# Study on the Development Path of Agricultural Products E-commerce from the Perspective of County

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Abstract: As one of the important elements of the rural revitalization strategy, the development of county economy has always been of great concern to all sectors of society. As a relatively weak link in the development of county economy, there is still much room for improvement in the development of e-commerce for agricultural products. In this paper, after a comprehensive search for relevant data, with a central county's research data as a reference, the marketing characteristics are summarized, the reality of the dilemma that exists is clarified, and the actual development of e-commerce for agricultural products in the county is comprehensively analyzed. The development of e-commerce for agricultural products in the county is subject to many constraints. By optimising the development path, it will enhance the sales level of agricultural products and help farmers increase their income, thus achieving the purpose of boosting the economic development of the county, narrowing the gap between urban and rural areas and giving a strong impetus to the modernization of agriculture.

**Keywords:** Rural revitalization; County economy; Agricultural products; E-commerce; Development paths

### 1. Introduction

Agricultural products are an important and special material for life, but the alignment of the development between producers of agricultural products and marketing information is inefficient. Through the use of information technology, Online shopping has become more and more popular in recent years<sup>[1]</sup>, buyers and sellers can exchange products online in the most convenient way<sup>[2]</sup>, with marketing facilitation, faster information flow and an efficient access to consumer demand, so as to help marketers understand market conditions and reduce operating costs and increase economic efficiency. This new trading model has adapted to the development of technology and market economy as well as promoting the development of agriculture. However, domestic research on e-commerce platforms for agricultural products is still in its infancy, especially in county-level agricultural markets, and needs to be systematically sorted out and analysed.

Technical elements. Agricultural products network marketing refers to a new marketing approach based on traditional marketing theory, using the Internet as a medium, fully using Internet technology to provide an in-depth exposure to agricultural products or their brands, and realizing the whole process of their marketing in the network environment. The development of county-level agricultural products e-commerce is influenced by the local natural environment, policy support, level of science and technology, related industrial chains, personal literacy and other factors. The convenience of electronic service is an important factor affecting the success of electronic commerce system<sup>[3]</sup>. In 2020, OTEO monitoring data showed that the national county agricultural products online retail sales reached 350.761 billion yuan, an increase of 29% year-on-year, and the county agricultural products e-commerce market maintained high growth. With the rapid popularization of mobile communication technology and the Internet, "Internet plus" is flourishing and rapidly entering the rural market, which is impacting and changing the traditional marketing model of special agricultural products, and it has become a trend in the development of online marketing of special agricultural products.

Policy elements. The government's policy support and the degree of perfection of the system are the main influencing factors. Government policies can play a macro-control role in the allocation of market resources, reduce the operating costs of agricultural products and lay a good foundation for agricultural

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products network marketing. The development of e-commerce in rural areas is receiving an increasing attention from the state, and since 2014, the state has been issuing a number of policies to promote the development of rural e-commerce, including both strategic planning and specific details to point out the direction and remove policy obstacles for the development of rural e-commerce<sup>[4]</sup>. For example, since the national e-commerce into rural areas comprehensive demonstration county project was launched in 2014, the total number of approved demonstration counties in Sichuan Province ranked first in the country in 2017, 2018, 2020 and 2021. The national-level comprehensive demonstration counties have reached 99, 2,323 and 11,727 e-commerce (logistics) service sites at the country, township and village levels respectively, providing effective support for the collection, receipt and delivery of agricultural products. At the same time, the implementation of the rural revitalization strategy has brought opportunities to the online marketing of agricultural products, and the rural supply-side reform system has provided support for the development of the rural economy, the modernization of agriculture and the increase of farmers' income

Marketing channel elements. Business platforms are important carriers to support the development of marketing. The strategic expansion and extension of large e-commerce platforms such as Taobao, JD.com, Suning, Tiktok, and Nonggou to the county has deepened the awareness of the people from the origin of agricultural products to the online marketing channels. The network platform can reasonably set the rules on the shelves, online shops, live sales and "online promotion, offline experience" to improve the display rate of goods to increase online traffic. Thanks to its low cost, high sales, autonomy and other characteristics, the network live marketing can improve sales and visibility of agricultural products, and provide a good environment for the development of agricultural products network marketing. Especially in recent years, the innovative development of live-streaming platforms and the obvious effect of the "Internet economy" have brought new opportunities for e-commerce marketing. For example, during the epidemic in 2020, the deputy governor of Dangshan County carried out a live broadcast of the "fight against epidemics to help farmers" with a popularity of up to 460,000. He used the live webcast to help farmers, selling nearly 50,000 pounds of crisp pears in just three hours, with sales of over 190,000 yuan.

