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Conference reports

The future development and restructuring of the international shipping industry: Conference report

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ABSTRACT

With the worldwide spread of the global Coronavirus (COVID-19), the shipping industry has played an essential and irreplaceable role in combating the effects of the pandemic, promoting a trade-led economic recovery and maintaining the stability of industrial supply chains. The North Bund Forum advocated jointly promoting the continuous innovation and wide application of green low-carbon technologies and effectively implementing the reduction strategies of global greenhouse gas emission, thereby contributing to the creation of a safe, smooth and green global supply chain. With the epidemic under control worldwide, the international shipping industry has also ushered in a new development cycle and growth opportunities, which brings new strategic opportunities for the development of Shanghai International Shipping Center. Shanghai will accelerate the building of the world’s first-class shipping center characterized as convenient and efficient, fully functional, open and integrated, green and intelligent. The forum is intended as a platform for exchanging ideas on major issues in global shipping, for incubating governance rules and norms of the international shipping industry, for releasing the latest policies and regulations in China and the world, and for showcasing the Shanghai International Shipping Center.

1. Introduction

At present, the global economic and trade pattern is undergoing profound changes, and under the impact of the Covid-19 pandemic, the shipping industry is facing unprecedented challenges as well as opportunities [1]. Co-sponsored by the Shanghai Municipal People’s Government and the Ministry of Transport, the 2021 North Bund Forum was held along the Huangpu River waterfront in Shanghai’s Hongkou District from November 3–5. Focusing on the theme of “Openness and Inclusiveness, Innovation and Reform, and Win-Win Cooperation: Embracing Future Development and Restructuring of International Shipping”, the forum revolved around such issues closely related to the global shipping industry. Political dignitaries, experts, scholars as well as business entrepreneurs from China and abroad gathered to engage in dialog and exchange their views on hot issues which have attracted wide attention. Held amid the global economic downturn, the high-end forum concentrated on the opportunities and challenges brought about by global economic and trade changes to the shipping industry, to yield insights into the new trends of the global shipping industry, and provide a communication and cooperation platform for all related parties in the shipping industry chain to understand the latest situation and future development of the international shipping industry with a view to building a harmonious and sustainable industry ecosystem, and to instill new impetus into the world economy.

The Forum invited officials from China’s Ministry of Transport, the Shanghai Municipal Government and the International Maritime Organization as well as prominent economists to deliver keynote speeches. In addition to the main forum, there were five sub-forums that touched upon issues concerning the environment, technology, safety, law and financial insurance.

Chinese President Xi Jinping sent a congratulatory letter to the forum, in which he pointed out that the shipping industry is an important guarantee for the development of global trade, and a significant bond for cordial exchanges among people throughout the world. He acknowledged the role of the shipping industry in addressing the COVID-19 pandemic threat, promoting trade recovery and maintaining the global stability of industrial supply chains. Xi emphasized that China is poised to collaborate with other countries to surmount the difficulties, adapt itself to the new development trend of green, low-carbon and intelligent shipping industry, and deepen the commitment to international cooperation in shipping affairs. He also vowed that China would spare no efforts to restore and guarantee the smooth flow of global industrial supply chains, promote the healthy development of the international shipping industry, and contribute to building a community with a shared future for humanity.

Li Xiaopeng, Minister of Transport, participated in the opening ceremony of the forum and delivered an address. He stressed the importance of openness and inclusiveness, innovation and reform, and win-win cooperation in promoting the healthy development of the international shipping industry and pledged China’s wisdom to the development of global sustainable transportation. Mr. Zhao Chongjiu, Vice Minister of Transport, delivered a keynote speech entitled “Joint efforts at home and abroad to promote the high-quality development of international shipping industry”. In addition, heads of relevant international organizations and experts from home and abroad shared their views on promoting the development of the shipping industry and ensuring the smooth flow of global industrial supply chains.
2. Major recent achievements in China’s shipping industry

Shipping, as an important part of a comprehensive transportation system, handles more than 95% of China’s global trade transportation [2], and it supports China’s high-level opening-up and high-quality development, according to Yi Jiyong, deputy head of the Water Transport Bureau under the Ministry of Transport. There have been striking achievements in China’s shipping industry, which can be summarized as follows:

First, the size of China’s fleets and ports ranks among the top in the world. According to Yi, China’s maritime fleets have the world’s second largest capacity (310 million dead weight tonnages as of the end of 2020 [3]), and China’s maritime transport service network connects major ports in more than 100 nations and regions. In 2020, there were eight and seven Chinese ports, respectively, among the top 10 ports in terms of global port cargo throughput and container throughput [4].

