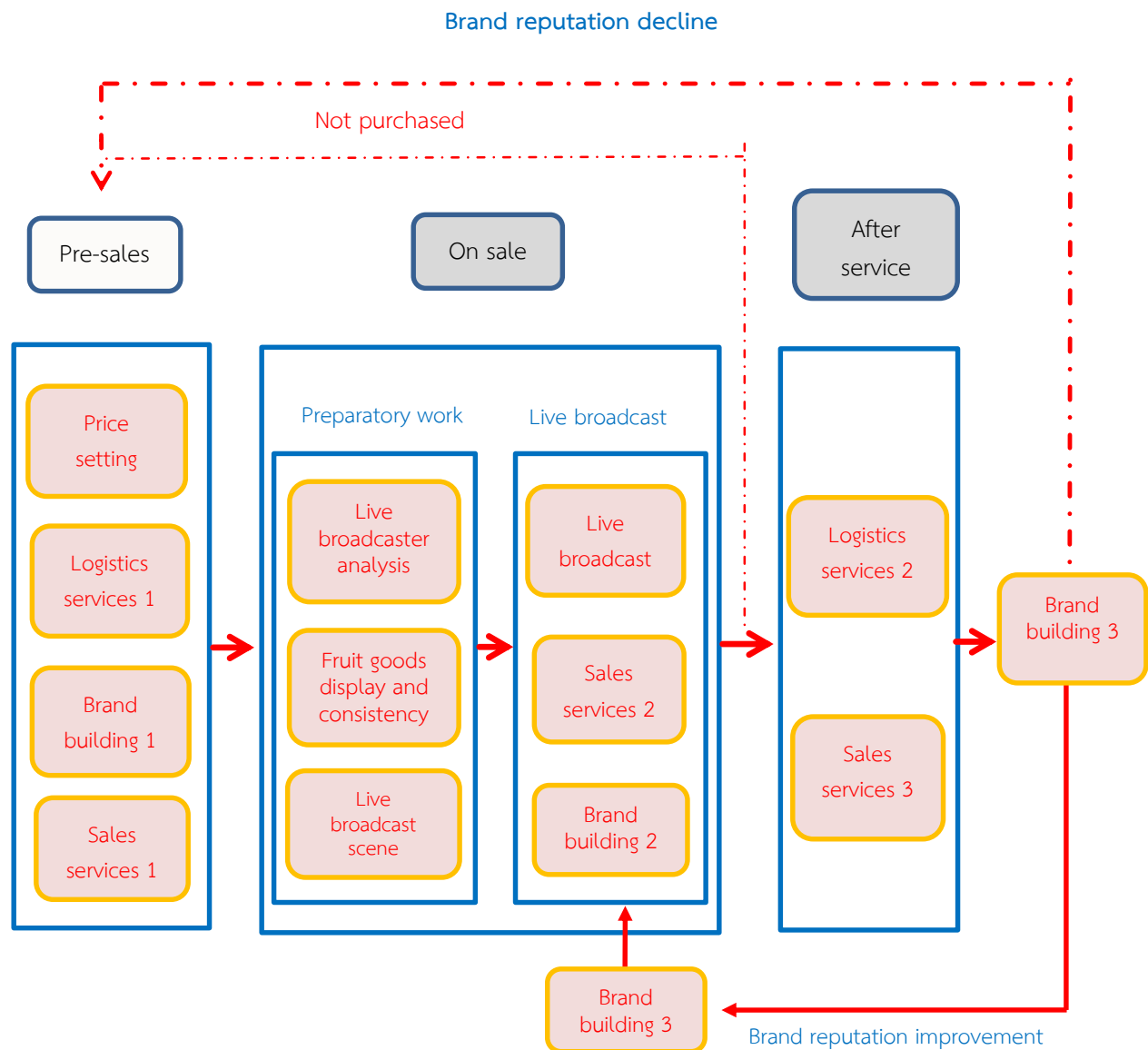| The elements of live broadcast management of fresh fruit e-commerce on consumers' online purchase in Guangxi	
Original Item	New Item
Live broadcaster analysis	
Live broadcaster with realism	Live broadcaster with a sense of honesty and realism
Live broadcaster with deep knowledge of the fruit goods sold	Live broadcaster with deep understanding of the knowledge and selling points of the fruit goods sold
Fruit goods Display and Consistency	
A detailed display of fruit goods	A detailed display of fruit goods that enables consumers to generate purchase incentives
A full display of fruit goods	Full display of fruit goods that can bring trust to consumers
Live broadcast scene	
Set up Live broadcast scene in a relatively quiet place	Set up Live broadcast scene in a place below 60 decibels

Table 2 Experts' suggestions on Items changes. (Continued)

