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The Evolution of the Chinese Shipping Market 1988-2018: An analysis of the struggle of state-owned Chinese Shipping Companies facing foreign competition

L'évolution du marché maritime chinois 1988-2018 : une analyse de la lutte des compagnies maritimes chinoises publiques face à la concurrence étrangère

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Abstract

Chinese shipping industry has experienced a rapid growth in the past three decades. With the analysis of the Chinese fleet capacity and the evolution of its market share in Chinese freight market, this paper reveals that foreign shipping companies took a majority share of ocean shipping while Chinese state-owned shipping companies have the upper hand in coastal and river shipping markets. Chinese private shipping companies were squeezed to either be a subcontractor or be confined in a niche market. This paper collects data from Chinese official shipping report and Chinese academic publications. It reveals that the prosperity of China's shipping market has not enabled the emergence of strong and competitive Chinese shipping companies when facing foreign competitors.

Keywords: Chinese shipping market, Chinese shipping companies, foreign shipping companies, Chinese government, container shipping, bulk shipping, market share.

Résumé

L'industrie maritime chinoise a connu une croissance rapide au cours des trois dernières décennies. A travers l'analyse de la capacité de la flotte chinoise et de l'évolution de sa part de marché du trafic maritime chinois, ce document révèle que les compagnies de navigation étrangères ont acquis une part majoritaire dans le transport maritime international de la Chine, tandis que les sociétés de transport appartenant à l'État chinois ont la haute main sur les marchés de la navigation côtière et fluviale. Les compagnies de navigation privées chinoises ont été obligées soit d'agir comme sous-traitant, soit de se confiner dans des marchés de niche.

Cet article recueille des données provenant de rapports officiels chinois et de publications universitaires chinoises. Il révèle que la prospérité du marché des transports maritimes chinois n'a pas permis l'émergence de sociétés de transport chinois solides et compétitives face aux concurrents étrangers.

Mots-clés : marché chinois, transport maritime, compagnies maritimes chinoises, compagnies maritimes étrangères, gouvernement chinois, conteneur, vrac, part de marché.

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INTRODUCTION

Thanks to the sharp increase in volume of seaborne trade, shipping is one of the industries that benefits the most from the rising manufacturing sector since 1978. The extremely rapid expansion of raw materials imports to sustain growth, and the exports of Chinese products to the world market all nurtured the Chinese shipping industry.

The objective of this paper is to portray the evolution of two major players in the Chinese shipping market, which are foreign shipping companies and Chinese state-owned companies. With expanding raw material imports and manufacturing exports, Chinese shipping companies experienced a strong expansion since 1988; however, contrary to a largely entrenched perception, they did not manage to achieve a dominant market position in the Chinese shipping market and appeared to be financially fragile. This paper aims to analyze the reasons of the inability of Chinese shipping companies to retain market dominance over foreign shipping competitors in the Chinese shipping market, since the opening of ocean shipping to foreign companies in 1988. If port activities in China have been well studied in the literature of transport geography (Song, 2002; Cullinane et al, 2004; Rimmer & Comtois, 2004; Wang and Slack, 2004; Cullinane and Wang, 2006; Yeo et al, 2008; Wang and Cullinane, 2014), there is little international literature on the evolution of the Chinese shipping market (Comtois, 1999; Haralambides & Yang, 2003; Tiwari et al, 2003; Cullinane, 2005). Comtois (1999) assessed the integration of port and shipping companies; Tiwari et al (2003) developed an analysis of the choice criteria of Chinese forwarders for ports and carriers; Haralambides & Yang (2003) developed an analysis of an unfolding Chinese shipping policy. Cullinane (2005) sheds light on the impact of China's accession to the WTO. None of these papers tackles the market structure and how it is shared between foreign, Chinese state-owned and Chinese private shipping companies. This paper sheds light on the factors involved in shaping the industry and the market share between these three players and reveals the influence of government interventions in Chinese shipping market. Meanwhile, this paper also touches upon how Chinese shipping companies tried to adapt to the opening up of the Chinese ocean shipping market to foreign competition.

As there is not much English literature on the evolution of the Chinese shipping market, we relied on Chinese sources, particularly Chinese shipping reports from the Department of Waterway Transport (2000 to 2017). We collected important data from Chinese academic articles and professional publications as well. This paper is thus original in two ways. First, it tackles a topic rarely studied in the literature; second, it refers to Chinese official sources and literature few Westerners have access to.

I – EVOLUTION OF CHINESE SHIPPING COMPANIES IN THE FRAME OF ECONOMIC REFORM

❑ 1988 - 2007: A strong increase

The Chinese shipping market was opened to foreign shipping firms in 1988. Three main phases can be outlined: the first one is characterized by an upward trend which peaked in 2007, as shown in fig.1.

The fleet capacity operated by Chinese companies thus increased sharply during this time, by nearly 600% (Frankel, 1998; DepWT, 2000, 2007). Most of the Chinese shipping companies held an average fleet capacity of less than 10 000 dwt, some of them were single-ship companies, mainly serving the inland river market. Three state-owned companies: China Ocean Shipping Company (COSCO), China Shipping and Sinotrans, owned 60% of the national fleet capacity of international ocean shipping (Department of Waterway Transport (DepWT), 2000). In terms of market share, it was divided as shown on fig.2.

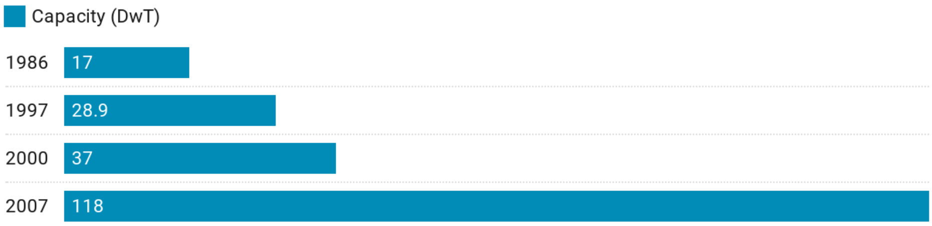

Fig.1 - fleet capacity operated by Chinese companies from 1986 to 2007. Sources (Frankel 1998, DepWT 2000, 2007)

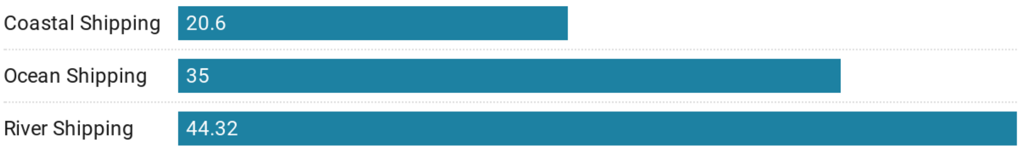

Fig.2 - Market share of shipping sector (in%), 2007, (DepWT, 2007)

The main source of the growth was not only Chinese state-owned shipping companies: private shipping companies also contributed a dramatic growth. Some statistics emphasize these observations. Hebei Ocean, a rising private shipping company, replaced Sinotrans as the national third largest shipping company – as shown on table 1. The top four Chinese shipping companies shared 77,6% of the whole national carrying capacity, with 92,2 million dwt (M dwt) and 1 629 ships (DepWT, 2007).