Second, the overall competitive edge of shipping has been significantly enhanced. The shipping industry has been fully open to the outside world. Through recourse to the free trade ports and free trade zones, a series of innovations in shipping systems and policies have been conducted and extended to other parts of the country, and the level of transport convenience has significantly improved. Shanghai International Shipping Center has been basically completed, and modern shipping service systems such as shipping trade, shipping finance and insurance, maritime arbitration, shipping and legal information service have undergone continuous improvement [5]. In the 2000 Baltic International Shipping Center Development Index Report, Shanghai International Shipping Center ranked among the top three in the world for the first time, and global shipping resource allocation improved to a considerable extent [6]. Dalian, Tianjin, Xiamen and other regional shipping centers are in the stage of accelerated development.

Third, scientific and technological innovation has reached the world’s advanced level. The BeiDou system was officially incorporated into the global radio navigation system, becoming the third maritime satellite navigation system recognized by the International Maritime Organization (IMO) after the US GPS and the Russian GLONASS system [7]. The fully automated container terminal of Yangshan Deepwater Port Phase IV has been built, the largest and most advanced of its kind in the world [8]. Port machinery, offshore large-depth saturation diving and other high-performance transportation equipment technology with independent intellectual property rights have reached the world’s leading level. By the end of 2020, a total of nine automated container terminals had been completed and seven were under construction, leading the new trend of smart ports in the world [9].

Fourth, the development of green transformation has yielded significant results. The structure of transport has been further adjusted, the sea-rail intermodal transport, water-water transfer, direct transport between the river and the sea have been greatly developed and the medium- and long-distance transport of containers and bulk cargo has been shifted from roads to rail and water transport. In 2020, the port container completed the rail-water intermodal transport volume of 6.87 million twenty-foot equivalent units (TEUs) [10]. The construction of ship emission control areas and port ship pollutant reception facilities has been accelerated. The special treatment of dry bulk cargo terminal dust is under way. The government actively embraces the “blue sea initiative”, encouraging ports and ships to apply new and clean energy [11].

Fifth, water safety supervision and rescue capabilities continue to improve. The risk control of water traffic has been greatly strengthened and the water traffic program has been issued so as to construct a new pattern with modernized and intelligentized water traffic dynamic control [12]. The coverage and guarantee of security emergency communications continue to improve, and ship dynamic monitoring management and services have become much more efficient. Sea and air three-dimensional search and rescue systems are basically established and the overall shipwreck salvage capacity in key waters and underwater mechanical sweeping operations have also improved considerably.

Sixth, China’s international influence is prominent. China has been elected to the International Maritime Organization (IMO) for 16 consecutive times as a Class-A member state. There has been extensive participation in international maritime cooperation, and China has contributed a non-negligible part in the establishment of international maritime rules and standards. In 2019 and 2020, China submitted 123 proposals to the IMO committees or subcommittees, with an annual average of more than 60 [13].

Finally, there is a strong coordination in epidemic prevention and control. Since the outbreak of the Covid-19 epidemic, the disease control working guide for ship crews, ports and front-line personnel has been revised and re-issued and the prevention and control of the epidemic for personnel in high-risk positions have been strictly implemented. Those who work in high-risk industries were vaccinated at the earliest opportunity [14]. During the epidemic, China’s major ports were always in normal operation, and ocean-going cargo ships shuttled around the clock, fully guaranteeing the stability of the global industrial supply chains.

3. Shanghai declaration 2021: Ensuring a smooth global supply chain

As a highlight, the 2021 Shanghai Declaration was released to encourage the global shipping sectors to fight the pandemic and contribute to global economic recovery. The President of the China Classification Society (CCS), Mo Jianhui, attended the opening ceremony and the main forum, and signed the “2021 Shanghai Declaration” on behalf of CCS.

The full text is as follows:

As the cornerstone of the global supply chain, the smooth flow of shipping and aviation is vital to world trade, national economies, commerce and industry, and the lives and well-being of millions of people.