Marketing strategy elements. Sellers attach importance to the relationship construction with buyers, and the establishment of a good trust relationship between buyers and sellers is an important way to enhance the trust of both sides, and an important initiative to promote the sales of agricultural products. E-commerce marketing needs to integrate multiple resources based on the product characteristics and sales requirements of agricultural products, in order to create a characteristic network marketing model to make up for the objective shortcomings of agricultural products. By bringing into play the advantages of modern online marketing, intelligent logistics and online live streaming applications, recommend items of interest to users<sup>[5]</sup>, the market economic benefits of online marketing of agricultural products can be enhanced. At the same time, according to the advantages and characteristics of the development of agricultural products themselves, "tailor-made" commodity marketing strategy should be employed, with the advantages and characteristics of agricultural products themselves as the entry point, to create an exclusive and unique brand image, attract consumers and enhance the comprehensive competitive strength of the product. By doing so, the agricultural products will be able to survive in the online marketing market, thus establishing a distinctive online marketing brand image<sup>[6]</sup>.

The media nature of trading activities is outstanding. The first is the inter-temporal nature. Internet transactions can be exchanged without the constraints of time and space in order to maximise the use of time and space for marketing activities. Agricultural products through the Internet can break through the spatial barriers, while the 24-hour online sales method eliminates the time barrier to achieve marketing anytime and anywhere. The second is the rich form. It gives full play to the innovation and dynamism of the marketing staff, designs a rich and diverse product image, and uses a variety of media information, such as text, sound, images, and even videos to achieve the spread of marketing communication, and also useful micro-films and other delivery methods to enhance the "fan stickiness" of consumers. The third is an enhanced experience. Consumer demand for quality of service is rapidly increasing, and so is the level of service required by the platform<sup>[7]</sup>. E-commerce product packaging design, information distribution, technical services, and the choice of platform are all important ways to enhance the consumer experience. Use the internet to achieve two-way communication and interaction between buyers and sellers, by displaying images of goods, materials and information enquiries.

Personalised development of both sides of the transaction. The first is based on voluntary basis. Internet sales promotion adopts a voluntary one-to-one approach, which is humanized and avoids the interference of many salesmen's strong sales promotion. Information provision and interactive conversation can also maintain a long-term friendly relationship with consumers. The second is rapid growth. The youthfulness of user groups has driven the change of people's behavior patterns. Online

shopping has become the main way for young people in the new year. Effectively reduce time expenditure and social activities, which is a market channel with high development potential. The third is forward thinking. E-commerce has many functions, such as channel, promotion, electronic transaction, interactive customer service and market information analysis. Any small change can lead the development trend of the market and guide the audience to change their consumption behavior and habits.

The ease and efficiency of the transaction method. The computer stores a large amount of information to meet the needs of consumers, and the quantity and accuracy of information transmitted are far higher than other media. At the same time, it can quickly adapt to market demand, update products and prices timely or at any time according to market changes, and meet the needs of many parties. Based on signal theory, reducing information asymmetry is crucial to building an effective information network, increasing the authenticity and accuracy of information, allowing access to supply and demand information, avoiding waste and achieving efficient transactions. Compared with traditional sales, online marketing is more cost effective and efficient for agricultural marketers, with no middlemen to earn the difference. It uses information exchange instead of physical exchange to achieve information dissemination. The e-commerce model for agricultural products can reduce printing and postal costs, forming a model of low-cost investment and high-effective returns without shop sales and rental expenses. In addition, it can reduce the cost investment brought by the circuitous multiple exchanges, reduce the transaction costs, and greatly improve the transaction efficiency of agricultural products.

#### 2. Literature Review

There is relatively little research literature in this area.

