

Research Article

Construction of Smart Marketing Model of Agricultural Products E-Commerce in the Era of Big Data

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Received 30 May 2022; Revised 4 July 2022; Accepted 16 July 2022; Published 13 August 2022

Academic Editor: Imran Shafique Ansari

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With the rapid development of China, the marketing mode of agricultural fruit is also keeping pace with the times. The old sales model of agricultural fruit is also affected, which has a huge impact on marketing models, channels, and sales amount. And the sales methods of agricultural fruit have also undergone great changes, from offline transactions to online platform transactions. Comparing the profit, popularity, proportion of agricultural fruits, and turnover of agricultural fruits in e-commerce with the traditional marketing model, the smart marketing model in the data age increases the turnover by 50% and the profit by 15%. And in the network environment that extends in all directions, the probability of people knowing about agricultural fruits will be greater. It can better build the agricultural product marketing system in the information age and make it conform to the characteristics of contemporary marketing. Through the marketing mode in the information, e-commerce of agricultural fruits can help agricultural fruits can below world.

1. Introduction

With the gradual introduction of the Internet into thousands of households, the Internet also brings great convenience to people. For agricultural fruit, people's traditional sales methods are mainly offline. Through shops or streets, they communicate face-to-face and sell. In the current era of information explosion, this offline mode of sales has been greatly affected. People are also increasingly liking the simple way of buying and gradually transacting on the web. The e-commerce of agricultural fruit is mainly to ensure the validity of information in the sales channels and the transportation of agricultural fruit, as well as the management of information and funds, in the processing, production, and transportation of agricultural fruit through computer and network technology. Through these methods to meet the sales of agricultural fruits, at present, China's development in this area is not perfect, it is in its infancy, and the institutional rules within the system are not perfect.

This online model of sales is also known as e-commerce, as shown in Figure 1. It is an activity that uses network information as a medium to exchange commodities and make profits. Simply put, it on the Internet. Buyers and sellers do not need to meet directly, but through online communication to reach a transaction. Because the technology of serving agricultural fruit has also been greatly improved, the freshness of agricultural fruit has also been guaranteed. And through online communication and sales, the circulation of agricultural fruit and other products has been accelerated. Product-currency-product conversion time is greatly shortened, saving people time. It also speeds up the circulation of market goods and expands the market. Because of the universality of informatization, as long as it is released, someone will see it. E-commerce of agricultural



FIGURE 1: E-commerce.

fruits can help agriculture to advance rapidly and slowly go to the world.

In this paper, through the comparison between traditional agricultural marketing and e-commerce agricultural product marketing based on big data, it is found that in the Internet era based on information explosion, the agricultural fruit sales model is more accepted by the times. And this model is more conducive to building its own characteristic agricultural product brand. Farmers can also maximize profits to meet the needs of farmers, reduce the complicated steps of farmers, and provide convenience for farmers.

2. Related Work

People's daily access to information has been enriched, and the commercial application of agricultural fruit has also increased. Its marketing model for agricultural fruit has also gradually become clear. The importance of the marketing model has also emerged, and it has gradually been applied to various sales channels. In terms of people going out to play, the Internet connects and communicates with people, and meets people's different needs through qualified aspects. Navigation, food, play guidance, etc., have also become a new game sales model. Through the Internet to explore people's location, behavior, geographic movement map, and other information and the information of these game groups, Zhang was based on people's game needs to judge the player's trajectory map. It provides support for travel decisions. It can carry out precise marketing for tourist groups and make tourists travel more intelligently [1]. In terms of the use of e-commerce, overall, the adoption of B2B e-commerce in advanced economies has been successful. However, this success has not been reflected in developing countries, suggesting that the IT adoption model in advanced economies may not be appropriate. So Vatanasakdakul S developed a strategic fit. He came to investigate the successful adoption of cross-organizational information technology in developing countries. He implemented it through the task-technology fit (TTF) model by integrating cross-organizational theory and ethnocultural theory. The

model suggests that, in a cross-organizational context, the technology supporting the mission may not have the expected impact on the performance of developing economies without considering the premises of use, national culture, the nature of commercial relationships, and technological infrastructure [2]. The customer's experience of using the product has a significant impact on the product merchant's presale activities. In this regard, chunxiang chose the pricing of products through beer manufacturers and online beer merchants, as well as their various sales channels among them. He got 4 different reaction voices. By proposing a model for these 4 different situations, the profit in the enterprise can be visually displayed through the model, and the steps of the merchant in the marketing can be simplified. It can increase the profit of the brewer and the merchants in the middle. Profits are maximized when the presale price is 2 times the predetermined price [3].

