

Analysis on Logistics Distribution of E-Commerce Products in Rural Areas

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Abstract

With the development of e-commerce, there is great potential in the rural e-commerce market with a large number of people. This article analyzes the huge opportunities for the development of rural e-commerce market and the problems in logistics and distribution. It is proposed that the problems of developing rural e-commerce logistics distribution are mainly due to the inappropriate logistics and distribution system, the lack of logistics and distribution talents, and the high distribution cost, which restrict the development of rural logistics and increase logistics costs. In order to promote the development of e-commerce in rural areas and enrich the logistics distribution system, it is proposed to improve rural logistics and distribution facilities, rationally plan distribution outlets, and vigorously cultivate rural e-commerce talents and combine urban and rural two-way logistics.

Keywords

E-Commerce, Rural Areas, Logistics and Distribution

1. Introduction

With the rapid development of China's economy and the rapid rise of the Internet, e-commerce, as a new business model, is also developing steadily. Electronic commerce, which has been developing at an alarming rate, has continuously promoted China's economic growth. At the same time, it has broken the traditional pattern of economic behavior, and has also changed consumers' past consumption patterns and life concepts. At present, due to the improvement of rural network infrastructure, the Internet penetration rate in rural areas of China is increasing, which means that rural e-commerce is bound to become the next blue ocean of e-commerce. This blue ocean looks beautiful from afar, but it is difficult to implement it. It may be difficult to perceive the impact of logistics

distribution on the development of e-commerce in cities, but the corresponding contradictions are exposed in rural areas with inconvenient transportation. Only by solving the problem of logistics distribution, which is inseparable from e-commerce, can rural e-commerce truly develop.

Domestic research on rural e-commerce mainly focuses on the following aspects.

1) Research on e-commerce mode of agricultural products. Peng Biyu proposed four e-commerce models for agriculture in China—M2M model, intermediary model, strategic alliance model, and member model, and made a simple analysis of them. Lin Hua pointed out two foreign models that can be used for reference, namely comprehensive online supermarkets that include agricultural product sales and specialized agricultural product online stores.

2) Research on the development countermeasures of e-commerce for agricultural products. After analyzing the current situation and problems of e-commerce development for agricultural products in Hunan, Peng Jian believes that rural cooperatives and agricultural standardization systems should be established and improved under the leadership of the government, while farmers should actively participate in cooperatives and continuously promote the standardization of agricultural product production and management. Liang Yun and others discussed the development path of agricultural e-commerce in China: first, building an efficient agricultural information network system; The second is to improve e-commerce development strategies for agricultural products. Li Jiani proposed countermeasures such as strengthening government functions, providing institutional guarantees, improving infrastructure, strengthening network construction, and improving the quality of farmers.

3) Research on the logistics issues of e-commerce for agricultural products. After discussing the problems existing in the construction of rural logistics system in China, Song Limin and others proposed a rural operation mode of postal logistics, which is “using entrusted agencies as bridges, township postal offices as grassroots units, and county and city logistics centers as basic logistics organizations.” Wen Longguang and Pan Lijun proposed a distribution solution based on the regional passenger shuttle bus system. The previous relevant theoretical research mainly focused on the following points: 1) The existing problems and constraints of the development of rural e-commerce market were well analyzed. 2) It is proposed that the development of rural e-commerce market should establish a standard system of scale, organization and standardization. 3) The logistics operation of agricultural products should organize supply chain resources around core enterprises and develop strategic partners. 4) Actively advocate the importance of accelerating and deepening the construction of rural information platform. Throughout the above researchers’ research on the development of rural e-commerce market has the following deficiencies: 1) More research on the development of rural e-commerce market only stays in the field of agricultural products entering the city, or means of production going to the countryside, and there is no research on how to combine the two-way logistics of agricultural

products entering the city with urban daily necessities and agricultural means of production going to the countryside; 2) The research on the bottleneck of e-commerce development of agricultural products is not thorough (Hu, 2018); 3) The research on the distribution mode of the village distribution terminal in the rural market is not in place, and the development of rural e-commerce should be coordinated with logistics. It is based on this that the current situation and problems of rural logistics distribution are analyzed, and development strategies are proposed for the development of rural e-commerce logistics distribution (Jia, 2018).

The organizational structure of this article is arranged as follows. Firstly, it analyzes the existing problems in the development of rural e-commerce through literature review and interviews, and further explores the causes. Finally, it proposes some measures to develop rural e-commerce logistics and distribution.

