Exploration of the Construction Mode of Jinan Waterless Port under “One Belt and One Roads” Strategy
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Abstract
Planning, construction and improvement of waterless ports can enhance the core competitiveness of the market and enhance the economic strength of China's export trade. As a new form of national development, waterless ports play a significant role in promoting the economy. Under the background of “One Belt and One Roads” strategy in China, Europe has gradually developed, which has brought a good opportunity for the development of China's foreign trade economy. Ji'nan, as a necessary place for the central European channel in Shandong, can give full play to its regional logistics center. This paper probes into the construction mode of Jinan's waterless port under the strategy of "One Belt and One Road" in Jinan, analyzes the background of the construction of Jinan's waterless port by SWOT, then analyzes the advantages of Jinan's waterless port construction by using the empirical analysis method. Finally put forward the construction countermeasure proposals.

Keywords
Waterless port, Construction model, Construct countermeasures and suggestions.

1. The situation of development of waterless ports in China

1.1 Status of Construction and Development of Waterless Ports
With the development of global economic integration and the increase of foreign trade volume year by year, port cargo volume pressure is increasing. Inland cities have built waterless ports one after another, extending port business to inland areas. The convenient and fast transit port in inland area is an important node of traffic network. It can not only improve the efficiency of transportation services and achieve greater throughput, but also save time and reduce logistics costs. At present, there are more than 50 waterless ports in operation, under construction and planned expansion, and 4 waterless ports have achieved great achievements [1].

1.2 Types of Construction of Waterless Ports
According to the geographical location of the waterless port, (1) there is the main type of coastal port, such as Tianjin's largest comprehensive port in the north of China, Tianjin's waterless port, increased port and inland cargo throughput through cooperation with 14 inland provinces and container container cargo areas. (2) The main type of inland waterless port, such as the anhydrous port established in Xi'an, has realized the direct docking of import and export trade with international transportation route and multimodal transport mode. (3) The combination of coastal and inland waterless port leading type, such as Harbin, Changchun, Dalian's anhydrous port, expands Dalian's source radiation hinterland to the whole region of the northeast provinces, and strengthens the economic strength of the three northeast provinces [2].

2. Background of construction of Jinan waterless port

2.1 Strategy of Belt and Road
On February 24, 2017, Jinan City issued the implementation Plan for participating in the Silk Road Economic Belt and the Construction of the 21st Century Maritime Silk Road, which proposed
expanding logistics cooperation and docking with the "Belt and Road" project. This is to strengthen the construction of sea, land and air transportation network system, promote the modernization of transportation system, and promote the development of logistics integration[3]. Promote the integration and operation mode innovation of inland shipping market and expand the international shipping channel. It will be necessary to actively promote the construction of electronic ports, improve cross-border e-commerce customs clearance services, and build international mail distribution centers and large air cargo distribution centers. Efforts will be made to build Jinan into an important node of the intermodal international logistics port and the national intelligent highway port network [4]. Jinan can strengthen the construction of ports, create a one-stop waterless port service system, and promote the development of the "Maritime Silk Road". That needs to Speedly up the economic development of the "Silk Road" economic belt, build international multimodal transport and jettisoning waterless port in Jinan inland.

2.2 Geographical Location and Traffic Environment
Jinan is connected with the Yangtze River Delta Economic Zone to the south, the Beijing-Tianjin-Hebei Economic Zone to the north, and the Shandong Peninsula to the Central China region from the east to the west. It is an important meeting point between the Bohai Rim Economic Zone and the Beijing-Shanghai economic axis, and one of the central cities in the Bohai Rim region and the middle and lower reaches of the Yellow River. In the transportation aspect has the strong geographical location superiority. At present, many freeways have been built and opened in Jinan, with a relatively perfect highway network, and the road transportation and traffic network in Jinan is also in the process of further improvement. At the same time Jinan relying on its own advanced transportation network and Shandong Province developed road transport network to actively develop the logistics industry has now built its own logistics network. As shown in fig. 1.

![Fig. 1 General layout of Jinan Railway Hub](image)

2.3 The Development of Jinan Foreign Trade

<table>
<thead>
<tr>
<th>Table 1 Import and Export figures of Jinan</th>
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<tr>
<td>total export-import volume</td>
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<td>amount of exports</td>
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<td>amount of imports</td>
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<td>Year-on-year increase</td>
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The total import and export volume of Jinan in Shandong Province is much smaller than that in Qingdao, Yantai, Weifang, Rizhao and other coastal cities. As shown in Table 1, Jinan's foreign trade is in a stage of great development, and Jinan can make full use of the advantages of provincial capital's highway and railway traffic to further develop foreign trade.

