

Study on the Influencing Factors of Fresh Agricultural Product Consumer Behaviors Under New E-commerce Mode

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Abstract: E-commerce provides a number of sales channels for fresh agricultural products, which not only promotes agricultural development, but also improves the income level of farmers. With the rise of new consumer groups, the new generation of fresh agricultural products' consumers will pay more attention to quality and convenience rather than low prices. The e-commerce model of community fresh agricultural products, which is deeply integrated online and offline, is increasingly welcomed by a new generation of consumers. Online to offline (O2O) e-commerce distribution efficiency of fresh agricultural products is high, but there are also problems such as high supply foundation and cold chain logistics construction costs, difficulty in standardizing agricultural products, large storage and transportation losses, and the need to cultivate user consumption habits. Community fresh food e-commerce needs to study the influencing factors of consumers' purchase behavior. According to the research results, there are many factors that affect consumers' purchase behavior of O2O fresh agricultural products. O2O e-commerce distribution efficiency of fresh agricultural products is high, but there are also problems such as high supply foundation and cold chain logistics construction costs. Based on the analysis of the consumers' behaviors, this study analyzed the influencing factors of fresh agricultural product consumer behaviors under new e-commerce mode and discussed the problems existed in fresh agricultural products and the e-commerce platform. The study results will help further promote the development of e-commerce of fresh agricultural products in China, and make the sales of fresh agricultural products in the e-commerce model of China create a new brilliance.

Keywords: Fresh Agricultural Products, E-commerce, Consumer Behavior, Influencing Factor

1. Introduction

Online to offline (O2O) is a new e-commerce model that has emerged rapidly in recent years. Consumers can use the positioning function of smartphones to search for nearby merchants, place orders and make mobile payments on the mobile phone, so as to experience consumption at merchants. The model can greatly shorten the purchase path and decision-making time of consumers, and provide consumers with a better shopping experience [1-3].

According to the Research Report on China's Fresh Food E-Commerce Industry in 2021 released by iResearch, the size of China's fresh food retail market will exceed 5 trillion yuan in 2020. [4] As one of the basic consumer goods in China, fresh agricultural products, with the increase of per capita disposable income and consumption expenditure, iResearch predicts that the fresh food retail market will continue to grow in the future, and the size of China's fresh food retail market will reach 6.8 trillion yuan by 2025 [5].

With the normalization of epidemic prevention, in 2021,

the number of orders of the fresh food e-commerce platform will grow rapidly, and more urban residents will choose fresh food e-commerce. People's previous lifestyles will also change. Fresh food e-commerce with the same business model can hardly meet the consumption needs of consumers at different levels. The attributes of decentralized production, high consumption, high added value, and lack of standards of fresh agricultural products determine that terminal customers are mainly high-end, geographically dispersed, time focused Low viscosity and other characteristics [6, 7]. At present, fresh e-commerce users are mainly concentrated in the first tier cities in the north, Shanghai and Guangzhou and the economically developed coastal areas in the southeast. The user consumption level is high, but due to consumer habits and user experience problems, the consumption frequency is

low and the stickiness is not strong. Therefore, appropriate resource integration will more accurately capture user needs and improve user satisfaction. "User thinking" requires fresh e-commerce enterprises to understand consumers' needs at a deeper level (Figure 1). They can quickly interact with consumers through the Internet, so that consumers can participate in every link of the supply chain from demand feedback to design, production, marketing, service and other processes. E-commerce enterprises can win users' favor by paying attention to users' needs and experiences, and paying attention to their wisdom and participation. Based on the analysis of the consumers' behaviors on fresh agricultural products, this study analyzed the influencing factors of fresh agricultural product consumer behaviors under new e-commerce mode [8-10].