Seven of the top ten Chinese shipping companies are state-owned. Among them, large shipping companies owned large ships for ocean shipping, and most of the small ships belong to medium and small-scaled shipping companies, deployed in coastal and river shipping. Arguably, the excessive fleet growth resulted in severe over-capacity, resulting in the huge losses incurred by Chinese shipping companies during the following years, especially when global financial crisis and recession hurt the Chinese shipping market the following years (Tab.1).

Rank	**Company**	**Carrying capacity**		**Self-owned capacity**		**Chartered capacity**	
		Ship number	***Dwt*** *(million)*	**Ship number**	***Dwt*** *(M)*	**Ship number**	***Dwt*** *(M)*
1	Cosco	841	*51,852*	460	*21,980*	381	*29,872*
2	China Shipping	436	*17,68*	363	*14,020*	73	*3,66*
3	Hebei Ocean Shipping	124	*13,772*	33	*5,059*	91	*8,713*
4	Sinotrans	228	*8,896*	68	*2,297*	160	*6,599*
5	China Changjiang National Shipping	1 869	*5,352*	1 864	*4,93*	5	*0,422*
6	Fujian Guohang Ocean Shipping	25	*1,057*	8	*0,398*	17	*0,660*
7	Zhejiang Ocean Shipping	12	*1,049*	12	*1,049*	-	-
8	Ningbo Marine	36	*0,853*	31	*0,803*	5	*0,05*
9	Zhejiang Shipping	40	*0,757*	40	*0,757*	-	-
10	Fujian Guanhai Shipping	15	*0,733*	15	*0,733*	-	-

Tab.1 - Fleet capacity of ten largest Chinese shipping companies in 2007
(Source: Department of Waterway Transport, 2007. Private companies shaded in grey). Decimal commas

❑ 2007 - 2012: A slower growth

The second phase starts after the robust progress that occurred until 2007. Thereafter, slower growth became the norm. By 2012, fleet capacity had increased by 92,3% to 228,5 M dwt, despite a significant decrease in ship numbers. This period is mainly characterized by an increase in ship capacity, as shown on fig.3.

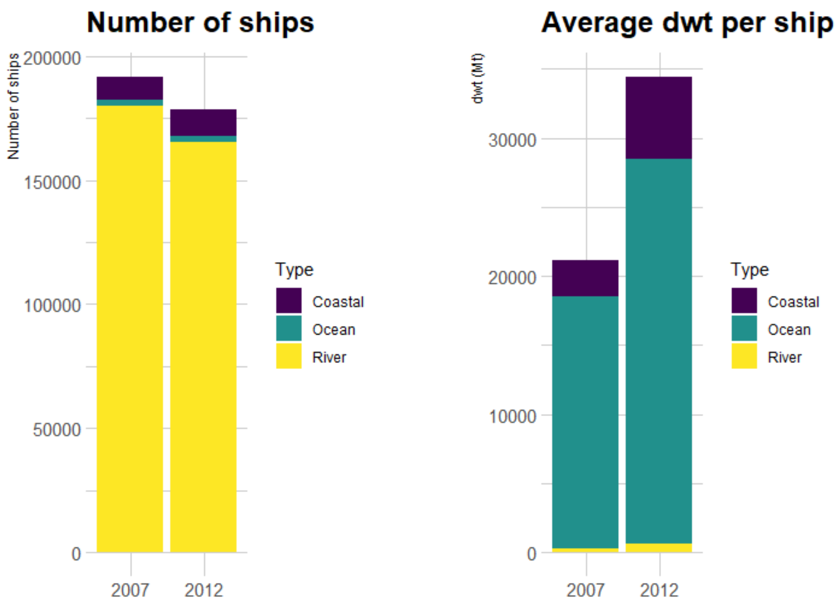

Fig.3 - Evolution of the fleet and its carrying capacity, 2007 – 2012 (DepWT, 2007, 2012)

With 1 500 new ships entering the coastal market, the fleet capacity of coastal shipping market was the fastest growing category. As the fleet capacity expanded from 24 M dwt to 65 M dwt, the average ship capacity almost doubled. China's coastal shipping has been the main driver of the ocean shipping capacity, with an annual increase of about 16%. The average ship capacity of river shipping market almost doubled as well. The ocean shipping capacity also experienced a vigorous growth of total capacity from 41,65 M dwt to 69,44 M. There are two possibilities for the above phenomenon. First, the world economy was recovering after 2008, which stimulated China's imports and exports, and thus, the coastal shipping market. Second, orders made before 2007 contributed to the rapid rise of fleet capacity.

In terms of shipping companies, COSCO, China Shipping, Hebei Ocean, and Sinotrans still ranked in the top four with their fleet capacity, but their national fleet capacity share dropped to 44,6% with only 1% share of total national ship number (DepWT, 2012). Despite the decrease of the ship number and the share of the national fleet capacity, the total carrying capacity of the top four shipping companies did not shrink, hinting these companies acquired bigger ships amid a growing national industry. COSCO and China Shipping kept growing moderately while upsizing their vessels, managing fewer units while preserving their capacity. The merger of Sinotrans and Changjiang River Shipping contributed to the progress of their position among national shipping capacity ranking. By contrast, the fleet capacity of Hebei Ocean shrank severely with the loss of half of their fleet capacity and two third of the ships. Then top five to top sixteen shipping companies included 10% of the national shipping capacity with 0,2% of national ship number[5] (DepWT, 2012). Six of the top ten shipping companies were state-owned companies, and eleven of the top twenty companies.

[5] This calculation is based on the original figures from the table of the DepWT report on China's shipping development.

Rank	Company	Total carrying capacity	
		Ship number	***dwt*** *(Million)*
1	China Ocean Shipping Co (Cosco)	739	*53,262*
2	China Shipping	411	*24,924*
3	Sinotrans & CSC Group	995	*17,198*
4	Hebei Ocean Shipping	39	*6,511*
5	Fujian Guohang Ocean Shipping	50	*2,894*
6	Zhejiang Ocean Shipping	13	*2,28*
7	Shanghai Time Shipping	39	*2,183*
8	DeQin Group	92	*1,878*
9	Guangdong Yuedean Shipping	24	*1,724*
10	Fujian Guanhai Shipping	19	*1,678*
11	Fujian Provincial Communication Transportation	41	*1,358*
12	Jiangsu Huahai Shipping	61	*1,279*
13	Ningbo Marine	36	*1,244*
14	Guangdong Lanhai Shipping	19	*1,16*
15	Zhejiang Shipping	29	*0,992*
16	SITC Container Lines	59	*0,808*
17	Shanghai Northsea Shipping	11	*0,729*
18	Jiangsu Ocean Shipping	22	*0,705*
19	Dongguan Haichang Shipping	9	*0,629*
20	Tianjin Changming Shipping	10	*0,622*

Tab.2 - Fleet capacity of twenty largest Chinese shipping companies in 2012
(Source: Department of Waterway Transport - DepWT 2012. Private companies shaded in grey)

❑ 2012 and beyond: trend consolidation

The third phase is marked by a consolidation of these trends. The total national shipping capacity kept a moderate growth, and the container shipping capacity growth was robust, as shown in fig.4.