When the information age gradually penetrates into people's lives, e-commerce also begins to use the marketing model. In this regard, Barg proposed that the marketing model is a first-order linear inhomogeneous ordinary differential equation (ODE). He used the initial response of the sale as the initial condition, and the solution to the initial value problem is easy and straightforward for an ODE course. This model is a great example of many related topics. It helps students gain the ability to interpret and communicate mathematical results. In addition to describing projects in this work, he discusses the Vidale-Wolfe model, and he showed how it can lead one to use Green's theorem in practical situations [4]. Kim and Peterson analysis examined the role of online trust in business-to-consumer e-commerce. He analyzed 16 sets of data from the study. The results suggest that online trust is subtly related to selected antecedents (e.g., perceived privacy, perceived service quality) and consequences (e.g., loyalty, repeat purchase intent). Analysis shows that the relationship between online trust and its respective antecedents and consequences is more idiosyncratic, complex and nuanced than previously thought [5]. He cited the example of the top universities in the modern Russian state of Rostov. Przhedetskaya and

Borzenko demonstrated the necessity of distance education marketing and formulated a marketing model for modern universities to promote distance education. He used methods of economic statistics and regression and correlation analysis. He selected Rostov State University's order for internet access for 2017 based on data from the Russian Federation's single information system in the field of procurement. He determined the main income of Rostov State University in 2017 and its position in the regional ranking of Rostov State University activity effectiveness [6]. Biagi and Falk provided new empirical evidence on the impact of ICT/ e-commerce activities on labor demand. A key feature of the empirical analysis is the use of several advanced ICT activities. The main finding of the study is that increases in ICT/e-commerce activity did not lead to job losses over time. This applies to manufacturing and services, as well as SMEs and large corporations. He found that these enterprises that do not support the use of ICT may lead to the replacement of the overall workforce [7]. The abovementioned illustrates the role of e-commerce in corporate trust, the applicability of this model in developed economies, and the impact of e-commerce on jobs. However, it does not mention the application between agricultural fruit. The article builds a marketing model for agricultural fruit through big data and applies it in e-commerce.

3. Agricultural Product Marketing Models and Constraints

3.1. Marketing Mode of Agricultural Fruit. The current sales channels of agricultural fruit are still relatively extensive, and they can be sold through various channels, which can be sold through restaurants, self-operated stores, live broadcasts, circle of friends, etc., as shown in Figure 2. Because of the exchange of network information, it has also expanded multiple channels for the sale of agricultural fruit. It can be sold through specialized sales stores. It can not only reduce the intermediate price difference, but also reduce the intermediate circulation time, and ensure the freshness of agricultural fruits. And it also improves the communication between agricultural fruit and stores. It can also be used as a sales channel through agricultural fruit and major restaurants. Agricultural fruits are a necessity for restaurants, and businesses can also sell agricultural fruit through other products [8]. There are also some agricultural product merchants who open their own stores to sell agricultural fruit online and offline [9]. At present, the live broadcast industry is prevalent, and it is sold by means of live broadcast, which is also a manifestation of driving economic development. At present, the video traffic is huge, farmers can promote their products through mobile video and posting them online. Or through the form of micro-business, it displays agricultural fruit and lets friends know various information about agricultural fruit such as sowing, protection, picking, cleaning, and transportation. It is best to form an independent brand. It is conducive to subsequent sales and is used to increase the number of users. It can also be shared through the platform, which is not a sale but a sharing. This is also a marketing tool for farmers. And this



FIGURE 2: Agricultural product sales channels.

