

Research on the Development Strategy of Rural Smart Logistics from the Perspective of Public Management

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Abstract: The development of rural smart logistics is a phased achievement in the implementation of the rural revitalization strategy. It provides new ideas and methods for the development of the rural economy and promotes the continuous modernization of rural economic development. From the perspective of public management, this paper explores the development strategies of rural smart logistics. By analyzing the development value of rural smart logistics and combining the problems existing in the current construction of rural smart logistics, it puts forward reasonable suggestions. The purpose is to tap the development potential of the rural economy and give full play to the role of the rural revitalization strategy in promoting rural economic development.

Keywords: Public management; Rural smart logistics; Strategy

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1. Introduction

The development of smart logistics is an inevitable trend in the development of the entire industry. Its integration with digital technology can effectively promote the healthy development of the logistics industry. For rural areas, the construction of smart logistics can not only improve the development quality of the rural logistics industry but also optimize the construction of infrastructure in rural areas. On the basis of effectively increasing farmers' income, it enhances the quality of rural life and promotes the transformation and upgrading of the rural economy. At the same time, from the perspective of public management, the promotion and implementation of smart logistics in rural areas also helps the government better perform its public service functions, and promotes the optimal allocation of rural logistics resources through policy guidance and resource integration.

2. The development value of rural smart logistics from the perspective of public management

2.1. Conducive to promoting the modernization of rural logistics

With the development of the times and the in-depth exploration of the rural revitalization strategy, the rural logistics industry has achieved considerable development and progress, and has become an important force in the current rural economic development. In this process, it is necessary to continuously integrate with the development of the times and build a smart logistics development model, which will help promote the continuous modernization of rural logistics development. From the perspective of public management, under the guidance of government policies, the development of rural smart logistics has also promoted the transformation of the rural economy. It is conducive to better implementing the rural revitalization strategy, effectively solving the problem of the single structure of the rural economy, and promoting the rapid and healthy development of the rural economy.

2.2. Conducive to improving the efficiency of rural logistics work

The development of smart logistics integrates digital technology into the traditional logistics industry, improving the efficiency of logistics management and operation. Especially for the rural logistics industry, the construction of a smart logistics system can effectively improve the efficiency of rural logistics work. The application of information-based methods and intelligent management has greatly improved the efficiency of logistics management, reduced the costs in traditional logistics work, and better realized the economic benefits of rural logistics industry operations. At the same time, the construction of a smart logistics system also makes the daily management and operation of logistics more targeted, which is conducive to the optimal allocation of resources and greatly improves the overall work efficiency of rural logistics.

3. Difficulties in the development of rural smart logistics from the perspective of public management

3.1. Backward construction of rural infrastructure

The construction of a smart logistics system has become an important trend in the development of the rural logistics industry. However, the characteristics of rural areas and the existing problems cannot be ignored, among which the backward construction of infrastructure is the core issue. Compared with cities, rural roads and storage facilities are relatively backward, especially in the development of information-based construction. This has formed a huge obstacle to the construction of smart logistics. The core of smart logistics is to improve the efficiency of logistics work through the application of information-based and intelligent means. However, the relatively low level of informationization and incomplete network coverage in rural areas hinder the promotion and application of smart logistics technology in rural areas, and also make it difficult for some technologies with obvious advantages to be applied in the logistics industry in rural areas.

3.2. Poor information sharing among rural logistics nodes

The essence of logistics is the information exchange and cargo transportation between different nodes, which is also the basis and prerequisite for the efficient operation of smart logistics. However, the information sharing among logistics nodes in rural areas is poor. For some areas, it is difficult to achieve real-time information sharing, which results in the failure to transmit and share logistics information in a timely and accurate manner. This increases the cost and risk of logistics operations and reduces the response speed of logistics services and customer

satisfaction. At the same time, due to the small number of nodes in the rural logistics chain in some areas, there is still the problem of “information islands” in rural logistics in some regions. This greatly affects the integration and high-quality efficiency of logistics resources and restricts the construction of a smart logistics system.

