

Research the Impact of Rising Freight Rates on the Real Economy under COVID-19

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Abstract: In the deep integration of global industrial and supply chains, COVID-19 has negatively impacted global flows of goods, people, and capital, resulting in disruptions to the global supply chain. The transportation industry plays a vital role in the real economy in contemporary society because most enterprises in the real economy are production-oriented. Most of them need to support their industrial chain through transportation. Since the lack of concern from society has contributed to the difficult development of these real economy enterprises, actions such as subsidies, controlling the freight rates, and other staff like that should be taken to prevent the economic crisis. This paper summarizes the phenomenon of rising freight rates and its impact on the real economy under the pandemic through data analysis and real-life example analysis. Moreover, through the conclusions drawn in the observation and understanding of the needs of entrepreneurs in real cases, some solutions have been developed to improve this problem.

Keywords: COVID-19, Rising Freight Rates, Real Economy, Impact.

1. Introduction

1.1 Research background

When the COVID-19 broke out in 2020, this unprecedented disaster quickly shocked the society and the economy of the world. People's demand for goods surged during the pandemic. Most of them put much money on these goods by online shopping instead of focusing on services due to the lockdown and quarantine regulations executed by the government. As a result, the demand for containerized trade surged by the supply-side capacity constraints such as container shortages. The mismatch between the increased demand led to surge rates of freight on all kinds of containers. For instance, the Shanghai Container Freight Index (SCFI) spot price for Shanghai-Europe routes was below \$1,000 per TEU in June 2020, jumped to around \$4,000 per TEU by 2020, and rose to \$7,395 by the end of July 2021 [1]. Because of the container price surge, many entities and enterprises that rely on containerized trade are also influenced. As a result, the enterprises were compelled to put more money into the freight by importing fewer items due to the limited investment.

1.2 Literature review

Gonzalez found that during the COVID-19, the lack of infrastructure in Colombia was exposed to the public and led to the rising freight rate. Thus, foreign investment was not encouraged in this situation. In addition, the infrastructure in developing countries is still a big deal that needs to be improved immediately [2]. The United States International Trade Commission found that the impacts of COVID-19 on the whole trade market in the United States are mainly about the reduction of capacity of container shipping caused by the slowdown in manufacturing in China and the high COVID infection rate among port workers. These factors all led to the higher freight rate, which shocked the economy throughout the whole country [3].

Not only the United States but many countries have been unable to develop a multi-faceted economy due to the economic depression caused by the negative impact of the COVID-19, which affects the development of the entire society.

1.3 Research gap

Most scholars researched the impact of COVID-19 on the rising freight rate that caused the higher cost of imported goods and its effects on workers.

In contrast, they focus less on the impact of a higher freight rate on the real economy, especially on some small enterprises. Due to the COVID-19 and few incomes, numerous brick-and-mortar enterprises face bankruptcy, but society pays less attention to these enterprises. The problem still exists because the adjustment agencies, such as the government, do not understand what entrepreneurs need most and what needs to be solved urgently in the current pandemic. Therefore, some of the government's policies do not play a very good role in regulating the urgent needs of enterprises. Since the lack of concern from society and the infrequent actions taken by the society contributed to the difficult development of these real economy enterprises, more improvements in restrictions and regulations should be based on more comprehension of these basic needs.

1.4 Research framework

This paper will investigate how the rising freight rate influences the real economy and aim to alleviate this phenomenon. First of all, this paper analyzes the income statistics of some enterprises in the real economy and the real situation of small enterprises suffering from COVID-19 for many years. This paper will briefly understand the actual economic situation and analyze the changes in the whole market. Next, according to the changes, this paper will find out the primary cause in this case and the current greatest needs of enterprises. Then, some government policies on solving this phenomenon and some shortages and gaps regarding these solutions. In the end, some better resolutions will be provided to solve the problem thoroughly.

2. Method

2.1 Statistical method

The statistical method analyzes or represents statistical data, a procedure for calculating a statistic[4]. This paper analyzes statistics such as the changes in freight rate, the income of real economy enterprises, and the bankruptcy rate among some middle and small-sized enterprises during COVID-19. The enterprises' conditions and challenges can be easily found to optimize the solutions and maximize the economic benefit that can help escape from becoming impoverished.

2.2 Case study

The case study is an intensive analysis of an individual unit (such as a person or community), stressing developmental factors concerning the environment [5]. This paper will use a case study of small enterprises. Small businesses are more able to highlight the huge impact of the current pandemic and better reflect the needs of the people and analyze the economic loss of enterprises under COVID-19 to reflect the condition of businesses and industries that depend on transportation and further upgrade plans.

2.3 Interview method

In social science, interviews are a data collection method involving two or more people exchanging information through questions and answers. A researcher designs the questions to elicit information from interview participants on a specific topic or set of topics [6]. One-on-one interviews provide more in-depth and direct access to precise data and the business's dilemmas. After interviewing a small entrepreneur, this paper will draw a side view of what most companies need during the epidemic to design better solutions in the following discussion part.