The year 2016 was turbulent for the global shipping market, and it had a significant impact on the Chinese shipping market. The total national fleet capacity declined slightly by 2.3% while the container shipping capacity experienced a sharp decline of 26,6% to 1,91 M TEUs. A decline of national fleet capacity also took place in 2017, with a 3,6% decrease and a reduction of 9.5% of ship numbers; however, the container shipping experienced a 13,2% rise to 2,16 M TEUs in 2017 (fig.4).

In terms of shipping companies, dramatic changes occurred. Among the previous top twenty Chinese shipping companies, many private shipping companies were forced into bankruptcy, such as Hebei Ocean Shipping, Fujian Guanhai Shipping, and Guangdong Lanhai Shipping. Some state-owned companies could not avoid bankruptcy owing to their heavy debt, such as Zhejiang Ocean Shipping. If we compare 2017’s top ten companies list with 2007, it is not difficult to notice that most of them either went bankrupt or merged, except for Cosco that remained the largest company in China. Six of the top ten shipping companies were State-owned companies and 12 of the top twenty shipping companies were State-owned shipping companies.

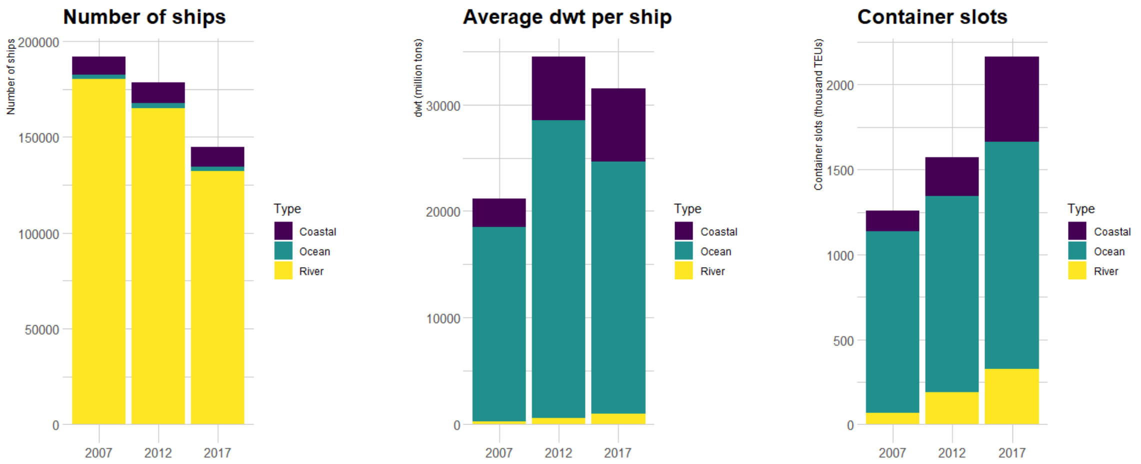

Fig.4 - Evolution of the fleet and its carrying capacity, 2007 – 2017 (DepWT, 2007, 2012, 2017)

Rank	Company	Total carrying capacity	
		Ship number	***dwt** (Million)*
1	China COSCO Shipping	1 123	*86,35*
2	China Merchants Group	785	*44,62*
3	Shandong Shipping Corporation	33	*4,815*
4	Qingdao Seaconstar Shipping	70	*4,066*
5	Fujian Guohang Ocean Shipping	55	*3,573*
6	Shenhua Zhonghai	40	*2,18*
7	SITC Container Lines	83	*1,823*
8	Hebei Ocean Shipping	13	*1,82*
9	Shanghai Zhonggu Logistics	155	*1,813*
10	Shanghai Time Shipping	28	*1,662*
11	Guangdong Yuedean Shipping	20	*1,40*
12	Ningbo Marine	33	*1,341*
13	Fujian Provincial Communication Transportation	26	*1,26*
14	Nanjing Ocean Shipping	23	*1,211*
15	Quanzhou Ansheng Shipping	42	*1,13*
16	Zhejiang Provincial Marine	24	*1,053*
17	Dongguan Haichang Shipping	13	*0,956*
18	Shanghai Northsea Shipping	12	*0,887*
19	Yangzhou Guosheng Shipping	68	*0,84*
20	Yanzhou Runhang Shipping	73	*0,82*

Tab.3 - Fleet capacity of twenty largest Chinese shipping companies in 2017.
(Source: Department of Waterway Transport - DepWT 2017. Private companies shaded in grey)

If we take a closer look at the evolution of fleet capacities of COSCO and China Merchants, it is striking to see how alliances contributed to their capacity growth. According to the Ministry of Transport Policy, since 2000, the Chinese government oriented its shipping policies to consolidate the sector through mergers, acquisitions, or strategic partnership (People.cn, 2000; Xu, 2017). China Merchants experienced a strong fleet capacity expansion due to its merger with Sinotrans-CSC in 2017. Before that, Sinotrans and Changjiang Shipping[6] (CSC) had merged in 2008. Merging with the China Shipping Group in 2016, COSCO was registered with a container fleet capacity of 1,58 M TEUs (ranked 4th in the world), a dry bulk fleet capacity of 33,52 M dwt (1st in the world) and a total fleet capacity of more than 85,32 M dwt (Coscocs.com, 2016). COSCO'S takeover of Orient Overseas Container Line (OOCL) in 2018 increased its power in container shipping, ranking among the world's Top 3 container ship operators with 2,79 million TEUs (UNCTAD, 2018). However, to what extent were Chinese companies overreaching their operational and financial capacities? Larger ships are assumed to bring returns and profits. The next question is then how much market share they can get.

II – THE STRUGGLE FOR MARKET SHARE WITH FOREIGN COMPANIES

❑ An incentive policy to attract foreign companies

In 1984, foreign shipping companies were allowed to operate international liner service in China's 14 open ports, such as Qingdao, Shanghai, Fuzhou or Guangzhou. In 1986, they were allowed to set up representative offices, and to register in China for joint ventures in 1987. The cargo reservation policy[7] was cancelled in 1988 and the bilateral agreement policy was completely abandoned in 1996. The two issues offered foreign shipping companies the possibility to engage in the Chinese shipping market with national treatment (Guangqi, 1999).

Since introduction of competition into the Chinese shipping market, foreign shipping companies' business flourished. By the end of 2000, 70 foreign shipping companies had opened up international container liner service in 130 Chinese open ports and 450 representative offices had been established (Lee and Shen, 2002), while 21 foreign owned shipping companies had established more than 50 branches in China (DepWT, 2000). In 2008, the number of wholly foreign owned shipping companies increased to 38, then to 42 by the end of 2012 (DepWT, 2008; DepWT, 2012). In 2013, the world's top 20 shipping companies had set up branches and representative offices in China, among which Maersk had the most branches number of 35 (Xu and Wang, 2013).

