

Research on the Construction of Rural E-Commerce Logistics Distribution System in Shuizha Logistics Park of Linjiang City under the Background of "Internet +"

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Keywords: "Internet +", Linjiang Sluice Logistics Park, Logistics distribution system, Rural e-commerce

Abstract: During the "Two Sessions" in 2015, Premier Li Keqiang put forward the "Internet Plus" action plan for the first time in his government work report[1,2]. In 2022, the "No. 1 Central Document" put forward new requirements for rural e-commerce, pointing out the implementation of the project of "developing agriculture through digital commerce" to promote e-commerce into rural areas. This has also provided a broader trading platform for agricultural products. Rural e-commerce is on the rise, becoming a new focus for changing the way of agricultural development, but it also faces new challenges, such as the traditional logistics distribution system has been unable to meet the needs of the rapid development of rural e-commerce in the new era. This paper takes Linjiang Sluice logistics Park as an example to explore how to strengthen brand construction and improve logistics distribution system, which has certain reference significance for the development of rural e-commerce logistics distribution.

1. Introduction

During the "Two Sessions" in 2015, Premier Li Keqiang put forward the "Internet Plus" action plan for the first time in his government work report. Since then, e-commerce has developed rapidly. In 2022, the "Opinions of the CPC Central Committee and The State Council on Comprehensively Promoting the Key Work of Rural Revitalization in 2022"[3] was released, putting forward new requirements for rural e-commerce once again, pointing out the implementation of "the project of developing agriculture through digital commerce and promoting e-commerce into rural areas"[4]. The booming development of e-commerce in rural areas has provided a new platform for the distribution of agricultural products in vast rural areas, broadened the way for farmers to increase their income, and unleashed the potential of rural revitalization. However, as the construction of

logistics distribution system of rural e-commerce is uneven, there are many areas to be improved in terms of personnel quality, service level and hardware construction [5-7]. Taking Shuizha Logistics Park in Linjiang city as an example, this paper conducts research on the construction of rural e-commerce logistics distribution system under the background of "Internet +".

2. Analysis of the Current Situation of Rural E-Commerce Development in China

According to the 49th Statistical Report on Internet Development in China released by China Internet Network Information Center (CNNIC)[8], with the improvement of Internet penetration rate in urban and rural areas, as shown in Figure 1, by December 2021, the Internet penetration rate in urban areas of China was 81.3%, 1.5 percentage points higher than that in December 2020. The Internet penetration rate in rural areas was 57.6%, up 1.7 percentage points from March 2020. The difference in Internet penetration between urban and rural areas was reduced by 0.2 percentage points, indicating that the difference in Internet penetration between urban and rural areas is narrowing year by year. "The overall size of China's Internet users continued to grow in 2021. First, the gap between urban and rural areas in accessing the Internet continues to narrow. China's existing administrative villages have fully realized "every village access to broadband". With the rapid development of education and agriculture in China, rural netizens began to use the Internet for agricultural products trading and online shopping. At the same time, the convenience of online payment provides convenience for the development of e-commerce in rural areas. As shown in Figure 2, by December 2021, the scale of online payment users in China had reached 904 million, an increase of 49.29 million compared with December 2020, accounting for 87.6% of the total Internet users. Such a large number of Internet users and utilization rate are very powerful for expanding the sales of agricultural products and reducing the sales cost. And through online shopping, convenient life of rural netizens, so as to promote the development of rural e-commerce logistics.



Figure 1: Internet penetration rate in urban and rural areas [8]



Figure 2: Scale and utilization rate of online payment users [8]

2.1. Characteristics of the Development of Rural E-Commerce Logistics in China

In the context of "Internet plus", through the establishment of efficient and convenient logistics distribution system, production, sales, transportation and other links can be closely linked together.

