Research on Rural E-commerce Terminal Distribution Strategy Based on Crowdsourcing Model

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Abstract: The development of the rural economy has driven the increase of rural e-commerce transaction volume, while the relatively backward logistics and distribution resources in rural areas are difficult to adapt to the growing trend of business volume. Therefore, it first summarizes the current status of rural e-commerce end-delivery business, analyzes the current rural e-commerce end-delivery business model, secondly analyzes the existing typical problems from various aspects of distribution resources, and again proposes the application value of crowdsourcing model and end-delivery The application process in the link; Finally, a security strategy for the implementation of the crowdsourcing model is proposed from the aspects of recruitment, training, assessment, and site selection.

1. Status of Rural E-commerce's Terminal Distribution Business

As the country provides more policy-oriented tilts for rural economic development, the new rural economy is undergoing a golden stage. Rural e-commerce, as a representative industry of the new rural economy, has experienced rapid growth in transaction scale in recent years. According to statistics from the Ministry of Commerce, rural online retail sales and agricultural product online retail sales in 2018 were 1.37 trillion yuan and 230.5 billion yuan, respectively. The growth rate is over 30%, which has a strong positive effect on boosting employment and promoting economic growth. For example, in 2017, there were 9.856 million rural online stores, a year-on-year increase of 20.7%, which led to more than 28 million employed people. Promote the government to introduce more preferential policies to guide social capital to expand the rural e-commerce market. For example, in the "Notice on the Comprehensive Demonstration of E-commerce in Rural Areas in 2019", the central financial fund encourages local governments to give priority to the use of awards, subsidies, and loan discounts. According to relevant statistical data, the current coverage rate of e-commerce into rural comprehensive demonstration areas is close to 90% [1].

As the penetration rate of the rural e-commerce industry continues to increase, the related logistics and distribution service industry is also becoming more specialized and large-scale. While domestic e-commerce giants are opening up the rural consumer market, they are also innovating end-of-life delivery models for rural e-commerce logistics, such as JD.com's self-built logistics model, Alibaba's rural community logistics model, and the cooperation model between SF and rural stores.

1.1. Self-built Logistics Distribution Model

This distribution model is an e-commerce company that builds its own distribution network (including distribution outlets and distribution personnel) in accordance with the demand distribution situation in rural areas. All products sold on the platform are delivered by its own distribution network. Its operational characteristics are high customer service satisfaction, but the initial investment in the network construction has high investment costs and long cost recovery periods. Costs are used to purchase or lease a certain size of distribution vehicles, build or lease warehouses, and recruit distribution staff [2].

1.2. Rural Community Logistics Model

The distribution model is that an e-commerce company outsources the platform distribution business to a third-party logistics company. The logistics company assumes the task of commodity distribution, and the e-commerce company undertakes services such as transaction, payment, and after-sales service. This model has a small amount of initial investment and a short cost recovery period, but the difference in service capabilities of logistics enterprises has led to uneven customer service levels [3].

1.3. Cooperative Distribution Logistics Model

The distribution mode is that e-commerce companies and express delivery companies cooperate to build offline self-service areas or rent rural small store areas to place express self-lifting containers. E-commerce customers can choose the nearest self-lifting container to pick up products. Although this model significantly reduces the operating and management costs of outlets, the investment cost and electricity cost of self-lifting cabinets are relatively high, which makes it difficult to coordinate the number of self-lifting cabinets and the distribution network design. In addition, the self-lifting model affects the customer service experience. Shaping the market competitiveness of e-commerce companies is not good [4].

