

Suggestions of Port Selection and Development for Maritime Silk Road in the 21st Century

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ABSTRACT

Since President Xi proposed “the 21st Century Maritime Silk Road” strategy in 2013, in order to ensure the large thoroughfare of logistics along the Maritime Silk Road, the port infrastructure construction of countries along the Maritime Silk Road has become a top priority. As for the construction and development of 15 major ports proposed by *Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road*, combining with the investment state of ports along the Maritime Silk Road by China’s large enterprises, this paper provides some proposals of port construction and development for operators under the Maritime Silk Road, and ultimately achieves sketch map of the routes of the Maritime Silk Road Line in 21st Century.

Keyword: maritime silk road, investment in ports by Chinese enterprises, china merchants group

INTRODUCTION

In October 2013, President Xi proposed the strategy of building the “21st Century Maritime Silk Road” jointly. In November, *The Decision on Major Issues in Deepening the Reform by the Central Committee of the Communist Party of China* was further clarified that China should speed up the interconnection construction of infrastructure with neighboring countries and regions ^[1], promote the construction of the Silk Road Economic Belt and the Maritime Silk Road. The Maritime Silk Road rose to a national strategy. In March 2015, *Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road* (hereinafter referred to as “*Vision and Action*”) was issued by the National Development and Reform Commission, Ministry of Foreign Affairs and the Ministry of Commerce jointly. In *Vision and Action*, infrastructure interconnection is the priority areas of One Belt One Road Construction. The framework of the *Vision and Action* mentioned that the focus direction of the 21st century maritime Silk Road referred to the trade from China’s coastal ports over the South China Sea to the Indian Ocean, extending to Europe; And it also referred to the trade from China’s coastal ports over

the South China Sea to the South Pacific; To achieve this goal, China should insist on making the important port as a node and building smooth, safe and efficient transport channel jointly ^[2].

Infrastructure construction will be the focus in strategy of One Belt One Road at initial stage. As for the Maritime Silk Road, the port is the key node that needs to be laid properly. At the same time, *Vision and Action* indicates that the focus point of One Belt One Road is the interconnection ^[3]. The interconnection in the port seemly looks like a linking up logistics network, which means that the role of the Maritime Silk Road is the strategic pioneer while the role of the Silk Road economy is the strategic channel ^[4]. With the implementation of the 21st century Maritime Silk Road, as the important carrier of the Maritime Silk Road, the port has become the main objectives for the major countries along the Maritime Silk Road to construct. When facing the overcapacity of the whole port shipping industry ^[5], the port construction which only make the throughput as its primary indicator has already been insufficient to meet the real needs. Therefore, the port construction should put more consideration to its position. Green, Efficiency, Technology and

Intelligence will be the right direction of the development of port construction in the future [6].

1. The Trade Status of China and countries along the Maritime Silk Road

The Maritime Silk Road runs through the continent of Asia, Africa and Europe [7]. One terminal of the Maritime Silk Road is the active economic circle in East Asia, and the other is the developed economic circle in Europe, which promotes the development of Southeast Asia, South Asia, Middle East and North Africa. The 21st century Maritime Silk Road involves more than 60 countries and regions [8], along which there has a large population, a great volume of economy and big development potential.

As the international starting point of Maritime Silk Road, China is not only the largest developing country in the world, but also the second largest economy in the world. At the same time, China acts as an emerging market country in Asia and an important driving force of economic growth in the Asian region and even the world [9]. Tab1 is the capital flows of trade of china and some major countries along the Maritime Silk Road from the January to September in 2016, as shown in Fig. 1.

As is drawn in the Fig1, with the exception of Malaysia, New Zealand and Australia, the volume of China exporting to the 11 countries mentioned