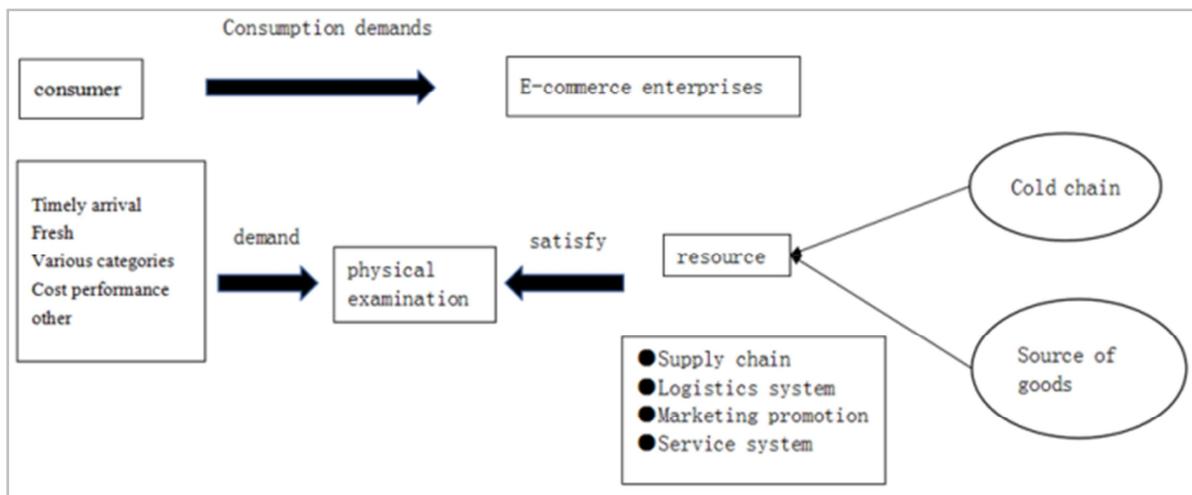


Figure 1. E-commerce consumer demand logic for fresh agricultural products.

2. O2O E-commerce of Fresh Agricultural Products

The social social local mobile model was first proposed in 2011, which caused a wave of O2O research and practice. The difference between O2O mode and B2B, B2C, C2C mode is that online network and offline physical stores are combined to attract consumers to form a closed loop of O2O business mode from online to offline or from offline to online, highlighting the transformation of consumers' online and offline channels. Fresh products mainly include aquatic products, seafood, meat, poultry, eggs, milk, vegetables, fruits and other agricultural products, which are fresh and not resistant to storage and transportation [11]. Due to the particularity of fresh agricultural products, current consumers have insufficient trust and satisfaction in e-commerce of fresh agricultural products, which has become the biggest obstacle to the development of e-commerce of fresh agricultural products. Many scholars have discussed the factors that affect online consumer satisfaction from different perspectives, mainly including customer perceived value, product and service quality, and website itself [12].

3. Influential Factors of Consumers' Purchase Behavior

3.1. Consumers' Shopping Habits

These include consumer education level, online shopping years, consumer age and social concern about fresh food safety. With the development of economy and the change of times, China's consumer groups have gradually changed, and their consumption habits have also changed. More and more people, especially young people, are accustomed to online shopping and mobile shopping. Consumers who are used to online shopping have a psychological tendency to accept e-commerce of O2O fresh agricultural products, and are more likely to have the motivation to purchase fresh agricultural products through the Internet.

3.2. Quality Safety of Fresh Products

According to relevant reports, when consumers buy fresh agricultural products online, they first consider the product quality and safety factors such as freshness, green safety certification, logistics and distribution speed, and sanitation

in the production process. The freshness degree is the embodiment of the quality of fresh agricultural products and an important factor for consumers to evaluate the quality of fresh agricultural products. Fresh products are non-standard products [13]. Agricultural products with the characteristics of appearance, taste, cleanliness, hygiene and freshness are the most attractive to consumers. In addition, with the characteristics of easy wear and tear, it is easy to generate security problems. Therefore, security is an important aspect of fresh agricultural products.

3.3. Logistics Distribution Service Quality

Logistics distribution is an indispensable factor and an important guarantee for online shopping. The e-commerce transactions of O2O fresh agricultural products need the support of developed logistics, including logistics services and distribution personnel. Consumers need merchants to deliver O2O fresh agricultural products to offline in a timely and accurate manner through e-commerce online shopping [14]. In view of the high requirements for freshness preservation of fresh products and the characteristics of easy wear and tear, it is necessary to make full use of offline stores to design and build a fresh room temperature and cold chain distribution system to achieve full chain product quality control. Timely and accurate distribution can greatly improve the enthusiasm of consumers to buy.

