Research on Rural Electronic Commerce Logistics in Henan Province

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Abstract — The aims are that improve the living standard of rural areas in Henan Province, and contribute to the building of a well-off society in an all-round way. According to the present situation of rural e-commerce logistics in Henan Province and the national support policy, the paper puts forward some suggestions. The paper mainly through the questionnaire survey method. It analyzes the present situation and the problems, and puts forward feasible suggestions. For rural development, it improves rural living standards. It can contribute to narrowing the gap between urban and rural areas.

1. INTRODUCTION
In the case of fierce traditional market competition and increasingly hot online market competition, Henan rural e-commerce is still in a semi-closed state. Logistics is an important link in rural e-commerce. The development of logistics will affect the development of rural e-commerce in Henan Province.

A lot of scholars have studied the rural e-commerce logistics. Wen [1] pointed out that under the current situation of the continuous development of the Internet and agriculture, the rural e-commerce logistics is changing the traditional agricultural product sales model. It has become the effective way to increase rural income. He and others [2] put forward that on the basis of the integration of rural e-commerce logistics, using the growth rate method and regression analysis method to predict the demand and overall trend of agricultural products, so as to optimize the logistics. Teng [3] put forward on the basis of analyzing the present situation of rural modern logistics in Henan Province. This paper studied the construction of rural logistics system in Henan Province. And it analyzed the existing problems, and put forward some suggestions and countermeasures. Huang [4] put forward the adaptability of the present situation of rural e-commerce logistics in Henan Province, analyzed the logistics problems in the development of rural e-commerce, and put forward the corresponding countermeasures. Wang [5] pointed out that rural logistics is the most important factor affecting the development of rural e-commerce. Through the analysis of the problems existing in rural e-commerce logistics, this paper put forward the current situation of improving rural e-commerce logistics through government policy support and strengthening infrastructure construction. Hua and others [6] pointed out that the integration mode of rural e-commerce logistics should adopt information symmetry and credit game for each participant. So that ensure the stability of supply chain and reduce logistics cost. Kong [7] pointed out that through the investigation method, the logistics distribution network was established to realize the two-way process system of industrial products and agricultural products process, and analyzed the
logistics cost and common distribution strategies of logistics distribution. Tang [8] believed that according to the analysis of the logistics development background of rural e-commerce in China. We should improve the development of rural e-commerce, optimize the rural logistics system, train and introduce talents. Liu [9] pointed out that the mobile Internet, rural e-commerce and logistics are interrelated, and the coordinated development of the three is an inevitable trend. This paper analyzed the current situation of mobile Internet, rural e-commerce, logistics. After analyzed the present situation and trend of rural e-commerce logistics. Yi [10] pointed out that the information circulation of rural e-commerce logistics is not smooth and the rural logistics distribution system is not backward. Rural e-commerce logistics training system should be established with the support of the government, and a perfect rural e-commerce platform should be established.

2. INVESTIGATION AND ANALYSIS ON CURRENT SITUATION OF RURAL E-COMMERCE LOGISTICS IN HENAN PROVINCE

In order to better understand the current situation of rural e-commerce logistics, this paper designs a questionnaire about rural e-commerce logistics on the basis of consulting relevant information.

2.1 Sample description

By July 2020, it sent out 1,000 questionnaires. A total of 820 questionnaires were collected. The recovery was 82%, including 510 electronic copies, 310 copies in paper. From the questionnaire, 52.27% of those engaged in rural e-commerce are in rural areas, 31.82% in cities, 15.91% in towns. The proportion of people in rural areas is relatively large.

2.2 Analysis of findings

Questionnaire survey Henan Province rural e-commerce logistics status, the results of data analysis, summarized as follows:

2.2.1 Network outreach

Rural e-commerce platform is a platform. It is through network information technology. Network information technology is the basis of the development of rural e-commerce. The purpose is study whether rural e-commerce is perfect in network information.