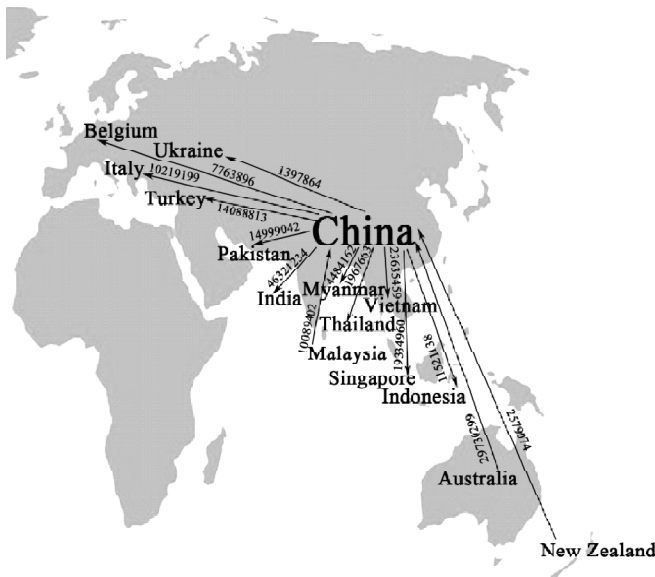


Figure 1: External trade objectives and their capital flows of trade for China (RMB)

above are significantly more than the volume of China importing from the above countries. Thus China is in a trade surplus position. As shown in Fig2, respectively, there are the total imports/exports of China importing from/exporting to the countries along Maritime Silk Road.

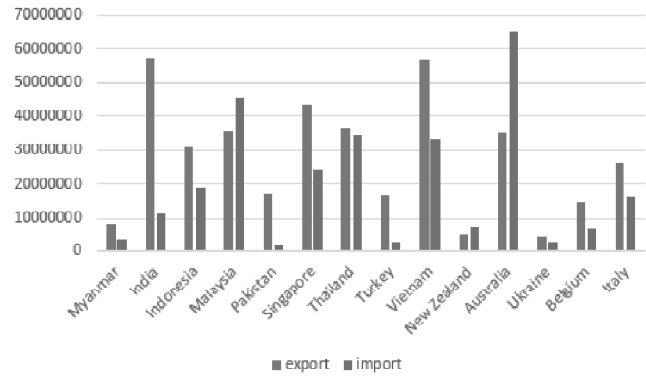


Figure 2: Total imports and output of China from the countries along Maritime Silk Road

As is depicted from the figure, China has good trade with 14 countries along Maritime Silk Road, especially with South Asia, Southeast Asia and other countries. With the implantation of Maritime Silk Road, China has the necessity to strengthen the trade with the countries along the Maritime Silk Road. On the other hand, with its large population and huge domestic demand, China can also provide significant impetus to the economic development of countries along the Maritime Silk Road.

2. AN OVERVIEW OF THE INTERNATIONAL SHIPPING CENTER ALONG THE MARITIME SILK ROAD

The partner of the Maritime Silk Road is not limited to ASEAN, but making a point to the line and the line to the surface, to enhance the connection of China with border countries and regions, forming the market chain of ASEAN, South Asia, West Asia, North Africa, Europe and other major economic sectors, developing the cooperatively economic zone of the South China Sea, the Pacific and the Indian Ocean, aiming to have a long-term development of the economic and trade integration of Asia-Europe. With the promotion of Maritime Silk Road, the international shipping resources further gather in Asia, which center transits to the East Asia, especially

to China. The pattern and structure of the world trade generate profound changes, deeply influencing the global shipping center development ^[11].

There are quite a few international shipping centers along the Maritime Silk Road. In the rankings of the world's top ten international shipping center in 2015, the shipping centers along the Maritime Silk Road occupy five seats ^{[12]-[15]}, as shown in the Table 1, including Shanghai international shipping center and Athens international shipping center with rapid development and significant improvement of service level as well as service capabilities. There are also three international shipping centers that are not along

the Maritime Silk Road, but they locates in the European region, which belongs to the area of “One Belt One Road” and can also be the accessible area of the extension of the Maritime Silk Road (route area extends from the Mediterranean to the entire European region). As the second largest international shipping center, London is mainly based on market transactions and providing shipping services. International shipping center is an important hub of maritime transportation ^[16], so the development of the corresponding shipping center has an important role in the establishment and development for the Maritime Silk Road.