With regards to cabotage, the 1987 and 2002 Regulation on Waterway Transport stipulates that foreign shipping companies are not allowed to operate in Chinese coastal shipping, neither river shipping. 2013 Implementation Opinions allowed international vessels owned or controlled by Chinese-funded shipping companies to engage in the coastal carriage of international trade containers between Shanghai and domestic ports. This strategy highlights that Chinese maritime trade depends on external support. Hence, Chinese government encourages foreign shipping companies to engage in Chinese shipping market in exchange for preferential policy. In 1992, the Revised Port Fee Regulation stipulated that foreign ships enjoy the same port fee and port facility usage fee as Chinese ships, which assured that foreign shipping company enjoyed complete national treatment. In addition, foreign invested companies enjoyed reduced income taxes until 2008 (Chinatax.gov.cn, 1996; Gov.cn, 2011). China started its first phase of the transformation of the business tax to Value Added Tax (VAT) in 2011 and completed the whole system in 2016. The new tax scheme applied to the transport industry as of 2013, which led to an extra financial load on Chinese and foreign shipping companies (Chinatax.gov.cn, 2011; Sinotf.com, 2013). Nevertheless, both could apply for VAT tax exemption if they operate

[6] Officially, it is referred to China Changjiang National Shipping (Group) Corporation.

[7] Transportation policy whereby Chinese cargoes to and from China had to be carried on Chinese-flagged vessels.

international ocean shipping business[8] (Chinatax.gov.cn, 2014). Besides tax advantages, Chinese government employed series of tax refund or free tax policies in Free Trade Zone (FTZ) or Economic Zone, such as in Shanghai Maritime Centre, Tianjin Bohai Economic Zone. Market entry and land use were offered for foreign logistics investment in FTZs, and central and provincial government also have the right to offer inducements to foreign investments as well (Hong, 2007).

❑ A harsh competition for Chinese companies

China's fast-growing international trade and its opening policy did not benefit Chinese companies. After 1988, 90% of foreign-invested companies in China chose foreign shipping companies in China for their ocean shipping and international logistics, with which they already had long-term business relations (Mofcom, 2004). On the other hand, in international trade, Chinese shippers gave up shipment control to foreign suppliers or foreign clients due to the lack of confidence with Chinese shipping companies' expertise and international logistics management. In 1995, foreign shipping companies already shared 52,5% of the container shipping market (Lv, 2000). Frankel attested that by the end of 1997, Chinese shipping companies carried 70% of raw materials imports and 50% of foreign trade by volume, but only 38% by value, which implies that foreign shipping companies carried 62% of foreign trade by value (Frankel, 1998).

By the end of 2000, foreign shipping companies controlled respectively 44% and 71% container market share from over 2 900 near sea voyages and 300 ocean going voyages in and out of China (Lee and Shen, 2002). Another source assessed[9] foreign shipping companies had 48% and 70% market share from over 3 000 near-sea shipping lines and 700 ocean-going shipping lines at the same period (Li et al., 2005), and another source mentions 80% market share in international shipping in 2010 (Yicai.com, 2010). According to these estimates, Chinese shipping companies held the upper hand on coastal traffic, but by a thin margin, whereas foreign shipping companies dominated the international shipping market, as shown on fig.5.

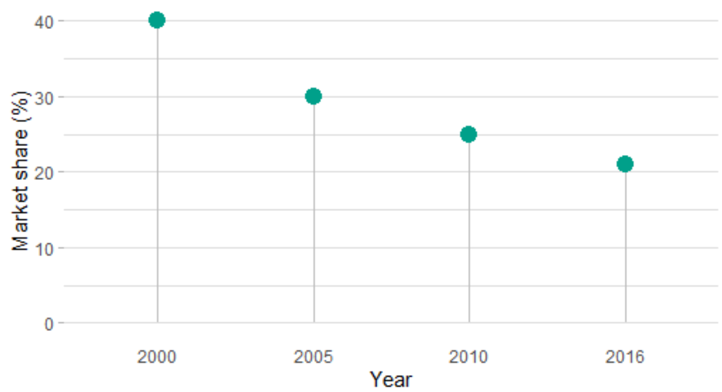

Fig.5 - Evolution of the market share of Chinese shipping companies in the Chinese ocean shipping market (Jia, 2013, quoted by Yang et al., 2018, p.143; Wan, 2018)

Foreign shipping companies quickly established a significant upper hand in the container market. However, COSCO underwent an important growth in recent years. In 2017, COSCO Shipping had secured 8% of the global container shipping market (Lloyds, 2017; Maersk, 2017; UNCTAD, 2017). After the merger with OOCL in 2018, COSCO-OOCL became the top US import carrier with a 13% share of the US market (Mongelluzzo, 2018). The growth of COSCO Shipping is seen as a valuable contribution to Chinese shipping power; but uncertainty remains as to whether this trend will evolve in the future. Some analysts

[8] Announcement about 0 VAT tax regulation of international water shipping 2014.

[9] As the Chinese bureau of statistics does not publish figures for any shipping segment, assessing the market share of Chinese and foreign shipping companies relies on partial information.

predicted China would dominate the global shipping market (Knowler, 2015; Kynge et al., 2017). This prediction seems to be over-optimistic, because an expansion in fleet capacity does not automatically translate into an expanded market share. Based on the current weak market share of Chinese shipping companies and the uncertain growth prospect, even the Chinese Government admits that China is not yet a maritime power (Xu, 2017).

It seems that the Chinese government tolerated the expansion of the market share held by foreign shipping companies for two reasons. First, as hinted above, China needed to rely on an effective shipping capacity for its export-driven growth since the opening of its economy, as the weak Chinese merchant fleet at the time was not able to fulfill this mission. Second, if China wanted to join the WTO later, it had to agree to the liberalization of international shipping services.

The ongoing restructuration of the Chinese shipping industry enabled Chinese shipping companies to emerge as global shipping companies now able to compete with foreign shipping companies. This restructuration aims to increase the financial and operational capacities of the Chinese companies, but not to eliminate foreign enterprises' market share in the Chinese shipping market (Blasko, 2015).

III – GOVERNMENT ROLE IN PROMOTING THE SHIPPING SECTOR

❑ A strong state support-system

Large shipping companies in China are mostly state owned and government policy is a critical source for company financing (Yang et al., 2018). More than securing a higher market share for Chinese players, the goal of the national shipping strategy aims at equipping China with better ships, better ports and a more opened shipping market to the outside world (Mackey, 2006). On the other hand, Chinese academics also believe that the weak fleet capacity of Chinese shipping companies was a major factor for the weak competitive advantages when facing foreign competitors (Yang, 1999; Zhou, 1999; Wang and Xie, 2000; Lu, 2003; Pan and Zhang, 2006; Xu and Wang, 2007; Qin and Tong, 2008; Xu et al, 2009; Li, 2009; Huang, 2013).

Heavily hit by the global financial crisis and recession, state-owned shipping companies were on the edge of bankruptcy after 2009. For instance, after being merged with several middle-scaled state-owned shipping companies in 1997, CSCL purchased 60% of its shipping fleet during 2000-2002. By 2003, its fleet was thus relatively new and cost efficient, enabling the company to make profits (Liu, 2005). By 2007, CSCL still enthusiastically ordered new large ships. It aimed at having a fleet capacity of 630 000 TEU by 2011 (Wu, 2007). Then, plagued by severe overcapacity, CSCL suffered consecutive losses after 2009, except in 2012, thanks to a 523 million yuans (¥) (87,17 million USD) liquidation of company assets and shares. In 2013, CSCL suffered again a loss of 2 646 million ¥ (441 million USD) (163money, 2013; Sina.com, 2014).