With the rapid development of agricultural technology, the level of agricultural science and technology has continued to improve, and the output of agricultural products has increased, putting forward higher requirements for marketing levels. And in recent years, e-commerce platforms have flourished, aim to influence customer behavior in favor of products and brands, improving the channels for marketing agricultural products, indeed improving the market competitiveness of agricultural products, expanding sales of agricultural products, and promoting the modernization of agriculture. By doing so, they have provided a boost to the implementation of the rural revitalization strategy. As an important part of county economic development, agricultural product e-commerce is also the "blue ocean" of e-commerce that has not been developed. Although e-commerce has made great progress in rural China, the gap between it and urban China continues to grow<sup>[8]</sup>. The development of e-commerce for agricultural products has become a new content of enterprises and social development, encouraging rural households to participate in e-commerce activities<sup>[9]</sup>, Online purchasing has developed rapidly in recent years due to its efficiency, convenience, low cost, and product variety, which is both an opportunity and a challenge. With the continuous influx of funds from all parties, the e-commerce platform of agricultural products has developed rapidly, We also examine image query characteristics, refinement by attributes, and segmentation by user types<sup>[10]</sup>, prediction and explanation of user ratings of interesting items. but with some problems, it has fallen into the dilemma of development. At present, although e-commerce enterprises are actively helping farmers to sell their agricultural products, competitive prices and website reputation influence consumer behavior<sup>[11]</sup>, they face a series of problems and difficulties in the implementation phase, such as the construction of rural e-commerce platforms, business models and popularity, online customer communication, and professional training in rural e-commerce.

However, existing studies have not explored the marketing paths for the development of e-commerce for agricultural products sufficiently. This paper matches the e-commerce marketing paths with the sales of agricultural products and further explores the development paths of online marketing for agricultural products, improve the customer shopping experience<sup>[12]</sup>, collected and analyze consumer preference behavior<sup>[13]</sup>, Trust and reputation are important factors affecting the success of trading<sup>[14]</sup>, collected and sorted according to preference is called 'user profiling'<sup>[15]</sup>,detect fraud behaviors on e-commerce platforms<sup>[16]</sup>. This series of initiatives are of great significance in comprehensively promoting rural revitalization and stabilizing and increasing agricultural production, as well as increase their revenues<sup>[17]</sup> and promoting sound economic and social development.

# 3. Materials and Methods

In this section, we describe the methodological approach. First of all, we designed the questionnaire,

conducted preliminary verification, and imported the questionnaire into the Sojump (a professional online questionnaire survey, evaluation and voting platform). You can fill in the questionnaire by logging in on wechat. Secondly, we selected the users of the e-commerce platform of agricultural products in a county in central China as the research objects. Finally, through the survey respondents fill in the questionnaire to generate survey data, so as to analyze the current predicament in the development of county agricultural products e-commerce.

### 4. Results and Discussion

In this section, we describe and discuss the main findings.

### 4.1. Restricted size and growth of agricultural e-commerce platforms

To the actual economic development of the county, the marketing of agricultural products requires certain professional support, while there is a lack of professional and technical personnel in agricultural products e-commerce, resulting in the limited development of county agricultural products e-commerce platform. According to the survey, the main platforms used for marketing agricultural products in a central county are: Taobao, Pinduoduo, JD.com, Meituan Grocery and live platforms such as Tiktok and quick hand (Figure 1), with Pinduoduo accounting for the highest percentage. The operation level of e-commerce in the county is in the middle stage of development. The educational level of the staff engaged in e-commerce is mainly university graduates, and the general size of the business is in having 5 to 10 professional and technical staff. In order to boost transactions and increase revenue, regular publicity and promotion of the platform is carried out to enhance the visibility of the agricultural products on sale, increase the number of fans of the platform shop and increase the number of user visits; some businesses promote their products by offering discounts on consumption limits and issuing coupons to increase the sales of agricultural products, but at the same time increase the cost of selling them.

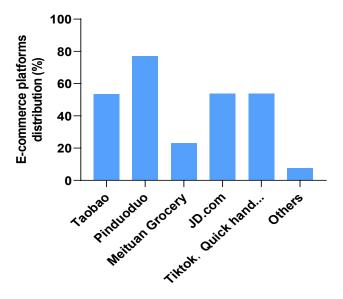


Figure 1: Distribution of e-commerce platforms used for agricultural products.

