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## **ПРЕДЛОЖЕНИЯ ПО СТРАТЕГИИ РАЗВИТИЯ КИТАЙСКИХ ГРУЗОВЫХ АВИАТРАНСПОРТНЫХ ПРЕДПРИЯТИЙ В РАМКАХ КОВИД-19**

### *Аннотация:*

В контексте ускоренного распространения ковид-19 на Китай карантинные меры Китая привели к полному нарушению производственно-сбытовой цепочки в верхнем и нижнем звеньях цепочки материально-технического снабжения, причем предприятия, занимающиеся воздушными грузоперевозками, являются важным звеном на рынке производственно-сбытовой цепочки и оказывают значительное воздействие. В настоящем документе предпринята попытка проанализировать и обсудить условия развития китайских грузовых авиатранспортных предприятий под влиянием новой эпидемии короны с помощью анализа ССВУ и предложить стратегию развития предприятий в контексте ковид-19.

### *Ключевые слова:*

SWOT, Китайская грузовая компания, ковид-19

### **1.Introduction**

According to the World Bank data, the trade market as a barometer of the air cargo industry, the global GDP growth of 2.4% and trade growth of 1.4% in 2019, the growth rate fell to the lowest level since the financial crisis in 2008. In the same year, the global air cargo market fell 3.3% year-on-year, completing 61.2 million tons of cargo and mail traffic. 2020 U.S. elections, Britain's exit from the European Union, tensions in the Middle East and other places, changes in jet fuel prices, etc., China's air cargo situation is still not optimistic. On the eve of Spring Festival, the global trade situation was further aggravated by the sudden impact of the new crown epidemic. In particular, on January 31, WHO recognized the new crown outbreak as an "international public health emergency (hereinafter referred to as "PHEIC")". Although travel and trade restrictions are not recommended, exports are still greatly affected and some countries are less receptive to Chinese exports, with more complicated procedures and higher transportation costs, resulting in significant short-term fluctuations in the air cargo market.

## 2.SWOT development analysis

### 2.1Strength of the development of China's air cargo industry (Strength)

#### 2.1.1Large air cargo market scale

In 2019, China's air cargo volume was 7.526 million tons, up 1.9% year-on-year (2010-2019 China's air cargo market development data shown in Figure 1), ranking second in the world in terms of cargo scale. China has put forward higher requirements for domestic air cargo enterprises: they must take up the mission of serving social production, meeting the needs of people's lives, and opening up international economic and trade channels.



Figure 1 – China's air cargo volume data from 2010-2019

#### 2.1.2Diversification of air cargo business development

According to preliminary statistics, as of January 2020, there were 158 all-cargo airlines in mainland China (Table 1). Express enterprises represented by the postal service, SF and China Unicom, and e-commerce enterprises represented by Jingdong and Cainiao are vigorously developing air cargo business. Domestic private air cargo enterprises such as SF Express and Yuan Tong Airlines are developing rapidly, among which, the fleet size of SF Airlines reached 58. In October 2019, SF entered into a strategic cooperation with German logistics giant DHL and wholly acquired the company's supply chain business in China. State-owned enterprises, represented by China Post, are also actively seeking breakthroughs and exploring new air cargo markets, with Post Air currently ranking second in China with 27 all-cargo aircraft. Traditional airlines are gradually divesting their cargo business and setting up specialized cargo airline enterprises. The mixed ownership reform of the three major airlines is steadily advancing.

Table 1 – Data statistics of major cargo airlines in China  
(Data source: collection and sorting according to the network data)

Airline companies	Amount of aircraft	Aircraft type					
		B737F	B747F	B757F	B767F	B777F	A300
CK(China Cargo)	9		3			6	
CA(AirChina Cargo)	15		3	4		8	
CZ (South Cargo)	14		2			12	
Y8 (Jinpeng)	12	9	3				
CF (Postal Air)	27	20		7			
O3 (SF)	58	17	2	31	8		
YG (Yuan Tong)	12	7		5			
UW (YouTong)	6						6
GS (Tianjin Cargo)	4	4					
ZY (China Airlines Cargo)	1			1			
GI(Zhongyuan Longhao)	6	6					