Table 1: International shipping centers along the Maritime Silk Road

<i>International Shipping Center</i>	<i>World Ranking</i>	<i>Introduction</i>	<i>Container Throughput in 2015 (million TEU)</i>
Singapore	1	The adoption of free trade policy mainly referring to the transit business has accelerated the speed of goods transition and improved the operational efficiency of port. The Free Trade Zone (FTZ) and the Logistics Park located in the nearby of port, equipped with the advanced comprehensive logistics information platform, the transportation and distribution of logistics and logistics facilities, can make the goods transfer efficiently and quickly.	30.9223
London	2	The shipping information services and consulting services of London port are in the world's leading position, and is also the city concentrated maritime professional media in the world. At the same time, many international maritime institutions, shipping organizations, industry associations settle in London, such as the International Maritime Organization, International Bureau of Shipping, International Shipping Association, Lloyd's Register and other organizations. It has developed charter market, a variety of shipping services and the support of soft environment of the shipping center, which has a significant impact on the global shipping market	The number is relatively small and not into the world top 20
Hong Kong	3	Relying on the developed Pearl River Delta Economic Zone and Xia Zhangquan Economic Zone, the economic hinterland of Hong Kong port is vast. Freeing trade policy, advocating global trade liberalization and setting free exchange system, Hong Kong port is committed to making the whole Hong Kong into a free trade zone, so Hong Kong port generally does not charge import and export tariffs, value-added tax and general service charges from the international traders.	20.1140
Shanghai	6	Shanghai port has vast hinterland and active trade (both import and export), and also is the shipping center with goods transition and distribution of hinterland goods. Making the shipping transactions as the center, attracting the international shipping headquarters, integrating the shipping finance, shipping insurance, shipping office and other functions, Shanghai port strives to build a center of shipping economy in Asia, even in the world.	36.537
Dubai	7	As Dubai in which one of major oil producing areas in the world, the export of crude oil and other petroleum products by sea is quite larger. The port bears the cargo handling work of quantity of crude oil, refined oil and other liquid bulk cargo. After years of development, the port of Dubai has become the largest free trade port in the Middle East, and the adjacent region has correspondingly developed into a free trade zone.	15.59

3. THE SELECTION OF CHINESE PORTS UNDER THE MARITIME SILK ROAD

As the leading country of the Maritime Silk Road, China is the starting point of the Maritime Silk Road. The “Vision and Action” proposes 15 ports along the Maritime Silk Road that require perfectly construction and development. As the necessary access to the Maritime Silk Road and gateway to Asia, Europe and the America, the status of infrastructure in these ports not only affects their port operational capacity and operational efficiency^[17], but also make significance to the construction and development of the Maritime Silk Road. However, the present situation of port infrastructure in China still remains the following three issues.

(1) The Insufficiency of port’s soft power. The port is dominated by cargo handling, while the shipping services, finance, law, insurance and other industries in the port are in a weak state of development. There are competition disorder, relative construction surplus, hinterland overlap, cargo simplification, homogeneity of economic structure, lack of cooperation and coordination and other issues. Ranking the top ten of cargo throughput of the China’s port in 2015, the transport products of Tangshan Port, Tianjin Port, Yantai Port, Qingdao Port and Rizhao Port are mainly coal, ore and other bulk materials.

(2) Limited convergence of coastal and inland. Because of the location, industry and foreign trade advantages of the port, the eastern coastal area is an important position for China’s opening-up policy. However, the proportion of port transition by railway with waterway and waterway with waterway in the eastern coastal areas is low. The transportation mainly relies on roads, restricting the scale of hinterland, limiting the convergence of coastal and inland. For example, the shipping volume of container by railway in Shanghai Port accounted for only 1%, and the transshipment cargo volume by the Yangtze River accounted for only 8%. The advantages of transportation combining the rivers and the sea is not effective, resulting in that more than 90% of container cargoes of Shanghai port assemble in the Yangtze River Delta region. Besides, coupled with limited export-oriented traffic in central and western regions, low opening-up, lower international trade,

unbalanced regional development, the transportation in Shanghai port is pretty partial in China.

(3) Narrow business of port operations. Most of the port operations focused on the port-related areas, mainly involving cargo handling, logistics warehousing and shipbuilding industry. The port operations are actually single model and narrow business. Hutchison Whampoa has 29 docks and 162 berths in the world, respectively accounting for 50%, 25% and 14% in the China inland, Hong Kong and global shipping trade.