### 4.2. A low degree of branding of agricultural products

The awareness of marketing brand construction of county agricultural products is not strong, and the degree of brand construction is not high. Some e-commerce enterprises stay at the level of traditional brand building and lack innovative measures, which are mainly reflected in the low added value of agricultural products and the lack of packaging design for agricultural products on sale. In brand marketing, the marketing methods of enterprises are too single to attract many consumers, resulting in narrow sales channels of products. Although there are agricultural products producers who sell their agricultural products through online video platforms, they have not established the brand image of their products, and there are individual e-commerce enterprises who do not focus on establishing a brand image in their sales bringing negative impacts. According to the survey, although 84.62% of e-commerce

enterprises in a central county focus on branding agricultural products (Figure 2), the level of construction is not high.

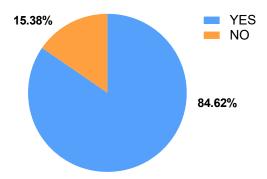


Figure 2: Whether e-commerce companies brand their agricultural products

### 4.3. Inadequate logistics facilities

At present, agricultural products have very high requirements for real-time logistics circulation, especially for some ingredient-related agricultural products, and the development of agricultural e-commerce must rely on a modern logistics system. However, in most of China's rural areas, county agricultural products e-commerce has not yet achieved modern logistics and distribution, especially in remote areas of rural areas, and infrastructure construction is far from meeting the needs of e-commerce development, or even become a bottleneck for development [18]. Most businesses adopt the original sales model, which is simply packaging the products. Obviously, it can not meet the needs of many modern logistics such as freshness, smoothness, fast transportation, clear categories and so on. In addition, the construction of the supply chain of agricultural products e-commerce platform needs to be improved. Rural logistics services pay attention to the interests of service subjects, without the concept of consumer supremacy, and the service is not normative and timely. In addition, the management is extensive, and there are barbaric loading and unloading, damaged goods and other behaviors, leading to a poor service quality<sup>[19]</sup>. The online sale of agricultural products requires a more specialised logistics chain, but the current e-commerce platform does not yet have a professional logistics chain, so there are some incoherent problems in the transportation process. The short shelf life of some agricultural products must be ensured by cold chain logistics to ensure the freshness of the products, otherwise they cannot be preserved for a long time and withstand long-distance transportation, a phenomenon that restricts the sale of agricultural products. According to the survey, a county in central China lacks cold chain logistics and has a low penetration rate of cold chain logistics. 61.54% of the factors affecting consumer evaluation of the county's agricultural products e-commerce enterprises are "untimely logistics and delivery" (Figure 3), which reflects the inadequate logistics facilities supporting the county's agricultural products e-commerce platform.

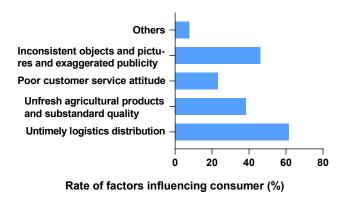


Figure 3: Factors influencing consumer ratings

# 4.4. Low awareness of fully developing the agricultural e-commerce industry

China Agricultural University Smart e-commerce research institute released a report on "China rural

e-commerce talent status and development in 2020" pointing out that in 2025 the talent gap will reach 3.5 million. At present, the majority of people engaged in e-commerce agricultural products are still of medium cultural level, with primary school education accounting for 1%, junior high school education accounting for 50%, senior high school education accounting for 32.5%, and university education accounting for only 16.5%. The majority of e-commerce professionals who graduate from universities do not first choose to join the development of rural e-commerce at the grassroots level. The study found that the quality of the operation of e-commerce platforms is closely related to the level of e-technology and information mastery of the practitioners. However, the practitioners have a low level of awareness of e-commerce, most of whom are half-baked, and are in the initial stage of imitation learning (Figure 4). They lack experience, have a low acceptance of new things, and their awareness of e-commerce is still at the virtual level. They have not updated their ideas in time to actively adapt to the development of e-commerce. In addition, some e-commerce enterprises focus on short-term gains and lack long-term planning.

