

# **Analysis on the Current Situation and Advantages and Disadvantages of Port Resource Integration in China**

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## **Abstract**

The integration of port resources within the provinces has gradually become the mainstream trend of my country's port sector reform. This is the inevitable product of the development of my country's port industry to a certain stage, driven by multiple factors under the background of a specific era. This article first introduces the necessity and background of port resource integration, and analyzes my country's current provincial port resource integration model to better sort out its development context. Next, through the analysis of the status quo of port resource integration in China's provinces, the port resource integration policy of each province is explained, and the advantages and disadvantages of the current regional port integration reform in my country are analyzed. And summarizing and forming relevant and beneficial development experience is of positive significance to the current port resource integration work in my country.

## **Keywords**

**Port Resources; Regional Economic Integration; Government-led.**

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## **1. Introduction**

After many reforms, China's port industry has gradually formed a pattern of "port decentralization, separation of government and enterprise". In 2001, the "opinions on deepening the reform of port management system directly under the central government and under dual leadership" completely changed China's port management system and decentralized all ports to local governments. The Port Law of 2004 established the port management system of "separation of government and enterprise, multiple operation, one port and one government, unified management" by law, encouraged and protected fair competition in port operation activities, promoted port scale construction, and realized great development of port industry. Since the implementation of the port law, the port administration in China has been following the policy of "one city, one port" for many years and has achieved initial success. With the rapid development of the port industry, the problems of repeated construction, overcapacity and excessive competition among regions have become increasingly prominent. The focus of port resource integration in China has shifted to cross administrative region integration. After the establishment of Guangxi Beibu Gulf port and Zhejiang port group, Jiangsu Port Group, Liaoning port group, Shandong Port Group and other provincial port groups, the integration of port resources within the provincial scope has gradually become the mainstream trend of China's port reform, which is the inevitable result of the development of China's port industry to a certain stage and driven by multiple factors in a specific era Things. Regional economic integration is the fundamental origin of regional port integration. The practical problems faced by the development of port industry constitute the realistic starting point of regional port integration, and "optimizing the allocation of port resources" is the fundamental logical starting point. The expansion of port governance space, the diversification of governance subjects, the coordination of governance behavior, the unification of

governance objectives and the sharing of governance performance constitute the specific connotation of China's port resource integration. Specifically, to achieve the goal of port sustainable development is fundamental; comprehensive and in-depth reform and economic new normal are the background of the times; benefit drive is the direct driving force; strategic drive is the traction force; administrative drive is the key support; situation drive is the experience reference. In a word, the integration of port resources within the province and regional port integration has become an important measure to promote the upgrading of port quality and efficiency, resolve excess capacity and optimize resource allocation.

## **2. The necessity of port resources integration**

### **2.1 Requirements of slowing down economic and trade globalization**

Since 2018, the growth of international shipping trade has been sluggish, and the driving force of world economic and trade activities is insufficient. In 2018, the trade volume increased from 4.1% in 2017 to 2.7%, and the slowdown affected almost all shipping related industries. Among them, the growth rate of global container shipping volume slowed down in 2017-2019. In 2018, the global container shipping volume was 152 million TEU, with a year-on-year increase of 2.6%, far lower than the growth rate of 6.0% in 2017. Although the shipping volume in 2019 increased to 198 million TEU, with a year-on-year growth of 2.0%, the growth rate dropped by 2.2% compared with that in 2018. One belt, one road, novel coronavirus pneumonia, and environmental problems will be needed to help the port industry to cope with the economic impact of the global trade friction. With the opportunity brought by the "one belt and one way" initiative, the port resources integration process will be promoted and port groups will be built as an international platform for the development of the country's foreign trade. Strategic cooperation, focus on port resources, form core competitiveness, enhance the ability to resist risks, promote China's port group to seize the opportunity in Global trade and competition, and promote the prosperity of China's shipping trade.

### **2.2 Requirements for the development of regional economic integration**

Under the background of the continuous spread of the international epidemic, China should expand domestic demand, strengthen the division of labor and cooperation with neighboring countries in the global industrial chain and supply chain, form a reasonable division of labor and competitive regional port integration layout, as an important support to promote the implementation of national economic development strategy, and promote the development of regional economic integration. However, as the scale of port investment is decreasing year by year, the new capacity is still high, and the overcapacity is prominent, which leads to excess port resources, repeated construction and unbalanced development. Therefore, we should accelerate the progress of port integration, solve the problem of port overcapacity, realize the efficient integration of port resources, standardize the market order, adopt dislocation development, quickly improve quality and efficiency, form the management mode of internal interconnection and efficient operation of port group, and promote the development of regional economic integration. At the same time, after the integration, the port group pays more attention to the driving and radiating effect on economic development, makes full use of regional resources, defines the operation orientation, speeds up the transformation and upgrading of industrial structure, forms the industrial cluster competitiveness with the port group as the core, drives the stable and rapid development of hinterland economy, reasonably avoids overcapacity, and realizes the development of regional economic integration.