3.3. Shortage of professional talents in rural logistics

From the perspective of public management, the development of rural smart logistics requires professional talents as support, especially compound talents with logistics industry knowledge and information literacy. However, from the current actual situation, most of the staff in the development process of the rural logistics industry are from rural areas themselves. The shortage of such professional logistics talents also brings difficulties to the construction of smart logistics. On the one hand, most of these local personnel are farmers who only participate in logistics work during the slack season, so their professionalism is obviously insufficient. On the other hand, due to the relatively poor comprehensive environment in rural areas, the attraction to high-quality and high-end talents is insufficient, making it difficult to attract high-quality logistics talents to engage in the construction of rural smart logistics.

4. Development strategies of rural smart logistics from the perspective of public management

4.1. Accelerate Infrastructure construction to provide basic support for the development of smart logistics

From the perspective of public management, the development of rural smart logistics requires accelerating infrastructure construction to provide basic support for the construction of a smart logistics system. Firstly, under the leadership of the government, it is necessary to accelerate the network coverage and logistics informationization construction in rural areas. Through policy support and capital investment, promote the layout and optimization of network base stations and optical fiber broadband infrastructure in rural areas, guide operators to accelerate the network layout in rural areas, and encourage operators to participate in the development and construction of rural logistics information systems. Through incentive measures such as tax preferences and financial subsidies, reduce the participation cost of enterprises, improve their enthusiasm, and realize full network coverage in rural areas. At the same time, introduce policies to build a sound rural logistics informationization standard system, standardize the data collection, transmission, and application processes, ensure the compatibility and interoperability of information systems, and create favorable conditions for the efficient operation of smart logistics.

Secondly, the government should encourage rural logistics enterprises to actively introduce advanced technologies and Internet platforms to enhance the modernization of logistics development. The government can take the lead in integrating resources, guide rural logistics enterprises to cooperate with relevant scientific research institutions, introduce the Internet of Things technology to improve logistics management efficiency, realize real-time monitoring and tracking of the transportation status of goods through the installation of intelligent sensors and RFID tags, and promote the intelligent transformation of rural logistics storage facilities. The adoption of automated three-dimensional warehouses and intelligent sorting systems can improve the utilization rate of storage space and the efficiency of cargo handling. At the same time, an information sharing platform can be built to realize real-time sharing and efficient matching of logistics information by integrating scattered logistics information resources. Use big data analysis technology to optimize logistics route planning, reduce transportation

costs and time, and use cloud computing technology to improve the scalability and stability of the platform, ensuring efficient operation even during peak periods, and providing strong technical support for the sustainable development of rural smart logistics.

In addition, from the perspective of public management, the development of rural smart logistics requires the government to start from the perspective of social public management, promote the intelligent construction process of rural logistics enterprises, truly implement the rural revitalization strategy, give full play to the role of the government in rural economic development, and comprehensively promote the diversified development of the rural economy ^[1].

4.2. Build a smart logistics platform to realize information sharing among logistics nodes

Building a smart logistics platform is an important part of realizing the intelligent development of rural logistics. It can not only realize information sharing among logistics nodes, but also promote the modernization of the entire rural logistics. Firstly, from the perspective of public management, under the guidance of the government, full attention should be paid to the importance of rural smart logistics construction. Rural logistics is a new form of rural economic development derived under the guidance of the rural revitalization strategy. It breaks through the traditional single development model of the rural economy and injects strong impetus into the development of the rural economy. Building smart logistics is an inevitable direction for the development of the rural logistics industry. It is necessary to continuously introduce advanced logistics management concepts and technical methods, build a smart logistics management platform, and improve information sharing among rural logistics nodes. The government should play a leading role in formulating relevant policies and standards, guide logistics enterprises, e-commerce platforms, and other parties to actively participate in platform construction, encourage enterprises to invest resources in technology research and development and system optimization through policy support, and ensure the capital needs for platform construction. At the same time, strengthen the technical support of the platform to realize real-time sharing of logistics information, which can ensure the accuracy and timeliness of information, improve the efficiency of logistics operations, and reduce logistics costs. In the era of big data, attention should be paid to the security and stability of the platform, and a sound information security management system should be established to prevent information leakage and system failures, and ensure the normal operation of the rural smart logistics platform.