2. Problems in Rural E-commerce End Delivery

2.1. Limited Coverage of Rural E-commerce Logistics Distribution Sites Affects Online Shopping Experience

At present, due to various factors such as cost, major domestic express delivery companies can only set up delivery service sites around the county seat. Most of the townships and villages use store alliances or set up service agencies to provide self-collection services. The blind spot of delivery service severely affects the online shopping consumer experience. According to the statistics of the State Postal Administration, the rural express delivery business grew at a rate of more than 30% in the first half of 2019, 7 percentage points higher than that of cities, but the pattern of strong cities and weak rural areas remained unchanged. There are 67,000 public express delivery points in rural areas across the country, and the coverage rate of township outlets has reached 92.6%, while up to 74.9% of the established villages have not been equipped with rural e-commerce distribution sites, which means that most villagers need to go to townships to receive express mail.

2.2. Lack of Transportation Infrastructure and Information Platform in Rural E-commerce Logistics Leads to Poor Distribution Efficiency

In recent years, the state has increased investment in the "Village-to-Village" project, and transportation infrastructure in rural areas has been greatly improved. Currently, village roads cover almost all administrative villages. The level of transportation infrastructure construction is low, and it is still a dirt road or a mountain road, which cannot meet the timeliness and safety requirements of e-commerce logistics terminal distribution. At the same time, most rural areas are still dominated by the agricultural economy, and the lack of secondary industry support has led to a long capital recovery cycle and low returns for the construction of storage and logistics bases, and a serious shortage of logistics distribution centers in rural areas. In addition, the decentralized agricultural production process rarely uses advanced network technologies such as big data, GIS, GPS, and logistics information platforms to share logistics information resources, resulting in lower efficiency of distribution operations in rural areas.

2.3. Lack of E-Commerce Logistics Business Training, Resulting in Insufficient Human Resources for Rural E-commerce Logistics Distribution

At present, most of the rural e-commerce logistics practitioners are over 50 years old, with low education level, and lack or have not received professional training in rural e-commerce logistics distribution. The level of standardized operations is low, and the level of distribution services remains at the postal level. Service level. In addition, the current government fiscal and taxation policies and business training mainly focus on the poverty alleviation link of the commodity export trade in rural e-commerce. There is no corresponding training expenditure and training arrangements for the consumer link of offline distribution, and the development of rural economy has driven the online shopping trade volume. As a result, qualified rural e-commerce distribution personnel are relatively insufficient.

3. Guarantee Strategy for the Implementation of the Rural E-Commerce Terminal Distribution Crowdsourcing Model

3.1. Reasonable Layout of County Distribution Network

The county distribution network is the starting point of the crowdsourcing service and the control management center. The goal of the site selection is to ensure that the delivery time and security are guaranteed. The crowdsourcing distribution staff can deliver the courier to customers in various regions of the township and village in a timely manner. The traffic is medium. Therefore, the county distribution network should first control the investment cost, and can meet the crowdsourcing distribution staff's fast access to delivery requirements. For example, in counties and towns, priority is given to neighbouring trade settlements, and in villages, priority is given to areas where retail stores are located.

3.2. Strictly Review the Registered Distribution Staff of the Crowdsourcing Platform

The key points for the platform's registered delivery staff can include the following three aspects: first, whether the registered staff has a good credit qualification; For example, to optimize the selection of delivery staff and delivery staff with relevant experience in express delivery companies or consignment companies; preference is given to the delivery staff with the qualification certificate issued by the State Postal Administration. The third is to check whether the distribution tools have

safety certification. For example, the postal management tricycle with the express delivery logo is preferred, and vehicles with hidden dangers are refused to undertake the distribution tasks.

3.3. Multi-knowledge System Professional Training for Crowdsourced Delivery Staff

Due to the characteristics of courier services, in order to ensure the quality of the services, professional training of crowdsourcing courier's work norms and service attitude is required on a regular basis. The training content includes general knowledge of traffic safety, cargo stacking and customer service skills. Among them, the training of common sense of traffic safety is to motivate the delivery staff to follow the relevant road driving rules and regulations; the cargo stacking training is to allow the delivery staff to master the rules of express delivery, to ensure that the weight is not light, the placement is firm, and it is easy to pick up; The delivery staff treats customers enthusiastically, patiently, and wholeheartedly, enhancing the customer service experience.

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