

# Research on Optimization Strategies for Logistics Construction in Zhoukou Port

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**Abstract:** Zhoukou Port is one of the 91 major ports planned by the country and the only major port in Henan Province. Therefore, studying the logistics construction of Zhoukou Port plays a crucial role in promoting the commercial circulation, logistics development, industrial upgrading, and economic transformation of Zhoukou and its surrounding cities. This article first analyzes the current development status of logistics construction in Zhoukou Port, then identifies the problems in development and proposes solutions, providing theoretical basis and practical guidance for the construction of port logistics in Zhoukou City.

**Keywords:** Zhoukou Port; Logistics Construction; Countermeasure.

## 1. Introduction

Zhoukou Port is one of the 91 major ports planned by the country and the only major port in Henan Province. The report of the 20th National Congress of the Communist Party of China proposes to accelerate the construction of a strong trading country, which is undoubtedly beneficial for Zhoukou to leverage its unique advantages of connecting the Yangtze River and the sea, and to make comprehensive efforts around "building ports, promoting logistics, and gathering industries", striving to build a national regional central port city [1].

Zhoukou Port was completed in December 2005 and put into use in April 2006. In June 2019, Zhoukou Port became the first inland container port in Henan Province. The construction and operation of Zhoukou Port started relatively late, and there are relatively few literature on theoretical research on domestic inland ports in CNKI or other journal databases[2]. There is also very little theoretical research specifically targeting Zhoukou Port. In 2012, Liu Zhen et al. conducted research on the water transportation industry in Zhoukou City and proposed several suggestions for future development; In 2016, Zhang Ruijie took Zhoukou Port Logistics Park as the research object. Through actual research on Zhoukou Port, he analyzed the problems existing in Zhoukou Logistics Park and proposed several suggestions and development measures for the layout design and operation mode of Zhoukou Logistics Park. In 2017, Wu Yuzhi studied that under the the Belt and Road strategic plan, Zhoukou should seize the opportunity to comprehensively enhance the core competitiveness of port logistics[3]; In 2019, Zhu Xuequn proposed corresponding optimization strategies and guarantee measures for the development of logistics industry in Zhoukou Port Area through research, providing reference for the study of logistics development strategies in Zhoukou Port Area[4]; In 2022, Xu Yajie analyzed the current planning and construction status of Zhoukou Port Area, conducted PEST environmental analysis on Zhoukou Neihe Port Area, and provided certain decision-making support for the functional layout planning of Zhoukou Port Area[5]. In 2022, Chen Hanqing sorted out the current situation of water transportation development in Zhoukou City and proposed some suggestions for the development and construction of

water transportation in Zhoukou City [6].

## 2. The Existing Problems in the Logistics Construction of Zhoukou Port

There are several existing problems in the logistics industry of Zhoukou Port.

(1) The proportion of land transportation burden is too high. According to the "2023-2029 China Transportation Industry Market Operation Situation and Future Trend Forecast Report", as of June 2023, the road passenger volume and cumulative passenger turnover in Henan Province from January to June 2023 were 164 million people and 15.858 billion person kilometers, respectively, with a cumulative road freight volume of 1.227 billion tons [7]. The cumulative road passenger volume increased by 94.4% year-on-year and the cumulative road freight volume increased by 13.5% year-on-year. From January to June 2023, the cumulative volume of waterway freight transportation in Henan Province was 90 million tons, an increase of 1.2% year-on-year. Henan has one inland port, with a cargo throughput of 15.35 million tons from January to June 2023[8]. It can be seen that although Zhoukou Port has accelerated the promotion of port logistics economy in recent years, overall land transportation accounts for a relatively high proportion[9].

(2) The infrastructure construction is incomplete, and the ancillary equipment is not sound. Although there has been some progress in the construction of Zhoukou Port Logistics Park in recent years, there is still a significant gap compared to mature logistics parks. The comprehensive service capacity cannot meet market demand, the construction of port ancillary facilities is weak, and the construction of port comprehensive collection and distribution system lacks scientific planning and improvement[10]. In addition, insufficient construction of logistics information platforms and operational mechanisms in the port area will inevitably affect the development of the port area and logistics enterprises; For logistics parks that have already been built and operated, their service functions are lacking, their business scope is small, and they cannot meet market demand yet.

(3) The level of logistics specialization is not high, and the

supervision and management are not perfect. Due to the small scale, large volume, and low degree of networking in the Zhoukou freight market, there has been no large-scale operation. The degree of specialization in logistics services is low, and a true third-party logistics enterprise has not yet been formed. As an emerging industry, the logistics industry is poorly managed and its laws and regulations are not very sound[11]. Therefore, supervision and management cannot keep up with the development and changes of the market, leading to the phenomenon of industry management losing control.

(4) Lack of various professional talents. The current development situation of the port area is constantly changing, and there is an urgent need for various professional talents. Talent shortage is one of the bottlenecks in the development of the port area. For example, logistics, dock, and port management majors are highly specialized and require a large number of talents, while vocational and undergraduate colleges in Zhoukou area do not have relevant majors. In addition, the port city is far from the bustling central urban area, and the construction of the park has just begun. Life is inconvenient, making it difficult to attract and retain foreign talents.

