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The Problems and Path Thinking of China's Rural Logistics Development

JIAO Rui*, YU Xiao-qiong

School of Economics, Sichuan University, Chengdu 610065, China

Abstract This paper introduces seasonal characteristic, scattered characteristic and diversified characteristic of rural logistics in China, developing rural logistics is significant to increasing farmers' income, promoting life quality, reducing cost of agricultural products, increasing job opportunities and quickening the process of urbanization. This paper also analyzes the status quo and existing problems of China's rural logistics as follows. China's rural logistics, with late start and great logistics aggregate, develops rapidly; the main body of rural logistics has a trend of diversification; the informatization develops rapidly. But there are some problems, for example, the infrastructure of rural logistics is backward; the informatization level is low; the development degree of main body of market is low; there is a shortage of talents; the technological level is low. The countermeasures are put forward to promote the development of rural logistics in China as follows: strengthen infrastructure construction of rural logistics in China; reinforce the construction of rural informatization; foster the main body of market of rural logistics in China; vigorously foster talents of modern rural logistics; promote technological level of rural logistics.

Key words Rural logistics, Problems, Countermeasures, China

Rural logistics, a concept relative to urban logistics, is a general term of transport, carrying, loading and unloading, packaging, processing, storage and other relevant activities that are provided for rural residents' production, living and other economic activities. Rural logistics is mainly to solve the circulation problem of agricultural products. *The Decision of the CPC Central Committee on Several Issues Concerning Promoting New Socialist Village Construction* pointed that China's actual conditions determine that the rural development and agricultural development are related with the development of whole China, and only by putting solving the issues concerning agriculture, countryside and farmers on the top agenda of the Party's work can we have the initiative of economic development and social development. In order to achieve the great goal of constructing new socialist village, promote agricultural production level, change rural appearance and increase farmers' income, the key is to guiding the upgrade of the primary industry and guiding the evolution of the primary industry towards the secondary industry and the third industry[1]. Vigorously promoting the rural logistics is an important means of strengthening the position of agriculture as the foundation of the economy, promoting rural economic development, increasing farmers' income, adjusting rural industrial structure and transforming rural economic developmental modes.

1 Characteristics of rural logistics and the significance of development

1.1 Characteristics of rural logistics

1.1.1 Seasonal characteristic Inasmuch the object of rural logistics is mainly the agricultural product, and the agricultural products have distinct seasonal characteristic, so the rural logistics also has seasonal characteristic. For example, in spring, the agricultural crops need to be planted, which requires a lot of seeds, fertilizers, plastic films and so on; in the fall, harvest time of agricultural crops, which requires a large number of vehicles, bags, warehouses and so on.

1.1.2 Scattered characteristic. The urban logistics is concentrative, with sound industrial chain, while the rural logistics is scattered. For example, when agricultural crops need to be planted, the farmers have to deliver seeds and fertilizers to the fields; when in the harvest season, the farmers need to use human power or large harvesting machinery to collect agricultural products scattered around the fields, for corresponding processing, storage, transport work, and so on. In addition, the residences of in rural residents are also scattered. Since most villages are quite small and usually the distance between village and village is far, coupled with unsound infrastructure such as rural roads, so the logistics can not be conducted in a centralized manner.

1.1.3 Diversified characteristic. Due to the different natural environments, customs, and environments of social and economic development, different agricultural production modes are formed under the combining influence of different natural environments, customs, and environments of social and economic development. Northeast China is suitable for large-scale mechanized cultivation of agricultural crops, while the southwest China, especially the mountainous area, is suitable for precision agricultural production; most of the northern regions of China can only grow one-crop rice, while the southern regions of China can grow double-crop rice and three-crop rice. The differences of agricultural production inevitably require that the diversity of rural logistics must be suitable for local conditions.

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* Corresponding author. E-mail:303487137@qq.com.

1.2 The significance of developing rural logistics

1.2.1 Increasing farmers' income. Through decades of development, the modern logistics has become an important part of the tertiary industry, and a new economic growth point, which plays a strong leading role in promoting economic development. The development of rural logistics can reduce the unnecessary loss of planting, management, harvesting, transportation, loaning and unloading, storage, processing, and other chains of agricultural products, and reduce the cost of production and management of farmers. The farmers can also enter upon the logistics industry in rural areas, that is, when it is in busy farming season, the farmers can conduct the production of agricultural crops, and when it is in slack season, the farmers can conduct reproduction of agricultural products. It is obvious that the development of logistics industry in rural areas can greatly increase farmers' income.