3. Results

Based on the freight tracking market is estimated at US\$532.7 Billion in the year 2022 in the U.S. The country currently accounts for 24.07% of the global market. China, the second-largest economy, is forecasted that it will approximately reach a freight tracking size of US\$586.8 in the year 2026 [8]. From the statistic, the fact that the freight market plays an unreplaceable role in each country's economy is reflected.

In the immediate COVID-19 situation, many enterprises rely on transportation due to the importance of the freight market to the whole economy. The dilemma, including container freight and air freight, is facing a serious problem- the increasing rate of freight that has become an agenda for majorities of enterprises.

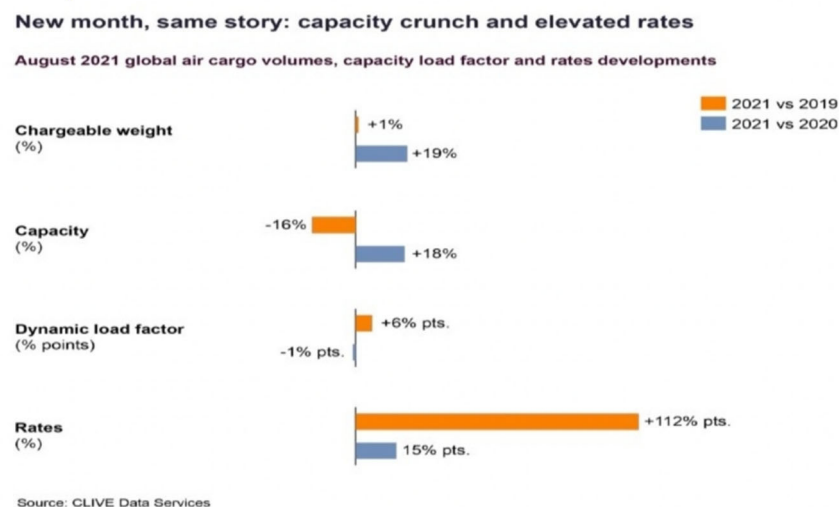


Figure.1 Statistical data about the changes in air freight
(Source: CLIVE Data Services [7])

Figure.1 indicates the capacity crunch and elevated rates in different years but in the same situation, emphasizing the impact of COVID-19 on this global change. There is a maintaining scale for the whole society to evaluate the rates that can be easier to notice the changes. The trend of each indicator is that comparing 2019 to 2021, which refers that before and after the pandemic, the changes are significantly greater than comparing 2020 to 2021, which refers to during the pandemic. The statistic shows that COVID-19 negatively impacted the freight industry through the market did make some effort to sustain the market without leading to an economic crisis. However, the sudden increase in freight costs for many companies that rely on it gets no respite, especially some small-sized enterprises. These small-sized enterprises lack sufficient funds. When encountering a sudden increase in freight, they do not have excess funds to turn around, easily leading to bankruptcy. In a research on the impact of COVID-19 on small business outcomes and expectations in the U.S, the sample the research chose is more than 5,800 small businesses out of 4.6 million, a network in 2020 that was the start of the pandemic. The specific time taken by the research was between March 28 and April 4 to better reflect the enterprises' intentions and desires at a critical point full of uncertainties in both industries and society. In the result, across the full sample, 43% of businesses had temporarily closed due to the effect caused by COVID-19. The decline was particularly sharp in the Mid-Atlantic region (including New York), where 54% of the companies went bankrupt, and employment was immediately down by 47%. The impact of COVID-19 has also varied widely across industries through this research. For instance, employment in industries that involve food services, art, entertainment, and retail declined more than in industries of finance, professional service, and real estate-related businesses [9]. Thus, it turns out that most of the industries not greatly affected by the pandemic do not need production and transportation.

As the raw material for making glass, quartz sand is bound to play a vital role in the glass industry, and it is even related to the life and death of the entire glass industry chain. The silica sand market in

this application area is expected to benefit from the growing demand for flat glass and glass fibers in the rapidly growing electronics and construction industries in emerging economies in Asia, especially India and China [11]. This can conclude that once the quartz sand industry declines, China Unicom's glass manufacturing industry will also be affected. For a country with a large demand for glass, especially China, many industries will stagnate once there is a lack of glass supply sources, such as construction. This leads to a negative cycle that prevents the entire society from progressing. Most people's basic needs cannot be satisfied, which might cause the governments' prestige to be insufficient due to the mass's dissatisfaction.

The freight industry plays a vital role in the survival of some enterprises during the pandemic. The quartz sand business is also an industry that needs to be mined and transported to other companies for further processing. A small company in the coastal Chinese city of Zhanjiang mainly mines quartz sand and ships it by the container. Before the pandemic, the freight of a container was 3,200 yuan, and after the epidemic, it was 3,800 yuan. The difference between a container before and after the epidemic was 600 yuan, and the company's product-low, iron quartz sand, was 30 tons in one container. One-ton reduced profit by 20 yuan. The small company's main survival is its excess funds to accommodate the sudden increase in container prices and promptly renegotiate prices with customers. Unlike many small businesses that go bankrupt, most of them don't have the extra money on their hands to stay afloat. During the pandemic, the financial shortage of many enterprises was exposed. It also contributed to the selection of enterprises.