Therefore, the establishment of a waterless port in Jinan has given Jinan an important platform for the development of foreign trade. Through the waterless port, it will vigorously expand the space for trade development and expand the field of foreign joint ventures. To create more convenient and favorable trade conditions for local foreign trade enterprises, but also to attract foreign trade enterprises from other less developed areas into Jinan. This will promote the development of Jinan's import and export trade; increase the degree of Jinan's opening to the outside world; increase the circulation of commodities in Jinan; improve the level of Jinan's consumption; and speed up the development of Jinan's import and export trade.

3. Construction Mode of Jinan Waterless Port

3.1 Analysis of the Construction Mode of Jinan Waterless Port by SWOT see

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Disadvantage</th>
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<tr>
<td>Internal analysis of Jinan waterless port. Analysis on the exterior of Jinan Waterless port.</td>
<td>1. The construction of a waterless port in Jinan is a new industry.</td>
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<td></td>
<td>2. There are many logistics parks in Jinan and the topographic structure is very complicated.</td>
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<td></td>
<td>3. Jinan has excellent transportation facilities and has the developed transportation networks both inside and outside the city.</td>
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<tr>
<td>Opportunity</td>
<td>SO strategy (growth strategy)</td>
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<td></td>
<td>WO strategy (reversal strategy)</td>
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<tr>
<td>1. Jinan as the new and old kinetic energy conversion demonstration zone.</td>
<td>1. Draw lessons from other modes of waterless port development.</td>
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<td>2. The construction of waterless port has received strong support from the government to strengthen.</td>
<td>2. Constantly changing the city of Jinan and improving Jinan's competitiveness.</td>
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<tr>
<td>3. Jinan industrial structure changed, environment traffic, facilities more and more perfect.</td>
<td>3. Improving transport capacity of multimodal transport.</td>
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<tr>
<td>Threaten</td>
<td>ST strategy (differential strategy)</td>
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<td>WT strategy (defensive strategy)</td>
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<tr>
<td>1. Jinan has been operating around the waterless port group.</td>
<td>1. Draw lessons from other modes of waterless port development.</td>
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<td>2. There is a high demand for information technology and infrastructure equipment of the system in the waterless port.</td>
<td>2. Eliminate unreasonable projects and introduce new construction schemes.</td>
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<td>3. Port clearance environment and customer resources are not yet perfect.</td>
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Table 2 Swot Analysis on the background of Jinan's Construction of Waterless Port
3.2 Function Positioning of Jinan Waterless Port
Jinan waterless port is an inland port with container freight service as its main function, which can provide services such as distribution of goods, LCL, customs, transit transportation, temporary storage, container storage and maintenance[5]. Among them, customs service is the landmark service of the waterless port. Because customers in remote areas can go through the related goods transit formalities directly in Jinan waterless port without having to go to the port again. With the promotion of "Belt and Road" strategy, the foreign trade of Shandong province, as one of the major industrial provinces in China, which developed continuously, and the important role of its coastal city port is increasing day by day. According to statistics, the throughput of Qingdao Port, Rizhao Port, Yantai Port and other ports are increasing and the pressure of container transshipment is great. The inland waterless port of Jinan can serve as a tool to relieve the pressure of cargo turnover around the port. The opening of Jinan edition of CEIBS promotes the rapid development of Shandong's inland foreign trade, and it urgently needs a comprehensive distribution center to serve it. Therefore, Jinan waterless port can also be used as the inland area cargo collection center, cargo receiving and sending business.

3.3 Investment Mode of Jinan Waterless Port Construction
Jinan waterless port is co-investment between Jinan municipal government, port enterprises and Jinan railway bureau. In the construction process of Jinan's waterless port, some international investment, large shipping companies or large cargo owners can also be attracted appropriately. This can relieve certain financial pressure, at the same time, it can provide a stable supply of goods for the operation of waterless ports. It is convenient to issue import CIF and export FOB bills of lading for waterless ports, and lay the foundation for the good operation of waterless ports. Because the government can coordinate the relationship between the relevant departments. Government participation is conducive to the early construction of waterless ports and the construction of waterless ports for the purpose of environmental protection. However, Government funded waterless ports also have inefficient problems, so other major customers of waterless ports are needed to participate in the construction of waterless ports. This also allows them to have a sense of ownership, actively provide supplies to ensure the basic operation of waterless ports.

3.4 Operation Mode of Jinan Waterless Port
In the operation of Jinan waterless port, the way of road-rail and water-iron transport is adopted to carry out the transportation of goods. On the one hand, for the goods that need to run through the port, the goods can be loaded in containers directly in Jinan's waterless port, and then the goods can be transported to the port by using the railway line in the waterless port. In ports, containers are loaded directly into the ship by hoisting, without the need for disassemble and handling of related procedures. This process simplifies the entire cargo transportation process and greatly facilitates the customer. On the other hand, for the goods that need to be main transported by railway, the loaded container cargo is transported to the area of the hanging pool next to the railway line by using the tractor head, and the container is loaded by the way of swinging and transporting. In the railway transportation yard which does not have the condition to swing and hang, it can be loaded by hoisting. Therefore, in the construction of Jinan's waterless port, according to the traffic situation of Jinan and the situation of goods circulation, the reasonable location should be selected, the railway line should be properly introduced, and the container dumping and hanging station should be set up. Jinan waterless port will be become an efficient, convenient, flexible [6].