### **2.3 Requirements of port and shipping imbalance in shipping alliance**

In order to achieve economies of scale and enhance competitiveness, liner companies have formed shipping alliances one after another to realize the complementarity of routes and berths in the fields of transportation services and shipping schedule coordination. From March 2019, star shipping and 2m alliance will expand strategic cooperation; from April 2020, modern merchant shipping and the alliance will officially launch a new 10-year cooperation mode. The change of shipping alliance is

bound to bring new changes to the global shipping industry and ports, and then continue to break the balance of ports and shipping. In order to pursue the long-term cooperation with the shipping alliance, the ports compete maliciously. They compromise and give in to the alliance, and sacrifice the port interests to obtain the affiliation of large shipping enterprises. To a certain extent, it damages the port benefits and restricts the future development of the port. For China's ports, under the imbalance of port and shipping, we should accelerate the integration of domestic port resources, realize the large-scale development of port group, effectively deal with the challenges from the shipping buyer's market, further establish their own advantages, improve production efficiency and service level, increase the strength and market competitiveness of port group, and achieve a win-win situation of port and shipping.

### **3. Main modes of port resource integration in China**

There are three modes of port resource integration in China.

#### **3.1 Administrative mode**

The integration of administrative mode is to integrate the port management departments of various cities in the province into a trans regional port management department, which is mainly the integration of administrative resources and natural resources. For example, the Beibu Gulf port authority was established in Guangxi Beibu Gulf, and the administrative mode was adopted to realize the integration of Guangxi Fangcheng, Qinzhou and Beihai ports.

#### **3.2 Market oriented mode**

The integration of market-oriented mode mainly relies on market mechanism and integrates port resources through capital means such as merger, reorganization and joint operation. This kind of integration is mainly aimed at the integration of port operation resources. For example, in July 2017, Liaoning provincial government and China Merchants Group signed the port cooperation framework agreement to establish a unified port operation platform in Liaoning. Based on Dalian Port Group Co., Ltd. and Yingkou Port Group Co., Ltd., Liaoning port group is set up in a market-oriented way to realize the integration of Liaoning coastal port business entities.

#### **3.3 Government led + market assisted model**

This mode is generally promoted by the local government. At the same time, it relies on the market means to restructure the assets of the port enterprises in the region, so as to form a unified port enterprise group, so as to achieve the integration of natural resources and business resources in the region. Such as Hebei Port Group, Ningbo Zhoushan port group and Jiangsu port group.

### **4. Current situation of port resources integration and Optimization in China**

In recent years, China's port industry has entered a round of port development reform, which takes the province as the main space carrier and takes the substantial integration of port resources as the key point. Different from the previous port reform led by the Ministry of transport at the level of the central government, the provincial government has become the leading force in this round of port development and reform.

China's first real integration of regional port resources through institutional means can be traced back to the establishment of Shanghai combined port management committee in 1997. It should be pointed out that: as an inter provincial port coordination organization, although it is an official organization led by the Ministry of transport, due to the division of administrative subordination, Shanghai combined port management committee can not play a substantial role in the integration of port resources. In the 21st century, in order to gain the leading position in the regional market and enhance their own development strength, some large-scale key port enterprises begin to integrate regional port resources mainly by means of capital (such as equity participation, merger and acquisition, etc.). Among them, the "Yangtze River strategy" put forward and implemented by Shanggang group in 2002 is a typical representative, but it still belongs to the form of port resource integration dominated

by market forces, which can not fundamentally solve the problem of regional port resource mismatch. In contrast, the provincial port resources integration trend gradually formed in recent years pays more attention to the integrated reform of administration and market

#### **4.1 Current situation of port resources integration in Zhejiang Province**

Zhejiang port resource integration is a representative work of China's port reform. Since May, Zhejiang has set up Zhejiang ocean port development committee and Zhejiang harbor investment and operation group Co., Ltd. at the provincial level to integrate the resources of the main ports in the province (Ningbo Zhoushan port, Jiaxing Port, Taizhou port and Wenzhou port) from the administrative and market levels, and to establish a unified port planning, management, operation and construction system in the whole province. The situation of urbanization development.