### **3. Strategies for the Development of Logistics Construction in Zhoukou Port**

This study combines the new situation of logistics development in inland port areas, draws on the successful experience of logistics in famous domestic and foreign ports, analyzes the development environment of Zhoukou Port's logistics industry, the problems in port construction and management, and proposes improvement measures based on this, providing decision-making support for achieving sustainable logistics development.

(1) Accelerate the construction of port industry city synergy and intermodal transportation system. Prioritize the logistics connection channel, propose to open up the channel between the port area and the hinterland, and facilitate the last mile of railway and high-grade highways entering the port. Firstly, we need to increase the construction of railway dedicated lines for entering the port, which means that the construction of the Zhoukou Central Port railway dedicated line on the Luofu Railway must be accelerated to ensure the implementation of the rail water intermodal transportation project between Zhoukou Central Port and Luofu Railway, and form a competitive advantage over Luohe Port and Xinyang Huaibin Port. Secondly, it is proposed to construct a water cargo transportation channel from Zhoukou Central Port to Zhengzhou Airport Economic Zone, which is the construction of the Jialu River shipping restoration project. Upgrade the channel from Zhoukou Central Port to Huaihe River, and build a class III waterway project so that larger tonnage cargo ships can directly reach Zhoukou Central Port [10]. Finally, strengthen the effective connection between ports and urban-rural construction, industrial layout, expand modern logistics and bulk commercial services of ports, promote the development of supply chain services, and ultimately achieve the coordinated development of ports, industries, and cities.

(2) Accelerate the construction of ports and efficient management of port areas. Specifically manifested in the construction of smart ports, green ports, safe ports, and open ports. Of course, with the current situation, the development

of ports cannot be achieved overnight. We need to focus on Zhoukou Port and develop characteristic ports with one of them as the focus. At present, it is in the rapid period of Internet technology development. Seizing the opportunity of "Internet plus", the development of smart ports is also going along with the trend. In the future, it is committed to realizing the intellectualization of logistics services and management of Zhoukou Port. Specifically, by utilizing technologies such as 5G, electronic tags, CCTV, etc., we will improve the intelligent collection system of port basic data, vigorously promote the intelligent construction of port gates, port loading and unloading equipment, and yard storage management, and create an automated water rail intermodal transportation terminal; By utilizing technologies such as Beidou Navigation, AIS, and AFID, we aim to enhance the collaborative management and control decision-making capabilities of port operations, enhance the intelligence level of container operation management and general cargo production management, and achieve intelligent perception of ports, ships, vehicles, and cargo; Promote the interconnection and interoperability between fourth party logistics and port logistics information platforms, trading markets, and e-commerce websites, forming a comprehensive information network covering the entire supply chain process.

(3) Enhance shipping services and port operation capabilities. One is to improve the comprehensive service level. Building a shipping service system based on port loading and unloading, ship supply and service guarantee, extending to professional logistics such as cold chain and chemical industry, transit distribution, and circulation processing, supplemented by port and shipping information, financial insurance, bulk trade, e-commerce services, futures trading, etc; The second is to promote the transformation of port and shipping enterprises. Encourage port and shipping enterprises to transform their roles into full process logistics carriers; Encourage port and shipping enterprises to expand their business, establish an integrated business model of ship, port, cargo, and finance, and achieve large-scale, intensive, and professional development.

(4) Accelerate the introduction of various professional talents. Talents are a key factor in the development of the port economy. We need to accelerate the construction of talent pools at all levels and in all aspects of the port area, create conditions to attract, utilize, and retain talents, especially to create an innovative talent highland, and provide talent support for the development of the port economy. Firstly, encourage talent recruitment and introduction. Actively cooperate with domestic and foreign universities and research institutions, establish industry university research cooperation alliances, fully utilize the advantages of science and technology universities and talent resource research institutes, leverage talents to develop enterprises, enhance the comprehensive competitiveness of enterprises, and thereby improve the technological and management level of port logistics. The second is to promote talent cultivation projects. Actively connecting with domestic Double First Class universities and vocational colleges, cultivating a group of diversified professional talents in fields such as innovation, modern logistics, commerce, port economy, cultural creativity, and enterprise management; Regularly select government personnel, enterprise management personnel, and professional technical personnel to study and train in domestic and foreign higher education institutions, master advanced technology and management experience, and

enhance the innovative ability of the talent team.

## 4. Conclusion

The study analyzed the development environment, problems in port construction and management of Zhoukou Port's logistics industry, and proposed improvement measures to provide decision-making support for achieving sustainable logistics development. Accelerating the logistics construction of Zhoukou Port can enhance its comprehensive competitiveness in the economy and leverage its role as a regional transportation hub; It is conducive to fully integrating and utilizing water resources, promoting the comprehensive and coordinated development of shipping, ecology, economy, and cities, building an ecological port that integrates shipping, ecology, tourism, and culture, and depicting a new picture of "water nourishing Henan".

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