effect is also very good, this is mainly related to interpersonal relationships. Or it puts agricultural fruit on the Internet platform, or other specialized sales platforms. On the one hand, the Internet platform guarantees the quality of products. On the other hand, it can also increase the order quantity, so that buyers can see the first-line process of the product at any time, from the process of production, transportation and sales. There are also sales through the community, people, who like a certain product are put into a group, integrated, and a special label is set up [10]. It puts all these people on the same label, and only shows these people when posting it. These are all sold through the Internet, which can help farmers maximize their profits. The marketing model is the general term for the management system. There are two types of marketing models in the current society. One is a marketing model that refines and integrates enterprise management. The other is through the customer, which analyzes the core value of the customer, and integrates all aspects of the marketing model. To judge whether the marketing model is successful or not, it mainly depends on the amount of marketing performance. Seventy percent of the success of an enterprise is determined by the marketing strategy, and the remaining thirty percent is determined by the combination of marketing. The marketing strategy of the enterprise plays an important role in the operation of the enterprise [11].

3.2. Characteristics of Marketing Models in the Era of Big Data. Under the influence of big data, e-commerce has also become more distinctive. It can increase stickiness among customers. The transaction can also be simpler, and the various activities of the program customers through the form of documents. It allows customers to understand at a glance. It can be marketed through various platforms, and e-commerce activities under the marketing mode. It can make users have more trust in the product and more in line with user needs. Online sales activities need to penetrate the activity plan into the hearts of customers and meet the needs of customers in the form of mail [12, 13]. Through customers placing orders online, it also promotes products to a certain extent. This is also crucial for enterprises, whose reputation largely determines their survival rate. There are four main differences between the characteristics of e-commerce under big data and traditional marketing, one is the way of dissemination, the other is to get rid of time and space, the third is promoting the interaction in two ways, and the fourth is to reduce the running amount, as shown in Figure 3.



FIGURE 3: Characteristics of marketing in the information age.

- (1) The way of transmission: In the Internet age of information explosion, the marketing model is no longer a one-to-one sales method, but multi-directional to multi-directional, not single, which has a great impact on traditional sales methods [14]. In the traditional marketing model, it is mainly about the activities of the merchants on the products, and it is a rigid regulation. It serves customers wholeheartedly, and the attitude of the seller has a lot to do with whether the customer buys or not. However, the Internet marketing model under big data information is multi-directional, showing exponential growth. It also creates greater value. The main difference between the two is the way of communication and the speed, and mode of dissemination of information. The speed of information dissemination is also fast, and customers will also communicate through information sharing, so as to achieve multi-directional dissemination [15].
- (2) Out of time and space. The traditional marketing model is limited by location, time, and space, but the information-based Internet sales model has gotten rid of this limitation. And products are more in line with customer needs, and companies can have more time to do marketing activities. It promotes its products and expands its popularity.
- (3) Two-way promotion and interaction. In the era of big data information, marketing has changed from a unilateral one-to-one model to a one-to-many model, and it has transformed into a two-way communication between sellers and customers, which accelerates the flow of the market economy. It operates through online social networking, and in the process of communication, consumers will have more room for decision-making time. For sellers, this also facilitates their understanding of customers and can more accurately understand the purpose of marketing.
- (4) Reduce the running amount. In this information age, transactions between people are carried out through electronic devices. Under the e-commerce model, the offline rent of sellers in shopping malls and stores is reduced. Through e-commerce, sellers mail agricultural fruit directly, eliminating intermediate steps and reducing operating costs. It also makes the sales steps simpler [16]. Through the network, agricultural

fruit enterprises can also obtain more information about customers, which is beneficial to the follow-up enterprise activities.

3.3. Marketing Strategies of Marketing Models in the Era of Big Data. With the advancement of the information age, traditional marketing strategies have been unable to meet the sales requirements of operators. Then it is also necessary to change the traditional marketing model and seek a marketing strategy suitable for contemporary informatization. As shown in Figure 4, there are four main aspects of informatization marketing strategy. First, it needs to understand the rules and characteristics of e-commerce, and second, it uses existing channels and innovates marketing methods. Third, it integrates through e-commerce and traditional sales models. Fourth, its public relations strategy needs to improve information technology.