#### **4.2 Current situation of port resources integration in Jiangsu Province**

In 2017, Jiangsu Province established Port Group, started to promote the integration of related port assets, and completed the integration of some provincial ports and shipping assets such as Nanjing Port Group and Suzhou Port Group. In July of the same year, the "opinions on deepening the reform of coastal port integration along the Yangtze River" was issued to improve the port planning system, promote the development of shipping industry, and realize the intensive and transformation development of ports in the whole province. In 2018, Jiangsu Port Group acquired 65.2% of the shares of Zhenjiang port group, which is controlled by the state investment transportation holding company, and Suzhou Port Group acquired 37% of the shares of Zhangjiagang port group, which is controlled by Beijing state investment transportation holding company. The successful implementation of this project marks another great progress in the integration of port resources in Jiangsu Province, which is of great significance to further promote the integration of port resources and the integration of ports in Jiangsu Province.

#### **4.3 Current situation of port resources integration in Liaoning Province**

In 2017, Liaoning provincial government and China Merchants Group signed the port cooperation framework agreement to establish a unified operation platform for Liaoning ports. In December of the same year, 100% of the shares of Dalian Port Group and Yingkou port group were transferred to Liaoning Northeast Asia port and Shipping Development Co., Ltd., a wholly state-owned company established by the state owned assets supervision and Administration Commission of Liaoning Province, and China Merchants Group owned 49.9% of the shares of the company. In 2019, Liaoning Northeast Asia port and Shipping Development Co., Ltd. officially changed its name after the completion of equity settlement and established Liaoning port group. In May of the same year, SASAC transferred 1.1% of the shares of Liaoning port group to China Merchants Liaoning for free. In June 2020, Dalian Port plans to merge Yingkou port by issuing a shares. In July of the same year, Dalian port and Yingkou port simultaneously announced the "trading plan", marking a substantial step in the merger process of the two northeast maritime hubs. At the end of the year, Liaoning port integration work again handed in a brilliant report card: on December 30, the signing ceremony for the second phase payment of Dandong Port equity transfer was held in Dandong Municipal government, and Pei song, deputy general manager of liaogang group, and Gong Zhengchao, legal representative of Dandong Lingang group, signed the agreement on behalf of both parties. Liaoning port integration is advancing steadily and is moving towards a new stage.

#### **4.4 Current situation of port resources integration in Shandong Province**

In 2018, Shandong Bohai Bay Port Group was established to further integrate Weifang port, Binzhou port and Dongying Port, which is the first step of port integration. In 2019, 100% equity of Weihai port group will be transferred to Qingdao port group free of charge, and the second step of Shandong integration will be basically completed. In August of the same year, Shandong Port Group was established, and 100% equity of Qingdao port group was transferred to Shandong Port Group free of charge. Qingdao Port Group owns four major port groups: Qingdao port group, Rizhao Port Group,

Yantai port group and Bohai Bay Port Group, which marks the further integration of Shandong port and accelerates the reform and development process of Shandong port integration.

In short, the important feature of China's port reform is that the scope of reform is limited to a single province, and specific management departments or provincial enterprises are established to undertake the functions of provincial port development. Because of the limited space of the paper, we will not repeat the specific resource integration of other provinces.

## **5. Analysis on the advantages of China's port resources integration**

### **5.1 More scientific resource allocation**

#### **5.1.1. Integrating factors to improve the quality of development**

The integration of adjacent ports with common economic hinterland in the same region can reduce the repeated construction among ports, ensure the scientific construction of port berths according to the port layout planning, effectively avoid the homogeneous competition of ports, and realize the economies of scale. The integration of port elements such as coastline, wharf, storage yard and water area, the integration of shipping, trade, information, port, finance and other related elements, and the integration of hub facilities such as collection and distribution transportation transfer center and logistics storage and transportation station are conducive to the development of river river combined transportation, river sea combined transportation, rail water combined transportation and shipping service industry, so as to realize the effective utilization and scientific allocation of elements. For example, after the integration, Jiangsu has established a container transportation system with trunk and branch links, and the container transportation along the river has initially formed a "trunk branch" water transfer network, which has improved the economic benefits and time efficiency of container transportation.

#### **5.1.2. Overall planning of port and shipping resources and improvement of overall functions**

The integration is conducive to the overall planning of water, road, port, shore, industry, city and other port related resources, combined with the high starting point, high-quality and high-level planning and construction of hinterland industrial layout, coordinating the matching of port and shipping public resources such as approach channel, anchorage, collection and distribution system, promoting the construction of bulk material storage and transportation center, port industrial and logistics park, and effectively connecting road, railway and other transportation modes, Better play to the overall efficiency of the comprehensive transportation system, and further enhance the comprehensive function of the port. For example, through resource integration, Jiangsu has initially realized the centralized management of anchorage public use.