1.2.2 Promoting farmers' life quality. The development of China's small-farmer economy in the past makes the rural areas have insufficient communication and contact with the outside world, and the farmers have been living a life of self-sufficiency, with not high quality of life. The development of rural logistics can help strengthen the close relationship between rural areas and urban areas, and promote urban products to enter rural areas, such as "making home appliances enter into countryside" and "making cars, and motorcycles enter into the countryside". The development of rural logistics can facilitate the farmers to buy desirable merchandise, and constantly improve the quality of life.

1.2.3 Reducing cost of agricultural products. In the early 90s of 20th century, the ratio of post-production output value of agricultural products and natural output value when harvesting in the United States is 3.80:1; the ratio of post-production output value of agricultural products and natural output value when harvesting in Japan is 2.20:1; the ratio of post-production output value of agricultural products and natural output value when harvesting in China is only 0.38:1. The logistics of agricultural products in developed countries is a process of value increase, while the logistics of many agricultural products in China at present is a process of quality impairment and price reduction. The transport losses of fruit and vegetable products in developed countries is about 5%, while the transport losses of fruit and vegetable products in China reach 25% – 30%[2]. It is clear that developing the rural logistics can reduce circulation losses of agricultural products, lower agricultural production costs increasingly, and continue to realize value better.

1.2.4 Increasing job opportunities and quickening the process of urbanization. Logistics development in rural areas has opened up some new industries, such as transportation industry of agricultural products, processing industry of agricultural products, packaging industry of agricultural products and so on, which can realize the transfer of rural surplus labor force in place and reduce the risk of farmers' income. In addition, the rapid development of rural logistics can further strengthen the close relationship between the rural areas and urban areas, promote coordination of rural areas and urban areas, play the role of the urban economy in supporting rural economic development, and incessantly narrow the gap between urban areas and rural areas. The rapid development of rural areas also drives the construction of small towns, and some farmers enter the city by participating in logistics enterprises, which can speed up the process of urbanization.

2 The status quo of China's rural logistics development and the existing problems

The overall structure of rural logistics system can be shown in Fig.1[3].

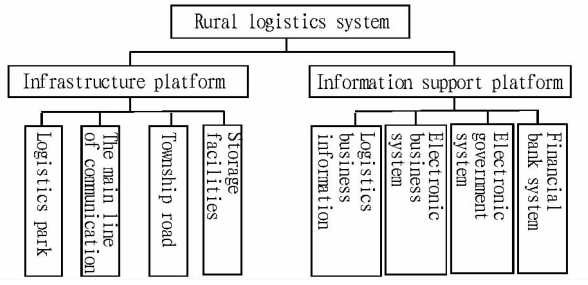

Fig.1 The overall structure of rural logistics system[6]

2.1 The status guo of development

2.1.1 Late start and rapid development. The developments of rural logistics in China is associated with the prosperity of the socialist market economy, with late start but the fast pace of development. On the whole, the rural logistics in China is still in its infancy. Infrastructure, logistics personnel, management system and other aspects need to be improved.

2.1.2 Great logistics aggregate. China is the largest developing country in the world, and the agricultural population accounts for more than 80 percent of the total population in China, so agriculture is the basis of the national economy. Therefore, the scale of logistics in rural areas is large, and the logistics of agricultural products accounts for most of the share. According to incomplete statistics, the total of logistics of agricultural products in China in 2010 was 600 million tons.

2.1.3 The trend of diversification of the main body of rural logistics. Currently, in addition to the main body of logistics of agricultural products, such as the traditional state-owned commercial enterprises, and rural supply and marketing cooperatives, the leading agricultural industrialized enterprises, big producers of agricultural products, specialized cooperatives, and farmer brokers all participate in the logistics market of agricultural products under the orientation of market. At present, the new main body of logistics of agricultural products, with supermarket chains and specialized cooperatives as the main representatives, develops rapidly[4].