We strongly feel the impact of the Covid-19 epidemic on the global supply chain and are determined to work together to guarantee the cross-border movement of anti-epidemic supplies and the health and safety of workers, and to gradually restore the battered global supply chain system.

We are highly concerned that breakthroughs in science and technology are profoundly affecting the way shipping and aviation activities operate, and are willing to cooperate to promote the in-depth application of next-generation information technologies such as big data, Internet of Things, blockchain, artificial intelligence, etc., so as to achieve global supply chain innovation and business model transformation.

We fully recognize the urgency and importance of adopting green and low-carbon technologies and actions for the sustainable development of transport, and are committed to jointly promoting the continuous innovation and wide application of green and low-carbon technologies to effectively implement global greenhouse gas emission reduction actions.

We deeply appreciate that fast and convenient maritime and aviation activities require cross-country and cross-sector understanding and cooperation within and outside the industry, so let’s join hands to create a safe, smooth and green global supply chain.

4. The release of four shipping industry development reports

The forum released four shipping development reports, which are also among the highlights of the conference. Of these four, three reports present the latest research results of China Classification Society, Shanghai Maritime University, Shanghai International Shipping Institute, China Economic Information Service, and China Waterborne Transport Research Institute. These three reports reflect the judgments on the trends in low-carbon development of international shipping industry, assessment on the production and operation status of global shipping enterprises, and objective and fair comprehensive evaluations of the world’s first-class ports and global port and shipping.
4.1. “Shipping energy efficiency and emission reduction development outlook report 2021” released for the first time

In order to help achieve the goal of “double carbon”, CCS proposes new international shipping climate governance rules based on the basic framework of global action against climate change proposed by the United Nations Framework Convention on Climate Change [15], etc., analyzes the impact of relevant policies and measures of regional and industry organizations, and proposes development trends and paths of future international shipping climate governance rules. From the perspectives of energy availability, economy, technological maturity, contributions to emission reduction and completeness of laws and regulations, future development trends and paths forward are proposed with respect to ship energy and power devices, providing an important reference for the global shipping industry to develop in the low-carbon direction [16].

4.2. “World-class port evaluation report” released for the first time

Ports are comprehensive transportation hubs, as well as strategic resources for economic and social development. In accordance with the “Guidance on the Construction of World-Class Ports”, China Economic Information Service, together with the Institute of Water Transport Science of the Ministry of Transport, conducted a number of studies on the comprehensive evaluation system of world-class ports, compiled and released the “Comprehensive Evaluation Report of World-Class Ports”, established an authoritative system of world-class port evaluation in the industry, and led China’s ports to move towards the goal of world-class standards.

4.3. “Global shipping prosperity index” released for the first time

The Global Shipping Prosperity Index is a composite of the prosperity index and confidence index of global container and dry bulk transport enterprises. The prosperity index is compiled based on indicators of enterprise capacity allocation and vessel turnover rate, reflecting the changes of the enterprise’s internal environment. The confidence index is compiled according to the entrepreneurs’ judgment on the current general economic development and the expectations of future trends, reflecting the industry’s confidence and mentality on the global shipping situation [17]. The Global Shipping Prosperity Index is therefore a “barometer” and “early warning device” of the shipping industry.

4.4. “Global port and shipping informatization development report 2021” released for the first time

Compiled by Shanghai International Shipping Research Center, the Global Port and Shipping Informatization Development Report has been published for five consecutive years. From 2019 onwards, the report creatively introduces port and shipping informatization market scale measurements, port and shipping information technology maturity curves and other special contents, aiming to summarize the significant achievements and experiences of informatization construction in ports, shipping and maritime fields in that year more objectively and comprehensively, and predict the future trends in the port and shipping informatization development. The Global Port and Shipping Development Report 2021 will bring new insights, ideas and enlightenment to the industry.

5. The building of Shanghai international shipping center

The forum is expected to become a new means of support for Shanghai’s endeavor to become the leading international shipping center and will help to promote the integration of the ‘Shanghai shipping’ brand into the international shipping governance system. Shanghai’s international shipping center construction is being comprehensively completed. Shanghai ports handled 43.5 million TEUs last year, leading the world for the 11th consecutive year. The city has also become one of the top three shipping centers for the first time, according to the Xinhua-Baltic Exchange International Shipping Center Development Index [18].