- (1) Rules and characteristics of e-commerce. E-commerce has now become the focus of online transactions. If they do not understand the rules and characteristics of e-commerce, they cannot expand the development of e-commerce. The profit effect it brings to the enterprise will also be minimal.
- (2) Use existing channels to innovate marketing methods. Big data informatization also brings a variety of marketing methods. Through events, key news, fame, community, or the other way around, it mainly requires companies to know how to use these marketing methods and deal with agricultural products lovers with different hobbies [17].
- (3) Integration through e-commerce and traditional sales models. Compared with the old sales methods, the effect of information communication is obvious. The advantages of information dissemination lie in being efficient, and convenient and reducing operation and maintenance costs. In a certain respect, it is not to abandon the traditional marketing model, but to combine the two for mutual benefit and complementarity. The combination of the two to achieve the best communication value has a good effect on the marketing model of both.
- (4) Improve the public relations strategy of informatization. If enterprises face the public opinion brought by informatization, the losses will be huge. Therefore, the dissemination information of in e-commerce



FIGURE 4: Informatization marketing strategy.

marketing needs to be comprehensive and penetrate into the information dissemination point. Effective public relations can prevent the dangers brought by informatization, and it has reached friendly cooperation with various information channels.

3.4. Construction of E-Commerce Marketing Model for Agricultural Fruit in the Era of Big Data. No matter what product, it needs to understand the market before selling it. It investigates the local sales, sales, market share, profit, and popularity of agricultural fruit [18]. Under the condition of understanding the market volume and user demand, the time points when consumers' consumption of agricultural fruit is high and their usual consumption are counted, and these data are analyzed. In the case of big data analysis, it is possible to understand a lot of consumer information, consumption habits, and consumption directions. This is necessary for farmers. For enterprises, market research can help them formulate market strategies, and then make different adjustments according to different market needs. By helping farmers to produce the right amount of agricultural fruit, it avoids wasteful situations, where supply exceeds demand. This has practical significance for realizing the scientific and methodical production of farmers. By helping farmers improve production quality, it provides professional technical guidance and breeding and implements standardized management of agricultural fruit to ensure the quality of agricultural fruit. It ensures that the quality of agricultural fruit is intact during channel transportation [19]. When selling through the e-commerce platform, farmers pick according to the order quantity under the e-commerce platform to avoid product waste [20]. Compared with the traditional model, it can greatly reduce the sales time and increase the sales efficiency, and the binding force in space is also reduced. Customers can directly sell online with farmers, which also simplifies the sales steps. Now farmers will place their products on major platforms for marketing. For example, we are familiar with Taobao, Jingdong, etc., as well as the current Meituan, WeChat applet, etc. These are all online platforms, which greatly simplifies the sales process. Through the singlevolume information on the platform, it can analyze customers, places, preferences, monthly purchases, etc., which cannot be achieved by traditional marketing [21]. Moreover, it makes judgments on the market according to the singlevolume information and analyzes the market demand. By making reasonable adjustments to the prices sold by farmers, it ensures farmers' income and benefits consumers. Agricultural fruit can also combine online and offline common channels. The data obtained through the complete marketing method will also be more accurate, so as to realize the tripartite interaction between enterprises, farmers and consumers, which also strengthened the stability of the sales model and greatly improved the sales. Marketing methods in the Internet age not only reduce the operating amount but also ensure the quality of agricultural fruit to a certain extent [22]. At present, consumers have strict requirements on the quality of products, which also shows the need for supporting products to ensure that the products are of good quality when they are delivered to customers. The planting, production, packaging and transportation of products all need to make a comprehensive treatment plan. By ensuring the quality of its products, it builds its own brand of agricultural fruit and also ensures a place in the case of market pressures. In recent years, with the exposure of some food problems, people pay more and more attention to food safety. It needs to require the quality and price of agricultural fruit to meet safety testing. It gradually formed the farmers' own brand advantage [23]. Although the purchase directions of agricultural products enthusiasts have also become diversified, agricultural fruits are products that people consume daily. If foreign agricultural products are put into the market, it will also have some impact on the current agricultural product industry, which makes the company in a profitable state. By adding new marketing methods, it increases the proportion of enterprises in the market, so as to achieve the best revenue benefits. The application of the brand to the product is very important, it can convey the special information of the product. Through the comparison of quality, price, product quality, and various links, we can create our own brand advantages. Therefore, it is necessary to establish its own supporting facilities for agricultural fruit to ensure the successful establishment of the brand. It also has the transportation industry, which also needs to be improved. It needs to do a series of measures from the picking, cleaning, refrigeration, and processing of agricultural fruit. It is then distributed to ensure product quality [24].