Although there are still various problems in the development of China’s ports, in order to better connect and serve the Maritime Silk Road, the port cities mentioned in the “Vision and Action” are playing their coastal geographical advantages, developing diverse modes of transport like sea and land transport, relying on the Free Trade Zone and all kinds of industrial park of Sino-foreign cooperation, planning to create the channel of transport, trade, industrial cooperation and capital investment with the interconnection of “One Belt One Road”, as shown in Table 2.

4. THE PORT INVESTMENT OF COUNTRIES ALONG THE MARITIME SILK ROAD

Some ports of countries along the Maritime Silk Road are relatively backward, with low efficiency of pass-by, resulting in the less connection and smooth for large thoroughfare of logistics along the Maritime Silk Road. For instance, the transport infrastructure in India is extremely backward, with the low standard and poor quality of road, having less than half of hardening roads, whose national highways only accounts for about 1.7% of the total national highway mileage; Although the total mileage of railways ranks forward among the world^[18], the railway still has obsolete equipment and backward technology, leading to the impossibility of high-speed railway, great shortage of capacity, unsafety of railway operations; and there also lacks of the investment of airport, ports and other facilities.

Facing unprecedented opportunities, the infrastructure construction of ports along the Maritime Silk Road which is relatively backward desires to be improved. For example, the gap of development level between ports in Southeast Asia

Table 2: The development position of 13 ports under the Maritime Silk Road

<i>Port</i>	<i>Position of port development</i>
Dalian	Create new maritime channel “Liaohaio”, and build an international hub port; Taking advantages of supply transit through the Bohai Sea, supply chain services and other superiorities, to further expand maritime trade corridor of Russia, Japan, South Korea and Southeast Asia and other countries and regions
Tianjin	Build The Tianjin Port as the eastern starting point of the Eurasian Bridge, the main node of the Sino-Mongolian economic corridor and the strategic fulcrum of cooperation in maritime cooperation, and promote the construction of transport channel combining the railway and waterway, which connects the Northeast Asia and has a radiation in Western Asia
Qingdao	Build a two-way open gateway of the “One Belt One Road”, and have radiation in inland areas. Based on the Qingdao Port and Qingdao Railway Container Center, the port wants to build international freight trains from Horgos to Central Asia and Europe and form the Qingdao brand with transportation combining the land and sea
Rizhao	Create transport hub port in “One Belt One Road” region both in land and sea
Lianyung	Create the hub port intersected by sea and land along the Maritime Silk Road economic zone; Create the pilot port for sea portals, the sea base of the SCO member countries, free trade of China and South Korea ; Create the best recommended port for Japan and South Korea import from or export to the Central Asian market
Shanghai	Enhance International shipping center construction to dock the “Two Belt One Road”
Ningbo-Zhoushan	Accelerate the integration of Ningbo – Zhoushan; Accelerate the pace of the construction of international hub port
Quanzhou	Speed up the construction of “hub port” as the west side of the Straits
Xiamen	Build the Southeast International Shipping Center; Build the hub port of Southeast trade
Shantou	Build Shantou port as one of the hub ports of the Maritime Silk Road
Shenzhen	Depend on the development of gulf industries containing Qianwan Bay, Shenzhen Bay, Dapeng Bay and Daya Bay and found Bay Economy; Actively promote policy breakthroughs, such as the Qianhai Bay, who has been moving for many years and the port logistics park behind is developing stable. So it lays the foundation for sustainable development of Shenzhen Port and building “Maritime Silk Road hub port” conforming to the national strategy.
Beibuwan	Build the international channel which regards Nanning as a node to the south. Based on the Beibuwan port, build cooperation network of China - ASEAN port city and set up Silk Road Fund in Guangxi; Build the Beibuwan port into a regional international shipping center
Haikou	Build the transit hub port of North Central container; Build shipping center towards the Southeast Asian

is relatively large; And the port infrastructure development is uneven. Although there are Singapore, Hong Kong, Klang and other major international transit ports in Southeast Asia, there are still quite a few weak ports, whose infrastructure requires to be further improved; compared with other regions, the port infrastructure in South Asian is relatively backward, which seriously hampers the development of their economies and trade, so the governments eager to improve infrastructure; the port infrastructure in Middle East and North Africa is still low and needs to be further improved and upgraded, the construction of which is in a vigorous stage of

development; The port infrastructure in the South Pacific is lagging behind, with several berths whose depth is quite shallow, lacking specialized wharves or berths, so the port infrastructure needs to be perfected and improved.

