

RESEARCH ON COMPETITIVE ADVANTAGES AND STRATEGIES OF PORT ENTERPRISES IN CHINA

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ABSTRACT

After years of construction and development, China's port enterprises have made great progress, in terms of capital, technology and management, which are basically in the positive direction. This paper lists the status quo and problems of the development of port enterprises in China. Based on the current technical, economic and social development conditions, this paper analyzes the competitive advantages of port enterprise in China and makes a corresponding discussion on the future strategic choices of port enterprises.

Keywords: Port enterprises; Dynamic Capability; Core competence; Development strategy

JEL code: M0, M1

1. Introduction

After years of construction and development, Chinese port enterprises have made great progress, in terms of capital, technology and management. With the policy of “One Belt One Road”, Chinese-funded ports have to expand overseas market. What’s more, with the policy of supply side reform and port resources integration, Chinese port enterprises are in a relatively positive direction. However, terminal capacity surplus, poor synergies of upstream and downstream industry and low operational efficiency still plague the development of port enterprises. Based on the dynamic competence theory, this paper analyzes the competitive advantages of Chinese port from the aspects of industry, enterprise resources and enterprise capacity, and discusses the future of port enterprises in China under those mentioned environment, and discuss the strategic choice of port enterprises.

At present, the academic community has not yet had a unified definition of enterprise competitiveness. From an industry point of view, Michael Porter (1980) argues that there are five forces in the industrial environment that determine the profitability of an

enterprise. From the perspective of corporate resources, Wemerfelt (1984) argues that tangible resources, intangible resources and accumulated knowledge resources can produce a competitive advantage. On this basis, Barney (1991) believes that companies can improve the quality of resources or utilize the resources more efficiently than their opponents. And such resources are difficult to be imitated and replaced, so that the enterprise obtains a sustained competitive advantage. From the perspective of corporate competencies, C.K. Prahalad and G. Hamel (1990) argue that core competencies are the collective learning ability within the organization, and in particular how to harmonize various production skills and integrate the skills of multiple technologies. The core competitiveness of enterprises with applicability, value, difficult to imitate, can become a source of competitive advantage. Teece et al. (1997) puts forward the concept of Dynamic Capabilities, which means the ability of enterprises to maintain or change their ability as a competitive advantage. In order to adapt to the changing external environment, enterprises must continue to acquire, integrate and confirm the internal and external administrative organization of technical, resource and functional capacity.

Based on the above situation, from some mainstream perspectives in the mature foreign enterprise competition theory, this paper analyzes the competitive advantages of Chinese port enterprises under the existing technical, economic and social development conditions

2. The Present Situation and Existing Problems of Port Enterprises in China

2.1 The Present Situation

China is a global leader of port operations capacity. Since Hutchison Whampoa took the shareholding of Yantian Port, China's port enterprises have made some progress in operating capacity. China's port operator's terminal operating capacity has begun to reach the border to output the management.

China's port enterprises carry out transformation and upgrading gradually. Taking Zhejiang Province as an example, in order to strengthen the integration of the coastal ports, the Zhejiang Harbor Group was established. The Ningbo Port, Zhoushan Port, Jiaxing Port, Taizhou Port and Wenzhou Port are integrated into a unified operation. In addition, relying on the national OBOR (One Belt One Road) strategy, the ports are to be re-positioned. And the channels of transport, trade, industrial cooperation and capital investment are to be built.

China's port enterprises began to invest in offshore ports. With the OBOR strategy promoting, Chinese-funded enterprises began to invest abroad. The data is shown in Table 2-1.

Table 2-1 Statistic of Chinese enterprises investing in overseas ports

Country	Project	Chinese enterprises	Shareholding ratio / winning content
Singapore	Container terminal	COSCO	49%
Australia	Port of Newcastle	China Merchants Group	50%
Malaysia	Port Guantan	North Bay Harbor	40%
Tanzania	Port of Bajamayo	China Merchants Group	-
Turkey	KUMPORT	COSCO	65%
Togo	Port Lome	China Merchants Group	35 years franchise
Nigeria	Tingkan International Container Terminal	China Merchants Group	47.5%
Djibouti	Port of Djibouti	China Merchants Group	23.5%
Sri Lanka	Colombo Container Terminal	China Merchants Group	85%
Sri Lanka	Hambantota Container Terminal	China Merchants / China Harbour Engineering	64.98%
Egypt	Port Said	COSCO	20%
Egypt	Port of Einusuena	China Harbour Engineering	-
Egypt	Port of Damiena	China Harbour Engineering	-
Israel	Haifa terminal	Shanghai Port Group	25 years franchise
Greece	Piraeus Terminal	COSCO	35 years franchise
Italy	Port of Naples Container Terminal	COSCO	50%
Belgium	Zeebrugge Container Terminal	Shanghai Port Group	25%
Belgium	Antwerp container terminal	COSCO	25%
Netherlands	EUROMAX container terminal	COSCO	35%
Abu Dhabi	Harley Port Terminal	COSCO	-
Italy	Wardo Terminal	COSCO	40%

2.2 Existing Problem

Although China's port enterprises have more positive development, there are still the following development issues and difficulties.