2. Current Situation and Problems of Logistics Distribution in Rural E-Commerce Market

2.1. Current Situation of Rural E-Commerce Logistics Distribution

1) Rapid Development of the Internet

According to the 50th “Statistical Report on the Development of Internet in China” released by the China Internet Network Information Center (CNNIC) in Beijing, as of June 2022, in terms of the network access environment, the average Internet user spent 29.5 hours per week online, an increase of 1.0 hours compared to December 2021. In addition, the number of short video users in China reached 962 million, an increase of 28.05 million over December 2021, accounting for 91.5% of the total number of Internet users. The number of webcast users reached 716 million, an increase of 12.9 million over December 2021, accounting for 68.1% of the total number of Internet users. The existence of the Internet not only meets people’s daily needs, but also contributes to the national economic development to a certain extent. It is also because of the existence of the Internet that it has created value for rural e-commerce. It provides broad space for rural development.

2) Strong Policy Support

As the gap between urban and rural economic development continues to widen, the government is increasingly aware that the gap between urban and rural areas will inevitably become a stumbling block to urban development, so the national government provides strong support for rural development and provides a series of security measures and policies. In January 2018, the State Council issued an opinion on promoting the coordinated development of e-commerce and express logistics, which pointed out that the infrastructure of e-commerce express logistics should be improved by strengthening planning and guidance, and focused on optimizing the allocation of rural express resources, and improving the rural distribution network supported by county-level logistics distribution centers, township distribution nodes, and village-level public service points. These

measures are conducive to ensuring the safety of goods distribution and distribution personnel, and are of great significance to the distribution of rural logistics.

2.2. Current Problems in Rural E-Commerce Logistics Distribution

Based on the “Opinions on Promoting the Development of Rural Postal Logistics” issued by six ministries and commissions, research materials from relevant research groups of Zhejiang Provincial Department of Transportation, and data from my visits to rural logistics enterprises, it is concluded that the following problems exist in rural e-commerce logistics.

1) High Cost of Distribution of Industrial Products in the Countryside

Compared with cities, the distribution cost of rural logistics is high. According to relevant statistics, the cost ratio of each express delivery to the city and village is 2:1. When the delivery mileage is within 20 kilometers, the cost of delivery to the city is 1/2 of that to the countryside; At 20 - 30 kilometers, the cost of distribution to cities is 1/3 of that of rural areas; At 60 km, the cost of distribution to cities is 1/5 of that in rural areas. Liu Qiangdong, the president of JD, said: JD sometimes has only one or two packages in rural areas. It is conceivable that the cost is five times that of Beijing and Shanghai.

2) Efficiency of Rural Logistics Distribution

Not only is the cost high, but also the time cost of rural distribution is high, and the delivery time is long. First, it is observed that it takes about 20 minutes to drive from a distribution point in the town to the village, sometimes more than 30 minutes. In 20 minutes, for a courier, dozens of packages may be delivered in the city, while sometimes it is only one package in the countryside. Secondly, the courier is not very familiar with the number of the rural doorplate, and with the acceleration of urbanization in China, the emergence of hollow villages in rural areas leads to low concentration, which may be scattered in all corners. Finally, the roads in rural areas are not as wide as those in cities. Many of them are meandering, and it is difficult to send a car to move as easily as in cities.

3) The Basic Facilities of Rural Logistics Distribution are not Sound

First of all, although most of the rural areas have convenient and wide roads, the construction of transportation network is still not perfect, and it is difficult to meet the actual needs. Secondly, the distribution network is not centralized enough. The post offices and third-party logistics enterprises in villages and towns operate independently, and it is difficult to achieve comprehensive coverage, which brings great trouble to the unified management of logistics distribution. Finally, the degree of specialization and standardization is low. Distribution personnel often hold several positions, and some have not even received training. In addition to professional distribution vehicles, there are also many private cars in the distribution vehicles. Due to the fact that villages are scattered, it is

difficult to establish a warehouse management system in terms of warehousing.

3. Analysis on the Causes of Rural Logistics Distribution Problems under E-Commerce Environment

3.1. Management Factor

Logistics enterprises basically implement a simple and rough extensive management mode in rural areas, which leads to low management efficiency. Most of the distribution personnel take up their posts without training and management, and there is a certain gap between the professional quality of the urban distribution personnel, and the distribution of rural logistics enterprises is scattered, and the degree of aggregation is low, which makes it difficult to achieve mutual communication and cooperation. Because information and resources cannot be shared. Rural areas have not yet been able to form an efficient management system and cannot achieve joint collaborative distribution.