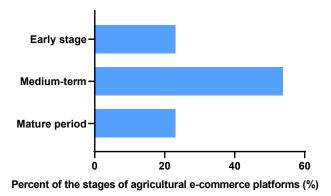


Figure 4: Development stages of agricultural product e-commerce platform

### 4.5. The development of electronic commerce should be strengthened in several aspects

Based on the characteristics of the county, and its geographical and traditional industrial advantages, coupled with the continuous development of Internet technology, there are more and more marketing channels and modes for agricultural products. The research on the development of e-commerce in a central county provides us with a data reference (Figure 5). Based on reality, we should comprehensively analyze the current situation and demand of agricultural products marketing in China, actively explore the marketing channels of agricultural products, and improve the level of e-commerce. Introduce modern technology and logistics chain network into rural areas and promote the establishment of a modern agricultural system including industry, production and management systems.

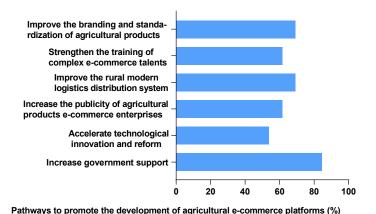


Figure 5: Effective pathways to promote the development of agricultural e-commerce platforms

### 5. Discussion

# 5.1. Focus on regional branding of agricultural products and enhance the marketing power of agricultural products across the board

In an information-rich world, even with the "information overload" of the Internet, consumers' attention is scarce and limited. In the consumer society, however, commodities with their exquisite external packaging tempt or stimulate the purchasing desire of consumers. Therefore, the economic activities of production and sales under the control of this desire form the theme of desire economics<sup>[20]</sup>. Through the creation of regional brands, geographical features and product advantages are highlighted, single quality competition is avoided, shopping behaviour is created and consumer attention is quickly and accurately attracted.

Highlight the characteristics of the regional brand. A good brand construction can obtain consumer recognition effect and also highlight the regional advantages to promote the formation of industrial clusters with agglomeration effect<sup>[21]</sup>. From the perspective of agricultural products, most of the hot selling agricultural products in the county are local characteristics, such as beef and mutton in Fengdu County, Chongqing, Pu'er tea in Menghai County, Xishuangbanna Dai Autonomous Prefecture and Panax notoginseng in Wenshan City, Yunnan. The company has also taken advantage of the rich geographical indications of agricultural products to transform from "selling products" to "selling brands". making the regional common brands of agricultural products an integral part of rural revitalization. In the current competitive environment of electronic commerce for agricultural products, rely on automatic label recommendation technology to improve the credibility of product description, the characteristic brand image design mainly highlights the brand advantages and deepens the impression of consumers. The first is to make full use of the county's resources, cultural and historical resources, legendary images of products and celebrity archives to carry out vivid publicity, with the goal of regionalising and specialising products, highlighting brand characteristics and avoiding similar competition. The second is to attach importance to the trademark and appearance design of the packaging of agricultural products. We should optimize product characteristics, highlight regional characteristics, and optimize the company's product packaging design. For example, there are more than ten national geographical indications for agricultural products in Pingdingshan City, such as Red Bull in Jia County, Pidgeon in Maigang and White Peach in Mawan. Based on quality and safety and led by brand creation, we will promote agricultural quality and brand building, comprehensively enhance the competitiveness of online marketing of agricultural products, improve the added value of agricultural industries and agricultural products, and promote farmers' income growth. The third is to shape the image of public welfare. Through research, the American Journal of Strategic Management shows that the social benefits of a company help to improve its assets and sales performance, and that a good corporate social welfare image can enhance trust between the company and consumers and improve consumer awareness of the company. E-commerce companies actively participate in social welfare activities to strengthen their social responsibility, increase positive social impact and win the trust of consumers. For example, every year, they work with farmers whose families are in difficulty to sell the agricultural products they produce in order to increase their income while winning social acclaim.

Give full play to the advantages of the new media. The first is to actively popularize traditional media and new media. E-commerce companies sign advertising contracts with local TV media, radio and other traditional media to regularly publish positive reports on the company's brand and products, increasing the media company's coverage of the brand, deepening consumers' impressions and potentially enhancing the image of the company and its products. The second is to use new media such as microblogging, Xiaohongshu and other well-known platforms to promote agricultural products. And timely identify and solve the crisis of public opinion, break through the confusion of various information channels, improve consumers' trust in information, and improve the recommendation rate and reputation of products in new media. The third is to optimise product pricing. Consumer demand theory proposes that consumers have a certain relationship between the quantity of goods demanded and the price of goods in a particular period. As the price of goods continues to increase, the quantity demanded gradually decreases. E-commerce enterprises need to make full use of the advantages of the Internet, focusing on determining the total value of the portfolio, optimising the product mix, highlighting the market price advantage of agricultural products, stimulating consumers' desire to buy, and achieving the purpose of optimal market share.

