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Research on Optimization of Anyang Logistics Industry Development

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Abstract

Anyang, as an important fulcrum city in Henan's logistics system, how to rely on its advantageous resources to develop characteristic logistics and promote the development of the city is an urgent and important topic before the city. Therefore, on the basis of combing the current situation of Anyang's logistics development, this paper analyzes the existing problems in its current development and then puts forward the corresponding improvement countermeasures.

Keywords

Characteristic logistics, Anyang city, Smart logistics.

1. Current Situation of Anyang Logistics Industry

1.1. Logistics Channel Is Increasingly Perfect

As a regional comprehensive transportation hub city, Anyang has increased its investment in transportation facilities year by year. By the end of 2019, the city's highway mileage will reach 11,806 kilometres, "three vertical, three horizontal and one rings" highway network has been completed and opened to traffic. The number of trunk roads has increased to 6 480 kilometres of "Three Vertical, Two Horizontal and One Joint" and 2668 kilometres of newly renovated rural roads. With the opening of the Jin-Yu-Lu railway, Anyang city will become one of the important railway hub cities, with the railway mileage reaching 261 kilometres.

1.2. The Scale of Transportation Capacity Continues to Expand

By the end of 2019, Anyang city had completed 254 million tons of freight annually, up 14.3% from a year earlier, with 104.178 billion ton-kilometres of freight completed, up 16.3% from a year earlier. The city's various types of road freight vehicles total about 79,000, including about 73,000 large and medium-sized ordinary freight vehicles with a capacity of 740,000 tons, 683 dangerous chemicals transport vehicles with a capacity of 12351 tons.

1.3. Accelerating the Construction of Stations

By 2019, there are 16 logistics parks built and under construction in the city. Among them, there are six large-scale logistics parks with a total investment of more than 100 million yuan.

1.4. Logistics Enterprises Grow Rapidly

There are 3 A-level logistics enterprises in the whole city, among which An Yun company is rated as 4A-level logistics enterprise. There are a total of 38,000 road freight operators in the city and 230 transportation enterprises above designated size, including 12 transportation enterprises with more than 300 large and medium trucks, 13 dangerous goods transportation enterprises and one container transportation enterprise. Well-known domestic logistics enterprises such as Wan Zhuang Logistics, Beibadao Logistics, Highway Port Group, Wanli

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Group and Shun Feng Express have successively settled in Anyang for development. However, the logistics enterprises in Anyang area are small in scale and narrow in-service target, mainly facing industrial enterprises and wholesale and retail enterprises.

Table 1. Summary of the project of Anyang large logistics park

Serial number	Entry name	Position	Area (mu)	Capacity (10,000 tons/year)	Function
1	International Logistics Port	Area for development	829	338	Storage, Distribution, distribution processing, Cold Chain Logistics, Logistics Information Service and Network Technology Development
2	Ruixiang storage logistics park	Anyang County	330	175	Goods storage, coal storage, handling, highway transportation, logistics information platform, comprehensive office services
3	Anyun transportation logistics park	Tangyin County	320	78	Storage, distribution, pledge supervision, comprehensive services, information services, parking lots, packaging and processing, living services
4	Beibadao Logistics Park	Area for development	884.33	730	Freight service, information service centre, storage yard, special railway line (connecting Beijing-Guangzhou line), container and distribution centre
5	Anqi transportation logistics park	Neihuang County	300	500	Goods transportation, storage, distribution, distribution, information service, handling, car repair
6	Datong logistics park, Linzhou	Linzhou City	1000	450	Warehousing, goods distribution, logistics processing, information services, comprehensive services, goods distribution, life services

Table 2. Main body composition of Anyang logistics supply market

Nature of enterprise		Nature of industry	
Wholly state-owned	17%	Pure transportation company	73%
collective	39%	Pure storage company	5%
Three capital	5%	Storage and transportation company	17%
Sole proprietorship	0%	Integrated logistics company	5%
Privately operated	39%		
Subtotal	100%	Subtotal	100%