The elements of live broadcast management of fresh fruit e-commerce on consumers' online purchase in Guangxi	
Original Item	New Item
Price setting	
Equal to or lower than the price of mainstream competitive goods on live broadcast platforms	Slightly lower than the price of mainstream competitive goods on live broadcast platforms
If consumers buy back more than 5 times, they can negotiate with customer services privately	If consumers buy back more than 3 times, they can negotiate with customer services privately
Live broadcast process	
Including the introduction of product information such as taste, quality of fruit goods and after-sales service	Including the introduction of fruit goods information such taste, quality, after-sales service and logistics service
Sales services	
Pre-sales services with fruit goods picture introduction	Pre-sales services with fruit goods information introduction
Timely reply to customer services consultation and on-sale services	On sale, reply to the customer's inquiry within 3 minutes
Logistics services	
Logistics services that arrive within 4 days	Logistics services that arrive within 2-4 days
Branding	
There is a brand promotion of high-quality short video drainage	Brand promotion with high-quality short videos that attract consumers to watch

After 12 experts' interviews and 17 experts' evaluations, 3 items were deleted, 12 items were revised according to experts' opinions, and a total of 8 live broadcast management elements with 43 dimensions were obtained.

3. Results of create and evaluate the live broadcast management model of fresh fruit e-commerce for consumers' online purchase in Guangxi

According to the above research results and the sales process, the following live broadcast management model of fresh fruit e-commerce for consumers' online purchase in Guangxi is designed, as shown in Figure 1.

Figure 1. Live broadcast management Model of fresh fruit e-commerce for consumers' online purchase in Guangxi

Model Explanation:

3.1 Pre-sale

Pre-sale includes 4 tasks: Price setting, Logistics services 1, Branding and Sales services 1, which need to be done well before sale.

Price setting is mainly based on market competition; Logistics services 1 is mainly the formulation of logistics services rules; Branding 1 mainly includes 2 contents: Make brand marks such as the name and logo of the live broadcast room; Sales services 1 mainly includes pre-sales services in sales services.

3.2 On sale

On sale, including 2 tasks: Preparatory work and Live broadcast. The Preparatory work includes 3 contents: Live broadcaster analysis, Fruit goods display and consistency, and Live broadcast scene, which are essential elements of live broadcast, and we need to prepare them before the live broadcast begins; Live Broadcast contains 2 contents: Live broadcast process and Sales services2.

Live broadcaster analysis, the main work is to choose a suitable Live broadcaster; Fruit goods display and consistency, including 2 contents: Fruit goods display and fruit goods consistency; Live broadcast scene, mainly the construction of Live broadcast scene; Live broadcast process, Usually contains 5 contents: Choose live broadcast time, warm-up, product introduction, emphasize selling points, promote sales and guide consumers to buy; Sales services 2, whose main work is to interact with consumers, requires to reply to the customer's inquiry within 3 minutes on sale; Branding 2 ,Mainly consisting of 3 tasks, Brand promotion with high-quality short videos that attract consumers to watch, Brand promotion for buying live platform traffic, Advertise on new media platforms such as AAuto Quicker and Xiaohongshu for brand promotion.

3.3 After-sales

After-sales, including 2 tasks: Logistics services 2 and Sales services 3. Logistics services 2 is mainly the experimentation of Logistics services, and its experimental system has been designed in Logistics services 1; Sales services 2 is mainly the experimentation of after-sales service, and its experimentation system has been designed in Sales services 1.

Conclusion of live broadcast management model expert evaluation opinions, 6 experts evaluated the effectiveness of live broadcast management model of fresh fruit e-commerce for consumers' online purchase in Guangxi, 11 classifications of 3 content, which agreed by 100% experts.

Recommendations

1. Fresh fruit live broadcaster, which gives people a sense of reality, can communicate well with consumers, has the knowledge of hosting, professional knowledge of oral communication and professional knowledge of performing arts, and has a deep understanding of the knowledge and

selling points of the fruits sold, and has team support and cooperation, which has a positive impact on consumers' buying behavior. In addition to learning live broadcast knowledge and skills at school, live broadcaster also needs to communicate with peers at work, participate in relevant training courses, and constantly learn and summarize to improve their live broadcast delivery level.

2. The display of fruit goods with rich colors and full display, the consistency of the size, freshness and taste of fruit goods displayed live with the size, freshness and taste of fruit goods received by consumers has a positive impact on consumers' buying behavior. The entrepreneur of fruit goods live broadcast should be an honest and trustworthy person, and secondly, the supplier of fruit goods should also be an honest and trustworthy person.

3. Choosing a place that can reflect the original ecology, the source of goods, and the live broadcast scene below 60 decibels has a positive impact on consumers' buying behavior. The success rate of building live broadcast scenes in fruit planting parks is the highest. followed by building live broadcast scenes in packaging factories, and then building live broadcast scenes in indoor live broadcast rooms.

4. The price of fresh fruit goods has a positive impact on consumers' purchasing behavior, and the pricing should be slightly lower than the price of mainstream competitive goods on the live broadcast platform, and the stepped pricing should be based on different packaging materials and different weight specifications. Consumers who buy more than three times and buy more goods at one time can bargain.