## 2.2 Disadvantages of China Air Freight Enterprises (Weakness)

### 2.2.1 Airlift is insufficient

According to the official website of the Civil Aviation Administration, there are 238 civil transport airports in China, six of which have been suspended as planned due to the COVID-19 pandemic, and the remaining normal operation airports have been affected to varying degrees. Taking the real-time monitoring data of flight operation on February 13 as an example, China's airport planned 13,660 flights and 2,711 actual flights, with a flight rate of only 18.3%. In terms of spatial distribution, east China and central China were most severely affected by COVID-19. Taking the statistical data on February 6 as an example (shown in Figure 2), 74.6% of airport flights in East China and 78.1% of flights in central and southern China were cancelled, while the flight execution rate was 25.4% and 21.9% respectively. Due to the COVID-19 pandemic, airport transport capacity has dropped significantly, less than 30 percent of the normal period.



Figure 2 – Execution data of China Airport on February 6, 2020 (by region)  
(Data source: Airsavvi)

### 2.2.3 The competitiveness of air cargo enterprises is weak

From the perspective of global air cargo market share, Chinese air cargo enterprises are not internationalized and competitive enough, and local air cargo enterprises only occupy about 30% of China's international air cargo market share. The end of the year and the beginning of the year are the traditional low season for the international cargo industry, and foreign air cargo companies are in the seasonal adjustment stage of capacity, with obvious flight cuts, further causing the embarrassing situation of lack of capacity in China. In recent years, leading companies in the industry, such as Postal Express, SF Express, Three Links and other backbone express logistics

enterprises are vigorously laying out the air cargo market, air logistics supply chain management level has improved, but still can not meet the needs of the national daily life, business development.

## **2.2.4 The uncertainty of market demand**

Increase the current Chinese economic development into a new normal, industrial restructuring, economic growth slowdown, freight market demand uncertainty increased. In particular, China's tertiary industry currently accounts for 53.9%, and consumer spending contributes up to 57.8% to the economy, and consumption has fallen to a freezing point under the impact of the new crown epidemic. With reference to the impact of SARS in 2003, we can see that the impact of the new epidemic will be even more serious this time. In terms of foreign trade, China's export trade grew by 5% in 2019 but exports to the U.S. fell by 12.7%, a record low since 2008, due to the global economic downturn and the impact of trade friction between China and the U.S. Although the first stage of the trade game between China and the U.S. has been achieved, the overall situation of China's foreign exports is still severe due to the impact of the new crown epidemic, and the air cargo market will see a low point of development.

## **2.3 Opportunities for the development of Chinese air cargo enterprises (Opportunity)**

### **2.3.1 Improve the efficiency of air cargo athletes**

Since the outbreak of the new crown epidemic, China's civil aviation sector has mobilized and coordinated cargo capacity to open up a "green channel" for the transportation of emergency supplies. Cargo airlines are actively flying domestic and international cargo charter flights to transport emergency relief materials, and a large number of passenger flights are carrying out material transportation through belly class capacity. Data from the Civil Aviation Administration shows that since the full-scale launch of the fight against the epidemic on January 20, as of March 1, the civil aviation system has guaranteed a total of 19,937 flights involving epidemic prevention and control, transporting 283,538 pieces of prevention and control materials, totaling 27,087.71 tons. Among them, 591 flights were sent to Hubei, transporting 748,637 pieces of prevention and control materials, with a total of 7,464.6 tons. The strong mobilization and organization efficiency provided strong support to ensure the early victory of anti-epidemic and disaster relief.

### **2.3.2 Opportunities brought by the development of e-commerce and express delivery**

In the past decade, China's e-commerce and express delivery industry has been developing rapidly, with an average annual growth rate of more than 40% in express delivery volume during the decade. At the same time, as the world's largest e-commerce market, China's transaction scale is expected to exceed \$30 trillion and its global market share will exceed 40%. During the New Crown epidemic, due to the introduction of control measures around the world, the demand for e-commerce in people's daily lives has surged, and the demand for express parcels and other time-sensitive logistics products has proliferated, so the market demand for air cargo will also expand.