### 5.2. Optimize platform functions and services to enhance the quality of e-commerce operations

Optimise service quality. With the development of the economy, consumers' demand for traditional agricultural products is no longer limited to basic factors such as quantity and price; product packaging, branding and platform service performance have become the focus of consumers' attention<sup>[22]</sup>. According to the 7Ps theory, the service quality of the platform mainly depends on the quality of pre-sales and after-sales services (people, process and tangible display). Firstly, the after-sales service management system is improved to provide a wide range of after-sales services. Communication tools, such as telephone and online services, are used in real time to simplify the return process; online customer service models are actively promoted, with a warm approach to customer service, timely troubleshooting and restoration of timeliness to ensure consumer satisfaction, When customers enjoy doing business and benefit from it, they are satisfied and will buy again in the future<sup>[23]</sup>. Secondly, strengthen the guarantee of the existing one while strengthening the after-sales service work. According to the characteristics of agricultural products, distinguish the after-sales service responsibilities of products, avoid unfair distribution of responsibilities, and ensure the return and accuracy of products.

Improve the functional design of the platform. The design elements of the platform are directly related to the time, effort and enthusiasm of the users. The positive image of the shop allows more online users to choose their products, thus creating a differentiated advantage. To a certain extent, therefore, the level of design of the platform is key to determining whether an e-commerce business can succeed. The first to make the buying process easier, more convenient and faster for consumers from the customer's point of view, and to showcase the advantages of low prices. The second is to optimise the search tools, highlighting the search navigation function, reducing the length of time consumers spend searching for products when shopping on the website, and accurately displaying customers' needs to provide a boost to their purchases. The third is to display agricultural products in multiple ways and actively promote video shopping. This is a new business model and a new form of product display. It breaks the traditional image and text presentation, reduces the false degree of goods, and improves consumer confidence in the platform, livestreaming engagement is crucial for e-commerce operators to build relationships and create consumer loyalty. For example, the video introducing the growth cycle of the product is used to show the characteristics of the product, providing agricultural e-commerce enterprises with the opportunity to show the advantages of the product, making consumers feel more intuitive and authentic, and reducing the risk of purchasing agricultural products.

# 5.3. Increase government support and build a solid protecion system

Cultivate and introduce professional talents. Policy makers should take full account of practical needs<sup>[24]</sup>. Attracting and retaining e-commerce talents can solve the problems that e-commerce enterprises are now facing. Only with e-commerce professionals can the agricultural products e-commerce platform now in operation make a qualitative leap forward and gain the upper hand in the development process. The first is to provide protection for talents. Fully implement the introduction, education, service and development system for e-commerce talent, develop a more reasonable and scientific strategy for the introduction of talent, develop preferential policies for housing, employment and medical care to attract and retain high-level employees and provide them with development opportunities. The second is to focus on creating an atmosphere for e-commerce. Create a good environment for farmers to start their own businesses, reduce the risks and costs of starting a business, and actively carry out diversified publicity and promotion activities and build professional training mechanisms so that rural people can gain a deeper understanding of online marketing and strengthen the social recognition of online marketing channels. The third is to carry out educational activities through village-level and county-level e-commerce service networks. Promote the construction of e-commerce training system in the whole county, strengthen the practical training of enterprises, cultivate network technical talents, integrate various training resources, strengthen the training of e-commerce talents, and improve the professional level and operation ability of rural e-commerce teams, so as to provide sufficient technical personnel for the development of agricultural product online marketing channels.