COSCO followed the same pattern as CSCL. After reaching a profit peak by 2007 and 2008, it suffered from consecutive losses from 2009 to 2013, except in 2010. Some analysts pointed out that the huge deficit was due to its ambitious fleet expansion in 2007 (QQfinance, 2013). In 2013, to alleviate the financial pressure, COSCO had to sell parts of its assets, such as ships and company shares, and negotiated the cancellation of charter contracts. These actions brought the company temporarily away from the risk of being delisted from the stock market in 2014. However, the company was financially fragile, and its only profitable business is was domestic logistics and E-commerce (163money, 2014). Other state-owned shipping companies went through a similar situation: in short, Chinese State-owned shipping companies have been struggling with poor financial performance (People.cn, 2014).

Nevertheless, with the intervention of SASAC[10], COSCO completed its merger with China Shipping (CSCL) in 2016 and its takeover of OOCL in 2018, making it the third largest

[10] State-owned Assets Supervision and Administration Commission of the State Council

container operator, and largest dry bulk shipper in the world. However, difficulties remain: a 4 484 million ¥ (675,3 million USD) huge loss was reported in the first quarter of 2016.

How could COSCO handle its debt while carrying on with consecutive mergers and acquisitions? It appears that the source of the capital needed comes from state-owned banks. COSCO Shipping admitted that the capital needed for overseas the acquisition came from its cash flow and bank loan in 2017 (21jingji.com, 2017). The Export-import Bank of China provided a ¥1 281 million (182 million USD) loan for COSCO Shipping's ship order in 2016. The Bank of China even provided a diversified set of financial services, including a 6 300 million USD bridging loan, to help COSCO Shipping complete its takeover of OOCL in 2018 (iFENG.com, 2016; Ft.com, 2017; BOC.cn, 2018).

COSCO was not the only beneficiary of such loans: facing its cash flow pressure, China Merchants Energy borrowed 242 million USD from ICBC for a year in 2016. Then, its parent company China Merchants Group refinanced a new loan of 272 million USD in 2017 with an annual interest of 3.48% for a renewed loan in 2018 (Eastmoney.com, 2018). China Shipping Development was guaranteed by its parent company, COSCO Shipping Energy, for 70 million USD loan in 2017 as well (iFENG.com, 2018).

Sinotrans-CSC, instead of being merged or acquired, was transferred completely to China Merchants Energy by a government administrative order (Yicai.com, 2017). Right after the company cleared off its ¥2 150 million (325 million USD) debt in 2016, they negotiated with state-owned banks for better loan terms and conditions, such as debt extension, lower interests, permission to borrow new debt to return old debt, and updating their credit status from negative to normal, etc. According to Sinotrans-CSC, they did not rely completely on government budget and administrative intervention, but they were able to take action to talk with banks themselves (Eeo.cn, 2016). These words reflected, to some extent, that government intervention or protection played a very critical role in their business operation. Somehow, the negotiation results underlined that state-owned companies enjoyed privileged treatments with the banks. It is well known that ICBC, Bank of China and the Export-import Bank of China are the leading banks that provide financial service for Chinese shipping companies (Tanjiaoyi.com, 2015). All this suggests that government's support is a vital factor in the survival of Chinese shipping companies in the Chinese shipping market. Government interventions help these companies expand despite their being debt-ridden, although the Chinese economic growth also helped support them.

❑ Network organization of state-owned companies

Another aspect of government policy is the reinforcement of networks between state-owned companies. Taking a closer look into these networks over the past two decades reinforces the idea state-owned companies invested time and money into developing strategic partnerships with other government-owned companies, not necessarily in the shipping business. For example, China Shipping Group set up a strategic partnership relationship with Sinopec in 2003 (China.com, 2003a). It also established a long-term business strategic partnership with ports in Dalian and Tianjin in China's Northern region (Cnshipping.com, 2013). COSCO set up a joint venture with China National Petroleum Cooperation (CNPC) for long-term collaboration in 2003 (China.com, 2003b), and signed a long-term shipping contract with Sinopec in 2006 (Gov.cn, 2006), and with CNPC in 2014 (CNPC, 2014). To help state-owned shipping companies go through the crisis, the Chinese government intensified its intervention to sustain cooperation between state-owned shipping companies and state-owned resources and energy companies[11], like China Shipping Group established a joint venture with Shanghai Baosteel in 2008, and with Shougang Corporation (Capital Steel) in 2009 (Sina.com, 2009). China Shipping Bulk (one of China Shipping Group's subsidiaries) became the shipping service supplier for five big steel companies, two big coal companies, and four electricity companies since 2008.

[11] The State-owned Assets Supervision and Administration Commission of the State Council (SASAC) stressed the relevance of upstream and downstream mergers and acquisitions in order to address the financial crisis.

On the other side, some critics consider government's support hinders necessary reforms of the Chinese shipping industry. It was argued that state-owned shipping companies did not have global distribution network systems; they were not real multinational shipping companies which could offer global logistics services (Du, 2001; Pan, 2003; Sun and Su, 2006; Li, 2009; Liu et al., 2009a; Li and Jin, 2014). State-owned companies reportedly did not modernize management procedures (Zhou, 1999; Li, 2009) and should reform their management structure to face competitions (Hu, 1996; Zhu, 2001; Li, 2007; Li, 2009). Chinese government also realized the gap between large fleet capacity and weak competence (Xu, 2017). Despite these shortcomings, other analysts like Comtois and Rimmer (2002) claimed that Chinese shipping companies are real global market players. Although several comments focused on requesting reforms in their corporate management, some voices in China called for the need to protect Chinese shipping companies. They argue that China should have a specific legislation to exclude foreign shipping companies from the Chinese shipping market, or China should cancel the national treatment policy to foreign shipping companies. They believed that foreign shipping companies implemented monopolistic behaviors in port terminals and determine freight prices that undermine the competitiveness of Chinese companies (Mao, 2004; Liu, 2006; Dai 2009; Wang and Jiang, 2011; Pan, 2014; Meng and Li, 2018).

DISCUSSION AND CONCLUSION

In 1988, the Chinese government completely opened up the Chinese shipping market to the outside world. As a result, the Chinese shipping market flourished since the 1990s. This fast expansion led to huge port traffic expansion, the development of containerization, port terminal construction and massive dry and liquid bulk imports to fuel the export-oriented economic growth. However, foreign shipping companies rapidly gained dominance in the Chinese shipping market, especially in the container sector. Two main factors contributed to this fact: Chinese shipping companies' poor competitive capacity and Chinese shipping policy. In terms of Chinese shipping policy, not only did China phase out cargo reservation and preference practice, but it also implemented a set of preferential policy measures to foreign shipping companies. Such policy, as the literature concluded, disproportionately favored foreign companies that were already more competitive. Nevertheless, the development of the Chinese shipping market and government intervention enabled Chinese state-owned shipping companies to develop a powerful fleet capacity, and they focused on ocean shipping and coastal shipping. On the other hand, private companies face the same business environment, but they have to look for their own survival methods. Up to now, they focus mainly on coastal or river feeder shipping.