3.4. Quality of E-commerce Platform

The quality of e-commerce platform refers to the richness of information displayed on the online platform of O2O model, the accuracy of pictures and text introduction, the reliability of user comments, the consistency of online information and offline services, and the development and utilization of online consumer purchase behavior information. The quality of e-commerce platform is conducive to a more comprehensive understanding of products, so as to deeply understand the characteristics of fresh products and discover the inherent laws of products. At the same time, the online platform should be able to deeply understand and analyze users. High quality personalized recommendation information based on user insight and fresh rules will help improve user loyalty. According to previous surveys, consumers buy goods online, and the pricing, quality, type and logistics speed of goods jointly affect the selection of customers, and propose ways to promote the development of online shopping consumption. The influencing factors include the quality and safety of goods, e-commerce sales methods, consumer consumption level and network operation technology, which together constitute the e-commerce sales environment for fresh agricultural products. The user's perception and evaluation of online shopping platform mainly include the user's attitude to the network, practicality, reputation, etc. It is an effective means to improve the fresh online shopping consumption.

3.5. Consumer Evaluation and Feedback

Consumers purchase commodities online, and the pricing, quality, type and logistics speed of commodities jointly affect the selection of customers. In the online purchase environment of agricultural products, consumers can't feel the appearance, freshness and taste of commodities without experience stores, and it is difficult to perceive the quality. Therefore, consumers' evaluation and feedback become one of the factors considered in consumers' purchase decisions.

3.6. Offline Experience

O2O e-commerce of fresh agricultural products is oriented to community residents and serves family life. Online product introduction is difficult to replace offline real vision, smell, touch and taste, and consumers lack enough experience. Transparency is reflected in whether the most appropriate products can be purchased at the right time at the best price, which will affect the enthusiasm of consumers. If the online transaction process of O2O e-commerce platform for community fresh agricultural products is simple and easy to use, the website design is humanized, and the website functions are complete, simple and easy to understand, learn and use; It is convenient to know and experience offline. The more convenient the online platform is, the more convenient the offline experience is. The more willing consumers are to get product information and enjoy convenient shopping and distribution services anytime and anywhere [15].

In general, among the influencing factors of fresh online shopping (consumers' own factors, commodity factors, e-commerce platform factors and sellers' factors), consumers' gender, age, education and other factors will have a certain interference effect on their online fresh products; Commodity quality, variety, quality and other factors will interfere with users' online purchase of fresh agricultural products; The reputation, service quality and image of the e-commerce platform will have a certain interference effect on users' online purchase of fresh agricultural products; Offline experience, logistics services and other factors will interfere with users' online purchase of fresh products.

4. Previous Study on Consumer Behavior Model

A previous study conducted by us on consumer behavior model of fresh agricultural products under O2O e-commerce mode revealed that:

The impact of risk, offline pickup accessibility, and personal innovation, while consumer purchase intentions are related to perceived usefulness, perceived ease of use, perceived risk, offline pickup accessibility, personal innovation, and consumer behavior, playing a mediating role in the relationship.

The empirical research results show that Chinese consumers who use the O2O e-commerce platform to buy fresh agricultural products mainly focus on whether the types of fresh agricultural products purchased on the O2O e-commerce platform are complete, whether using this mode to buy fresh agricultural products can save time and whether it can improve the quality of fresh agricultural products. Therefore, this requires that O2O e-commerce companies should fully understand the usefulness of other competitors, and do sufficient market research to understand the requirements and concerns of target customer groups for fresh agricultural products. Improve the usefulness of the fresh agricultural product O2O platform itself to consumers.

The perceived ease of use in the O2O e-commerce model has an important impact on consumers' purchase intention and consumer behavior. Consumers' recognition of their own products increases the possibility of their purchases, and at the same time expands the popularity of enterprises and products; on the other hand, the platform design should not be too complicated and cumbersome, otherwise it will be counterproductive, and the product promotion provided will attract consumers. At the same time, it is necessary to ensure that the operation process of consumers buying fresh agricultural products on the O2O platform is convenient, and at the same time, it is easy to obtain the desired products and services on the platform website, so as to ensure the convenience of payment methods when paying, and truly let consumers feel it is relatively easy to buy fresh agricultural products on the O2O e-commerce platform. Therefore, while O2O e-commerce uses online publicity to attract consumers to buy, they should also pay attention to the ease of use of the O2O platform for fresh agricultural products.