At the same time, e-commerce platform can save the transaction cost of supply and demand, and enhance the transparency of agricultural and sideline product market information. China's e-commerce logistics distribution system is characterized by informatization, modernization and socialization. At present, third-party logistics, self-established logistics and logistics alliance distribution system is relatively mature, and has been developed and popularized to a certain extent. On the whole, rural e-commerce logistics distribution has the following characteristics:

(1) The scale of rural e-commerce expands rapidly. CNNIC data shows that China's online shopping users reached 749 million, 39.12 million more than in March 2020, accounting for 79.7% of the total Internet users. The number of mobile Internet shopping users reached 747 million, up 39.47 million from March 2020, accounting for 80.1 percent of mobile Internet users. Since 2013, China has been the world's largest online retail market for seven consecutive years. To expand domestic demand, online consumption has strengthened economic resilience, and online shopping has become the fastest application of the Internet among rural netizens.

(2) The e-commerce website platforms of rural netizens are diversified. According to an online survey, 73.6 percent of rural netizens in China most frequently use online shopping platforms taobao and Tmall, and 18.8 percent of rural netizens also choose self-run platforms such as Yihaodian and JINGdong. In online shopping, the main issues that netizens care about are commodity price, commodity quality, after-sales service, logistics and distribution, payment security and commodity category.

(3) E-commerce enterprises gradually improve rural logistics supporting services. (1) jingdong took the lead in launching "pioneer station plan" and "jingdong gang" service stores :(a) implemented jingdong "pioneer station plan" and gradually improved its self-operated station network. In order to promote the development of rural e-commerce, JD has set up JD distribution stations in each county and township to provide netizens with logistics distribution, commodity replacement, payment on delivery, door-to-door pickup and other related services. (b) Build a "Jingdong Gang" service store to solve the "last mile" distribution problem. (2) the alibaba implement strategy of channel sinking, united's Tmall electric city, taobao, bargain, three platforms, with each big logistics company by early build rookie logistics services platform, to cover up to more than 2600 counties, more than 50 village, provide electric door-to-door logistics services, really convenient by electricity the rural life.

2.2. Analysis of problems in the development of e-commerce logistics in rural China

With the rapid development of China's rural economy, the number of rural netizens is increasing, which constantly promotes the development of e-commerce logistics. However, in view of the expansion of rural e-commerce, there are still big problems in the current logistics service, mainly including the following aspects:

(1) Rural e-commerce logistics distribution system is not perfect. Due to the late start of China's logistics development, most of the logistics distribution network for the rural market covers counties and districts, many towns and villages still cannot deliver goods, especially some remote mountain logistics services are blank. Rural netizens place orders through online shopping, and suppliers entrust logistics companies to deliver orders. Due to the current imperfect logistics network system, many logistics companies are unwilling to accept orders and deliver goods, which seriously restricts the development of rural e-commerce in China.

(2) The supporting systems and policies for rural e-commerce logistics development are not sound. The development of e-commerce in rural areas is still in the initial stage, and the management system for online shopping and the safety awareness of rural netizens still need the attention and popularization of the government and other relevant departments. The construction of

rural logistics system not only needs the efforts of e-commerce and logistics enterprises, but also needs the support of the government for the construction of logistics platform.

(3) Rural logistics professionals are in short supply and logistics service level is low. Although China's e-commerce logistics has achieved rapid development, there is still a lag in talent training. In recent years, colleges and universities have begun to pay attention to the training of application-oriented talents. However, the logistics market, especially the rural e-commerce logistics talents, is still extremely short, and most practitioners are still rural local personnel. In terms of service concept and development strategy, it restricts the development of rural e-commerce logistics and also affects the shopping experience of rural netizens.

2.3. Development status of rural e-commerce logistics in Linjiang Shuizha Logistics Park

As a comprehensive logistics enterprise specializing in cargo transportation and self-operated logistics park management, Jilin Xinhua Tianrui Logistics Co., Ltd. relies on the existing logistics network, road transportation, storage, distribution and other logistics industry advantages, In conjunction with the open sesame electronic commerce co., LTD. Jilin province in logistics information platform development, the school enterprise cooperation e-commerce platform (loving e family), industry training comprehensive management advantages, together with river sluices logistics park into with comprehensive logistics "e-commerce + + vocational education training" as the core of regional integrated services platform. To form an "online leading by e-commerce demand" and build an information center for trade and logistics; "Offline facilities in the park and county urban and rural distribution network as the basis" to build distribution centers, e-commerce county center warehouse; "Vocational education and practical training" to create local e-commerce, logistics personnel training base.