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2. Problems in Anyang's Logistics Industry

The development of Anyang's logistics industry is still in the stage of traditional logistics, with a high proportion of proprietary logistics. The logistics operation efficiency and management level are low, the inventory is large, and the logistics cost is high. It lacks modern logistics node facilities such as logistics parks, logistics centres, and distribution centres, lacks professional logistics enterprises in a real sense, and has yet to establish and implement an effective logistics industry management system. The main manifestations are as follows:

2.1. Anyang Characteristic Logistics Positioning Is Not Prominent

Table 3. Logistics positioning of Anyang and surrounding cities

City	Logistics location
Anyang city	Build an important transportation and logistics centre in the junction of the Central Plains Economic Zone and the four provinces of Shanxi, Hebei, Shandong and Henan, and an important commercial and logistics centre in the Central Plains Economic Zone
Hebi city	Commercial logistics centre, professional logistics centre
Xinxiang city	Building regional modern logistics centre radiating North Henan and facing the whole country
Puyang city	Important transportation hub and logistics centre in Henan, Shandong and Hebei
Handan city	Build the largest modern logistics hub at the junction of the four provinces, and become the transportation centre in the north of the Central Plains, the gathering place of people flow, logistics and information flow in the north of the Central Plains

Judging from the level of economic development and logistics positioning, Anyang and Handan have the most significant competitive relationship. The total economic volume and the development of the tertiary industry in Handan are higher than those in Anyang. Handan has economic and market advantages. In terms of logistics positioning, Handan radiates its positioning to the commodity distribution centre in the central plains, which conflicts with Anyang's logistics positioning. Therefore, Anyang's logistics development orientation is vague, which does not reflect Anyang's inherent transportation advantages, industrial advantages and national policy advantages. Characteristic logistics is not refined enough, and its development is insufficient.

2.2. The Low Development Level of Intelligent Logistics

First, the construction of information platform is lagging, and there is a lack of a logistics resource information sharing platform for the whole industrial chain, which leads to the lag of information transmission, the coexistence of resource replacement and vacancy, and lack of efficiency in the industry. Second, logistics enterprises have a low degree of informatization. Except a few leading enterprises can provide modern logistics services such as information processing, logistics scheme design and supply chain management, the vast majority of enterprises have not yet established enterprise management information systems. The work of data exchange, vehicle management and order management still lack information reform, and the usage rate of new logistics technologies such as electronic labels is especially low.

2.3. Logistics Infrastructure Construction Lags

The development of logistics network node facilities in Anyang region is seriously lagging. Logistics nodes are mainly small-scale and low-level freight stations or freight information departments, with outdated and crude facilities and lack of effective integration of resources. Logistics park construction lacks overall planning. At present, most of Anyang's logistics parks are small in scale and simple and extensive in operation. Their business scope only involves simple services such as storage, transportation, vehicle parking, information intermediary, etc.

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The number of logistics node facilities such as modern logistics parks in the true sense is very limited.

2.4. Backward and Unreasonable Logistics Facilities and Equipment

Storage facilities are old and backward, mostly open storage yards and simple warehouses. The number of storage facilities such as buildings, three-dimensional warehouses and cold storage is very small, and the layout of storage facilities is not reasonable enough. Moreover, its operation mode is backward, mainly based on leasing and property management, with low service level and lack of personalized and value-added services. There are a large number of freight vehicles, the overall supply exceeds demand, and the vehicle composition is unreasonable, which is difficult to meet the market demand for logistics. If there are too many ordinary gondola cars and too few specialized cars, it is difficult to meet the needs of safety, high efficiency and environmental protection.

2.5. Logistics Enterprises Are Small in Scale, Single in Business and Backward in Technology

At present, Anyang logistics enterprises "small, scattered, weak" phenomenon is prominent. Most of the logistics enterprises have a single form of operation, backward technology and equipment level, low level of informatization, and traditional logistics management mode, resulting in slow speed, high cost, low efficiency, large loss and low service level. Logistics enterprises have not yet formed an effective cooperative alliance, and low-level competition has caused a serious waste of resources.