This paper especially interviewed Mr. Feng, the company's general manager mentioned above. His main dilemma now is the increase in shipping costs, but he cannot respond to the price increase with his buyers. Since people are more willing to defend their interests, Mr. Feng cannot afford any less or even a loss than before. Fortunately, the company has survived the pandemic because it had sufficient capital reserves before. He also mentioned that the mining of quartz sand has also been affected during COVID-19. Because the mining of quartz sand requires human resources, but during the epidemic, the government has taken protective measures such as isolation and city closure. In order to protect the legitimate rights and interests of workers, the company is still required to pay wages without the worker's work. Therefore, the mining volume of quartz sand is not as large as before at the same cost case.

The severe price increase caused by the sharp drop in the number of containers during the epidemic has caused huge economic losses to production industries such as the quartz sand industry. It has also affected industries that purchase production products, such as the glass manufacturing industry. The resulting large-scale industry slack affects the country's economic development.

4. Discussion

4.1 Subsidize freight for enterprises

During COVID-19, the Chinese government relaxed the policy on housing loans. At the same time, the government also eased the terms of loans for small and medium-sized enterprises to ensure their vitality [10].

Because of the rapidly increasing freight costs during the pandemic, the national government may also appropriately subsidize enterprises. However, to prevent some companies from relying on subsidies to earn the price difference and properly screen out some shell companies that do not have enough funds, the government should control the cost of subsidies roughly within the size of the increased cost. The government can also reduce the interest on loans, reducing the debt pressure on entrepreneurs to a certain extent.

The government needs to subsidize companies that depend on the transportation industry, but it also needs to subsidize some companies that buy those products. Due to the impact of the pandemic, prices have risen. And due to the increase in shipping costs, some production companies, such as the quartz sand industry, have been hit hard. They have to raise prices to ensure profits, but many industries that buy products, such as the glass industry, will buy a small amount because of the

increase in the price of quartz sand to protect themselves from losing money. As a result, glass production will be less or even more shoddy than the original, which will affect the operation of more industrial chains. If the government can subsidize industries such as glass, the country's development will be less hindered by the pandemic.

4.2 Control freight

The national government needs to control the freight rate to prevent the economic depression caused by the phenomenon of the monopoly of the market. In the major transportation companies, the number of containers should be distributed fairly and evenly to prevent the occurrence of the phenomenon of speculation of container prices. Only in this way can the stability of the entire market be ensured that can correct market stability after an economic turmoil as soon as possible.

The government plays a role in market adjustment and market supervision not to let the market fall into serious market failure. Also, according to the market situation of the appropriate industry, it can relax the loan policy or subsidized work at any time. These measures mobilize the enthusiasm of enterprises and people to work.

4.3 Regulations on enterprises

At the same time, government policies also need to be formulated and improved. The government should re-evaluate salaries for companies and their employees. According to the monthly attendance of employees and whether the reason for absence is due to the isolation under the national policy or the evaluation of justifiable reasons, it is determined whether the employee's salary should be the same as usual or whether it needs to be increased or decreased accordingly. In order to prevent unscrupulous companies from making false reports and maliciously deducting wages from employees, the government should set up a special agency to supervise the rationality of wage distribution by companies. Enterprises need to provide the relevant authorities with accurate attendance records and the government's isolation policy to prove the fairness of wage distribution.

4.4 Introduction of technical talents

The processing of quartz sand is still a very technically demanding thing. If the role of the transported quartz sand can be maximized, it will surely alleviate the economic losses caused by the epidemic. For professional technical processing, the national government also needs to spend money to invite many talents to study and solve this problem, which is also beneficial to national science and technology development.

5. Conclusion

5.1 Findings

This reflects that some industries requiring production and transportation have suffered more setbacks than others and have improved during the epidemic. Given this situation, this paper studies four methods to solve this problem: government subsidy, government control and supervision, government establishment of new regulations to restrict enterprises and workers, and introduction of corresponding technical talents.

This paper aims to solve the problems currently faced by most Chinese industries and give corresponding countermeasures and improve the loopholes in the current existing laws and regulations through real data, real cases, and interviews. Thinking about an economic phenomenon from multiple dimensions leads to multiple impacts and is related to the impact on the prospects of the entire industrial chain and social development. As a major production country globally, due to a series of problems caused by the epidemic's impact, many important productive forces have suffered serious setbacks, resulting in relative slack in most industries, affecting China's economic development and social progress.

5.2 Limitations and Future studies

However, this paper still has many limitations. For example, in the case study, the data for just one company is not very convincing. The industry mentioned is also completely insufficient in only one aspect. More data is needed to support this paper to become much more complete. Moreover, the example of small enterprises does not fully explain the dilemma faced by all enterprises. For example, small enterprises may face the problem of capital chain disconnection, but large enterprises may not encounter it. Hence, this paper needs more practical research to demonstrate its feasibility.

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