#### **5.1.3. Intensive use of shoreline to avoid low-level repeated construction**

The integration of port resources is conducive to the intensive development of water and land areas, the construction of large-scale, large-scale and specialized berths, the solution of many problems such as small number of high-grade berths, poor berthing capacity and low shoreline utilization efficiency, and the improvement of shoreline resource allocation efficiency. For example, Zhejiang Province has set up a marine port shoreline resources collection and storage center, improved the linkage mechanism for the preliminary work of port shoreline projects, strengthened the management of port shoreline, and co-ordinated and concentrated capital resources to focus on major projects.

### **5.2 More dynamic market players**

#### **5.2.1. Reduce invalid internal friction and improve enterprise benefit**

Through the establishment of a unified platform and management and control system, the large-scale port groups rectify the internal business order, divide the work and cooperate with each other, and arrange the sites reasonably, so as to realize the unified construction, operation, management, service and external cooperation. After the integration, the port capacity is improved more rationally, which is conducive to reducing low-level repeated construction and avoiding resource waste. For example, Zhejiang has solved the contradiction of overcapacity of some terminals through integration, avoided



the vicious competition of homogenization, and effectively strengthened the cooperation between ports.

#### 5.2.2. Enhance competitiveness and expand development space

The establishment of the port group has expanded the scale, increased the business scope, enriched the product line, solved the problems of small scale, few business categories and unsound industrial chain of small and medium-sized enterprises as a whole, solved the long-standing structural contradiction of "small, scattered and weak" in some places, and greatly enhanced the strength of participating in market competition and foreign cooperation.

#### 5.2.3. Expand water transport supply and reduce logistics cost

Integration is conducive to coordinating the scientific connection and reasonable collocation of port and surrounding transportation modes, and providing higher quantity and quality supply. It can not only make up for the short board of transportation capacity, but also reduce the intermediate links and reduce the logistics cost, upgrading from "walking well" to "walking well", "walking fast" and "walking cheap". After the integration of Jiangsu Province, the cost of inland river transshipment of each container from Suzhou Industrial Park to Taicang port area will be reduced by 100 yuan; after the integration of Anhui Province, the water bus route from Wuhu to Shanghai will be opened, and the time from Wuhu to Shanghai will be reduced from more than 10 days to less than 5 days.

### 5.3 More efficient service capability

#### 5.3.1. Play a leading role in serving economic and social development

The establishment of large-scale port group is conducive to the realization of scale, large-scale, intensive and hub as soon as possible. The advantages of leading role are obvious. It can improve the comprehensive throughput capacity and support capacity of the port in an all-round way, and provide better support for economic and social development.

#### 5.3.2. Play the role of platform and serve the opening up

More than 90% of China's foreign trade goods are imported and exported through ports. The establishment of large-scale port group is conducive to the overall planning of the service of water transport foreign trade ports, accelerating the promotion of the cooperation mechanism of big customs clearance and big data, improving the resource allocation of ports, ships and routes, closely connecting the international routes and inland hinterland, realizing the seamless connection between inland enterprises and the international market, and providing better and faster services in foreign trade.

#### 5.3.3. Give full play to the role of main force and serve the construction of port and shipping infrastructure and equipment

According to the port law, the port is a geographical concept. Its market is open, the main body is diverse, different operators have different understanding and ideas, and the level of infrastructure and equipment is also different. This is one of the important reasons for the problems of "shallow use in deep water" and low-level repeated construction of some ports. Large enterprises pay more attention to the scale and specialization of terminals and equipment, and promote the upgrading of the whole port facilities and equipment with the role of vanguard.

### 5.4 Industry development is more sustainable

#### 5.4.1. It is conducive to strengthening and expanding the strength of state-owned enterprises

The reallocation of resources inevitably involves the adjustment of property rights. In order to respect the autonomy of non-state-owned enterprises, integration is mostly limited to state-owned enterprises, so government guidance and market operation are needed. The integration of port resources is not only the reform of port industry, but also the deepening reform of state-owned enterprises. The establishment of large-scale port group is conducive to promoting the merger and reorganization of state-owned port and shipping enterprises, establishing and improving the modern enterprise system, enhancing the vitality of state-owned enterprises and improving the efficiency of state-owned capital.

By optimizing and adjusting the structure of port enterprises, vigorously expand the upstream and downstream industrial chain, and make the state-owned enterprises stronger, better and bigger. After the integration, the total assets of Zhejiang Haigang group exceeded 100 billion yuan, the net assets nearly 70 billion yuan, the debt ratio decreased to 36.2%, and the comprehensive strength of the enterprise increased significantly.