Through investigation and analysis, rural networks are more developed. 68.18% of people are using the network. 29.55% of people are rarely used. 2.27% of people are almost no use. It shows that the popularity of rural network is relatively high. It lays a good foundation for the development of rural e-commerce logistics in Henan Province.

2.2.2 Kinds Of Rural agricultural products

According to the investigation, there are many kinds of agricultural products sold in rural e-commerce in Henan Province. There are many kinds of agricultural products sold on e-commerce platforms in Henan Province. And the preservation conditions of different agricultural products are different, which have higher requirements for storage and transportation.

| Types of agricultural products | Percentage share |
|-------------------------------|------------------|
| 1-2 species                   | 54.55%           |
| 3-5 species                   | 13.65%           |
| 5 or more                     | 31.82%           |

2.2.3 Kinds of rural e-commerce platforms

From the investigation, the rural areas are generally using Taobao platform to trade. It shows that there are many kinds of e-commerce platforms in rural areas. But most of the people engaged in rural e-commerce choose to use Taobao. It can price autonomy is relatively strong, engage in rural e-commerce personnel can set their own prices, change prices. JD and other platforms autonomy are weak.
### TABLE 2 PERCENTAGE OF KINDS OF AGRICULTURAL PRODUCTS

| Types of rural e-commerce platforms | Percentage share | Tao Bao | JD and SUNING et.al | Basket et.al |
|------------------------------------|------------------|---------|---------------------|-------------|
|                                    |                  | 75.91%  | 7.32%               | 24.29%      |

#### 2.2.4 Sales of agricultural products

The logistics system of rural e-commerce includes sales links. It investigates the sales of agricultural products in Henan Province on the rural e-commerce platforms. And it analyzes the current situation of agricultural products sales. According to the survey, the sales of agricultural products on the rural e-commerce platform are not very good.

### TABLE 3 PERCENTAGE OF SALES OF AGRICULTURAL PRODUCTS

| Sales of agricultural products | Percentage share |
|-------------------------------|------------------|
|                               | Good             | Normal   | Bad     |
|                               | 15.91%           | 68.18%   | 15.91%  |

#### 2.2.5 Rural e-commerce delivery common logistics company

According to the investigation, there are many kinds of rural express delivery, most of the rural e-commerce personnel will choose ZTO Express delivery. The speed of delivery is fast. The transportation time is short. And the buyer can receive the goods in a very short time. China Post is the most extensive network in China. It can reach villages and towns, postal delivery speed is slow. It results in the number of people choosing postal service is lower than ZTO Express, which indicates that the rural e-commerce logistics system is not perfect and the delivery speed is slow.

#### 2.2.6 Forms of sending and receiving agricultural goods in rural areas

The analysis result shows that the rural areas still have their own situation of sending and receiving agricultural products to the township agency points, which will lead to long distance transportation and waste too much time, which is not conducive to the development of rural e-commerce logistics in Henan Province.

### TABLE 4 PERCENTAGE OF FORMS OF RURAL LOGISTICS SENDING AND RECEIVING EXPRESS DELIVERIES

| Form of rural logistics sending and receiving express delivery | Percentage share |
|--------------------------------------------------------------|------------------|
| Township agency point                                         | 57%              |
| Free of charge door mail                                      | 41%              |
| Charge to door mail                                           | 2%               |

#### 2.2.7 Rural e-commerce personnel to send and receive express delivery network time

Rural e-commerce integrates logistics, forms an efficient circulation system, investigates the time of rural e-commerce personnel to express outlets, integrates the process, and shortens the time as far as possible.
According to this, most rural e-commerce personnel are far from the nearest express delivery point, it takes 10-30 minutes to arrive, and a small part takes more than 30 minutes, so the layout of rural express outlets needs to be improved.