3. The Supporting Conditions of Anyang's Logistics Industry Promotion

3.1. National Policy Supports the Development of Characteristic Logistics in Anyang City

First, the national implementation of the "the belt and road initiative" strategy has brought new opportunities for the development of logistics. Anyang Becomes Green Freight Delivery Demonstration Project to Create City in 2017. In December 2018, Anyang was selected as the carrier city of the dry port-type national logistics hub in the national logistics hub layout and construction plan.

Second, the national manufacturing industry transformation and upgrading strategy provide new opportunities for the development of the logistics industry. This strategy will promote the upgrading and transformation of Anyang's traditional industries, vigorously develop service-oriented manufacturing, and point out the direction for the development of Anyang's modern logistics industry. Anyang's logistics industry will further shift from extensive growth of scale and speed to intensive growth of quality and efficiency.

Third, the strategy of "building a well-off society in an all-round way" promotes the continuous innovation of logistics service mode. With the continuous improvement of domestic consumption capacity and level, the diversification and personalization of consumption structure will become more obvious. This will promote the continuous innovation of demand-oriented logistics service mode.

Fourth, the "internet plus" strategy will promote the development of e-commerce logistics. Anyang City has formulated several policies to support the development of e-commerce, setting up special funds to guide and promote the construction and development of e-commerce.

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3.2. The Formation of A Comprehensive Transportation System Provides A New Way for Anyang Characteristic Logistics Planning and Positioning

Anyang has initially formed a "three vertical, three horizontal and one rings" expressway network and a "two vertical and one horizontal" railway transportation network. With the planning and construction of northeast Henan branch airport, land port and aviation port, and the improvement of trunk roads and rural road networks such as national roads, provincial roads, counties and villages, Anyang is developing into a modern three-dimensional transportation hub city integrating railway, highway and aviation.

3.3. Industrial Industry Foundation Is Conducive to Improving the Level of Anyang's Characteristic Logistics

Anyang's industrial economy has a solid foundation and a complete range of categories. It has formed four leading industries such as metallurgical building materials, coal chemical industry, equipment manufacturing, food and medicine, and three basic advantageous industries such as textile and clothing, electronic information, and new energy. It has constructed an industrial layout based on eight industrial clusters and 20 professional parks. A good industrial foundation has laid a good foundation and provided great support for the rapid development of the logistics industry.

4. Countermeasures and Suggestions on the Promotion of Anyang Logistics Industry

4.1. Strive to Build A Modern Comprehensive Three-Dimensional Transportation System

Give full play to the role of transportation infrastructure construction in stimulating the economy and promote the deep integration of various modes of transportation such as railway, highway and civil aviation. To speed up the construction of comprehensive transportation corridor hub and give full play to the leading and supporting role of transportation in characteristic logistics.

Actively promote railway construction and strengthen external ties. Construction of the Anyang connecting line of the Jin-Yu-Lu railway to connect it with the Anyang-Li railway will strengthen traffic support for the development of large enterprises in western Anyang. To speed up the construction of Linzhou special line, Tangyin special line and Neihuang special line of Jin-Yu-Lu railway to serve the development of industries in three counties (cities). Construction of rail transit network covering the main cities and radiating urban areas. We will speed up the construction of urban rail lines and connect them seamlessly with inter-city railways, buses and taxis to form a fast transportation network that is closely connected with the surrounding cities.

Accelerate the development of aviation and enhance the driving effect of radiation. The Anyang Airport will be completed and put into use to improve the transportation network facilities around the airport and enhance its accessibility to the outside world. We will speed up the construction of Linzhou General Aviation Airport and Neihuang General Aviation Airport, and initially form a comprehensive airport service network with Anyang Airport as the centre, with the aviation school airport, Linzhou Airport and Neihuang Airport linked together to promote the development of the general aviation industry.