#### 5.4.2. It is helpful to improve the financing ability of enterprises

It is easier for large port groups to obtain government policy, capital, taxation, land and other support, and it is also easier for them to cooperate with large cargo owners and local governments to obtain stable sources of goods and a good development environment. After the expansion of enterprise scale, credit is usually improved, which is conducive to bank loans, attracting foreign capital or issuing corporate bonds, raising funds with the help of the capital market, reducing the cost of capital, coordinating the use of enterprise funds, and improving the efficiency of capital use. Some local governments have also made great efforts to inject capital to support integration. For example, Zhejiang Haigang group has received 15 billion yuan of assets injected by the government

#### 5.4.3. It is conducive to the implementation of the concept of green ecological development

The integration of port resources and the establishment of large state-owned port group is a necessary measure to implement the concept of resource conservation and green ecological development, to deal with the extensive low efficiency problem of "small, scattered and chaotic", and to guide and promote the more sustainable development of the whole port industry. Taking the opportunity of port resources integration, Jiangsu Province has put more than 100 illegal wharves along the river in place and completed ecological restoration, focused on "water control, gas control, waste control, bank protection and greening", comprehensively promoted oil and gas recovery, shore power construction, dust control, water pollution control, port capacity improvement, etc., and achieved remarkable results.

## 6. Analysis on the disadvantages of port resource integration in China

In recent years, China's port resource integration work has been carried out in full swing, at the same time, there are also many problems. Because the current port resource integration work in China is mainly at the provincial level, many provinces are facing different problems in the process of integration, so this paper selects three typical integration areas to analyze the disadvantages.

### 6.1 Problems faced by Shandong Port Resource Integration

#### 6.1.1. There are many coastal ports in Shandong Province, and the repeated construction and disordered competition are serious

There are as many as 40 ports of different sizes along the 3345km coastline of Shandong Province, with an average of one port per 85km. In order to improve short-term benefits, some local governments blindly develop and construct port groups, forming many small and medium-sized ports. More than 50% of Shandong's container business is concentrated in Qingdao port, and bulk cargo such as coal, iron ore and crude oil are also concentrated in Qingdao, Rizhao, Yantai and other big ports. Many small and medium-sized ports have unreasonable function orientation, and the cargo type structure and business overlap with other big ports seriously. Some small and medium-sized ports, when facing the competitive pressure of big ports, attract goods by reducing port handling charges, so as to improve short-term benefits. The competition among ports in Shandong Province is fierce, but the overall profit of ports has not improved significantly.

#### 6.1.2. There is a big gap in the profitability of ports in Shandong Province

According to the port yearbook data, Qingdao port achieved a net profit of 2.186 billion yuan in 2016 and 3.043 billion yuan in 2017, up 39.2% on a month on month basis, and its profitability has been among the best in the whole port shipping industry; Rizhao Port achieved a net profit of 176 million yuan in 2016 and 369 million yuan in 2017, up 109.7% on a month on month basis; Yantai port made

a net profit of 61.8972 million yuan in 2016 and 2802.4 million yuan in 2017 The overall profit level was low.

### **6.1.3. The composition of the controlling shareholders of the major ports in Shandong Province is different, which seriously hinders the promotion of the integration of port capital and advice**

Among the port enterprises in Shandong Province, Dongying Port and Binzhou port have relatively simple equity components, both of which are state-owned. Since 2018, all the major shareholders of the two ports have owned Bohai Bay Port Group. Weifang group is controlled by Senda Meigang, and only 1% of the shares are held by state-owned assets, while the rest are held by foreign-funded enterprises. Qingdao Port Group has established more than 40 Sino foreign joint ventures in cooperation with Hong Kong Merchants Group, Maersk and other foreign-funded enterprises. Rizhao Port as a listed company, in addition to Rizhao Port Group is the controlling shareholder, the intention of integration is not strong. In the process of resource integration of coastal ports in Shandong Province, the profit of enterprises will inevitably be involved. In recent years, in addition to Qingdao port, the profitability of other ports in Shandong is relatively low and unstable. In addition, Landbridge port is wholly owned by Landbridge group and belongs to private enterprises. Among the shareholders of Yantai port, there are Baosteel Group, CNOOC investment and other central enterprises. At present, the seven major ports in Shandong Province have a variety of different management systems, the background of property rights is extremely complex, and there are many stakeholders, so it is difficult to find a balance point to take into account the interests of all parties in the port integration. Therefore, it is very difficult to achieve the balance of interests between the ports.

## **6.2 Problems in the process of port integration in Fujian Province**

### **6.2.1. The port layout is still scattered and there are structural contradictions**

Although Fujian Province has the largest deep-water shoreline resources in China. However, due to historical reasons, driven by the "one city, one port" orientation and local interests, cities all over the country compete to build wharves and develop port industry, while the economic hinterland is limited, resulting in the current situation of scattered berths and insufficient strength of coastal ports. By the end of 2017, the number of productive berths of coastal ports in the province had reached 496, scattered over 3752 km of coastline. Among them, the lack of large-scale specialized deep-water berths, especially large-scale container berths. However, due to the large number of small and medium-sized, general-purpose wharves, strong randomness of construction and disorderly use of shoreline, it is not conducive to reasonable competition and division of labor, resulting in waste of resources and overcapacity. In addition, the dispersion of port berths makes the collection, distribution and supporting facilities of some ports unable to keep up, reduces the service quality and level of the port, and seriously weakens the influence and competitiveness of the port.