Therefore, with the implementation of the Maritime Silk Road, in order to connect and serve the strategy, domestic enterprises operating a port or terminal overseas becomes a new engine for the development of domestic enterprises^[19]. Till October 2016, the investment in international ports along the Maritime Silk Road by Chinese enterprises has been shown in Table 3.

Table 3: Investment in international ports along the Maritime Silk Road by Chinese enterprises before October 2016

<i>Nation</i>	<i>Port Project</i>	<i>Chinese enterprises</i>	<i>Shareholding ratio or the winning content</i>
Singapore	Container terminal	COSCO Pacific	49%
Australia	Newcastle	China Merchants International	50% 98 years of operating and leasing rights
Australia	Darwin	China Land Bridge Group	99 years of operating and leasing rights
Ukraine	Crimea	Ocean New River Investment Management Co.	Not available
Malaysia	Kuantan	Beibu Gulf port group	40%

contd. table 3

<i>Nation</i>	<i>Port Project</i>	<i>Chinese enterprises</i>	<i>Shareholding ratio or the winning content</i>
Tanzania	Bajamoyo	China Merchants International	Not available
Turkey	KUMPORT	COSCO Pacific China Merchants International CICDI Overseas Investment	65%
Togo	Lomé	China Merchants International	35 years franchise
Nigeria	Tingkan International Container Terminals	China Merchants International	47.5%
Djibouti	Djibouti	China Merchants International	23.5%
Sri Lanka	Container Terminal in Colombo Southport	China Merchants International	85%
Sri Lanka	Phase II Container Terminals in Hambantota	China Merchants International/ China Harbor Engineer	64.98%
Papua New Guinea	Laicheng	China communication construction	Not available
Myanmar	Koh Chang isle	CNPC	50.90%
Pakistan	Gwadar	China Overseas Holding	40 years franchise
Egypt	Seid	COSCO Pacific	20%
Egypt	Einsukhna	China Harbor Engineer	Not available
Egypt	Damietta	China Harbor Engineer	Not available
Israel	Haifa New	SIPG	25 years franchise
Greece	No.2 and No.3 terminal in Piraeus	COSCO Pacific	35 years franchise
Greece	Piraeus	COSCO Pacific	67% not determined yet
Italy	Container Terminals in Naples	COSCO Pacific	50%
Belgium	Container Terminals in Zeebrugge	SIPG	25%
Belgium	Container Terminals in Antwerp	COSCO Pacific	25%
Netherlands	Container Terminals in EUROMAX	COSCO Pacific	35%
Abu Dhabi	Phase II terminal in Caliph	COSCO Marine Port	Not available
Italy	Vado terminal	COSCO Marine Port	40%

For example, China Merchants Group, who started its business as port and shipping enterprises, has invested in more than 30 ports in 16 countries on five continents. Most of them are located at important position of One Belt One Road. These terminals fit with the important nodes of the Maritime Silk Road in the 21st, as shown in Fig. 3.

Among them, taking the main ports like Kuala Lumpur, Djibouti, Tingkan International Container Terminal, Lomé Port, Port New York Port, Port Link and Kumport port as an example, the followings are the investment projects which have been completed or are being carried out by the China Merchants Port in Table 4.

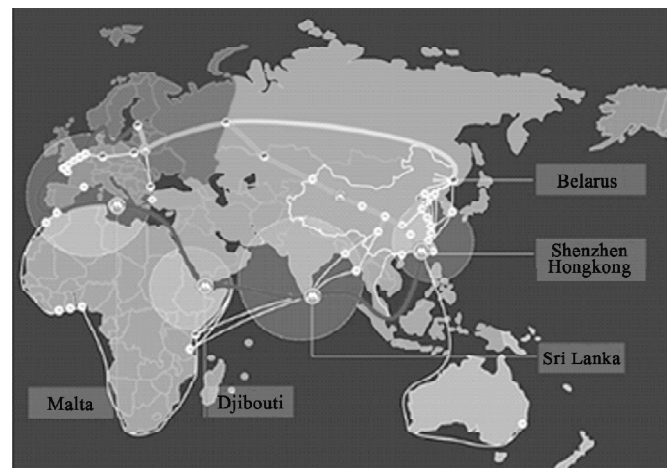


Figure 3: The allocation of terminals which are invested by China Merchants Group