4.2. Gradually Deepen the Construction of Intelligent Logistics

To promote the development and application of information technology in the field of logistics, strengthen technical training and personnel training, and formulate relevant policies and measures to form a cross-sectoral, cross-industry and cross-regional network connection and information sharing public information platform.

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Promote "internet plus". Encourage the operation mode of "traditional industry+internet plus logistics" and take "looking for steel net+Anyang steel+Furui logistics park" as a pilot to promote the transformation and upgrading of Anyang traditional industry and the integration and development of industries. We will support the application of "internet plus Finance" in the logistics industry and take "Anyang Logistics Port+Yidiantong Logistics Information Network+Financial Model" as a pilot to build a new logistics format in the northern region of Henan and enhance Anyang's core competitiveness in the northern region of Henan. The goods supervision mode supporting "internet plus supervision" reduces links, improves efficiency and ensures the safety of goods through online multi-party joint-supervision.

Support bar code, smart tag, RFID and other automatic identification, identification technology and EDI technology in the application of enterprises, improve the visualization and traceability of goods, and promote the development of smart logistics.

Support Beidou navigation, Internet of Things, cloud computing, big data, mobile Internet and other advanced information technology applications in Anyang City, promote the quality improvement and efficiency enhancement of traditional industries, support the new development of emerging industries and new formats, and form new impetus for development.

4.3. Relying on Jin-Yu-Lu Railway to Build Characteristic Logistics Development Zone

Jin-Yu-Lu Railway runs through Linzhou City, Anyang County, tangyin county and Neihuang County. Its opening and operation bring opportunities to the development of characteristic logistics in Anyang City.

Relying on the Jin-Yu-Lu railway connection line, focusing on Datong Logistics Park, Anyang West Logistics Park, Neihuang Logistics Park, Tangyin Comprehensive Logistics Park and other projects, the public-rail intermodal logistics park will be rationally distributed to form a public-rail intermodal service system and reduce Anyang logistics operation costs.

Build an international logistics railway channel and connect it directly with Rizhao port through Jin-Yu-Lu railway to build an international logistics outlet of Anyang city. Based on Tangyin East Railway Port, build a regional international logistics centre with port function in northern Henan. Attracting export-oriented enterprises, international logistics enterprises and Rizhao port freight forwarding enterprises to enter the public-rail intermodal logistics park, extending the international logistics chain and promoting the development of export-oriented economy in northern Henan.

4.4. Building a Characteristic Logistics Service System

Relying on the Jin-Yu-Lu railway corridor and the northeast Henan airport, we will build a comprehensive logistics base integrating "railway port", "highway port" and "aviation port". Around Anyang's heavy industry, the construction of Wan Zhuang public railway logistics park, Da Tong logistics park, Rui Xiang storage logistics park and other public railway connection type comprehensive freight hubs. Relying on industrial agglomeration areas, the construction of Anyang Transportation Logistics Park, Anyang International Logistics Port, North Comprehensive Logistics Park, Anqi Logistics Park and other comprehensive logistics parks. Actively support the construction of regional professional logistics parks radiating into Shanxi, Hebei, Shandong and Henan provinces to form characteristics and enhance competitiveness. At the same time, guide vehicle maintenance, service and other industries to enter the park and provide supporting services.

We will optimize the layout of urban logistics infrastructure, speed up the construction of a comprehensive information service platform for urban freight distribution, and encourage commercial and commercial circulation enterprises, manufacturing enterprises and freight distribution enterprises to develop various forms of unified distribution, joint distribution and

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night distribution. The "one circle and two wings" postal express network layout with Anyang city as the centre should be constructed so that it can radiate the whole city's counties, districts and even villages and towns and be linked with Hebi, Handan, Puyang, Changzhi and other regions. To guide express delivery enterprises to build express distribution centres, distribution centres and storage centres in manufacturing cluster areas to enhance their operational capabilities. Encourage express delivery enterprises to develop express delivery outlets with fixed locations and expand their coverage. Promote the construction of express logistics park to realize industrial agglomeration, functional integration and intensive operation. We will continue to speed up the construction of rural logistics, foster and support several key rural logistics enterprises, and adapt to the development situation of urban-rural integration. To speed up the construction of rural postal communication facilities, focusing on strengthening the standardization of rural postal blank township outlets and terminal service capabilities. To promote the complementary advantages of express service and comprehensive transportation system resources, improve the city express distribution network.