3.2. Financial Factor

On the one hand, the government's support for logistics is limited, and the logistics enterprises with only trucks cannot borrow enough funds; On the other hand, most of the rural logistics enterprises are small and medium-sized enterprises. The overall financial strength is not strong enough and the relative core competitiveness is not strong enough. It is difficult to absorb capital in the society to promote the redevelopment of enterprises. Many logistics enterprises mostly set up their outlets at the county and township level, but failed to sink to the village and township level. The rise of oil price and overall wage level has led to the continuous increase of rural distribution costs of logistics enterprises, which makes it difficult to achieve economies of scale, which means that the profits of enterprises are shrinking and restricts the development of rural logistics distribution.

3.3. Logistics Talent Factor

There is a shortage of professional logistics and distribution talents in rural areas. Compared with urban areas, the salary and living standards in rural areas are far inferior to those in urban areas, and most people feel that working in rural areas is far less beautiful than working in urban areas. Under the influence of a series of factors, highly educated logistics talents are not willing to return to the countryside. Even if they return to the countryside, the rate of leaving their jobs is very high because they can't stand the conditions in the countryside. At present, the level and quality of logistics delivery personnel are not uniform, so that the services provided are not professional and sophisticated, and the efficiency is not efficient enough. The phenomenon of brutal and violent operation still exists, and the phenomenon of damage to logistics express delivery still occurs.

4. Development Strategy of Rural Logistics Distribution under E-Commerce Environment

4.1. Improve Rural Information Network Infrastructure Construction

Although logistics distribution needs offline physical objects to support the realization, information flow and capital flow can be realized without obstacles through online e-commerce platform. The information network infrastructure is the basis for achieving efficient logistics. The government should give strong support and guidance to establish information network infrastructure covering all rural areas. At present, most rural areas have mobile communication and other network facilities and equipment, but the network environment is still poor, and the signal is still intermittent. The government can unite with mobile and other communication companies to set up broadband for farmers in the countryside, because in the countryside, there are many retail customers who handle broadband, and the communication companies feel troublesome and refuse to go to the door to handle it; In addition, after taking into account the actual situation in rural areas, the rural communication tariff can be appropriately adjusted and a part of preferential subsidies can be given.

4.2. Reasonable Planning of Logistics Distribution Network

The selection of distribution outlets in rural areas by logistics companies plays a vital role in the development of companies in rural areas. Unqualified distribution outlets are bound to be difficult to meet the needs of users, which will further lead to the increase of distribution costs. At present, most of the logistics distribution points in rural areas only involve towns, not rural areas (Liu, 2015). After certain planning and calculation, several adjacent villages can be divided into one unit, and the distribution network can be set at the place with the shortest distribution distance through data calculation, or the network can be set at the place where villagers often go in and out, such as the supermarket and the village committee (Wang, 2016).

4.3. Cultivate E-Commerce Logistics Talents

To strengthen the team construction of talents in rural logistics system, we not only need to attract logistics talents to the countryside, but also can cultivate logistics talents ourselves. First, the government can provide subsidies for talents who go to the countryside, and enterprises can also moderately raise wages. Of course, these talents need to master not only information network technology, but also electronic logistics knowledge. Second, relevant courses can be offered in secondary vocational schools and universities to actively encourage students to engage in relevant work (Currently, relevant courses in universities are mainly focused on basic theoretical teaching such as warehouse management, transportation management, procurement management, and supply chain management, with little involvement in the operation of rural e-commerce and agricultural

product logistics). Undoubtedly, in the above two measures, the government needs to play an active guiding role in guiding the direction of talent cultivation and introduction.

4.4. Logistics Combination of Industrial Products to the Countryside and Agricultural Products to the City

The combination of industrial products to the countryside and agricultural products to the city can avoid the situation of empty space and save costs. In the seasonal season of agricultural products, there are transport trucks going to the village every day to pick up goods. When the trucks go to the countryside, they are basically empty, which is similar to the empty situation of logistics distribution vehicles returning from the countryside to the network. Therefore, the combination of rural and urban vehicle distribution can solve at least two no-load situations (Zhang, Chen, & Jiang, 2018).

5. Conclusion

In the current development of the e-commerce market, where the wind is rising and the situation is in full swing, logistics enterprises should turn their attention to the argument of the rural market. After analyzing the constraints and market opportunities for developing rural e-commerce, measures are proposed to improve rural logistics and distribution facilities, reasonably plan distribution networks, vigorously cultivate rural e-commerce talents, and combine urban and rural two-way logistics. These views have a positive impact on the development of rural e-commerce, but their specific implementation needs to be further improved in the future.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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