Optimise government support. The government needs to strengthen its efforts to support the development of e-commerce of agricultural products in terms of formulating plans and policies, strengthening legislation and increasing investment<sup>[25]</sup>. The first is to establish a public service platform and actively explore ways to develop new forms of agricultural e-commerce. At the same time, professional and technical personnel with high service awareness will be provided, and the government will organize training to enhance the technical quality of professionals<sup>[26]</sup>. Strengthen the cultivation of e-commerce awareness of agricultural products enterprises, and guide social forces to participate in the

operation and construction of e-commerce platform spontaneously and actively. The second is to actively play the guiding function of financial funds. Strengthen the financing and credit support for the brand of agricultural products, and guide the active participation of county enterprises, in order to build the brand of agricultural products and provide strong financial support. The third is to further improve the relevant systems for the development of county land, fiscal, finance and other related industries. For example, after the establishment of the comprehensive demonstration county of e-commerce in rural areas, the development level of rural e-commerce has been significantly improved. On average, the implementation of this policy has increased the development level of rural e-commerce by at least 2.73% to 4.17%<sup>[27]</sup>. At the same time, a sound agricultural product quality supervision system has been established to carry out systematic quality management.

### 5.4. Optimise supply chain services

Strengthen the construction of rural information infrastructure. The cost composition of the rural circulation supply chain in the context of e-commerce mainly includes decentralized operating costs, capital flow costs and logistics and storage costs<sup>[28]</sup>. The first is to build an efficient and smooth circulation system through policy guidance and market participation, in line with the current trend, to reduce logistics costs and reduce the cost expenditure for the sale of agricultural products. Strengthen the construction of cold-chain logistics distribution system, give full play to the comprehensive service functions of township post, supply and marketing, express delivery, telecommunications and other services, and build an efficient rural and urban storage logistics distribution platform for agricultural products. The second is to support eligible counties, townships, villages, towns and villages to establish distribution service stations, expand cold chain logistics service functions, and provide operating sites for precooling, refrigeration, mobile and low-temperature sorting of agricultural products. It is necessary to reasonably plan and build the whole cold chain logistics infrastructure, introduce professional cold chain logistics technology, ensure the efficient implementation of product refrigeration, maintenance, storage and transportation, and improve the cold chain distribution system.

Optimize distribution mode. The first is to build a logistics and distribution center for agricultural products in the urban-rural fringe, and cultivate high-quality logistics enterprises to carry out distribution activities for agricultural products into cities. We will improve the "first mile" distribution of goods out of the village and the "last mile" distribution of goods into the village in various ways, and promote the establishment of the distribution mode of tripartite cooperation in rural areas based on the existing distribution mode of "e-commerce-logistics-community" in urban areas to solve the "one kilometer" problem of agricultural products production and marketing<sup>[29]</sup>. In this way, we can provide efficient and fast logistics services for fresh agricultural products from the vegetable garden to the dining table. The second is to improve the comprehensive functions of rural e-commerce service outlets. Encourage rural e-commerce service outlets to increase or open projects such as top-up payment, electronic settlement, package access, tourism consulting, etc. to provide one-stop comprehensive services for rural residents. Establish and build a logistics network of rural Cainiao post stations to promote the continuous increase of sales of agricultural products. The third is to strengthen the construction of logistics facilities for low-temperature processing and refrigerated storage of agricultural products. Develop green technology, strengthen the technology and application of refrigeration facilities and equipment, and build an agricultural product e-commerce ecosystem integrating agricultural product processing, packaging, storage and logistics facilities. At the same time, e-commerce enterprises of agricultural products have in-depth cooperation with major logistics enterprises to establish services such as green food distribution in a fast manner to rural areas.

### 6. Conclusions

With the rapid development of China's agricultural products sales market, major e-commerce enterprises have set their sights on this field and have been injecting capital to build their own agricultural products sales platforms in order to extend the industrial chain and gain more profits. However, no matter what channels and means are used to sell agricultural products, the aim is to develop the county economy, further explore the potential of rural resources and enable farmers to obtain greater economic and social benefits, so as to achieve the purpose of "strong agriculture, a beautiful countryside and well-off farmers". This requires the development of county agricultural products to follow the right direction under the guidance and support of the government, continuously explore new modes of operation, make full use of the Internet to create brands for agricultural products, improve added value, help customers find the products they want tol<sup>[30]</sup>, improve the quality of life by suggesting more

affordable goods and services, win the full trust of the customer<sup>[31]</sup>, further promote the standardization and scale of county agricultural products e-commerce, and inject new vitality into rural revitalization.

### **Author Contributions**

This article was completed by the author alone, but I still have to thank a county in central China for its support in helping to complete the questionnaire.

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