Make full use of Internet thinking and new technological platforms, transform the traditional transportation organization, optimize the transportation organization structure, solve the "many, few, scattered and weak" problems, and promote the transformation and upgrading of traditional industries. In the field of comprehensive transportation, we will promote the innovation of transportation organization modes, effectively integrate various transportation resources, and promote the coordinated development of various transportation modes. At the same time of serving the development of small and medium-sized transportation enterprises, we will support the joint reorganization of transportation enterprises and build a group of transportation groups with strong strength, standardized service, great development potential, strong regional competitiveness and good brand reputation in the city.

We will increase support for leading key enterprises and guide them to integrate market resources in an orderly manner. Encourage and guide large freight (logistics) enterprises to carry out mergers and acquisitions, promote strong alliances between upstream and downstream enterprises, promote multi-industry linkage, expand value-added services, and cultivate service brands. Actively introduce well-known domestic logistics enterprises to set up headquarters and operation centres in Anyang city, and promote strategic cooperation with local logistics enterprises. We will support the development of cross-regional alliances for small and medium-sized logistics enterprises in Anyang City and encourage innovation in alliance operation modes. Encourage key enterprises in Anyang city to integrate small and medium-sized freight operators with the brand as a link, using special line alliance, franchise, etc.

5. Safeguard Measures of Anyang's Logistics Promotion

5.1. Promoting the Integration of Logistics Resources

Support logistics park to integrate small, scattered and disordered freight market and distribution station in Anyang City. Support large transport companies to integrate idle freight vehicles through vehicle attachment. Encourage logistics enterprises to integrate resources through merger and reorganization, improve the level of intensive operation, and reduce the cost of the logistics operation. Support the establishment of warehouse resource database, the integration of warehouse information, improve the efficiency of warehouse utilization. Support the establishment of cross-enterprise and cross-industry information sharing mechanism, and realize the integration of logistics information resources in the city.

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5.2. Improving Logistics Technology and Standardization Level

We will accelerate the process of logistics standardization and promote basic and universal standards for logistics infrastructure, technical equipment, logistics information and logistics management, mandatory standards for safety, health and environmental protection, and professional standards for various logistics operations and services. To guide enterprises to adopt standardized, serialized and standardized logistics facilities, equipment, technology and services to achieve integration with international logistics.

5.3. Improve Support Policies

We will implement the policy of using land for industrial storage in logistics parks, and support the use of old factories, warehouses and existing land resources of industrial enterprises to build logistics facilities or provide logistics services. We will implement preferential tax policies related to the logistics industry and cultivate several large-scale logistics enterprises that are networked and developed on a large scale. Strict implementation of the "green channel" policy for the transportation of fresh agricultural products. Expand investment and financing channels, encourage private capital to enter the logistics field, and guide banking financial institutions to increase credit support for logistics enterprises. According to the characteristics of logistics enterprises, promote the innovation of financial products, promote new financing methods, and provide more convenient financing services for the development of the logistics industry. Support qualified logistics enterprises to broaden their financing channels by issuing corporate bonds, non-financial enterprise debt financing instruments and listing enterprises.

5.4. Strengthen Personnel Training

Perfect the logistics discipline system and the professional personnel training system. Focusing on improving practical ability, and by the requirements of the construction of modern vocational education system, we will explore the formation of a new mode of training talents jointly by institutions of higher learning, secondary vocational schools, relevant departments, scientific research institutes, trade associations and enterprises. We will improve the on-the-job personnel training system, encourage the training of high-level management personnel in the logistics industry, actively carry out vocational training, and improve the professional quality of logistics industry employees.

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