Secondly, from the perspective of public management, the development of rural smart logistics requires the construction of a corresponding management mechanism, and all rural logistics nodes should be included in the smart management platform to avoid the occurrence of “information islands.” Regardless of the size of the logistics nodes, they must be reflected in the smart management platform to ensure the timeliness and accuracy of logistics information. In addition, a multi-level communication and coordination mechanism should be built to promote information exchange and cooperation between logistics enterprises, e-commerce platforms, and government departments, and form a joint force to promote the development of rural smart logistics.

Furthermore, the core of the smart logistics system is essentially the real-time sharing of information. Any link in the logistics chain can control logistics information in real time, and the application of intelligent means can reduce the cost of logistics production and operation. From the perspective of public management, the government should carry out top-level design, give full play to its leading role, and guide rural logistics enterprises and corresponding technical support institutions to provide a solid foundation for the construction of rural smart logistics ^[2].

4.3. Strengthen the training of professional talents to provide talent support for rural smart logistics

The development of rural smart logistics is inseparable from the support of compound talents. However, the weakening of the attraction of rural areas to talent is an objective fact. This requires guiding the flow of talents to rural areas from the perspective of public management to provide strong talent support for the development of rural smart logistics. Firstly, in the process of talent training, colleges and universities should clarify the significance of the implementation of the rural revitalization strategy, help talents establish a correct view of career selection, and guide students to combine their personal career development with the construction of rural smart logistics. In addition, colleges and universities should optimize the curriculum settings of logistics-related majors, add characteristic courses on rural logistics, and cultivate compound talents who understand both logistics technology and are familiar with the rural market environment. At the same time, from the government level, it is necessary to encourage colleges and universities to carry out industry-university-research cooperation with rural logistics enterprises and establish internship bases, so that students can improve their practical abilities in the actual work environment and reserve high-quality talents for the development of rural smart logistics.

Secondly, in the training of existing personnel, a systematic training plan should be formulated. Regular training should be carried out for current rural logistics staff, focusing on the improvement of information literacy and the application of modern scientific and technological logistics means. The training content should cover the operation of logistics information technology, the application of big data analysis in logistics management, and the use and maintenance of intelligent logistics equipment. Through the combination of theoretical explanation and practical operation, the professional skills and comprehensive quality of rural logistics staff can be improved. In addition, by establishing an incentive mechanism, rural logistics staff are encouraged to actively participate in training, continuously improve their abilities, and contribute to the development of rural smart logistics.

Moreover, the construction of rural smart logistics is a long-term and continuous work. Whether for introduced talents or existing staff, enterprises should continuously improve the welfare benefits and promotion mechanisms for talents to enhance the attraction of talent. Enterprises can provide a competitive salary system and comprehensive social security benefits to enhance the sense of identity and belonging of talents to the rural smart logistics industry. In this way, the sustainable development of rural smart logistics can be realized, and a continuous supply of talent support can be provided for the development of the rural logistics industry ^[3].

5. Conclusion

From the perspective of new public management, the reform of county-level human resource management is an important measure to improve government credibility and service quality, and it can also promote the improvement of human resource management quality. This paper discusses the specific strategies of county-level human resource management reform from the perspective of new public management. By analyzing its implementation significance and combining the difficult problems in the reform process, it puts forward reasonable suggestions. The purpose is to promote the continuous improvement of county-level human resource management quality, better enhance the modernization of human resource management, and comprehensively promote the improvement of public service quality.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Yu J, 2025, Research on Development Pathways for Rural Smart Logistics from a Public Management Perspective. *China Storage and Transportation*, 2025(5): 103.
- [2] Chen JB, 2024, Development Strategies for Rural E-commerce Logistics from a Public Management Perspective. *China Storage and Transportation*, 2024(3): 122.
- [3] Zhao HL, 2023, Issues and Strategies for Rural Logistics Development from a Public Management Perspective. *China Storage and Transportation*, 2023(11): 159.

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