After 1988, Chinese foreign trade boomed with enormous cargo throughput, which demanded an efficient shipping service for the export of manufactured goods and the import of raw material to fuel the intense economic growth. However, Chinese shipping companies had limited capability to handle such huge shipping demand with their carrying capacity and logistic network. If Chinese government had not opened the Chinese shipping market, Chinese shipping companies might gain time to grow strong and grasp more market share. However, the risk is that such a strategy would introduce bottlenecks that could hinder economic growth, causing transport-induced scarcity of raw materials and clogging exports. As China's economy heavily relies on foreign trade, the priority between nurturing a relatively inefficient shipping industry and developing manufacturing and foreign trade has to be carefully considered. The economic scales of the two options are radically different, thus it is not really surprising that Beijing opted to open up China's shipping market, albeit at the cost of developing a strong dependence on foreign shipping firms.

It appears that, through consolidation of the Chinese shipping industry, the government may now be looking at ways to build up strong, globalized shipping companies that could compete with foreign shipping majors. Chinese government may accept temporarily that foreign shipping companies hold an advantage in the Chinese shipping market. This would not be a precedent. In the United States, powerful local shipping companies were once dominant in the tanker and container market, but nowadays, European or Caribbean shipping companies dominate the tanker market in the USA. In the container market, American industry giants like SeaLand, APL, US Line, TransAtlantic Lines declined during the 1990s and the only significant company that survived in the market is Matson-Horizon (Tourret, 2018). Political clout does not mean the nation’s shipping sector is strong.

References

163money.com, 2013, 中海集运靠“外快”弥补主业亏损 CSCL compensated main business loss with “part time job”, March 30, http://money.163.com/13/0330/11/8R7AAGME00253B0H.html, a. October 30, 2014.

163money.com, 2014, 亏损王”中国远洋卖资产扭亏 今年盈利难度大 Loss king sold out his assets for gaining little margin. March 29, http://money.163.com/14/0329/02/9OFIT40700253B0H.html, a. October 30, 2014.

21jingji.com, 2017, 730 亿“土豪”并购 中远海运重组后“买买买”路径探寻 After 73 billion merger deal, new rich COSCO Shipping shopping all the way http://m.21jingji.com/article/20170714/d57f8ce1289a572ccbaa7c69a385390e.html, a. Jan 10th, 2019.

Blasko, D., 2015, China’s Merchant Marine. Paper for China as “Maritime Power” Conference, July 28-29, 2015, Arlington, Virginia, www.cna.org/cna_files/pdf/china-merchant-marine.pdf.

BOC.cn, 2018, 中国银行助力中远海运集团要约收购东方海外 Bank of China helped Cosco Shipping acquired OOCL http://www.boc.cn/aboutboc/bi1/201807/t20180727_13091736.html, a. Jan 10th, 2019

China.com, 2003a, 两大国企巨头中石化与中海集团联手开拓油品市场 Two major central enterprises CNPC and CSCL collaborate exploring oil market. September 26, www.china.com.cn/chinese/jingji/411654.htm; a. October 30th, 2019.

China.com, 2003b, 中石油与中远集团签合作框架协议 China petrol signed collaboration framework with CSCL. March 10, www.china.com.cn/chinese/jingji/289777.htm. A. November 1st, 2019.

Chinatax.gov.cn, 1996, 外国公司船舶运输收入征税办法 Foreign company shipping revenue taxation. http://hd.chinatax.gov.cn/guoshui/action/GetArticleView1.do?id=3644&flag=1, a. Feb 6th, 2019.

Chinatax.gov.cn, 2011, 关于印发《营业税改征增值税试点方案》的通知, Avis sur la mise en oeuvre du "Système pilote de conversion de la taxe professionnelle en taxe sur la valeur ajoutée, www.chinatax.gov.cn/chinatax/n810341/n810765/n812156/201111/c1185800/content.html, a. Feb. 25, 2020.

Chinatax.Gov.cn, 2014, 关于国际水路运输增值税零税率政策的补充通知 Announcement about 0 VAT tax regulation of international water shipping 2014, www.chinatax.gov.cn/n810341/n810765/n812141/n812252/c1078644/content.html, a. Feb 7th, 2020.

CNPC, 2014, 中国石油与中远集团签署战略合作协议 CNPC signed strategic collaboration agreement with COSCO. June 16, www.cnpc.com.cn/cnpc/jtxw/201406/dbde32d142ad4e1fa4d2ad4c911a65fd.shtml, a. November 9, 2014.

CnShipping.com, 2013, 中海集团助大连港集装箱业全速发展 China Shipping Group aided Dalian port container shipping to speed up, www.cnshipping.com/xwzx/mbbd/33415.shtml a. November 1st, 2014.

Comtois, C., 1999, The integration of China's port system into global container shipping. *GeoJournal* 48(1), pp.35-42.

Coscocs.com, 2016, Group profile, February 25, http://en.coscocs.com/col/col6918/index.html, a. Feb. 25, 2020.

Cullinane, K., & Wang, T. F., 2006, Port governance in China. *Research in Transportation Economics*, 17, pp.331-356.

Cullinane, K., 2005, The container shipping industry and the impact of China’s Accession to the WTO. *Research in Transportation Economics* 12.1, pp.221-245.

Cullinane, K.; Fei, W. & Cullinane, S., 2004, Container terminal development in Mainland China and its impact on the competitiveness of the port of Hong Kong. *Transport Review*, 24(1), pp.33-56.

DepWT - Department of Waterway Transport, 2000, 中国航运发展报告 China Shipping Development Report. Beijing: China Communications Press.

DepWT - Department of Waterway Transport, 2007, 中国航运发展报告 China Shipping Development Report. Beijing: China Communications Press.

DepWT - Department of Waterway Transport, 2008, 中国航运发展报告 China Shipping Development Report. Beijing: China Communications Press.

DepWT - Department of Waterway Transport, 2012, 中国航运发展报告 China Shipping Development Report. Beijing: China Communications Press.

DepWT - Department of Waterway Transport, 2017, 中国航运发展报告 China Shipping Development Report. Beijing: China Communications Press.

Du, B., 2001, 走进 WTO 的国有航运企业 State owned shipping companies entering WTO 中国远洋航务公告. Maritime China 8, 26-28

Eastmoney.com, 2018, 招商轮船收购报告书 601872: The report of China Merchants Group acquisition, http://pdf.dfcfw.com/pdf/H2_AN201812261279682459_1.pdf, a. Jan 10th, 2020.

Eeo.cn, 2016, 长航减负 21.5 亿 央企重组脱困提速 Sinotrans-CSC cleared off 2.15 billion yuan, Central government enterprise accelerated getting rid of poverty http://www.eeo.com.cn/2016/0521/287457.shtml, a. Jan 10th, 2019

Frankel, E. G., 1998, China maritime developments, *Maritime Policy & Management*, 25(3), pp. 235-249.