2.1.4 Rapid development of informatization of rural logistics The basic requirement of modern logistics development is to focus on both quality and speed. The use of information technology can better solve the problem that the logistics speed is slow and the products are easily lost, faced by the traditional logistics in the past. Rural logistics in recent years has made some achievements in informatization, and almost all places

establish various kinds of rural logistics information platforms regarding the production, circulation, transaction and so on, of agricultural products; GPS technology, and networking technology begin to be applied to the rural logistics in developed regions; various forms of rural logistics networks have been established one after another. The application of information technology in rural areas has greatly improved the logistics efficiency in rural areas.

2.2 The problems existing in China's rural logistics development Although China starts late in developing logistics in rural areas, the development of rural logistics is fast, which greatly promotes the rural economic development, improves the life of the peasants and makes great achievements. However, China is still a developing country, and the rural economy is still relatively backward, thus the income of farmers has not yet been significantly improved. Rural logistics, as an important form of promoting prosperity of rural economy and raising farmers' income in rural areas, has some problems that need to be solved in the process of thriving development.

2.2.1 The infrastructure of rural logistics is backward. Since 30 years of reform and opening up, China has obtained remarkable economic and social achievements; the urban infrastructure is improved ceaselessly; many big cities have been getting into the ranks of world-class metropolises. Compared to cities, the infrastructure of rural areas is still quite backward. The road conditions in many rural areas are in poor state; the cost of logistics is high; the logistics tools can not play a role; even a few areas have not realized the situation that there are sufficient roads that interrelate all villages; there is a shortage of scientific fresh-keeping and refrigeration equipments, and the short shelf life of agricultural products makes it difficult to achieve logistics process; the modern containers and bulk transport develop slowly; the vehicles that are used in the rural logistics mainly focus on medium-sized trucks and light trucks, and the ownership rate of heavy trucks is low, which is not conducive to large-scale transport and reducing transport costs.

2.2.2 The informatization level of logistics is low. The application of information technology, in a large measure, promotes economic development and social progress. On the whole, the informatization level of logistics in rural areas of China is low, which cannot meet the current requirements of the development of rural logistics. The flow and process of logistics of agricultural products, and the resulting efficiency and benefit, are closely related to information system of agricultural logistics, while the information variety and quality provided by the existing information system of agricultural logistics cannot answer the need, lacking effective information orientation. The flow of means of agricultural production and logistics of agricultural products has blindness, with irrational process. For a long time, the channel used by the farmers to obtain information of supply and demand in market is simple, lacking effective means. There is serious phenomenon of lag and distortion, failing to keep up with market changes, which is an important factor impacting inflation-proofing and appreciation of logistics and causing considerable losses[4].

2.2.3 The development degree of main body of market is low. Although China's main body of logistics market in rural areas has a trend of diversification, but, on the whole, the main body of logistics market is still immature, and the narrowness of circulation channels hinders the expansion of the logistics market in rural areas, which makes it difficult to meet the needs of the logistics market in rural areas. Currently, the main body of logistics market in rural areas is mainly the individual farmer, with small scale, low level of modernization, and weak ability to resist risks. Moreover, there is a shortage of leading logistics enterprises in rural areas.

2.2.4 There is a shortage of logistics talents. Talent is the most important resource. Logistics talent in rural areas is the important cornerstone for promoting sound and rapid development of logistics in rural areas. At present, China is extremely devoid of rural logistics talents that meet market demand. Although in recent years, many universities and secondary vocational and technical schools have initiated the major concerning logistics, and the vocational qualification certification system of logistics also develops ceaselessly, it still cannot answer the need of logistics industry that develops by leaps and bounds, and the talents who enter upon the logistics industry in rural areas are extremely scanty.

2.2.5 The technological level of rural logistics is low. As for the logistics in rural areas, being that the standard of all chains is not uniform, it causes the waste of equipment, resulting in increase of product costs. In addition, equipments of the logistics are backward. In the process of delivery of products, the pickup truck is used mostly, lacking the equipments and technology of refrigeration and freezing, which impacts the fresh-keeping of products. According to statistics, the loss rate of vegetables, fruits and other agricultural products in China reaches 25%–30%, in harvesting, transport, storage and other logistics chains. The agricultural products with the total value of 75 billion are spoiled in the process of transportation annually[5].