### **2.3.4 Cold chain transport for the air cargo market to open up new horizons**

Data show that the market size of China's cold chain logistics is about 300 billion in 2018, and will reach 380 billion in 2019. Especially in 2020, China will enter a well-off society, and people's material life will be richer, and the market space for fresh products and high-end medical products will be greatly expanded. It is also due to the convenient e-commerce shopping environment mentioned above and the increase in demand for fresh food and high-end pharmaceutical products, the market size of China's cold chain logistics is expected to exceed 400 billion in 2020, and the aviation cold chain market will be further activated by then.

### **2.3.5 New technology application promotes the development of the industry**

The logistics industry is under great pressure and challenges to ensure that the relief and anti-epidemic materials are delivered to the front line quickly. A large number of new technologies and equipment have started to play an important role in the dramatic anti-epidemic and disaster

relief operations. Among them, the emerging logistics technology represented by freight drone technology is the most eye-catching, which realizes contactless and precise coverage of logistics end distribution. For example, on February 12, SF Express delivered medical protection materials weighing about 3.3Kg to medical staff at Jinyintan Hospital in Wuhan through a cargo drone. On February 16, Jingdong used drone technology to carry out aerial disinfection for the densely populated area of Erdos High-tech Zone Management Committee in Inner Mongolia, and on February 18, it carried out low-altitude disinfection for hospitals and communities with epidemics in Dalat Banner. In addition, not only the drone technology, but also the latest blockchain technology is shining in the logistics industry. In the future, the emerging technologies represented by cargo drone technology and blockchain technology will become a powerful tool to promote the rapid development of air cargo and the logistics industry as a whole.

## **2.4 Challenges to the development of Chinese air cargo enterprises (Threats)**

### **2.4.1 The international external development environment is becoming increasingly complex**

More than six years after the "Belt and Road" initiative was proposed, more than 100 countries and organizations around the world have participated in it, and the bilateral or multilateral trade volume between China and related countries exceeds USD 5 trillion. The trade game between China and other world powers has become increasingly intense, and China's development environment and the global trade situation are clearly volatile. In this context, the outbreak of the new crown epidemic in China has attracted global attention. In particular, after the occurrence of PHEIC, several countries and regions, including the United States, have taken entry control measures against China, which has disrupted China's foreign trade and reduced or forced to stop a large number of international flights. Therefore, it is a challenge to ensure the smooth flow of international transportation network and the smooth transportation of overseas emergency supplies. Active international cooperation to effectively respond to the epidemic and avoid a "panic" in the global air cargo market is imminent.

### **2.4.2 Revenue pressure in the context of the new crown epidemic**

After the outbreak of the new crown epidemic, the logistics industry, especially the air cargo business revenue has been a serious impact. But it is not difficult to compare the SARS epidemic in 2003, the epidemic is short-term, phased. 2003 SARS period, the logistics industry has experienced a decline in revenue, cost surge and other multiple pressures, the direct performance of the industry's revenue growth of negative 20% year-on-year, total cost growth of 14.5%. We should also see that although the outbreak occurred during the traditional low season of the freight market, the new epidemic was more contagious, lasted longer and had a greater impact. Considering the fierce competition in the air cargo market, the capital chain of enterprises is generally tight, and coupled with the cost and revenue pressure caused by the impact of the New Guinea epidemic, the liquidity of enterprises will further shrink. Difficulties in paying employees' salaries, accounts payable and rent will gradually emerge. Some SMEs with insufficient cash flow will fall into sudden operational difficulties and even bankruptcy.

### **2.4.3 Employee risks in the context of the new crown epidemic**

As mentioned earlier, mandatory quarantine measures, including city closures and road closures, were taken nationwide to prevent the spread of the new crown outbreak. Second, the nationwide extended leave measures have increased the risk of employees being infected while on leave, resulting in short-term incapacity and work-related injuries, further increasing business risks; third, some employees have developed psychological disorders due to excessive panic, affecting the normal operation of business. This affects the normal operation of the business and the stability of the team. The superposition of multiple factors causes the loss of human resources, which seriously affects the normal operation of the enterprise.