### **6.2.2. There are many port operators, but the scale is small, leading enterprises lack strength**

The cargo throughput of the state-owned port groups in Fujian coastal ports accounts for less than half of the total throughput, and the diversified investment and operation entities create an uneconomic situation of vicious competition. As mentioned above, Fujian Province has set up two major port groups to lead the integration of business resources. Although some progress has been made, it has brought great challenges to the integration due to the large number and complexity of investors. Compared with other coastal provinces, Fujian Province is dominated by a powerful port enterprise, and the strength of the two major groups is slightly inferior. Xiamen Port holding group (with total assets of 36.974 billion yuan in 2016) and Fujian transportation group (with total assets of 36.974 billion yuan in 2016) are far from the strength of Ningbo Zhoushan port before integration (with total assets of 36.974 billion yuan in 2016) or Zhejiang harbor group after integration. There are many types of business entities, among which there are many private business terminals. According to statistics, there are still more than 200 enterprises mainly engaged in port business.



### 6.2.3. The port collection and distribution system is not perfect, and the port supply is insufficient

In recent years, Fujian province continues to strengthen the construction of port collection and distribution system. Ports are increasingly connected with railways and expressways. In the past five years, a number of port dredging expressways such as Kemen, Jiangyin, Zhaoyin, Douwei and the North Bank of Meizhou Bay have been completed one after another. Recently, the highway network of Shugang has become increasingly dense, with seven Shugang railways. However, it should be noted that a perfect system of port transportation and freight transportation has not yet been formed, and there are problems in the connection between the branch line of port railway and the rear freight railway (such as quning, Fengfu, Xiangpu, Xingquan, etc., which are horizontally connected with the mainland). Some railways have some problems, such as high freight rates, freight trains can not be guaranteed, etc. (for example, Jiangxi iron and steel enterprises have the advantage of railway distance of about 230 km from Luoyu port in our province, but the railway to Ningbo has a great deal of preferential treatment, which leads to the loss of most of the goods to Ningbo port), resulting in poor collection and distribution channels, and the expansion of hinterland is greatly restricted. In 2017, the volume of bulk goods from other provinces entering and leaving the ports of our province through sea rail intermodal transport increased by 41.4%, reaching 6.014 million tons, accounting for 1.15%. In terms of containers, 26071.5teu of containers from other provinces entering and leaving the ports of our province through sea rail intermodal transportation, with a year-on-year growth of 60.4%, accounting for only 0.167%. Although the absolute value of growth rate is high, the proportion is still small. Mature international ports often account for 20% to 40% of sea rail intermodal transport. According to this standard, there is a huge gap between ports in our province. Due to the backwardness of the collection and distribution system, the ports in Fujian Province are basically limited to serving the economic development of the province and belong to the typical local ports. For large ports such as Shanghai port and Ningbo port, goods from other provinces account for more than 30%, while those from Fujian Province account for less than 10%.

### 6.2.4. Port integration is not in place, still need to continue to promote

As mentioned above, the integration of port resources in Fujian starts from administrative resources, which promotes the reform of port management system. The whole province has been integrated into four ports, namely Xiamen port, Fuzhou port, Quanzhou port and Meizhouwan port. In addition to Xiamen City, Xiamen Port Administration Bureau is under the management of Xiamen City, other departments are under the management of Xiamen province. The shoreline resources have been planned and constructed in a unified way, the public waterway in the same harbor has been maintained and managed in a unified way, and tugboat and other resources have been coordinated in a unified way. However, it can not be ignored that due to the cross administrative regionality of port management, there are overlapping functions between port administration and other administrative departments. So far, the port management system needs to be further straightened out. Some port functions have not been integrated, and there is a phenomenon of multiple ports in one port, which leads to low port efficiency; in addition, the responsibility subject of port public infrastructure construction and maintenance is not clear, which leads to the phenomenon of shifting responsibilities. Compared with other coastal provinces, the integration of business resources in Fujian Province is relatively slow. First of all, the integration of port resources in Fujian Province involves many stakeholders and the capital structure is complex. The ownership of port assets is complex. The Provincial Communications Group and Xiamen port group belong to the provincial SASAC and Xiamen SASAC respectively; the Quanzhou port group belongs to the Quanzhou SASAC; the Ningde port group belongs to the Ningde SASAC; the central enterprises also invest in the terminals along the coast of Fujian; in addition, the owners' terminals along the coast of Fujian account for a large proportion and the throughput composition is high. It is difficult to coordinate the interests of all parties, which leads to the weak subjective desire of port enterprise integration and the difficulty of reaching a consensus, which affects the progress of port integration.