Chinese ports are of overcapacity and competition homogeneity. Since the beginning of the 21st century, the operation ability of port in terms of the warehousing, transportation, handling have reached a high level and brought the results of excess capacity of the port. And some of our port enterprises still rely solely on the

advantages of terminal nodes and obtain benefits by loading and unloading services. There is a problem of hinterland overlap and cargo convergence between adjacent ports. That is to say, competition is of a higher degree of homogeneity.

The pattern of shipping alliance strengthens, which weakens the bargaining power of port enterprises. According to statistics, the main liner alliance capacity is accounted for more than 80% of the total capacity of the world. Large-scale ship company alliance makes port enterprises put forward more complex requirements. Such as large-scale collection and distribution, cross-harbor transfer and other business will also face normalization. Under these situations, shipping companies enhance their own bargaining power by alliance, while the port business is relatively passive. In addition, with the alliance, shipping companies are more concentrated with workload which promotes the requirement of upgrade the hardware and efficiency.

The trend of large-scale ship forces the port to upgrade technology and infrastructure. The increasing trend of large-scale ships has forced the port to further upgrade its infrastructure, such as increasing investment and installing larger lifting equipment, which makes large ships match to the loading and unloading efficiency. In addition, the trend of large-scale ship is bound to lead to reducing the port of loading and increase frequent changes of loading and unloading. It is obvious that the gap of peak and trough will be exacerbated.

Chinese port enterprises are of poor resource utilization and internal and external collaboration. Relevant data show that, in Yangtze River Delta region, the container truck attendance rate and overload rate are 80% and 60%. Due to the low efficiency of the resources caused by the redundancy and waste is about 7 billion yuan. If the port in Yangtze River Delta improves 15% operating efficiency, the annual cost savings will reaches to 1 billion yuan. High terminal efficiency will reduce the time that ship stays in port. A decrease of 10% time that ship stays in port can save 1.46 billion yuan for the shipping company (SPG & Accenture,2016).

3. Analysis on Competitive Advantages of Port Enterprises in China

3.1 Based on industry perspective

Michael Porter proposed five force model can be a more comprehensive summary of the situation faced by an industry. For port enterprises, the five-force competition model can show the following forms.

(1)**Competitive strength:** At present, there is a widespread competition relationship among the ports in China. The intensity of competition in the port depends to a large extent on the hinterland situation. More resources can be attained in the hinterland, more intense the competition among ports will be.

(2)**New entrants:** Due to the public service of the port, in China, port enterprises are

generally state-owned. Heavy capital-intensive, long construction period, complex management and other factors make the port industry has been in a relatively favorable position of shipping value chain as very high barriers to entry industry.

(3)**Substitutes:** As a result of the unique attributes of the port, the substitutes in the five-force model can be understood as other ports within the same transport area or adjacent transport area. If the service and product provided by the adjacent port is of high difference and service level, it means that the substitution ability of the substitute is strong,

(4)**Bargaining power between suppliers and buyers:** In a highly concentrated shipping market, for port enterprises, buyers of their products and services are mainly including cargo and ship owners. When the port capacity in a region is greater than the market demand, that is, oversupply, the bargaining power of cargo side and the ship is higher; when a regional port capacity is difficult to meet the market demand, that is, in short supply, the port enterprises bargaining power is higher. With the trend of alliance of ship companies, the port enterprises are at inferior position.

In summary, it can be concluded that the port enterprises need to have sufficient hinterland resources, capital and differential advantages. Of course the supply and demand situation of market should not be ignored.

Table 3-1 Advantages of port enterprises based on industry perspective

For cargos		For ships	
Port capacity	Berth capacity	Infrastructure of port	Berth depth
	Handling ability		Unloading water depth
	Yard capacity		
	Collection and distribution systems		
Port transit fee	Loading and unloading fees	Port service fee	Port charges
			Loading rate
Service quality	Poor cargo damage	Service quality	Customer experience
	Customer experience		Other value-added services
	Other value-added services		

3.2 Based on the perspective of enterprise resources

For port enterprises, their business resources can be divided into the following points.