Among the evaluation indicators of economic development, the development of agricultural fruit is also easily affected to a certain extent. In the construction of the model, the main goals are the technology, sales, market share, profit, and popularity of the company in operation [25]. It takes Internet technology, e-commerce technology, informatization degree, and logistics technology as variables. The investment cost of agricultural fruit itself is also a factor that affects the model. Therefore, the calculation method of estimation is adopted in this paper to analyze it. Through the evaluation after information processing, it analyzes and judges the sales of agricultural fruit of big data. According to the model structure described above, this paper verifies the authenticity of the data and variables. Through the fuzzy evaluation method, it performs an integrated calculation of the summarized data. First of all, a set *U* needs to be formed for the variables in the model, as follows:

$$U = U_1, U_2, U_3, \dots, U_n.$$
 (1)

n is the influencing factor. The customer's evaluation of agricultural fruit is collected to form an evaluation set as follows:

$$J = J_1, J_2, \dots J_C.$$

C is the evaluation level, and the weight of possible influencing factors is *W*, as follows:

$$W = (W_1, W_2, \dots, W_n). \tag{3}$$

Among them, the range of W is (0.1), and there are the following situations:

$$\sum_{r=1}^{1} W = 1.$$
 (4)

Then, a matrix can be established to analyze the evaluation level, such as:

$$R = (r_n)_{p+c}.$$
 (5)

p is the level influence factor, r_{ij} represents the *j*th level in the *i* item, and the establishment matrix is as follows:

$$R = \begin{cases} r_{1.1} & \dots & r_{1.n,} \\ \dots & \dots & \dots \\ r_{c.1} & \dots & r_{1.c.} \end{cases}$$
(6)

It is differentiated by C kinds of evaluation grades, from very unsatisfactory (40) to quite satisfactory (100), and the measurement calculation is carried out, as shown in Table 1.

From the table, we can see that China's agricultural e-commerce level is still at a medium level, and China's agricultural fruit has great potential for development in e-commerce. Considering other factors, Internet technology, and e-commerce technology will have an impact on the effect of the marketing model.

3.5. Significance of E-Commerce Marketing Model of Agricultural Fruit. In the current era of big data, the economic benefits of the network marketing model are huge. And agricultural fruit, as our daily essential products has a huge market share [26]. E-commerce under big data currently has many specialized technical personnel for operation and

maintenance. It also shows that under the current structure of information explosion, the role of agricultural fruits in economic circulation is undoubtedly huge. Because of the advantages of agricultural fruit, they will definitely be able to obtain economic benefits. E-commerce breaks the communication barriers between different countries so that there are no geographical restrictions between trading countries, and it also provides friendly trading opportunities between countries [27]. The agricultural fruits are sold to various countries through the Internet. In China, the supply and demand plan can be adjusted according to the market demand, and an independent brand can be formed abroad. During the transportation of agricultural fruit abroad, strict control of product quality can not only promote regional exchanges and trade but also form a friendly trading market and achieve win-win cooperation. Because the production of agricultural fruit requires a specific environment, the proportion of foreign traded agricultural fruit in the foreign economic market is relatively low. At present, the agricultural fruit in China's foreign trade is mainly aquatic products and fruits and vegetables [28]. The quality requirements for these products are strict, and the technical requirements are high in terms of preservation and transportation. China's agricultural fruit sales model is still developing, and it needs to be sold both online and offline. The information age has also led to the opening of all economic and trade markets, which is both an opportunity and a challenge for the Chinese market. Nowadays, people also prefer to conduct transactions on the Internet. As long as China's agricultural product industry has a sound marketing model, it can better occupy the market share. Of course, these need to learn from the marketing methods of other countries. By fully understanding the market, it can create greater marketing space for Chinese agricultural fruit.