Ft.com, 2017, Cosco takeover of Orient Overseas affirms China's trade ambitions. *Financial Times*, July 10, https://www.ft.com/content/11eca6ea-6545-11e7-8526-7b38dcaef614, a. Jan 31, 2020.

Gov.cn, 2006, 年中石化将用中远船运输 3000 万吨进口石油 CNPC would use COSCO ships for 30 Mt of petrol import in 2006. February 8, www.gov.cn/jrzg/2006-02/08/content_182597.htm, a. November 1st, 2019.

Gov.cn, 2011, 外国公司船舶运输收入征税办法 Revised Foreign Shipping Company Transport Taxation 2011 http://www.gov.cn/gongbao/content/2011/content_1860855.htm, a. February 7, 2020.

Haralambides, H. E. & Yang, J., 2003, A fuzzy set theory approach to flagging out: towards a new Chinese shipping policy, *Marine Policy*, 27(1), pp.13-22.

Hong, J., 2007, Transport and the location of foreign logistics firms: The Chinese experience, *Transportation Research Part A: Policy and Practice*, 41(6), pp.597-609.

Hu, M., 1996, 外资班轮进入中国带来的影响及我们的对策 Impact of foreign liner companies entry into China and our counter measures.水运管理 *Shipping Management* 11, pp.19-22 + 25.

Huang, S., 2013, 航运并购正当时 Shipping industry merger and acquisition.珠江水运 *Pearl River Water Transport* Z2, pp.146-153.

iFENG.com, 2016, 进出口银行与中远集团签署 1200 亿元战略合作协议 The Export-import Bank of China and Cosco Shipping signed strategic agreement of 120 billion yuan, http://finance.ifeng.com/a/20160805/14691954_0.shtml, a. Jan 10th, 2020.

iFENG.com, 2018, 中远海能(01138)为中海发展香港 7000 万美元银行贷款提供担保 Cosco shipping energy provided guarantee of 70 million USD for China Shipping Development, http://finance.ifeng.com/a/20180426/16209595_0.shtml, a. Jan 10th, 2020.

Knowler, G., 2015, China to dominate global shipping by 2030, Shanghai report finds, *JOC.com*, June 10, https://www.joc.com/maritime-news/china-dominate-global-shipping-2030-shanghai-report-finds_20150610.html; a. Dec 2, 2018.

Kynge, J. et al., 2017, How China rules the waves. *Financial Times*, Jan. 22, https://ig.ft.com/sites/china-ports/ C. Dec 22, 2018.

Lee, T.W., Shen, M., Roe, M. (ed.), 2002, *Shipping in China*. London: Routledge, 199 p.

Li, G., 2016, 航运法研究 *Research in Shipping Law*. Law Press. China, 156 p.

Li, J., 2009, 中国大型航运企业市场化面对的问题及对策分析 Analysis and Countermeasures to the Market-oriented Problem Being Faced by Chinese Major Shipping Company. 物流科技 *Logistics Sci-Tech*, 32(6), pp.47-49.

Li, K. X., Cullinane, K., Yan, H., & Cheng, J., 2005, Maritime policy in China after WTO: impacts and implications for foreign investment. *J. Mar. L. & Com.*, 36, pp.77-91.

Li, X., 2007, 对国有航运企业主辅分离改制实践中若干问题的探讨 Analysis on some issues of state owned shipping company reform practice. 交通财会 *Finance & Accounting For Communications* 1, pp.23-28.

Liu, L., 2006, 对外资控股港口企业垄断行为的对策研究 Analysis on countermeasure to monopoly behavior in foreign invested Chinese port. 中国港口 *China Ports* 10, pp.27-28 + 31.

Liu, Q.; Zhang, W., 2011, 对国有与民营航运企业若干运行机制的比较分析 Comparative analysis on Chinese state owned and private shipping company operation mechanism. 交通企业管理 *Transportation Enterprise Management* 5, pp.44-46.

Lu, F., 2003, 集装箱班轮运输企业的兼并与收购 The Merger & Purchase of Container Liner Enterprises. 浙江交通职业技术学院学报 *Journal of Zhejiang Vocational and Technical Institute of Transportation* 4, pp.22-26.

Lu, X.; Wu, Y., 2006, 外资进入中国航运市场现状分析及应对策略 Analysis and countermeasure on foreign investment in China shipping market 中国水运(学术版) *China Water Transport (Academic)* 10, pp.12-13.

Lv, Z., 2000, 国有大型航运企业经营战略的若干问题 Some issues on major state owned shipping enterprises business strategy. 中国远洋航务公告 *Maritime China* 3, pp.24-27+7.

Mackey, M., 2006, Chinese shipping aims for global leadership, *Asia Times*, http://www.atimes.com/atimes/China_Business/HC01Cb06.html, c.Dec.1, 2018

Maersk, 2017, Strategy and performance-Q1 2017. http://investor.maersk.com/static-files/93f633a3-8235-4ed9-bac5-c1cfc6fcc2ae, c. Dec1, 2019.

Mao, J., 2004, 中小航运企业的竞争策略分析 Analysis on small and medium-sized shipping company competition strategy. 经济前沿 *Forward Position in Economics* 9, pp.75-76.

Meng, F. and Li, Y., 2018, 影响我国运输服务贸易出口的主要因素与政策建议[J] The Factors and Suggestions on Chinese Transport Service and Trade export.现代管理科学 *Modern Management Science*, 2, pp.109-111.

Mofcom, 2004, 跨国航运公司在华一体化战略分析 Multinational shipping company integrated strategy in China. October 10, www.mofcom.gov.cn/article/s/200410/20041000287072.shtml. Consulted 30th, October, 2014.

Mongelluzzo, B., 2018, Cosco-OOCL set to become top US import carrier, *JOC.com*, Feb. 15, https://www.joc.com/maritime-news/container-lines/cosco/cosco-oocl-set-become-top-us-import-carrier_20180215.html, a. Dec 1, 2019.

Pan, G. 潘国尧, 2014, 海运企业自救是根本 Self-helping Helps Chinese Ocean Shipping Enterprises. 中国物流与采购 *Chinese Logistics Purchasing*, 19, pp.44-46

Pan, H. and Zhang, J., 2006, 从国际海运企业购并效益谈对我国的启示 On the Enlightenment toward China from International Sea Transportation M&A Performance 中国航海 *Navigation of China* 1, pp.81-84.

Pan, Y., 2003, 国有航运企业发展综合物流的战略分析 Strategy analysis on state owned shipping companies logistic development. 珠江水运 *Pearl River Water Transport* 5, pp.23-24.

People.cn, 2000, 洪善祥提出，中小航运企业要向规模化专业化发展 Hong Shanxiang pointed out, Small and medium-sized shipping enterprises should develop their scale and profession September 8, www.people.com.cn/GB/channel3/22/20000908/225000.html, c.. Feb. 25, 2020.

People.cn, 2014, 砸锅卖铁”难挽亏损 中海集运去年巨亏 26.3 亿元, http://finance.people.com.cn/stock/n/2014/0128/c67815-24249409.html, January 28, a. Feb 25, 2020.