### 3. Suggestions for air cargo enterprise development strategy

Combining the analysis of strengths, weaknesses, opportunities and challenges of Chinese air cargo enterprises in the context of COVID-19, a strategy selection matrix was constructed (shown in Figure 3). Since this paper analyzes the impact of the new crown epidemic on Chinese air cargo enterprises, it focuses on the impact of external environmental changes on air cargo enterprises and recommends the WO/WT strategy (seize opportunities, overcome shortcomings, and meet external challenges).

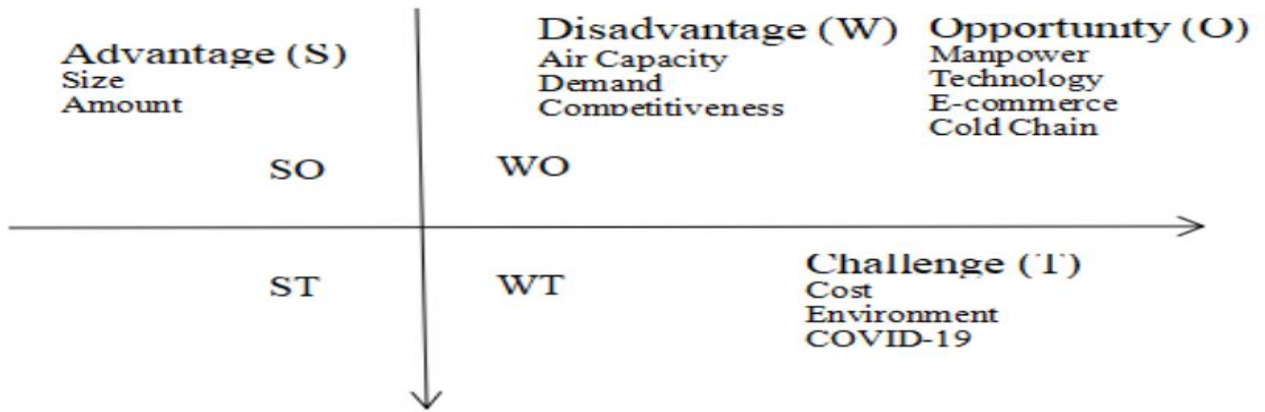


Figure 3 – SWOT strategy selection matrix

#### 3.1 Strengthen organizational efforts and mobilization

As the main body of the logistics industry, air cargo enterprises are the main force in the delivery of materials for the prevention and control of the new epidemic. The enterprises need to actively play the advantages of fast and efficient air transportation, fully communicate and collaborate with relevant departments of civil aviation, and actively undertake major transportation work such as the delivery and deployment of medical emergency supplies. First, strengthen the coordination with health, civil aviation, transportation, customs and other departments and relevant local governments, and strive to jointly establish a convenient and efficient response mechanism for emergency supplies transportation services. Second, to set up a research and judgment group on the new crown epidemic to accurately predict the situation of the prevention and control of the new crown epidemic, both to continuously improve the mobilization mechanism of the enterprise itself, to strengthen the synergy with airports, airlines and express logistics enterprises, and to accurately research and judge the situation after the epidemic is over. Third, we should do a good job of emergency transport security in Hubei, especially Wuhan and other areas hardest hit by the new crown epidemic, allocate additional necessary safety and protection facilities, and adjust capacity in a timely manner according to the needs of the epidemic area, and take counterpart support and directional services when necessary to enhance the emergency transport security capacity of relevant areas.

#### 3.2 Improve transportation organization plan

With the continuous strengthening of the prevention and control of the new crown epidemic, the situation of epidemic prevention and control is gradually developing in a good direction, the logistics and distribution needs delayed by the resumption of work will be gradually released, and the transport protection plan for the special period should be done in a timely manner. First, strengthen the cooperation in the industry to avoid the backlog of goods in some areas due to the reduction of capacity by airline companies, and to ensure the basic smoothness of the distribution network of emergency materials to the greatest extent; second, for emergency medical and living materials during the prevention and control of the New Crown epidemic, we can meet the logistics transportation demand by communicating and coordinating with the hub airport to release the time limit and increase the frequency; third, further improve the layout of the enterprise network and adjust the capacity at the right time. Third, further improve the layout of the enterprise

network and adjust the capacity at the right time. Strengthen the investment in strategic resources node resources of important hub airports at home and abroad, and accelerate the construction of a global cargo system.