3 Countermeasures of promoting China's rural logistics development

Logistics development in rural areas is a gradual process, and it is bound to generate many problems in the process of development. We should find the problems in time, and solve the problems in time, so as to continuously promote the sound development of rural logistics.

3.1 Strengthen infrastructure construction of rural logistics in China The elevation of rural logistics level needs robust logistics infrastructure in rural areas as guarantee. The government should increase inputs in rural infrastructure of logistics. On the basis of allotting of financial fund of the central government, the local government should establish special funding system of infrastructure construction of rural logistics, according to the actual local situation; list improvement schedule concerning logistics infrastructure in rural areas, so that it can complete the infrastructure construction step by step; formulate preferential policies to attract private capital, and foreign capital to improve rural infrastructure; through tax policy, financial poli-

cy and so on, give priority to the program of infrastructure of rural logistics.

3.2 Reinforce the construction of rural informatization Incomplete infrastructure of rural logistics is the hard factor constraining China's logistics development in rural areas, while the backward informatization construction in rural areas is the soft factor constraining the development of logistics. In recent years, the logistics development in rural areas slows down, and the income of farmers grows slowly. There are many reasons, and lacking effective and timely information is one reason. The information of rural logistics is crucial to the development of rural logistics. We should know clearly the information of logistics, specifically including the relevant information regarding policies and regulations, production and management of rural logistics, and various kinds of logistics technology information of transport, storage, packaging, delivering processing and so on relating to the process of logistics. The governments at all levels should establish and perfect rural logistics information platform that is in line with actual situation, according to the need of logistics development in rural areas; set up many logistics information sub-platforms in the regions with relatively developed rural logistics, so as to collect logistics information and release logistics information timely; strengthen publicity and promotion degree, so that more farmers know the searching ways of logistics information; strengthen the informatized infrastructure construction of logistics, such as the radio, television, telephone, and internet; promote the development of consulting services industry concerning rural logistics information.

3.3 Foster the main body of market of rural logistics in China We should actively promote the integration of logistics resources in rural areas, in order to achieve diversification of the main body of market; speed up the restructuring and transformation of assets of former circulation enterprises of agricultural products; change the status quo of small scale, monotonous service and closed operation; according to the direction of industrialized development of circulation of agricultural products, focus on strengthening the support for the wholesale market of agricultural products, transport enterprises of agricultural products, import and export enterprises, logistics distribution enterprises, and large chain supermarket of food; rely on the market and organize transport association of agricultural products; encourage the development of models of "place of production + farmer", "processing enterprises + farmer", and "enterprises of production, transport and sales + farmer, distribution center + farmer"; foster and strengthen the organization degree of the main body of market; develop various kinds of farmers' cooperatives, agencies, intermediary wholesaler and other intermediaries[6].

3.4 Vigorously foster talents of modern rural logistics Logistics, as a new major, is in the early stage of development of China's higher education. As for the professional researches on logistics, especially the logistics in rural areas, they are weak, and there is a critical shortage of logistics talents in rural areas. In order to address this case, the government, the institutions of higher education, secondary vocational schools should join together to devote themselves to the fostering of professional rural logistics talents. The government should offer certain capital support for the schools which set up the majors concerning rural logistics; on the basis of vigorously introducing logistics teachers, colleges and secondary vocational schools should set up the professional courses suitable for the development of rural logistics in China; in addition, we can adopt the forms of organizing various forms of rural logistics training classes, holding forum of rural logistics development, conduct investigation in overseas regions with developed rural logistics and so on, in order to promote the fostering of rural logistics talents.

3.5 Promote technological level of rural logistics With the development of modern science and technology, logistics equipment and logistics technology develop constantly, which can reduce the losses in the process of transport and storage of agricultural products to the extreme, reduce logistics costs and increase added-value of products. The government should adopt the ways of fiscal interest subsidies, financial support and so on, to encourage the rural logistics enterprises or individual to purchase advanced logistics transport equipments, fresh-keeping equipments and so on; to ceaselessly strengthen the standardization of rural logistics, and actively adopt international or domestic relevant logistics standard according to the market demand in the logistic chains of transportation, packaging, processing, warehousing and so on; actively develop container transport and large refrigerated truck transport so as to constantly improve rural logistics technology.

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