2.2.8 Goods lost or damaged
In the rural e-commerce logistics system, loading and unloading is one of the links. This paper investigates the loss or damage of agricultural products in Henan Province during loading and unloading. It analyzes the present situation. And it finds out the problems existing in this link. The results of the survey shows that 63.41% of the people received and received agricultural products in rural areas without loss or damage. But 36.59% of the people said that the loss or damage occurred frequently in rural areas, and the packaging of agricultural products sent to customers was often crushed or torn, which showed that:
- There is violent loading and unloading in the process of logistics and transportation, insufficient protection measures were taken.
- Rural e-commerce personnel were not aware of the importance of packaging agricultural products.

2.2.9 Time required for transportation
The survey shows that 35.90% express delivery can be delivered to customers in 1-3 days. 58.97% takes 3-5 days and 5.13% takes more than 5 days, which indicates that most logistics companies need 3-5 days in terms of transportation time.

The rural transportation problem is the rural e-commerce personnel thinks is the most serious. It needs the fastest to solve.

The investigation and analysis shows that the rural logistics needs to be improved. The road surface is built. The transportation route is optimized. And the logistics network is increased, which can save a lot of time and benefit the development of rural e-commerce logistics.

3. OPEN QUESTIONS
Through the questionnaire survey of rural e-commerce logistics in Henan Province and the communication with employees. It combines with the analysis of the data, the following problems are put forward:
3.1 Platform advocacy not available
The data shows that most rural e-commerce personnel are using Taobao platform. There are two reasons:
• First, the propaganda of other platforms is not enough, rural e-commerce personnel do not know much about other platforms.
• Second, Taobao price autonomy is relatively high, can price their own. Other platforms are not widely used and the market is hindered, which is not conducive to the development of rural e-commerce and will greatly affect the development of rural e-commerce logistics in Henan Province.

3.2 Small number of rural express outlets
The data shows that there is a long time for rural e-commerce personnel in Henan Province to send and receive express delivery points nearby. The reason is that there are too few rural express outlets. Each town has a postal network, but the express outlets of other logistics companies have not been popularized to villages and towns, and the distribution of separate postal outlets can no longer meet the growing demand of the rural logistics market. When sending and receiving agricultural products, rural e-commerce personnel are far from the express delivery network. It leads to a long transportation time, and affects the operation speed of the whole logistics system and the development of rural e-commerce logistics in Henan Province.

3.3 Inadequate logistics distribution and warehousing system
The data shows that there is a long transportation time. The customer received the damage of agricultural products. For the current logistics companies, failed to integrate all aspects of logistics organically. It can not timely and quickly transport agricultural products to the hands of customers. Rural transportation is not very good. Transportation takes a long time. Some agricultural products have higher requirements for preservation, and different kinds of agricultural products have different requirements for storage. It Fail to keep these agricultural products fresh will directly affect the quality of agricultural products. The distribution and storage system of logistics mainly sends agricultural products to customers at the fastest speed. It aims to ensure the quality of agricultural products.

3.4 Lack of expertise
The data shows that there is loss and damage of agricultural products. Because rural e-commerce personnel do not realize that they should pay attention to the packaging of agricultural products. And in terms of logistics service attitude, there is a general service attitude of logistics service personnel. There is no professional level. In the daily operation of express outlets, it needs a manager to control, including the scope of the transport route optimization, logistics personnel service requirements and so on. Most college students go to work in rural areas. It results in a lack of professionals in rural areas.

3.5 Service standards are not implemented
There are some problems in rural e-commerce logistics, such as violent loading and unloading, lack of attention to the packaging of agricultural products by rural e-commerce personnel. And the state has already set standards for the trial operation of rural e-commerce services. But it has not realized the strict implementation of comprehensive supervision. In the course of investigation, a few urban areas in Henan Province have begun to carry out professional training for rural e-commerce personnel. But most areas have not been implemented. It has affected the development of rural e-commerce logistics.