### **3.3 Continued investment in smart logistics**

In the fight against the new epidemic, a large number of companies have initially achieved the goal of integrating transportation and distribution by investing in smart logistics technology, which has given them more market power for development. For example, through big data, Jingdong Logistics analyzed the historical orders and population distribution in the area of the new epidemic and predicted the future order pattern, so as to achieve the goal of meeting the orders of key hospitals in Wuhan with priority and accurate delivery; Just-in-time smart logistics system opened 13 green cross-border channels in the United States, Mexico and Japan for free to ensure the safe and efficient transportation of materials to the front line to support the fight against epidemic; Cainiao established 3 core reserve areas and 3 trunk arteries to help Wuhan. Cainiao established 3 core reserve areas and 3 trunk arteries to support Wuhan, and built a special warehouse for medical supplies in Wuhan in 6 hours, while relying on the global intelligent network to open up the customs clearance process and create many green freight channels to reach the epidemic areas within two days. Looking to the future, building a smart logistics system and intelligent supply chain operation system by strengthening technology investment will be the key development direction for freight companies after the epidemic.

### **3.4 Improving supply chain service capabilities**

As a new epidemic sweeps across the country, traditional freight companies relying on a single campus reserve always appear to be weak, while emerging supply chain companies are springing up with great vigor. China CaiBird Logistics, with its complete supply chain system, cooperated directly with upstream brand suppliers of masks and protective clothing to ensure the supply and distribution efficiency of medical supplies on the front line of the epidemic; Haier, relying on its global layout, completed the distribution of four batches of aid materials such as funds, medical equipment and IoT home appliances in the epidemic area; Midea launched a global procurement platform, playing the advantage of overseas supply chain, in Japan, South Korea, Germany, Italy 10 countries such as the procurement of medical masks and other materials sent to Hubei. The practice of enterprises fully illustrates that the role of modern freight in the entire supply chain has expanded from transportation to front-end procurement, back-end distribution, resource and inventory allocation, etc., to achieve a full range of value-added supply chain services level.

### **3.5 Provide personalized services**

In the traditional freight industry competition into the white-hot stage, the companies should be customer-centric, providing specialized and personalized services to cultivate core competitiveness. For example, strengthen cooperation with e-commerce enterprises to provide door-to-door e-commerce express services; develop new markets, strengthen the cold chain of drugs, fresh fruit transportation security capabilities; second, develop a flexible price system. To cope with the rapidly changing external market environment, companies should focus on researching price strategies that are conducive to the development of the freight market. By segmenting the freight market and implementing different price strategies for different routes, different seasons and different goods, the supply and demand relationship will be adjusted.

## **4. Conclusion and outlook**

The epidemic of Xinhua is temporary, but the development of the enterprise is permanent. We believe that under the strong leadership of the Party Central Committee, with the joint efforts of people around the world, with the cooperation of logistics people, and with the unremitting efforts of air cargo people, we will overcome difficulties together through technological

innovation, model innovation, and service innovation to achieve rapid recovery of the air cargo industry and meet the arrival of huge market demand.

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### SUGGESTIONS FOR THE DEVELOPMENT STRATEGY OF CHINESE AIR CARGO ENTERPRISES UNDER THE COVID-19

*Abstract:*

In the context of the accelerated spread of COVID-19 to China, China's quarantine measures have led to a comprehensive disruption of the upstream and downstream of the logistics supply chain, with air cargo enterprises as an important link in the supply chain market having a significant impact. This paper attempts to analyze and discuss the development environment of Chinese air cargo enterprises under the influence of the new crown epidemic through SWOT analysis, and propose the development strategy of enterprises in the context of COVID-19.

*Key words:*

SWOT, China Marine Cargo, COVID-19