### 6.3 Problems in the process of port group integration in Yangtze River Delta

#### 6.3.1. Lack of unified and detailed overall planning

The Yangtze River Delta port group lacks a unified and detailed overall planning, the positioning of each port has a certain degree of functional overlap, and even some ports have inconsistent development positioning in different periods of planning. In general, the basic development layout of "one body, two wings" of the Yangtze River Delta port group can be respected and reflected in the development plans. For example, the "13th five year plan" of Jiangsu Port clearly points out that it is necessary to "focus on the strategic positioning of the container trunk port in the north wing of Shanghai international shipping center" to accelerate the construction of Taicang container trunk port. Another example is the "13th five year plan" for the development of marine ports in Zhejiang Province, which clearly emphasizes that Zhoushan port is "an important part of Shanghai international shipping center". However, as far as the overall development planning of the port group is concerned, it is only mentioned in the development planning or other policy documents compiled at a very limited national level, such as the national coastal port layout planning and the regional planning of the Yangtze River Delta region. It is only a framework planning, and does not involve a detailed overall planning.

In terms of the overlapping functions of port development positioning and the inconsistency of planning, taking Lianyungang port and Taicang port as examples, the above two ports are planned as container trunk ports in the 13th five year development plan of Jiangsu Province. From the perspective of container transportation practice of Yangtze River Delta port group, the functional positioning of this planning layout will cause the overlapping functions of the two ports. The development status of container transportation in Lianyungang port and Taicang port in the 13th five year development plan of Jiangsu Province is described as follows: Taicang port has opened up 20 near ocean routes with 55 shifts per month, while the ocean routes are in a blank state, mainly including feeder transportation and domestic trade routes. Although Lianyungang has opened one ocean route to the west of the United States (Lianyungang Los Angeles Auckland) and one ocean route to the Middle East (Lianyungang Dubai Abbas Khomeini), the flight density and throughput scale of the routes still fail to meet the requirements of the trunk port. In addition, it is worth mentioning that in the "national coastal port layout plan" issued by the former Ministry of communications in 2006, Lianyungang port was clearly planned as a container transportation branch line and feeding port, rather than a container trunk port.

#### 6.3.2. The competition among ports in port group is fierce

The main ports in the Yangtze River Delta are competing for the hinterland supply of goods, which further aggravates the degree of market competition. The social and economic development level of the Yangtze River Delta region is at the leading level in the country, the import and export trade is developed, the generation of marine cargo is high, and the economic hinterland of the main ports in the Yangtze River Delta port group intersects, so the port services can effectively cover the whole Yangtze River Delta region. Therefore, in the absence of a good and efficient port collaborative development mechanism, in order to expand cargo throughput, each port pursues its own interests and vigorously attracts cargo sources. In the Yangtze River Delta region, both large-scale coastal hub ports and small and medium-sized Yangtze River inland ports have introduced relevant economic subsidy policies to promote the further development of Hong Kong. In practice, the economic subsidy policies introduced by various ports are not only to attract the source of goods to boost the throughput of Hong Kong's goods, but also to adjust the structure of collection and distribution, promote the development of green shipping and other functions. Taking the "detailed rules for the implementation of fund management of Shanghai's project of adjusting and optimizing the structure of shipping collection and distribution" as an example, one of its important policy original intention is to increase the proportion of container water transfer business in Shanghai port and alleviate the traffic and environmental pressure brought by road transportation to Shanghai. In addition, in addition to local preferential subsidy policies, some ports also actively strive for preferential policies, so as to gain

more competitive advantages than other ports in the port group. Taking Shanghai port as an example, as early as 2012, the Ministry of finance, the General Administration of customs and the State Administration of Taxation jointly issued the notice on trial implementation of the tax rebate policy at the port of departure in Shanghai. Under the tax rebate policy at the port of departure, export enterprises can go to the tax authorities in charge of tax rebate by virtue of the tax rebate certificate and relevant materials issued by the Customs at the place of departure, while under the general traditional customs declaration policy Only after the export goods leave the country can the enterprise declare the tax refund. The tax rebate policy at the port of departure can shorten the tax rebate time of export enterprises and improve the efficiency of capital turnover. According to the notice on improving the tax rebate policy at the port of departure issued by the Ministry of finance, the General Administration of customs and the State Administration of Taxation in January 2018, the tax rebate policy at the port of departure only applies to the export goods whose departure ports are Shanghai Waigaoqiao port and Yangshan Bonded Port.