5. The live broadcast process has a positive impact on consumers' purchasing behavior. Fruit live broadcast selling enterprises should choose the target consumers to broadcast live online for many hours. In the live broadcast process, it should include the promotion activities that can attract consumers, detailed information introduction of fresh fruit goods, emphasis on favorable selling points and attractive promotion activities for consumers, and actively guide consumers to buy.

6. Sales service has a positive impact on consumers' purchasing behavior. Fruit live broadcast selling enterprises should do a good job in pre-sales, in-sales and after-sales services, and need to reply to consumers' inquiries and complaints within 3 minutes.

7. The logistics packaging of fruit goods with effective protection can be delivered within 24 hours and delivered within 2-4 days. The logistics service of door-to-door delivery has a positive impact on consumers' purchasing behavior. This task needs to supervise the delivery of the warehouse and the transportation of the logistics company, and update the logistics service

information of fruit goods in the live broadcast platform in time, so that consumers can check whether the fruit goods have been delivered at any time, if so, when the goods will arrive there and when they are expected to arrive.

8. Branding with the name and logo of the live broadcast room, brand reputation with 95% favorable rate, and high-quality short videos that attract consumers to watch have a positive impact on consumers' buying behavior. branding should also do a good job in placing advertisements on new media platforms such as Aauto Quicker and Xiaohongshu, buying live broadcast platform traffic, and pay attention to consumers' shopping experience and evaluation in time.

9. The live broadcaster team should do a good job of self-monitoring, timely reflection and improvement. The fruit live broadcast team is required to hold a meeting and discuss every day after completing the work of the live broadcast team, to study the demands expressed by consumers when interacting with consumers in the live broadcast, and to study the live broadcast data such as the total transaction amount, input-output ratio, customer unit price, fruit goods conversion rate in the live broadcast room, per capita online time in the live broadcast room, etc., and to find out the shortcomings and improve them.

Conclusion

Through the above research, the conclusion as follows.

In first step: through the interviews 12 experts, the elements of Live Broadcast Management Model of fresh Fruit e-commerce for Consumers' Online Purchase in Guangxi is obtained, which includes 8 elements with 46 dimensions.

In second step, from the analysis and evaluation of live broadcast management model elements of fresh fruit e-commerce for consumers' online purchase in guangxi by 17 experts to find the median (Mdn) and interquartile range (IQR). there are 43 items with a median value of 3.50 and above and an interquartile range of 1.50 and below is valid and needs to be preserved; 3 items with a median value of 3.50 below and an interquartile range of 1.50 above is invalid and needs to be deleted. The experts suggested that 12 text of live broadcast management elements of fresh fruit e-commerce for Consumers' Online Purchase in Guangxi, should be revised in order to make the elements more consistent and complete.

In third step: 6 experts evaluated the effectiveness of live broadcast management model of fresh fruit e-commerce for consumers' online purchase in Guangxi, 11 classifications of 3 content, which agreed by 100% experts.

The results of this research show live broadcaster analysis, fruit goods display and consistency, live broadcast scene, price setting, live broadcast process, sales services, the eight elements of logistics services, branding are positively related to live broadcast management of fresh fruit e-commerce for Consumers' online purchase in Guangxi, the interrelation of each element has been expressed visually and clearly through the construction of the model. Enterprises can adjust the live broadcast operation according to the results of this study to achieve the maximum marketing effect within limited investment. Generally speaking, this research has important reference significance for Guangxi fresh fruit e-commerce live broadcast merchants to improve live broadcast efficiency, increase sales, improve service methods, and meet core demands.

References

Cctv Finance. (2023). How popular is live e-commerce? In 2023, the total amount of live e-commerce transactions in China is expected to exceed 4 trillion yuan. https://www.gzstv.com/a/c44cd43e26944600970d9c37be5ae5a1

China Rural Network. (2023). Guangxi's fruit output ranked first in the country for five consecutive years. http://www.moa.gov.cn/xw/qg/202310/t20231030_6439291.htm

Fu, D., & Gao, X. (2023). The impact of new farmer anchor characteristics on consumer purchase intention. *Agriculture and Technology Agriculture, 43*(23),158-163.

Jia, W., & Pan, J. (2023). Analysis of factors influencing consumer purchase intention in agricultural product live broadcast e-commerce. *Popular Technology, 25*(286), 179-181.

Wang, Y. (2023). Empirical study on factors influencing consumer purchase decisions in the context of e-commerce live broadcast. *Economic Observations, 9*,51-53.

Xie, Y., & Li, C, & Gao, P., & Liu, Y. (2019). Research on the impact and mechanism of social presence on online conformity consumption in live broadcast marketing: A behavioral and neurophysiological perspective. *Progress in Psychological Science, 27*(06), 990-1004.