(1) Opportunities Linjiang Shuizha Logistics Park is located in Taixing Village, Jianguo Street, Linjiang City, is the entrance and exit of G222 National Road to Linjiang, the geographical position is superior, suitable for the development of logistics business. River lock to the logistics park business plan relevant to the national ministries "e-commerce into rural", "express to the countryside", "electricity" for poverty alleviation and relevant policy, is committed to electricity and the coordinated development of logistics park and fusion, according to relevant policy guidance, combined with the "industrial products to the countryside, the agricultural products into the city", keep the rural e-commerce and logistics service system, Promote the development of local economy in Linjiang.

The logistics market has become increasingly refined and diversified with the personalized needs of consumers, and multi-batch and small-batch distribution has emerged at the historic moment. Rental storage (outdated equipment, storey height) and third-party express (warehouse overflow, lost pieces, standardized rather than personalized service) can no longer meet the needs of e-commerce business. Major online retailers such as Amazon, JD.com, Taobao, Vancl and Suning have all joined in self-established logistics. Get through the "last kilometer" of urban and rural logistics, and bring development opportunities for e-commerce logistics in logistics parks. E-commerce giants have laid out the layout of third-tier and fourth-tier cities. Channel sinking is the general trend of the future development of e-commerce, and the functionality of e-commerce logistics industrial parks serving county markets has become increasingly prominent.

(2) Challenges With the rapid development of e-commerce and the increasingly perfect e-commerce industry chain, the requirements for logistics are also becoming higher and higher. Customers' requirements for logistics services are constantly increasing. E-commerce enterprises and users hope that logistics enterprises can adjust traditional logistics services to meet their own personalized requirements, so as to realize the rapid, timely and low-cost circulation of goods. With

the gradual opening of China's logistics market, logistics enterprises are facing a more intense competitive environment, traditional logistics enterprises are facing the transformation to modern logistics enterprises, the scattered resources to integrate, transform and improve, enhance service functions.

Customer's attitude to logistics service changes from traditional to modern. Force us on the management pattern also should have corresponding change, to carry out the "e-commerce industrial park + express logistics industrial park" integration development model, the joint business bureau, transport and other related departments, combined with linjiang city e-commerce into rural demonstration project, solution of linjiang city of villages and towns "last one kilometer" of logistics distribution between urban and rural areas.

3. The Development of Rural E-Commerce and Logistics Distribution System Construction of Innovative Ideas

To fully implement the strategy of rejuvenating the country, the rural e-commerce and logistics distribution system construction to the current economic form, throughout the pros and cons, make full use of the Internet environment, effective use of local resources, give full play to the role of the government functional departments, strictly implement the relevant national huimin policy, for the development of rural e-commerce and logistics distribution create a good environment and atmosphere, Down-to-earth, pragmatic, but also conducive to the people. To sum up, the development goals of Linjiang Sluice Logistics Park are as follows:

3.1. Build Logistics Center Nodes and Improve Infrastructure Construction of Logistics Distribution System

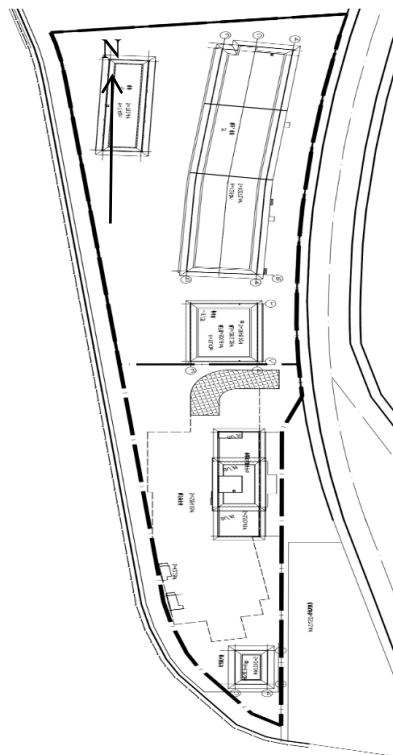


Figure 3: General plan of Linjiang Sluice Logistics Park

The rapid development of rural e-commerce is inseparable from the support of logistics

distribution system. Under the background of "Internet plus", in accordance with the requirements of "government leading, enterprise implementation and market operation", combined with local development needs, supported by modern science and technology, through overall planning, the convergence function of multimodal transport center is gradually improved, the information function is organically linked, and the park realizes comprehensive intelligent management.