Table 4: The investment projects which have been completed or are being carried out by the China Merchants Port

<i>Port</i>	<i>Nation</i>	<i>Introduction</i>
Colombo	Sri Lanka	Colombo port is the largest harbor in Sri Lanka, which acts as an important Transshipment port for Indian subcontinent. The CICT terminal invested by China Merchants Group has 4 container berths with annual design capacity of 2400,000 TEU. It is the only terminal which can unload super large ship. CICT terminal put into operation in April 2014 and had a throughput of 680,000 TEU.
Djibouti	Djibouti	Djibouti port is located in the West Bank of Aden Gulf, facing the Mandeb, which is regarded as the south door of the Red Sea Strait. And it is the international shipping channel that ships must pass through, having the radiation of East Africa, the Middle East, the Red Sea and India's West Bank, so it has an important strategic position. At present, China Merchants Group is actively coping the model of "the former Hong Kong, Central, the city after" of Shekou Industrial Zone and "Zhangzhou National Development Zone".
Tincan International Container Terminal	Nigeria	TICT has 770 meters of shoreline and an annual design capacity of 500,000 TEUs. Nigeria is the largest economy in Africa. The growth of container throughput of TICT is stably increased, and TICT has already achieved the 430,000 TEU in 2014.
Lome	Togo	The design throughput capacity of LCT terminal is 2.2 million TEUs and the depth of berths is 16.6 meters. Now, it is the port with most superior hardware facilities in West Africa, and will become the regional hub port in West Africa.
Newcastle	Australia	Located on the east coast of New South Wales, Newcastle is 120 kilometers away from the northeast of Sydney and is the economic and trade center of northern and northwestern NSW. It is also one of the oldest and largest tonnage ports in Australia. Coal exports accounted for more than 90% of the total tonnage of the port the total. The port will help China Merchants to have a greater influence on the international energy transport market.
Terminal Link	France	Based on the European, Mediterranean and African ports, Terminal Link has invested 15 terminals in 8 countries.
Kumport	Turkey	Kumport is the third largest container terminal in Turkey. It is located in the port of Ambarli and the port is in the north-west coast of the Marmara Sea. It is close to the European part of Istanbul and occupies an important strategic position in the Eurasian Continent. The distance to the Bosphorus Strait is only 35 km. And it is the throat between the Black Sea and the Mediterranean. The port has 2180 meters shoreline and six berths, whose maximum frontier depth is 16.5 meters, so it can load or unload the largest container liner. At present, container handling capacity of the port is 1.84 million TEU, and can be further expanded to 3.5 million TEUs. China Merchants Group, COSCO Pacific and CIC jointly own a 65% stake in Kumport Terminal.

From the experience of China Merchants Group, in order to adapt to the port system and achieve interoperability, the China Merchants Group successes mainly by seizing the key port base, improving the production capacity, output management and efficiency by the creation, alteration or expansion, ensuring the connection of the nodes and routes along the Marine Silk Road in 21st. At the same time, the Silk Road Park is proposed by the China Merchants Group during the process of developing Shekou Industrial Zone and Zhangzhou state-level development zone. The Silk Road Park relies on the core nodes of ports invested by the China Merchants Group, with the main carrier of Industrial Park near port, combining the five functions consisting of the transit construction of international commodities logistics, export processing and producing, light settlement of cross-border and the facilitation of customs clearance services to support Chinese enterprises going overseas by the Silk Road

Park. At present, the China Merchants Group has been constructing the major project of One Belt One Road in the industrial park in Belarus which is invested by China and Belarus[7].

5. THE SUGGESTIONS FOR THE CONSTRUCTION AND DEVELOPMENT OF PORTS ALONG THE MARITIME SILK ROAD

As a strategic framework of creating a new pattern with all-round external cooperation, the construction and development of the Maritime Silk Road in the 21st century has entered the stage of planning and implementation. The construction of the Maritime Silk Road requires coastal cities to collaborate in the development of infrastructures such as marine transportation, communications, energy, ports and ocean transportation. Therefore, in order to better dock and serve the Maritime Silk Road, there are four suggestions for considerations.