#### 6.3.3. The development of each port in the port group is unbalanced

At present, the development of ports in the Yangtze River Delta port group is obviously unbalanced, and the degree of development and utilization of port resources is also unbalanced. There is a great imbalance between Zhejiang / Anhui / Jiangsu and Shanghai, which is not only reflected in the provinces, but also in the inter city. Taking Zhejiang Province as an example, in 2019, the coastal ports in Zhejiang Province will complete the cargo throughput of 1.35 billion tons and the container throughput of 31.58 million TEUs, of which Ningbo Zhoushan port alone will complete the cargo throughput of 1.12 billion tons and the container throughput of 27.53 million TEUs, accounting for 82.9% and 87.2% of the total coastal ports in Zhejiang Province respectively. Compared with the centralized imbalance phenomenon of "one dominating" in Zhejiang Province, Jiangsu Province presents a decentralized imbalance. Taking the port data in 2019 as an example, there is only one Lianyungang port with a cargo throughput of more than 200 million tons in Jiangsu Province. In the development and utilization of port resources, the Yangtze River Delta port group also has the problem of unbalanced development and utilization of resources. Taking shoreline resources as an example, the available shoreline and land resources of Shanghai port are in short supply, and the structural contradiction of the port is prominent. However, the utilization rate of coastal ports along the Yangtze River in Jiangsu Province is still lower than the national average level. Although the utilization rate of coastal ports along the Yangtze River has reached 60%, and there are not many deep-water shoreline resources that can be developed in one piece, the coastal port shoreline is only developed by 20%, and the reserve scale is still very rich.

#### 6.3.4. There are many port administrative departments in the port group, lacking substantive unity and coordination

There are many port administrative departments in the Yangtze River Delta port group, and there is a lack of unified management organization at the regional level. There are many problems in the port management of provinces and cities, such as multiple management, separation of upper and lower levels, and cross functions. At the regional level of the Yangtze River Delta, as early as 1997, in order to strengthen the construction of Shanghai international shipping center, the State Council agreed to set up the Shanghai Composite port, and correspondingly set up the Shanghai Composite Port Management Committee. The management committee, jointly established by the Ministry of transport and the governments of Shanghai, Zhejiang and Jiangsu provinces, is responsible for the comprehensive administrative coordination of ports in the Yangtze River Delta region and the coordinated promotion of port and shipping development related matters in the construction of Shanghai international shipping center. However, the Shanghai combined port management committee focuses on administrative coordination and lacks substantive administrative authority and corresponding administrative functions. At the local level, there are differences in the establishment of port administrative agencies in three provinces and one city. There are significant differences in the name, management function and administrative level of provincial port authorities in the Yangtze

River Delta port group. First, Zhejiang Provincial Ocean port development committee is different from other provincial port authorities. Other provincial port authorities are subordinate to provincial transportation authorities (transportation department or transportation committee). Zhejiang Provincial Ocean port development committee is directly under the provincial government and is on the same level with provincial transportation authorities. Zhejiang Province is a typical example of China's regional port integration reform. As a comprehensive administrative organization, the marine Port Development Committee is established to manage the port investment projects and shoreline resources in Zhejiang Province. It does not involve the daily administrative management of port operation level, and the daily administrative authority of port still belongs to the port and shipping administrative organization. Due to the particularity of the ocean port development committee, it still has no corresponding local municipal organizations. Second, Shanghai, Zhejiang and Anhui all concentrate port administration, waterway administration and local maritime administration in the same management organization to a certain extent, while Jiangsu province adopts the division of labor management mode. The port administration responsibility belongs to the Port Bureau, and the Department of transportation sets up another Waterway Bureau to carry out Waterway Management. Third, the relationship between provincial and municipal port authorities is not the same. Generally speaking, the municipal port authority is usually subordinate to the municipal transportation administrative department. Anhui province did not put the personnel and property of the 13 municipal port and shipping administrative organizations under the vertical management of the provincial port and shipping administrative organization under the jurisdiction of the municipal transportation administrative department until 2013 when the implementation opinions on promoting the reform of the provincial local maritime (port and shipping) management system was issued To implement vertical management below the city level. In addition, the municipal port authorities are different from the provincial port authorities. Taking Ningbo City as an example, the port authority of Ningbo city is the Transportation Committee of Ningbo City. At the same time, Ningbo Port Administration Bureau is put up with the brand of "two brands, one team". Among them, Ningbo Port Administration Bureau is entrusted to carry out the specific port administration.

## 7. Conclusion

Therefore, in the follow-up integration of China's port resources, all provinces should implement the development strategy of national economic belt, implement the integration of port resources according to local conditions, and realize the real sense of reasonable distribution of shoreline resources, reasonable division of labor between ports, and port city linkage. Form the situation of unified planning, unified construction, unified management and efficient operation.

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