In this forum, Shanghai and IMO actively negotiated and reached a consensus. Based on the successful case of the two sides jointly supporting the construction of the Asian Maritime Technology Cooperation Center in the early stage, they will jointly carry out technical cooperation, promote the implementation of the initial IMO greenhouse gas emission reduction strategy, and join hands with stakeholders to focus on and solve major issues in the field of shipping, such as maritime safety and security, protection of seafarers’ rights and interests, and smart shipping. This is the first time that IMO, as the most authoritative intergovernmental international organization in the field of shipping under the United Nations, has reached a consensus on cooperation with local governments, which is a milestone for Shanghai International Shipping Center in its aim to be integrated into the world and serve the globe.

In 1998, the Shanghai Shipping Exchange officially released the world’s first container tariff index, and to date it has formed the “Shanghai Shipping Index” system encompassing container, dry bulk, “One Belt, One Road”, etc. [19]. In 2021, to promote the prosperity and stability of the international shipping market and support the innovation of shipping freight index futures, Shanghai Shipping Exchange developed the Shanghai Export Container Settlement Freight Index, which passed the Principles of the Price Reporting Agency audit of the International Organization of Securities Commissions (IOSCO). This indicates that the index has won the international authoritative recognition and the Shanghai Shipping Exchange has become the first institution in China to pass the certification. This move has laid a solid foundation for the listing of shipping tariff index futures products.

In the high-end interview session of the forum, Chen Shuai, a member of the Hongkou District Government, exchanged notes on the advantages and experience of Hongkou in building an international shipping center, how to build shipping “soft power” and other issues. Chen Shuai remarked that, with the vigorous development of Shanghai international shipping center, a more solid foundation has been laid in Hongkou District’s shipping service industry. Next, consistent efforts will be made to publicize “Shipping Hongkou”, making it the “node and hub” of the shipping service industry. The major focus will be on further enhancement of the agglomeration of shipping services in Beihai Beach and to continuously promote the high-quality development of the shipping services industry.

6. Global economic and trade changes: Changes in shipping and responses

“The North Bund International Shipping Forum 2021 was convened in Shanghai to discuss responses to global economic and trade changes. It constituted one of the parallel sessions of the first North Bund Forum, and was held under the theme of “Revolution and Response: Shipping Industry Under Global Economic and Trade Changes”.

The Vice Mayor of Shanghai, Mr. Zhang Wei, pointed out in his speech that the maritime shipping industry, as an important and basic strategic service industry, meets more than 95% of the transportation demands in the world trade. Since 2020, the vulnerability of the international logistics chain and supply chain has increased under the impact of the COVID-19 pandemic. As a result, the importance of deepened cooperation among different nations has rendered it more imperative to develop Shanghai into an international shipping center. Zhang reiterated that Shanghai would continue to forge ahead on the path of reaching this goal.

The chairman of COSCO SHIPPING, Mr. Wan Min emphasized in his
speech that in responding to the global economic and trade changes, shipping should identify the long-term trends on the basis of short-term uncertainties. Such long-term trends of the shipping market will hinge on the following changes: changes in trading pattern with a focus on changes in globalization and localization; the digital transformation with a focus on the changes in internal and external drives; environmental conservation with a focus on the changes of partial improvement and deep innovation [20]. To achieve this, he advocated tight collaboration across the shipping industry chain to respond effectively to such changes, further enhance the industry’s ability to support global trade, make new progress and contributions in the current business cycle, and play a unique role in the stable operation of the global supply chain.

A variety of speeches were delivered at the session, including “Shipping Industrial Chain Deep Integration”, “Work Together for a Stable, Smooth and Efficient International Supply Chain”, “Shipping’s Decarbonization Journey”, “Explore the Direction of Digital Development of Smart Ports”, and “China as a Key Market for Hapag-Lloyd in a Challenging Industry Environment”.

7. Key issues discussed at the five sub-forums

7.1. “Green and low carbon” sub-forum

Experts and industry leaders in this forum exchanged views on the issues concerning the future development of low-carbon and zero-carbon shipping, the application of new energy in green shipping, and so on. IMO Secretary General Lin Keiser mentioned that the amendments to the International Convention for the Prevention of Pollution from Ships (MARPOL) had been adopted in early 2021, introducing mandatory technical and operational measures to reduce the carbon intensity of international shipping. IMO also hoped that the research on and development of low-carbon and zero-carbon fuels should be accelerated to achieve decarbonization through energy transformation. Zhang Shouguo, executive vice president of China Shipowners’ Association, emphasized that there is a huge demand for clean energy in shipping.