Qin, Y., Tong, J. 2008, 国际航运业并购动机及其对我国航运企业的启示- The Motives of International Shipping Enterprise M/A and its Enlightenment to China. 物流技术 *Logistics Technology* 4, pp.53-54+70.

QQfinance.com, 2013, 中国远洋为何总要靠补贴生存 COSCO survival deeply rely on governmental financial allowance. http://finance.qq.com/zt2013/cjgc/zgyy.htm, January 15, a. Feb. 25, 2020.

Rimmer, P & Comtois, C., 2004, China's competitive push for global trade: port system development and the role of COSCO. In D. Pinder and B. Slack (eds), *Shipping and ports in the twenty-first century: globalisation, technological change and the environment*. London: Routledge (pp.40-62).

Rimmer, P. & Comtois, C., 2002, China's transport and communications firms: transforming national champions into global players. *Asia Pacific Viewpoint* 43(1), pp. 93-114.

Sina.com, 2009, 中海携手首钢 合资一亿建航运公司 China Shipping collaborate with Shougang (Capital steel) to set up a joint venture shipping company, January 9, http://finance.sina.com.cn/roll/20090109/02295735809.shtml, a. November 1st, 2019.

Sina.com, 2014, 中海集运亏本经营 2013 年毛利率骤降 1166% CSCL operated with financial deficit in 2013, turnover dropped 1,166%; April 10, http://finance.sina.com.cn/stock/hkstock/ggscyd/20140410/080518755264.shtml, a. October 30, 2019.

Sinotf.com, 2013, 营改增后航运企业税负增加 20%, Augmentation de 20% de la pression fiscale sur les compagnies maritimes après la réforme fiscale, 9 août, http://www.sinotf.com/GB/Logistics/1111/2013-08-09/yOMDAwMDE1NTgyOA.html, a. Feb. 25, 2020.

Song, D.-W., 2002, Regional container port competition and co-operation: the case of Hongkong and South China, *Journal of Transport Geography* 10(2), pp.99-110.

SSE.cn, 2017, 招商局能源运输股份有限公司 2017 年第三季度报告 The third quarter report of 2017 of China Merchants Energy Shipping Co. Ltd http://static.sse.com.cn/disclosure/listedinfo/announcement/c/2017-10-27/601872_2017_3.pdfm, a. Jan 10th, 2019.

Sun, J, & Su, Q., 2006, 我国运输服务贸易竞争力的国际比较 International Comparison of the Transportation Service Trade of China. 国际贸易问题 *Journal of International Trade* 4, pp.67-72.

Tanjiaoyi.com, 2015, 中国航运企业的融资之路 The path of Chinese shipping companies' financing, Feb. 7, http://www.tanjiaoyi.com/article-10994-1.html, a. Jan 10th, 2020.

Tiwari, P., Itoh, H., & Doi, M., 2003, Shippers' port and carrier selection behaviour in China: a discrete choice analysis. *Maritime Economics & Logistics*, 5(1), pp.23-39.

Tourret, P., 2018, Puissance maritime américaine: la maitrise des mers est-elle toujours possible? *Grands Dossiers de Diplomatie*, 46, pp.38-41.

UNCTAD, UN Conference on Trade and Development, 2017, *Review of Maritime Transport 2017*, https://unctad.org/en/PublicationsLibrary/rmt2017_en.pdf#page=45 , c. Dec 1, 2019.

UNCTAD, UN Conference on Trade and Development, 2018, *Review of Maritime Transport 2018,* https://unctad.org/en/PublicationsLibrary/rmt2018_en.pdf, c. Feb. 25, 2020.

Wan, J. 万俊斌, 2018, 中国海运物流产业及企业竞争现状探析 China maritime shipping industry and competition analysis. 物流技术与应用 *Logistics Material Handling*, 23(8), pp.140-144.

Wang, J. & Slack, B., 2004, Regional governance of port development in China: A case study of Shanghai International Shipping Center. *Maritime Policy & Management* 31(4), pp.357-373.

Wang, Q.; Jiang, Z., 2011, 我国航运市场的垄断问题及其法律制度之构建 China shipping market monopoly issue and its law system. 中南大学学报 (社会科学版) *Journal of Central South University (Social Science)* 4, pp.12-17.

Wang, Y., & Cullinane, K., 2014, Traffic consolidation in East Asian container ports: a network flow analysis. *Transportation Research Part A: Policy and Practice*, 61, pp.152-163.

Wang, Y.; Xie, H., 2000, 现代航运企业发展趋势 Modern shipping development tendency. 航海科技动态 *Marine Technical News & Trends* 7, pp.6-9.

Wu, F., 2016, 我国海运业对外开放的特点与建议 The features of China's maritime shipping open up and some suggestions. 海外投资与出口信贷 *Overseas Investment and Export Credits*, 3, pp.18-21.

Wu, X., 2007, 中海集运速度从何而来 CSCL development speed analysis. 中国远洋航务 *China Maritime* 12, pp.61-62+9.

Xu, H. Liu, W. and Jing, H., 2009, 班轮运输企业并购决策的博弈分析 Game Analysis of M&A Decision-Making for Liner-Shipping Enterprise.中国航海 *Navigation of China*, 3, pp.100-103.

Xu, X. 徐翔, 2017, 联合起来共克时艰——交通部副部长何建中谈航运业发展的走势 Consolidate to overcome the difficulty-He,Jainzhong, the deputy of MOT analysed the tendency of China's shipping development . 中国储运 *China Storage Transport*, 1, pp.44-45.

Xu, X. Wang, R., 2013, 航运业跨国公司在华区位分布研究 A study on multinational shipping company location in China. 交通企业管理 *Transportation Enterprise Management* 1, pp.7-9.

Yang, D.; Liu, Q.; Jiang, L.; Zhang, W. and Chu, W., 2018, Contemporary Issues and Current Challenges: A Way Ahead. In Duru, O. (ed.), *Maritime Business and Economics: Asian Perspectives*. Routledge (pp.138-151).

Yang, G., 2006, 大型国有航运企业蓄势发力应对新局 Major state owned shipping companies are well prepared to face the new challenges. 中国交通报 *China Communication Journal*, January 17th, pp. B01.

Yang, Z., 1999, 国有航运企业并购研究 Study on State owned shipping company merger and acquisition. 中国水运 *China Water Transport*, 7, pp.11-12.

Yicai.com, 2010, 外资盘踞中国海运八成市场份额 Foreign shipping grabbed 80% of market share, Nov. 17, https://www.yicai.com/news/602455.html, a. Feb 6th, 2020.

Yicai.com, 2017, 外运发展：中国外运长航集团和招商局集团完成战略重组 The development of Sinotrans-CSC: the completion of strategic merger of Sinotrans-CSC and China Merchants Group, April 10, https://www.yicai.com/news/5263123.html, a. Jan 10th, 2020.

Zhou, X., 1999, 试论国有航运企业如何摆脱困境 Some analysis on how state-owned shipping companies can improve business. 航海技术 *Marine Technology* 1, pp.77-81.

Zhu, G., 2001, 深化珠江国有航运企业改革的思考 Some reflections on deepening states owned shipping company reform in Pearl River region. 珠江水运 *Pearl River Water Transport* 12, pp.16-19.