The lower the risk of purchasing fresh agricultural products on the O2O e-commerce platform, the more conducive to improve the consumer experience and satisfaction of consumers. Therefore, O2O e-commerce should pay attention to minimize the risk perception brought to consumers under this model, and distribute Carefully check the order, check and ensure the quality of fresh agricultural products, deliver goods in time, protect the personal information and property safety of consumers, discover problems exposed in the Internet environment in a timely manner, reduce the risk perception to consumers, and make the Consumers can shop with peace of mind.

Investigating the reasons, this paper believes that on the one hand, it may be related to the samples in this paper; on the other hand, it may be because the O2O e-commerce platform construction lacks a leader, and various problems encountered determine the difficulty of replication in the general sense of platform construction, and there is no difference. With standardized products and no transparent and standardized service guidelines, consumers still have concerns about whether the O2O platform can truly consider the interests and requirements of consumers, whether it can

not infringe on personal privacy, etc., which leads to consumers' trust in the platform. The sensitivity among the factors influencing the purchase intention of consumers is relatively low.

The empirical research results verify that O2O e-commerce's most prominent focus on "offline experience" is consistent. Therefore, the offline experience under the O2O e-commerce model, that is, the accessibility of offline pickup has an important impact on consumers' purchase intention and purchase behavior, and the satisfaction of offline experience is a very important factor. For example, set up several offline pickup points in residential areas, bus stops, subway stations and other places where residents are concentrated.

The empirical research results prove that the higher the individual's personal innovation level, the greater the purchase intention and purchase behavior of consumers to use the O2O e-commerce platform to purchase fresh agricultural products. The higher a person's personal innovation is, it means that the individual is willing to try new things, and has a high enthusiasm and curiosity for new objects, so they have a stronger ability to learn and master new things, and find new things with Therefore, consumers with higher personal innovation are more willing to use the O2O e-commerce platform to purchase fresh agricultural products, which in turn affects their purchasing behavior.

In terms of gender, gender only has a significant impact on consumers' personal innovation, and male consumers are more innovative than women. As far as age is concerned, age only has a significant impact on consumers' perceived usefulness, perceived risk, personal innovation and consumers' purchase intention. The personal innovation and purchase intention of the age group (26-35 years old) are significantly greater than those of others. Age group; the perceived risk of age group (26-35 years old) was significantly lower than other age groups. In terms of education level, consumers with a bachelor's degree have higher perceived usefulness, lower perceived risk, and higher purchase intention and consumer behavior of bachelor's and graduate degrees. In terms of income level, the higher the income level, the higher the level of consumer purchase intention and consumer behavior, and the lower the perception of risk.

5. Conclusion

In general, O2O e-commerce distribution efficiency of fresh agricultural products is high, but there are also problems such as high supply foundation and cold chain logistics construction costs, difficulty in standardizing agricultural products, large storage and transportation losses, and the need to cultivate user consumption habits. Community fresh food e-commerce needs to study the influencing factors of consumers' purchase behavior. According to the research results, there are many factors that affect consumers' purchase behavior of O2O fresh

agricultural products. E-commerce of fresh agricultural products should strengthen the production platform of fresh agricultural products, ensure the freshness, health and safety of fresh food, establish a well-known brand of fresh agricultural products, build a sales system satisfying consumers by relying on brand strength, increase the publicity of fresh agricultural products, and make online purchase more convenient, intuitive and easy for consumers. At the same time, it is necessary to further improve the logistics efficiency, reduce the cost of goods transportation, take the actual needs of consumers as the main goal, ensure the timely and safe distribution of goods, so that consumers can buy with confidence. Increase the after-sales service quality of fresh agricultural products, and improve consumers' satisfaction with the service attitude of fresh e-commerce and their recognition of businesses. Only in this way can we further promote the development of e-commerce of fresh agricultural products in China, and make the sales of fresh agricultural products in the e-commerce model of China create a brilliant future.

Health and health care will continue to be the focus of consumers' attention in the future. E-commerce operators of fresh agricultural products in communities should continue to improve product quality and further focus on the promotion of green, healthy, safe and high-quality agricultural products. In addition, it can also provide consumers with more customized lifestyles through online channels, making it easier for users to locate the products they want and meet users with higher requirements. In the future, with the continuous upgrading of big data, artificial intelligence, internet and other related technologies, O2O e-commerce of fresh agricultural products will become more and more intelligent.

Author Contributions

The Manuscript was written through contributions of all authors. All authors have given approval to the final version of the manuscript.

Conflicts of Interest

The authors declare that they have no competing interests.

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