4. Comparison of Traditional Marketing and Marketing Models Based on Big Data for Agricultural Fruit

This paper investigates the self-operated merchants of agricultural fruit in recent years. Through the traditional agricultural product marketing model and the marketing model based on big data, this paper compares the local popularity in terms of turnover, market share, and business profit. The constants in this paper are the number of surveys, sites, and population circulation. Building from the above model ensures that these constants are weighted the same. It guarantees the accuracy of the investigation.

In terms of turnover, due to the limitations of traditional marketing and the pursuit of simplicity in people's shopping methods, there are also differences in turnover between the two. In this paper, the daily turnover is compared with the monthly average turnover, and the same number of selfoperated agricultural fruit stores are investigated, and the results are shown in Figure 5.

From the comparison chart of the two, it can be seen that the daily turnover of agricultural fruit e-commerce based on big data is about 1223 yuan, and the daily turnover of

Mobile Information Systems

TABLE 1: Factor estimation table.

Score	40	50	60	70	80	90	100	Mean rating
Overview	0.087	0.090	0.101	0.235	0.213	0.117	0.08	71.021
Internet technology	0.048	0.091	0.182	0.271	0.231	0.125	0.072	71.941
E-commerce technology	0.071	0.092	0.158	0.228	0.226	0.142	0.082	72.024
Degree of informatization	0.068	0.090	0.172	0.241	0.225	0.142	0.075	68.221
Logistics technology	0.0912	0.0952	0.195	0.26	0.211	0.132	0.068	69.321



Traditional...

FIGURE 6: Market share of agricultural fruit marketing.

traditional stores is about 808 yuan. In the era of information explosion based on big data is about 50% higher than that of traditional agricultural fruit, which is also relatively high. It also shows that the information circulation under big data is more extensive. The agricultural fruit sales model in the era of information explosion is more in line with the process of the times. People are also gradually adapting to the marketing model under big data information.

According to the survey in recent years, there are obvious differences in the market share of traditional marketing and agricultural product marketing based on big data in different regions, as shown in Figure 6. With the progress of the times, the situation of the surveyed area is also related to the level of local development. The more developed the place, the less the proportion of traditional marketing will be.



FIGURE 7: Profit comparison.



FIGURE 8: Evaluation comparison.

The data from the survey shows that in the same region, the proportion of the old sales model of agricultural fruits in the market is showing a downward trend. Compared with e-commerce marketing in the era of big data information, it is showing an upward trend year by year. It also shows that the proportion of the old sales model of agricultural fruits is gradually declining, and it has gradually become unsuitable for contemporary people. The e-commerce agricultural product marketing model in the information age is gradually replacing the traditional agricultural product marketing model. In underdeveloped cities, the situation in these two situations is basically unchanged. There is no comparison in the text, this is also affected by the region, which is an objective fact.

In traditional agricultural product marketing, many middlemen will earn the price difference, resulting in lower profits for farmers. And now the information-based agricultural product marketing model reduces the unnecessary steps in the middle. It only needs to use the logistics method to make agricultural fruit delivered to customers. In addition to the transportation and storage costs of agricultural fruit, it still has huge profits. The profit comparison chart of the two is shown in Figure 7.

By comparing the monthly profit, quarterly profit, and annual profit of the same number of stores, it can be found that the profit of the agricultural fruit marketing model in the era of the information explosion is 15% higher than that of the old sales model. It also shows that the agricultural product marketing model based on big data can directly improve farmers' profits, which brings intuitive benefits to farmers.

Because of the data age, traffic has also become very important, in the traditional marketing model of agricultural fruit. It may only be famous locally, but e-commerce is multi-directional, and as long as the agricultural product information is released, it will be published on major shopping apps or other channels. The people who need it will see the information. After a period of time, people will also have a certain impression of this agricultural product brand, and the popularity of agricultural fruit will also increase. As shown in Figure 8, the evaluation of agricultural fruit in people's minds is divided into 7 levels. Ratings and ratings are proportional to popularity.

