

Analysis on the Impact of COVID-19 Pandemic on the International Marine Transportation

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Abstract

In 2019, the COVID-19 rampaging around the world, was rapidly spreading and affecting the shipping industry chain of more than 200 countries and regions. Since 2020, the "closure of the country" and "closure of the city" have caused port congestion, ship suspension, route contraction and rapid decline of shipping economy. The stock prices of major shipping companies have changed significantly, and investment institutions have lowered the ratings of shipping companies, presenting a difficult business picture in the industry. International marine transportation is an important part of the logistics system, accounting for more than 2 / 3 of the total volume of international trade. More than 85% of China's total import and export goods are transported by sea. With the rapid development of China's economy, especially after China's entry into WTO, China's economic development is further integrated into the process of economic globalization. At present, China has become a global manufacturing center and the import and export scale is in a period of rapid development. In 2012, the total import and export volume exceeded that of the United States, and became the world's largest trading country. As the main "carrier" of import and export goods, international marine logistics has achieved faster development. Under the influence of the COVID-19, global economic development and trade flows have been greatly restricted. Therefore, the purpose of this study is to find out the impact of COVID-19 pandemic on international marine transport, and propose measures to deal with it, in order to serve as a reference for the shipping industry.

Keywords

COVID-19 Pandemic; International Marine Transportation; Policy Suggestion.

1. Introduction

For the sake of clear illustration and brief introduction of this thesis, three aspects will be included in this part. They are, significance of the study, thesis statement and the organization of the thesis.

1.1. Significance of the Study

International marine transport is an important part of the logistics system, accounting for more than 2 / 3 of the total volume of international trade. More than 85% of China's total import and export goods are transported by sea. With the rapid development of China's economy, especially after China's entry into WTO, China's economic development is further integrated into the process of economic globalization. At present, China has become a global manufacturing center, and the import and export scale is in a period of rapid development. In 2012, the total import and export volume exceeded that of the United States, and became the world's largest trading country. As the main "carrier" of import and export goods, international marine logistics has achieved faster development. Under the influence of the COVID-19, global economic development and trade circulation have been greatly restricted. International marine transport, as the most important means of circulation in the international transportation

supply chain, has been harmed by the international trade industry. When the interests of one side of the closely related economic industry are damaged, another industry will also be affected. The close relevance of the industrial chain is affected, and the international shipping industry can also refer to the sharing economy industrial chain theory. Similarly, when the relevant interests of one party are damaged, the international shipping industry will also be affected.

The whole thesis focuses on the impact of COVID-19 pandemic on the international marine industry and its countermeasures. In this way, the author can put forward solutions and provide some enlightenment for the shipping industry.

1.2. Organization of the Thesis

The thesis is divided into the following five parts.

Chapter 1: Introduction. This part is a statement of the background, significance and framework of the study. It explores the situation and existing problems of international marine transport under the COVID-19 pandemic, which proves the necessity of analyzing the impact and put forward suggestions.

Chapter 2: Literature review. This part mainly explains that scholars at home and abroad analyzing the impact of COVID-19 pandemic on the shipping industry from different angles.

Chapter 3: Research method. It mainly includes the questions, subjects and process of the research.

Chapter 4: Mind findings. It discusses the analysis the impact of COVID-19 pandemic on marine industry employees, shipowners and ports.

Chapter 5: Conclusion. Based on the previous investigations and researches, the main recommendations are made to the employees and the ports.

2. Literature Review

After clarifying the purpose of this thesis, this thesis elaborates on the impact of COVID-19 pandemic. In addition, the study of COVID-19's impact is specifically aimed at the marine industry, but it is not limited to the marine industry.

2.1. General Background of COVID-19 Pandemic

COVID-19 pandemic (Corona Virus Disease 2019), referred to as "COVID-19", WHO named "2019 coronavirus disease". It refers to pneumonia caused by 2019 New Coronavirus infection. Since December 2019, a number of cases of unexplained pneumonia in Southern China's seafood market have been found in some hospitals in Wuhan, Hubei. It has been confirmed as an acute respiratory infectious disease caused by 2019 New Coronavirus infection.

On February 11, 2020, WHO director general Tan Desai announced in Geneva, Switzerland, the name of New Coronavirus pneumonia was "COVID-19". In February 22nd, China's national health and Health Commission issued a notice that the English name of New Coronavirus pneumonia was revised to "COVID-19". The COVID-19 pandemic in March 11th was considered to be a global pandemic.