4. Development Recommendations

4.1 Platform advocacy
At present, there are many kinds of rural e-commerce platforms available on the network, but the questionnaire survey shows that most farmers sell agricultural products through Taobao platform. Many platforms face different consumer groups. Farmers choose different platforms to sell agricultural products can increase the sales and sales of products. The government and vegetable basket, JD and other e-commerce business enterprises can promote and promote the platform. At the same time, e-
commerce platform management enterprises can improve the price autonomy of rural e-commerce personnel. It makes rural e-commerce personnel have a certain autonomy to sell agricultural products. It promotes the development of rural e-commerce logistics.

4.2 Establishment of rural express outlets
The questionnaire survey shows that farmers need to spend a long time to send and receive agricultural products by express delivery. Which is not convenient and can no longer meet the needs of the market. In order to develop rural e-commerce logistics in Henan Province, logistics companies can set up more express outlets in rural areas. It improve the layout scale of express outlets, and save the time for rural e-commerce personnel to go to the receiving and sending points.

Logistics companies can also use the wide distribution of China Post network, cooperate with China Post. With the help of China Post in towns and villages, in China Post network to send and receive. It not only can send agricultural products to customers as quickly as possible, but also use existing resources to save costs.

4.3 Adopt optimal transportation routes
Agricultural products in the transport process will be too long, affecting the quality of agricultural products to customers. In order to ensure the quality of agricultural products, the transportation route is planned and the transportation time of agricultural products is saved. Because the value of agricultural products itself is on the low side. And the origin is in the rural areas with less developed transportation. The scheme of using aircraft transportation is more difficult to realize. The freight exceeds the value of the commodity itself. As a result, rural e-commerce platform for the sale of agricultural products farmers have no profit. In cross-provincial distribution, the optimal route can be used in different sections of transportation, saving costs and resources, and helping agricultural products to expand the market.

4.4 Improve storage systems and cold chain transport
Agricultural products have different requirements for storage environment in the process of circulation. In operation, agricultural products with different storage conditions should be classified. And it should be placed together. For some special perishable and perishable agricultural products, it is necessary to ensure the quality of agricultural products through low temperature transportation. In view of this part of the products, cold chain transportation can be introduced to control the temperature of the whole transportation process. And it reduces the deterioration of agricultural products in transit. We can cooperate with the existing cold chain logistics in rural areas. It also can rent its cold chain equipment resources, provide logistics services for special agricultural products. It can carry out high quality logistics services for farmers on the basis of saving resources and cost. And it opens up a new development direction for the development of rural e-commerce logistics.

4.5 Train Professional Personnel of Rural E-commerce Logistics
The lack of professional talents has greatly affected the development of rural e-commerce logistics in Henan Province. It is very important to train a group of personnel who are good at rural e-commerce logistics management. Here are two measures:

- It is necessary to train personnel engaged in rural e-commerce logistics. Such as improve their professionalism, and increase their professional knowledge and skills, and introduce professionals to conduct systematic training, and cooperate with Taobao platform. The platforms provides professionals to operate stores and speed up the development of rural Taobao stores.
- It should be guided that the rural youth to participate in the production, packaging, processing and storage of agricultural products. And it encourages them to carry out entrepreneurial employment in these links.
- It is significantly that encourage graduates to work in rural related industries, and start businesses in rural areas, to make full use of rural resources. The government has promulgated
preferential policies to establish corresponding innovative research teams for the core technologies of industrial development.

5. CONCLUSION
Through the questionnaire survey of rural e-commerce personnel, this paper analyzes the present situation of rural e-commerce in Henan Province. And it puts forward some problems, such as the lack of platform propaganda, the small number of rural express outlets, and puts forward some suggestions. It has a little positive effect on the improvement of rural e-commerce logistics in Henan Province. The innovation of this paper is to use the method of questionnaire to investigate the rural e-commerce logistics in Henan Province. And it puts forward some suggestions for the problems.

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