According to the evaluation data of the survey, it can be seen from the evaluation scores of traditional marketing that the popularity of traditional marketing has increased, and the popularity has increased relatively slowly. Although the e-commerce agricultural product marketing model has a low starting point in the era of big data, its popularity has increased rapidly in the next few years. It also shows that the traffic brought by the information age will also increase the popularity faster. It also forms a sharp contrast to the traffic in the traditional mode.

5. Conclusion

This paper mainly compares the marketing model of agricultural fruit e-commerce with the old sales model in the era of the information explosion. It is compared in four aspects: turnover, market share of agricultural fruit, profit, and popularity. Through the method of investigation, this paper uses the fuzzy evaluation method to establish an evaluation model. Finally, the agricultural fruit sales model under the Internet is 50% higher than the traditional agricultural fruit sales model, and the market share of agricultural fruits is also rising, but the market share of the traditional agricultural fruit sales model is declining, and the overall profit has also increased by about 15%. It has also created a special agricultural product brand, and its popularity is also rising. In this way, the agricultural product market will also be more marketable. At present, the sales system of agricultural fruits in e-commerce is not complete. There are still great challenges. Agricultural fruits also need to grasp the welfare of the current information age. By advancing faster and better, it creates a more complete operating system and breaks through the limitations of agricultural fruit themselves. It jointly seeks greater profits for farmers and promotes the pace of the Internet age. In the era of e-commerce, agricultural fruits also need to gradually adapt to the progress of the times. It relies on technology to go better and farther. It promotes the steady development of agricultural fruit under e-commerce more quickly.

Data Availability

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

Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, author-ship, and/or publication of this article.

Acknowledgments

This work was supported by The Fundamental Research Funds for the Central Universities (Grant Nos. 31920200040 and 31920220030) and by the Gansu Provincial Key Laboratory of E-Commerce of Ethnic Information of Northwest Minzu University (Grant No. 2021-1).

References

- J. Zhang, T. Wu, and Z. Fan, "Research on precision marketing model of tourism industry based on user's mobile behavior trajectory," *Mobile Information Systems*, vol. 2019, no. 4, pp. 1–14, 2019.
- [2] S. Vatanasakdakul and J. D Ambra, "A conceptual model for e-commerce adoption in developing countries: a task-technology fit perspective," *International Journal of Information Technology and Management*, vol. 6, no. 2/3/4, pp. 343–361, 2007.
- [3] C Guo and H. Zhou, "The selection and pricing of mixed multi-channel marketing model for mid-high wines under experience driven," *Journal of Systems Science & Information*, vol. 7, no. 1, pp. 37–53, 2019.
- [4] M., C. Barg, "Find, process, and share: an optimal control in the vidale-wolfe marketing model," *CODEE Journal*, vol. 11, no. 2, pp. 1–10, 2018.
- [5] Y. Kim and R. A. Peterson, "A meta-analysis of online trust relationships in E-commerce," *Journal of Interactive Marketing*, vol. 38, no. 7, pp. 44–54, 2017.
- [6] N. Przhedetskaya and K. Borzenko, "Marketing model of promotion of remote education by modern university," *International Journal of Educational Management*, vol. 33, no. 3, pp. 446–453, 2019.
- [7] F. Biagi and M. Falk, "The impact of ICT and e-commerce on employment in Europe," *Journal of Policy Modeling*, vol. 39, no. 1, pp. 1–18, 2017.
- [8] I. O. Pappas, P. E. Kourouthanassis, M. N. Giannakos, and G. Lekakos, "The interplay of online shopping motivations and experiential factors on personalized e-commerce: a complexity theory approach," *Telematics and Informatics*, vol. 34, no. 5, pp. 730–742, 2017.
- [9] a admin, K. Walid, and M. Mustafa, "Deep learning model for digital sales increasing and forecasting: towards smart E-commerce," *Journal of Cybersecurity and Information Management*, vol. 8, no. 1, pp. 26–34, 2021.
- [10] M. A. Tofigh and Z. Mu, "Intelligent web information extraction model for agricultural product quality and safety

system," Journal of Intelligent Systems and Internet of Things, vol. 4, no. 2, pp. 99-110, 2021.