As of 19:06 on December 23, 2021 (2:06 on December 24, Beijing time), the number of confirmed cases in the world has increased by 822278 to 276436619 compared with the previous day, and the number of deaths has increased by 8008 to 5374744.

Jiang Yanxuan (2020) pointed out in his thesis that COVID-19 is super infectious. It is mainly spread by droplets and contact. The droplets within 2 meters can carry the virus. Especially when people cough and speak, the droplets of the virus carriers will fall on the other side's mucosa, and they will infect each other. The infected person will remain in the 14-day incubation period, that is, the virus will not immediately appear after the virus is infected.

Asymptomatic infected people will also spread the virus when they contact healthy people (asymptomatic infected people are called asymptomatic infected people who have positive nucleic acid test and have no self-perceived or clinically identifiable symptoms and signs after 14 days of incubation period) Jiang Yanxuan (2020).

In COVID-19 pandemic, the March 11, 2020 new crown pneumonia epidemic has been characterized by pandemic features, who director general Tan Sade said.

To sum up, the impact of COVID-19 pandemic on the marine industry is huge. Domestic research has been launched, but the research on the impact is mostly limited to a single level. Systematic studies are very rare. For the entire shipping industry, COVID-19 is a shock, but it is also an opportunity. If this global public health event is comprehensively summarized and lessons learned, it will be of historic significance. Moreover, at present, the world lacks in epidemic prevention and control and port and ship control, and sometimes there will be ship or port aggregation epidemic, resulting in port closure.

COVID-19 pandemic is a serious concern. Tan Sade said at a regular press conference in Geneva that the extent and severity of the epidemic is deeply worrying. "We therefore think that the new crown pneumonia epidemic has a pandemic feature.

There are three reasons why the research is not comprehensive. First, the world is trying to maintain the normal operation of the industry, and some foreign countries do not attach importance to COVID-19, and think that COVID-19 has little influence on the marine industry. Second, the collection and analysis of the situation of epidemic related ships is a large project, which requires high requirements for researchers, and countries have different difficulties in epidemic prevention and control; Third, and most importantly, the world shipping industry has a huge market. There is no organization or institution that can share resources to give advice to the participants of the world shipping industry. For these reasons, it is difficult to access the relevant information on the impact of the epidemic on the shipping industry and its countermeasures at home and abroad. The purpose of this thesis is to integrate the research and put forward some insignificant suggestions for the normal operation of the shipping industry.

2.2. Researches Abroad

Up to now, the research on the impact of COVID-19 pandemic on the marine industry abroad has gradually become comprehensive. Foreign scholars and shipping associations carry out research in practical work, use the research results to change the management mode of shipping industry and improve the operation efficiency of shipping industry. Among them, United Nations (2020) launch an investigation into the international cooperation of the shipping industry, respond to the challenges faced by seamen because of COVID-19, and support the global supply chain. It not only analyzes the psychological pressure generated by seafarers under the outbreak of the epidemic situation, but also gives a reasonable and effective way to make the same plan for the same kind of International Labour Organization (2020). In the annual report of The International Chamber of Shipping (2020) in 2020, it also published its research on the health problems of seafarers under COVID-19, and put forward suggestions for preparations for the recovery of the marine industry after the outbreak.

Unlike several major organizations in the world, Journal of Transport & Health (2021) from the acceptance of the public, it further expounds how COVID-19 fully explains the long-term disadvantages of the public in terms of how the public looks at transportation. In particular, it refers to home work as a marine practitioner. If all countries and ports are closed managed, the problem faced by seamen is to be confined to the big "home" at sea. Yes. In general, as we carry out vaccination programs around the world, some people may suggest that we make the world a better place and take some positive things from this international disaster. If our insatiable desire for excessive mobility exacerbates the rapid spread of the virus, perhaps we

need to reconsider our mobility practice. Under the existing conditions, we can only exercise our right to freedom within an appropriate range. As an indispensable part of world exchanges, the marine industry is even more so.

However, most of these organizations consider the research on personnel engaged in the marine industry. People-oriented is of course the first priority, but it will be icing on the cake if more consideration can be given to protecting employees from a larger level.

In contrast, the domestic research on the impact of COVID-19 pandemic on the marine industry is mainly focused on the large scale. Most of the objects of concern are ports, docks and whole ships. The main researchers are Jiang yanxuan, Wang Xianshui, Jiang Yusheng, Wang Jinghan, Xu Qiang, Liu Lianhua and so on. Most of them take domestic and domestic ports as research objects and collect data to investigate COVID-19's impression of the shipping industry. For example, Wang Jinghan (2020) from the two aspects of shared economy and epidemic prevention and control measures, the thesis discusses the changes in COVID-19's shipping time and price, shipping network and policies, so as to refine the overall impact of the epidemic on the shipping industry. Based on the particularity of COVID-19 pandemic, on this basis, it analyzes the impact of viruses on the shipping industry through various aspects of globalization, and combines with the interventions taken by the government. So as to infer the positive countermeasures that the shipping industry should take and the overall development trend of the industry, and give the corresponding countermeasures on this basis.