7.2. “Digital and intelligent” sub-forum

Experts and representatives shared their views on the opportunities as well as challenges associated with new digital and intelligent technologies in the shipping industry and put forward some practical suggestions. Lin Yewen, deputy general manager of COSCO Shipping Technology, said that the epidemic has made conspicuous the role of digitalization, and the shipping industry has proactively embraced digital reforms to improve productivity. For example, a ship health code has been introduced to quickly identify which ship is at risk [21]. Xu Pengzhan said that smart ports, smart ships and digital waterways are gradually emerging, and new technologies such as big data and artificial intelligence have become powerful pillars for shipping development.

7.3. “Security and cooperation” sub-forum

Francis Francis, Secretary General of the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), believed that with digitalized crew bridges the number of accidents can be effectively reduced. Xu Pengzhan, the Director of China Communications Information Center, believed that to solve the problem completely, it is necessary to solve such fundamental problems as inadequate digital collection of shipping elements, drawbacks in networked transmission of shipping information, fragmentation of shipping business data, and uneven development of shipping wisdom applications, etc. Mathias Jonas, Secretary General of the International Hydrographic Organization (IHO) mentioned that between the fifteenth century and the eighteenth century, competition and knowledge of nautical charts led to many groundings and the loss of many crew members around the world and IHO is not and will not become a tool for gaining power.

7.4. “Arbitration and justice” sub-forum

The participants discussed in depth the problems and solutions in the theory and practice of international maritime commercial arbitration. Mr. Lu Peng, Vice President of the China Council for the Promotion of International Trade (CCPIT), introduced the achievements of maritime arbitration and judicial collaboration in China. Liu Xiaoyun, President of Shanghai High People’s Court, urged continued dialog and cooperation between maritime justice and maritime arbitration to improve the various working mechanisms of judicial support and arbitration supervision, and to optimize the dispute resolution platform coordinating arbitration, mediation and litigation [22]. Professor Wang Guohua from Shanghai Maritime University said that China’s shipping and trade industry has gradually become the biggest supporter and user of maritime arbitration, and the Chinese wisdom should be provided to enhance the credibility of international maritime arbitration.

7.5. “Finance and insurance” sub-forum

The participants discussed such topics of concern as the shipping market situation in the post-epidemic era, the scale and structure of freight rates in the shipping market, the risk exposure of freight rate fluctuations, freight index futures, the trend of RMB settlement of shipping freight and shipping finance leasing and shipping insurance. It aims to help enterprises to avoid risks and achieve high-quality development through the joint forces of shipping, finance and insurance.

8. Conclusion

The shipping industry is an important guarantee for the development of international trade. As a keystone of the global supply chain, smooth maritime and aviation activities are connected with world trade, national economies, business and industry, and the lives and welfare of millions of people.

According to Zhang Wei, vice-mayor of Shanghai, the forum has been tasked to incubate governance rules and norms of the international shipping industry, issue China and international shipping policies and regulations, and showcase Shanghai as an international shipping center.

At present, global instability and uncertainty have obviously been intensified, and China is speeding up the formation of a new development pattern with the domestic cycle as the main body and the domestic and international double cycles mutually promoting each other [23], and the international shipping industry also ushers in a new development cycle and growth opportunities, providing new strategic opportunities for the development of Shanghai International Shipping Center. In the new era, Shanghai is committed to improving the shipping service capability comprehensively and accelerating the pace of building a world-class shipping center that is convenient and efficient, functional, open and integrated, green and intelligent.

The forum is intended to be a platform for exchanging ideas on major issues in global shipping, a platform for incubating governance rules and norms of the international shipping industry, a platform for releasing the latest policies and regulations in China and the world, and a platform for showcasing the Shanghai International Shipping Center. It aims to promote the sustainable development of the shipping industry by strengthening exchange and cooperation, so as to better bring into play the role of shipping industry as a bridge and link in the global trade, and to further promote the healthy development of the world economy and trade.

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**Conflict of Interest**

The authors declare that they have no conflict of interest.

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Helong Tong  

College of Foreign Languages, Shanghai Maritime University, Shanghai, China  

E-mail address: hltong@shmtu.edu.cn.