(1) Improving the backward port facilities: Through the improvement of infrastructure, including the construction of transport network, the implementation of the corresponding preferential policies and the realization of multimodal transport, the attractiveness for the supply of port is increased to a certain extent. In addition, the ports in above conditions will attract a large number of foreign trade enterprises, which will strongly promote the development of shipping industry, distribution and transportation industry, warehousing industry and other port-related industries, such as bonded industry, shipbuilding industry, trade, petrochemical and other port-dependent industries, as well as finance, insurance, tourism and other port-derived industry. With such positive promotion, the development of port-related industries, in turn, will further promote the improvement of the port infrastructure.

(2) Providing funding for port infrastructure construction: To promote the Maritime Silk Road to construct smoothly and develop healthily, the government of China first leads in creating the Asia Infrastructure Investment Bank, injecting 40 billion US dollars to start the "Silk Road Fund". This new investment model provides financial support and protection for the healthy development of the Marine Silk Road, which shows the attitudes of China that would share the new opportunities of developing, face challenges and promote common development with all countries along the Maritime Silk Road. The majority of countries along the Maritime Silk Road expresses a positive attitude of participation.

The Asian Infrastructure Investment Bank is an intergovernmental and multilateral development agency in Asia, which operates in accordance with the modalities and principles of the multilateral development banks, designed to provide financial support and economic cooperation for the countries along the One Belt One Road in infrastructure construction. The model of "bank + fund" contributes to improving the effectiveness of investment and financing of the One Belt One Road, perfecting the port infrastructure.

(3) Adopting new technology in ports and management innovation: In order to improve the efficiency of port operation, to maximize the benefits by reducing the cost of capital investment and to

reduce the pollution caused by the ports, the tendency of information, automation, energy-saving of ports is more obvious. With the continuous innovation and the application of modern automation technology in the ports, compared with the traditional terminals, modern automated container terminals have great advantages in the intelligence, reliability, stability, equipment utilization, operating costs and other aspects. At present, the new technologies in ports, such as the intelligent port, automated terminals, new methods of terminal operations, continue to apply. The new ports need to take the technology and management innovation into consideration, especially when Chinese enterprises construct ports with foreign cooperation.

(4) Improving the ports as the core distribution and transportation system: Actively constructing the inland facilities connecting the ports and speeding up the construction of the multimodal transport network ^[20], which is a momentous foundation to enhance the transport efficiency and promote the interconnection of the Maritime Silk Road. For typical examples, the Piraeus Port Project in Greece invested and operated by COSCO Group. The Piraeus Container Terminal has been linked to the national rail transport system ^[21] in Greece and has been formally integrated into the European rail transport system, making the port the main transit node for the Mediterranean and the southeastern Europe. According to preliminary estimates, this initiative could shorten one-week of transit time from Asia to Europe via Piraeus, which has important influence on the development of port competitiveness in the port of Piraeus.

6. CONCLUSION AND PROSPECT

This paper combines the trade status of China and countries along the Maritime Silk Road in the 21st century with the status of international shipping center as core ports along the Maritime Silk Road in the 21st century. In view of the construction and development of 15 important ports put forward by *Vision and Action*, basing on the present status, this paper introduces the current construction situation and position of 13 ports under the Maritime Silk Road. The overseas investment by Chinese enterprises is gradually increased. Based on the

corresponding countermeasures proposed, this paper finally draws the sketch map of the routes of Maritime Silk Road in the 21st century, which is shown in Fig. 4.

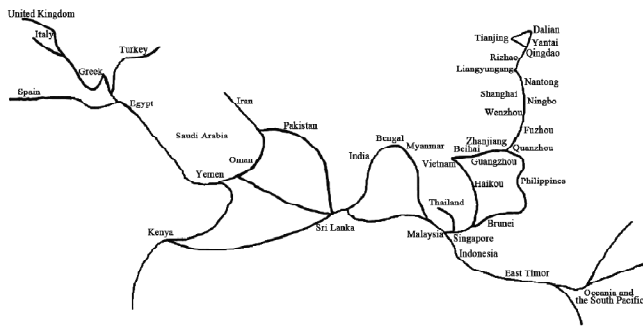


Figure 4: Sketch map of the routes of Maritime Silk Road in the 21st Century

In summary, the construction and development of ports under the Maritime Silk Road in the 21st Century is a complex problem. This paper only combines the trade, port and investment status, then puts forward countermeasures and the sketch map of the routes. For the limitation of individual knowledge and time, the geopolitics, the feasibility of the route and other factors are not considered there. We hoped that more effective suggestions will be proposed under the method of quantitative analysis by combining the elements of logistics, capital flow and information flow in the future research.