Linjiang sluice logistics park covers an area of 25823m², with a total construction area of 25713.4m² and a total investment of 156 million yuan. The general plan of the park is shown in Figure 3. The construction of the project started in 2017. At present, the construction of the project and its affiliated works has been completed, and all single items and comprehensive acceptance have been completed. There are five buildings in the park, including a warehousing center of 800m², an e-commerce and commercial complex building of 10370m², a processing plant of 3661m², a service center, a complex building of 5310m², and a bus office of 243m².

Reasonably introduce advanced logistics supporting facilities and services, comprehensively improve the operation efficiency of "local e-commerce + logistics industry", ensure the comprehensive improvement of local rural e-commerce logistics distribution service level, and provide basic guarantee for local economic development.

3.2. Build "Characteristic Logistics Park" Demonstration Base and Innovate Logistics Operation and Management Mode

In order to maximize rural resources, broaden e-commerce channels, improve the service level of logistics distribution, closely combined with the characteristics of Linjiang local industry, economic and resource endowment, through information technology and other technical means, improve the logistics distribution operation management mode. For economies relying on locally featured agricultural products, the planning, operation and logistics management of these agricultural products should be strengthened. Build a logistics network that serves local economy, covers the whole province and radiates to the whole country with unified standards, standardized services and efficient operation, and effectively solve the work quality and service level of agricultural supply chain logistics operation. The park will integrate resources, strengthen infrastructure and network construction, and serve Linjiang Market, integrating wholesale, commodity display and trading, logistics and distribution functions. Introduce the retail industry, drive other small and medium-sized enterprises and individuals to enter; Improve the service capacity of the logistics park, provide the enterprises in the logistics park with office, catering, property, parking, accommodation, industry and commerce, tax and other basic supporting services, make the basic facilities in the logistics park more perfect, increase the advantages of the park. At the same time, it will also provide value-added services such as logistics consulting, logistics finance, commodity display, facility leasing, and insurance agency for the settled enterprises. According to the needs of enterprises, we can provide comprehensive logistics services, such as warehousing management, transportation and distribution, information services, financial services and other value-added services, to achieve multi-business revenue.

3.3. Build the "E-Commerce + Logistics Training and Practice" Base to Further Strengthen the Training of Rural E-Commerce Professionals

Rural e-commerce to get a good development, must be strong rural e-commerce professional training. On the one hand, the local government can provide preferential talent policies to attract excellent e-commerce professionals to rural areas for employment; On the other hand, through docking and cooperation with universities, secondary vocational colleges and social training institutions, the logistics industry association, relying on e-commerce and logistics activities in the

park, e-commerce platform and logistics information platform resources, to build core logistics activities, e-commerce activities and standard logistics business processes. With logistics technology and e-commerce technology as the focus, e-commerce system and logistics information management system as the platform, logistics equipment as the support, and supporting courses as the guarantee, to build a professional and practical "combination of work and study" modern "e-commerce + logistics" practice base. In addition, local farmers can also be trained to improve their e-commerce and logistics related professional knowledge and skills, and promote the improvement of farmers' informatization level; At the same time, the publicity and encouragement of advanced typical rural e-commerce should be increased to achieve a demonstration leading role in the development of surrounding e-commerce and promote the comprehensive development of rural e-commerce[9].

4. Conclusion

In this paper, under the background of "Internet +", the current rural status of e-commerce and logistics distribution system and the analysis of existing problems, and explored in the "Internet +" environment rural e-commerce logistics bottlenecks, combining the reality of Linjiang city sluices logistics park logistics construction, to study the construction of rural e-commerce logistics distribution system, It aims to give full play to the resource advantages of Linjiang city, better promote the transformation and upgrading of Linjiang characteristic agricultural products through rural e-commerce, fundamentally expand the sales channels of famous and excellent characteristic products in Linjiang City, and has certain reference significance for promoting the healthy development of agricultural products logistics and distribution industry.

Acknowledgements

Jilin Electronic Commerce Society "14th Five-year plan" Project (No.:2021JLDS75)

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