- [11] H. R. Darani, M. R. Kohansal, and M. Ghorbani, "An integrated hydro-economic modeling to evaluate marketing reform policies of agricultural fruit," *Bulgarian Journal of Agricultural Science*, vol. 23, no. 2, pp. 189–197, 2017.
- [12] Z. Awang, A. Afthanorhan, and M. Mamat, "Modeling structural model for higher order constructs (HOC) using marketing model," *World Applied Sciences Journal*, vol. 35, no. 8, pp. 1434–1444, 2017.
- [13] M. Ismail, N. E. El-Rashidy, and N. Moustafa, "Mobile cloud database security: problems and solutions," *Fusion: Practice* and Applications, vol. 7, no. 1, pp. 15–29, 2021.
- [14] K. Bence-Kiss and O. Szigeti, "Analyzing the marketing model of krishna consciousness in Hungary," *Balkans Journal of Emerging Trends in Social Sciences*, vol. 3, no. 1, pp. 56–63, 2020.
- [15] S. A. Kuznetsova, K. Kuznetsov, and A Kuznetsov, "A. How to increase Public confidence in understanding and use of the banking system: marketing "nets for trus"," *Financial and credit activity problems of theory and practice*, vol. 2, no. 29, pp. 13–20, 2019.
- [16] M. H. De, "Integrating internal and external marketing function for a services management marketing model in Iran," *Religación Revista de Ciencias Sociales y Humanidades*, vol. 4, no. 18, pp. 233–237, 2019.
- [17] L. Ge and C. Li, "Exploration of garment enterprise marketing model based on new retail," *Modern Economy*, vol. 10, no. 01, pp. 227–236, 2019.
- [18] D. Jannach, M. Ludewig, and L. Lerche, "Session-based item recommendation in e-commerce: on short-term intents, reminders, trends and discounts," *User Modeling and User-Adapted Interaction*, vol. 27, no. 3-5, pp. 351–392, 2017.
- [19] T. Oliveira, M. Alhinho, P. Rita, and G. Dhillon, "Modelling and testing consumer trust dimensions in e-commerce," *Computers in Human Behavior*, vol. 71, no. 7, pp. 153–164, 2017.
- [20] Y. H. Hsiao, M. C. Chen, and W. C. Liao, "Logistics service design for cross-border E-commerce using Kansei engineering with text-mining-based online content analysis," *Telematics and Informatics*, vol. 34, no. 4, pp. 284–302, 2017.
- [21] Y. Guo, M. Wang, and X. Li, "Application of an improved Apriori algorithm in a mobile e-commerce recommendation system," *Industrial Management & Data Systems*, vol. 117, no. 2, pp. 287–303, 2017.
- [22] G. Vinodhini and R. M. Chandrasekaran, "A sampling based sentiment mining approach for e-commerce applications," *Information Processing & Management*, vol. 53, no. 1, pp. 223–236, 2017.
- [23] Y. Zeng, F. Jia, L. Wan, and H. Guo, "E-commerce in agrifood sector: a systematic literature review," *The International Food and Agribusiness Management Review*, vol. 20, no. 4, pp. 439–460, 2017.
- [24] C. Robinson, "Disclosure of personal data in ecommerce: a cross-national comparison of Estonia and the United States," *Telematics and Informatics*, vol. 34, no. 2, pp. 569–582, 2017.
- [25] J. K. Min, "How to promote E-commerce exports to China: an empirical analysis," *KDI Journal of Economic Policy*, vol. 39, no. 2, pp. 53–74, 2017.
- [26] H. Hallikainen and T. Laukkanen, "National culture and consumer trust in e-commerce," *International Journal of Information Management*, vol. 38, no. 1, pp. 97–106, 2018.
- [27] X. Li, H. Jianmin, B. Hou, and P. Zhang, "Exploring the innovation modes and evolution of the cloud-based service

using the activity theory on the basis of big data," *Cluster Computing*, vol. 21, no. 1, pp. 907–922, 2018.

[28] M. S. Murali Dhar and R. Manimegalai, "A policy-oriented secured service for the e-commerce applications in cloud," *Personal and Ubiquitous Computing*, vol. 22, no. 5-6, pp. 911–919, 2018.