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REFERENCE

1. Pradeep Srivastava. Regional Corridors Development in Regional Cooperation[R]. ADB Economics Working Paper Series. No. 258, 2011
2. Justyna Szczudlik-Tatar. “One Belt, One Road” Mapping China’s New Diplomatic Strategy[J]. PISM Bulletins, 2015, (7)
3. Hanqin Li. The New Opportunities for The International logistics Channel in the territory of “One Belt One Road” [J]. View of the Continental Bridge, 2015,09:63-65.

3. Wolfgang Lehmacher, Victor Padilla-Taylor. The New Silk Road - Idea and Concept[J]. ISPSW Strategy Series: Focus on Defense and International Security, 2015, (11).
4. Heaver, T. D. (2002). The Evolving Roles of Shipping Lines in International Logistics. International Journal of Maritime Economics, 4(3), 210-23
5. Michal Meidan, Luke Patey The. Challenges Facing China’s Belt And Road Initiative[J]. DIIS Policy Brief, 2016, (2)
6. Notteboom, T.E.,& Rodrigue.J.-P.(2005).Port regionalization: Towards a new phase in port development. Maritime Policy and Management, 32(3), 297-313.
7. Felix K Chang. China’s “Win-Win” Development Bargain: China, the Asian Infrastructure Investment Bank, and the International Order[J]. FPRIE-Notes, 2015, (6)
8. Qingcheng Zeng. Port Development Report of the Maritime Silk Road in the 21st [M]. Dalian Maritime University Press;2015:005&065.
9. Balasubramaniam A, Puah C H, Mansor S A. Economic Interdependence: Evidence from China and ASEAN-5 countries. Modern Economy, 2012, 3:122.
10. Song L. L. Van Geenhuizen M. Port Infrastructure Investment and Regional Economic Growth in China: Panel Evidence in Port Regions and Provinces [J]. Transport Policy, 2014, (36): 173-183.
11. C. F. Ge, X. B. Huang. The Experience and Revelation of Modern Shipping Service Industry Development of International Shipping Center [J]. Port economy, 2010,06: 14-16.
12. Shuai Zhang. The Experience of Constructing and developing International Shipping Center - Taking Hamburg Port as an Example [J]. Logistics Technology, 2010, 01: 18-20.
13. Jieli Wang. Experience of the Construction from Hong Kong International Shipping Center to Shanghai [J]. Water transport management, 2010, 02: 27-28+34.
14. Hubin Guo. The Experience and Enlightenment of the Formation and Development of World - class International Shipping [J]. China Economic Journal, 2013, 05:21-24.

15. Boke Mao. New Opportunities and Tasks of Shanghai International Shipping Center [J]. *Port economy*, 2014, 12:5-8.
16. Gzerny A., Hoffler F., Mun S. L. Hub Port Competition and Welfare Effects of Strategic Privatization [J]. *Economic of Transportation*, 2014, (3): 211-220.
17. Dwarakish G. S. Salima A. M. Review on the Role of Ports in the Development of a Nation [J]. *Aquatic Procedia*, 2015, (4): 295-301.
18. Roberts B. A gravity study of the proposed China-ASEAN Free Trade Area. *The International Trade Journal*, 2004, 18(4): 335-353.
19. Ng, A. K. Y. (2013). The Evolution and Research Trends of Port Geography. *The Professional Geographer*, 65(1), 65-86.
20. Asgari N., Farahani R. Z., Goh M. Network Design Approach for Hub Ports-Shipping Companies Competition and Cooperation [J]. *Transportation Research Part A*, 2013, (48): 1-18.
21. Wang, J. J., & Slack, B. (2000). The evolution of a regional container port system: the Pearl River Delta. *Journal of Transport Geography*, 8(4), 263-275.