Table3-2 Competitive advantages of port enterprises based on enterprise resources

Tangible resources	Geographical location
	Berth depth
	Shoreline length
	Route network
	Collection and distribution systems
	Yard systems
	Hinterland infrastructure
	Hinterland market services
	Port security
	Perfect information exchange technology foundation
Intangible resources	Service Level
	Customer experience
	Value-added services
	Brand and reputation
Knowledge resources	Technique level
	Quality innovation system
	Company culture

When the port enterprise has the above resources which are difficult to be imitated and replaced, it wins a sustained competitive advantage

3.3 Based on the perspective of enterprise capability

In order to adapt to the changing environment of the port and shipping industry, port enterprises need to have the following capabilities.

Table3-3 Competitive advantage of port enterprises based on enterprise capability

Capability	Content
Operational capability	Improve the operational aspects, provide efficient, green, accurate products and services
Service innovation	Improve the rich products, provide customers with high value-added services, such as finance and insurance, consulting and other business
Technical innovation	Utilize the current advanced technology, improve operational efficiency and provide high-quality services
Institutional innovation	Actively implement the integration of port integration, strengthen the alliance and cooperation among the ports
Capital investment	Rely on industrial policy and national strategy, invest actively in domestic and foreign ports
Business internationalization	Focus on the international market and carry out strategic overseas business

And the ability should make the appropriate adjustments to meet the market demand and industry changes.

4. Analysis on Strategy of Port Enterprises in China

Nowadays, the focus of the development of China's port enterprises is how to come out from the traditional competitive landscape, and form differentiated products and services, thus develops a sustained competitive advantage. Its continued differentiation of products and services can be reflected in the following strategies.

4.1 Rely on technological change and achieve the port operating efficiency upgrade

As the Internet of Things became the third wave of the information industry revolution, the port's intelligence level will be greatly enhanced. Through the use of more intelligent terminal equipment, such as unmanned aerial vehicle port security monitoring, unmanned vehicle transport of goods and automated port cargo handling, which help to achieve the port enterprise technological innovation progress and improve the port supply chain operational efficiency.

4.2 Strengthen the standardization of management and provide high value-added products and services

In the daily operation of port enterprises, by perfecting collection and distribution system, strengthening the deep water port and inland port reasonable division of labor and cooperation, the function of multimodal transport hub and distribution center are obtained by the ports. The development of logistics visualization, port intelligent scheduling and other advanced approaches to achieve standardized management will improve the core competitiveness of port enterprises core products. In addition, the high value-added services should be provided to strengthen intelligent analysis and decision-making, such as customer demand-based multimodal transport services and so on. With the standard information resources, the port logistics market transactions, finance, insurance and other supporting services should be expanded. And the risks and business opportunities should be identified.

4.3 Promote port business cooperation to accelerate the innovation

The traditional port enterprises form their competitiveness with geographical location advantages and operational management level and other factors. And now, in order to achieve the port of differentiated positioning, introducing the supporting manufacturing industry matching to the logistics industry, strengthening investment in innovation activities in the hinterland will have a profound impact on port enterprise. By the construction of open collaboration, high interconnection, intelligent ecosystem, the deep data accumulation, network and logistics value which play an important role in cooperation can be obtained.

4.4 Build information platform of interoperability and a safe green port

The data flow of the port business upstream and downstream should be opened up. And data sharing and exchange center should be established, so as to improve the level of port management decision-making and quality of service and achieve the port and the logistics link seamlessly. Transparent information platform is conducive to providing customers with port logistics integration solutions. Also, it is conducive to the port and customs, maritime, commodity inspection and other port units of information integration. Thus the customs clearance efficiency and service levels will be improved, and a green security modern port will be constructed.

4.5 Rely on national strategy and carry out the layout of the port at home and abroad

The future of the port competition will change from the “line” to the “network”. This network should not be confined to the port within a company and a country, and need to be based on global transport network. In order to implement the national strategy and military security needs, China's port enterprises need to conduct national strategic investment, which is not only conducive to the construction of China's port transport network, but also safeguarding our military strategic security, so as to ensure the safety of China's transport network.

5. Conclusion

This paper presents the situation of Chinese port enterprise and their overseas investment activities. From the perspective of industry, enterprise resources and enterprise capability, the core competences of port enterprise are summarized. There are the conclusions that when the port enterprise has the above resources which are difficult to be imitated and replaced, it wins a sustained competitive advantage. And the ability should make the appropriate adjustments to meet the market demand and industry changes. Based on the above analysis, the development strategies are promoted for port enterprises gaining competence.

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