Jiang yanxuan and Wang Xianshui (2006) analyzed the cargo loading and unloading, crew work and rest and crew certificate replacement involved in marine cargo transportation, and described the crew shift work and rest in detail. According to the treatment methods of some ports in China, they put forward the crew safety and shift change involved during the epidemic and the treatment methods of crew certificate.

2.3. Researches at Home

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a huge market. There is no organization or institution that can share resources to give advice to the participants of the world shipping industry. For these reasons, it is difficult to access the relevant information on the impact of the epidemic on the shipping industry and its countermeasures at home and abroad.

However, the research directions at home and abroad are quite different, which is not conducive to all-round management, The purpose of this thesis is to integrate the research and put forward some insignificant suggestions for the normal operation of the shipping industry.

3. Impacts on the Marine Transport

3.1. Impacts on Shipping Industry

In 2020, the global shipping industry started in the cold winter when the epidemic spread and the market superimposed. Novel coronavirus pneumonia, which was released by the World Trade Organization in the first quarter, was 95.5, lower than 96.6 in November 2019, and was quickly lowered by the outbreak of the COVID-19 pandemic.

Affected by the epidemic, China's manufacturing industry basically stagnated from January to February. In February, the PMI of manufacturing industry fell sharply to 35.7, a record low. In March, the resumption of work and production of enterprises was significantly accelerated, and the PMI began to rise; In February, JPMorgan's global manufacturing purchasing managers' index fell 3.2 points to 47.2, ending three consecutive months of expansion. Novel coronavirus pneumonia has been the most common case in the United States in March, with the outbreak and spread of Italy, Spain, Germany, France, Britain and other European countries. More countries and regions have joined the blockade of border areas, stoppage of production. With the increase of unemployment, the import demand of the United States, the world's largest importer, began to decline, and its Markit manufacturing PMI was 48.5, a record since 2009 New low since (Wu Minghua, 2020).

3.1.1. Impact on Marine Industry Employees

First, seafarers face the problem of employment. According to the International Chamber of shipping (2020), "As remarked in this year's Annual Review, the COVID- 19 pandemic has led to significant disruptions to the industry's way of working. ICS continues to be at the forefront of addressing the ongoing crew change crisis, making every effort to persuade governments to facilitate the repatriation of 400,000 seafarers stranded at sea."

Charles (et al,2021) mentioned: One of the most obvious health problems due to the pandemic is its impact on people's well-being (e.g., anxieties due to insecurity, confusion, emotional isolation, and stigma) which can lead to insomnia, self-harming, and suicidal behaviors. So far, the author summarizes several influences:

A. Emotional response to stress

Stress can produce a variety of emotional reactions, some are single, some are complex; Some reacted strongly, while others reacted weakly; Some have a long duration and some have a short duration. The main manifestations are anxiety, fear, anger and depression. Anxiety is the most common psychological stress response. Depression is a negative and pessimistic emotional state, which is usually related to "loss". The fear experience occurs when they lack their own sense of security and personal values. Anger can make you lose control of oneself.

B. Behavioral response to stress

It is a kind of coping strategy to eliminate the stress on the body and mind, so as to meet the needs of the individual.

3.1.2. Impact on Shipowners

For ship owners, there are the following effects:

First, the cumbersome epidemic prevention procedures make the ship's berthing cycle longer and increase the time and fuel cost;

Second, the crew cannot be replaced for a long time, and the shortage of crew makes the staff in a high load state, which is not conducive to the safety of the ship;

Third, due to the closure of the port caused by the epidemic, many ship owners had to skip the port and dock, resulting in breach of the contract.

3.1.3. Impact on Ports

"Less cargo and more ships" triggered the tide of suspension.

As for the impact of ports, Wu Minghua wrote that the Baltic dry bulk index (BDI) "fell for 14 consecutive years". By the end of March, the international dry bulk market was weak in the first quarter. And as COVID-19 spreads around the world, until mid-April, a total of 117 countries (regions) have declared a state of emergency, and some countries or regions have also taken measures to "seal off the country" and "seal off the city". At the same time, 38 countries (regions) have taken restrictive measures on trade in goods (except medical materials), and some countries (Vietnam, Cambodia, Russia, etc.) have taken measures such as banning the export of agricultural products or implementing a quota system, resulting in a sharp contraction in the import and export trade of the world's major economies. With the cancellation of orders and the loss of customers, enterprises have "no work to recover" for a time, and the shipping industry, which relies heavily on goods trade, soon found that it is also facing the dilemma of "no goods to transport".