4.Countermeasures and Suggestions for Construction of Waterless Port in Jinan
The construction of inland waterless ports is a systematic project, which cannot be separated from the blind construction of actual terrain, traffic and economic development. The construction and development of waterless ports involve a wide range of areas, have a strong policy, have a large investment, and have a long period of time. It is not only the need of market and enterprise development, but also the function of government infrastructure protection. In the latter stage, the economic benefits will be great, and all departments without water ports will need to work closely
together, work together, push forward in a down-to-earth manner, take measures according to local conditions, and plan as a whole. From the point of view of national and local social and economic sustainable development, the construction of inland harbor[7].

4.1 Provision of Professional Support
In order to ensure that the development strategy and management of waterless ports can be updated and optimized in time, the construction of waterless ports requires a large number of specialized logistics personnel. Through the combination of school training and on-the-job training, basic training and professional training, theoretical training and practical training, the theoretical knowledge and practical foundation of logistics practitioners are improved in an all-round way. At the same time, the professional skills of logistics practitioners have been strengthened. Emphasis should be placed on training talents who understand modern logistics management knowledge, and at the same time increasing the introduction of logistics talents to provide them with a good platform conducive to the logistics talents to display their talents.

4.2 Enhanced Collaboration With Surrounding Ports
Jinan has a superior geographical location, and Tianjin, Qingdao, Rizhao, Weihai, Yantai and other places connected with the transportation mode is quite developed, Jinan can be used as the economic hinterland of these ports. Jinan, as the economic city of Shandong Province, is the junction point between North and South China, and the transportation of goods with other places can be carried by way of railway and road transport. Cooperation with ports can be done by rail, road, and waterway. South China should strengthen regional cooperation with ports and actively expand the economic hinterland of inland waterless ports. At the same time, Jinan should actively integrate into the coastal economic belt and give full play to its regional advantages. Realize the seamless connection between port and waterless port, reduce the waste of intermediate link, improve the efficiency of port operation, and speed up the economic development of waterless port at the same time[8].

4.3 Speeding up the Construction of Waterless Port Logistics Transportation Channel
First of all, speed up the development of road transport, the construction of efficient and convenient highway passage. Speed up the construction of internal and external corridors in various regions, further improve the level of existing highway corridors, build special freight corridors, form a dedicated transport network system for passenger dedicated lines, and further strengthen the docking between ports and inland hinterland highways. Improve the efficiency of highway collection and distribution. Second, speed up the planning and construction of special railway transport channels, and give play to the advantages of hot metal transport demonstration projects. Strengthen the cooperation with the government, actively develop the related waterless port transportation channels, actively optimize the transport organization, improve the efficiency of road and rail transport, vigorously promote the scale of road and bridge passage, improve the efficiency of road and bridge transportation.

4.4 Strengthen Government Guidance and Work Closely with All Departments
In the construction of water-free port, local government should give full play to its guiding and supporting role. The government should organize the formulation of scientific planning, political policies, funds and other aspects of strong support. In terms of capital, the government can actively attract social capital to invest, not only to absorb domestic capital, but also to attract foreign capital to participate in investment. At the same time, customs, inspection and quarantine, railway, highway, foreign exchange and banking and other departments must closely cooperate to form a linkage mechanism to give full play to the waterless port services [9].

Provide port clearance facilities. To deepen the reform of regional customs clearance, to expand the scope of application for enterprises with "territorial declaration, port inspection and release", and to extend the scope of application to class B or class C production enterprises with no illegal records [10]. Promote paperless customs clearance mode, truly realize the inland waterless port cargo all
To strengthen the cooperative innovation of inspection and quarantine departments' supervision and control mode, to implement such facilitation measures as direct clearance and green passage, and to promote the export customs clearance mode of "origin inspection, port exit orders" and import customs clearance mode of "port transfer inspection, territorial inspection", expand the scope of reinspection and transfer the low-risk goods to the waterless port. Set up special channels, special windows and special inspection areas for inland waterless port cargo.

5. Conclusion

The waterless port is a collection of resources and services. On the one hand, the waterless port intensifies the logistics resources, provides local import and export services for inland areas, reduces logistics costs, and improves the efficiency of customs clearance. On the other hand, intensive transportation resources enable different modes of transport to coordinate operations to provide customers with convenient and fast services. Under the new situation, there are many opportunities and challenges in the construction of Jinan's waterless port, so it is necessary to plan the construction of Jinan's waterless port as a whole and make clear the direction of the construction of Jinan's waterless port. Rational use of its own existing advantages, and constantly improve the shortage of construction and development process, hope to build Ji'nan waterless port into efficient service Ji'nan and the surrounding urban logistics industry of the waterless port.

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References