In Li Qianwen and Zhou Dequan's view is that line arrangement has a great impact. In terms of berthing and unberthing, although it has not been affected by the epidemic for the time being, most ports need ships to conduct self-inspection and declare that there is no epidemic before they can arrange pilotage and tugboat berthing and unberthing. In terms of loading and unloading efficiency, affected by the return of migrant workers and delayed resumption of work during the long holiday, there is a shortage of wharf workers (especially general cargo steel), and the operation efficiency of all ports has generally decreased.

In addition, capital is also very important for ports. As Wang Jingyan (2020) wrote in her thesis When it comes to actively seeking diversified capital channels, adequate capital is an important foundation for the operation and development of an enterprise, especially for shipping enterprises. Whether shipping enterprises order to build ships, buy insurance for existing ships, maintain their own operating expenses of transport ships, and pay the wages of crew and employees, they all need a lot of capital investment, which These funds mainly come from the business income of shipping enterprises. (Wang Jingyan, 2020: 9).

However, during the epidemic period, due to the adverse impact on the main business, the business volume decreased and the business income decreased, which may make the shipping enterprises' own funds insufficient to maintain operating expenses.

4. Suggestions for Marine Transport under COVID-19 Pandemic

Under the COVID-19 pandemic, marine transport, as an important hub of the world of transportation, should shoulder corresponding responsibilities. Shipping enterprises shall abide by the local epidemic prevention policies and do a good job in epidemic prevention for crew members. Try to ensure the resumption of work and production and maintain the development of the enterprise.

4.1. Suggestions for the Employees

Epidemic prevention is the top priority. In addition to complying with the epidemic prevention policy, personal protection also needs to be strengthened. Reduce mobility and reduce the number of trips during ship berthing to prevent virus infection.

Then, the mental health of the crew should be paid attention to in order to choose an effective way of resistance in case of stress response.

(1). Enhance adaptation and response capacity. Everyone will encounter all kinds of disappointments in life and lead to psychological fluctuations, especially the crew group. The characteristics of life and work at sea determine that the crew group has great psychological pressure.

(2). Develop reasonable cognitive habits. Everyone will have different views or attitudes towards the understanding of stressors. Crew members should be encouraged to develop a more mature and constructive outlook on life, values and scientific thinking ability, and objectively understand various difficulties, such as major diseases. The party branches, ship political commissars and Party construction mechanisms established on state-owned enterprise ships can perform this responsibility well.

(3). Temper will and quality. "If you don't experience the storm, you can't see the rainbow". The crew's hard work, survival ability and ability to resist pressure are better than other groups. The reason is the strong will quality honed by long-term offshore work and life.

(4). Exercise a healthy body. Novel coronavirus pneumonia is not only conducive to the physical infection of the disease, but also conducive to the preparation of mental health and psychological self-confidence. Otherwise, physically weak people will lose confidence in the disease and lose the ability to fight diseases.

(5). Cultivate good interests and hobbies. In the face of difficulties or diseases, good interests and hobbies help to distract attention and improve immunity. Most of the ships are equipped with entertainment and fitness facilities. Participating in playing ball, chess and gymnastics are good interests and hobbies, which can improve the love of life, passion for work and confidence in overcoming difficulties.

4.2. Suggestions for the Ports

(1). Fulfill corporate obligations and pay attention to epidemic prevention and control is the top priority. Only a good environment can provide conditions for trade. The port should take into account the sustainability of the epidemic development and pay close attention to the health of ships and personnel approaching the port. If infectious diseases or suspected persons are found, they shall be reported in time and handled properly. Early detection of cases, early reporting, early isolation and early disposal shall be achieved. We will ensure people's health and life safety.

(2). Improve port operation efficiency and reduce operating costs

Affected by the epidemic, the port will face great operating pressure. In order to survive in the dilemma, enterprises should respond to the epidemic situation rationally and objectively. Start with your own business and pay attention to market changes. Improve port digitization as much as possible in order to reduce costs.

5. Conclusion

International marine transportation is the main artery of the world economy. This thesis seeks to explore the impact of COVID-19 on international shipping, and puts forward measures to deal with it so as to play a certain role in reference to the shipping industry.

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