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Analysis of the Current Situation, Problems and Countermeasures of Civil Aviation in China

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Abstract: After the founding of New China, some external competition and internal policy support led to the rapid development of civil aviation. In the process of development, some problems have also been found and solved. Up to now, China's civil aviation industry has a huge scale and is one of the most important industries in China, with a growth rate far exceeding the international level. However, due to the unstable international situation, airlines are under pressure due to the rise of oil prices and the reduction of passenger traffic, which also exposes many new problems. This paper describes four current problems of civil aviation. The problems are rough management and neglect of industrial structure, monopoly in the aviation oil and material supply sector, which is not conducive to reducing enterprise costs, excessive intervention in enterprise management, which hinders moderate competition in the air transport market, and relatively low economic efficiency of civil aviation. Solutions are also given to each of the above problems, which include industrial structure policy, industrial investment policy, anti-monopoly law and other related policies and legal systems.

Keyword: China, civil aviation, industrial structure policy

1. Introduction and Current Status

Since the outbreak of the new crown epidemic in 2020, the cross-regional movement of people has been strictly restricted, and the number of passengers in the civil aviation industry in China has decreased sharply, which has dealt a serious blow to the entire industry. However, Chinese civil aviation enterprises have long been faced with problems such as serious shortage of airspace resources, weak competitiveness in the international market, and high cost of aviation fuel. Many prominent contradictions and problems have erupted during this period of time, and the entire industry has suffered serious losses and faced severe challenges. Chinese civil aviation enterprises are urgent to make innovations in industrial structure, operation mode, cost control and other aspects to overcome difficulties.

As the second largest economy in the world, China's civil air transport industry is huge. It is an important strategic industry in China and an important part of modern transportation. Under the dual influence of the government's institutional reform of China's civil aviation enterprises and China's accession to the WTO, China's civil air transport industry has entered a phase of rapid development,

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with an average annual growth rate of 18% in total traffic turnover over the past 20 years, more than twice the world average and the second highest international ranking. In 2019, the year before COVID-19, the civil aviation industry directly contributed more than 200 billion yuan to China's economy and has become an important economic pillar for the country. However, its large size also means extreme demand volatility, and China's civil aviation industry is significantly affected by various contingent events [1]. In particular, since the outbreak in 2020, the epidemic has continued to occur regionally, the movement of people has been severely restricted frequently, and airlines have grounded or significantly reduced their flight schedules accordingly [2]. This has resulted in a significant drop in both passenger and cargo traffic. For 2020 alone, the total number of passenger flights performed by Chinese airlines is down by approximately 22% overall compared to 2019. The pressure on both the supply and demand side of flights is significant. It directly cuts into the revenue capacity of the Chinese national trough. Changes and innovations in the shipping model can play a positive role in achieving efficient allocation of shipping resources and in getting out of market underestimation. While the pressure on the revenue side is increasing, China's civil aviation costs remain high and cost control has also revealed numerous problems [3]. Aviation fuel is the largest cost item in the air transportation industry. Chinese airlines' jet fuel costs account for 30-40% of operating costs, while the world average is only at 23%. Particularly affected by the shaky world situation in 2022, oil prices are highly volatile and rising, putting enormous cost pressure on the Chinese civil aviation industry [4]. The use of financial derivatives such as options to hedge the risk of jet fuel delivery and achieve hedging of aviation fuel is considered one of the necessary measures for the civil aviation industry to reduce costs, avoid risks and create profits, which can effectively meet the challenges to cost control under the current situation [5]. China Eastern Airlines and other large civil aviation companies have used financial derivatives to fix the delivery price of the purchased jet fuel in the early stage and have played a certain role. However, due to the immaturity of technology, its goals have not been fully achieved and some negative effects have been produced. Therefore, the improvement of financial derivatives and the adjustment under the new situation are particularly important for cost control. As a result of the significant contraction of shipping business, the regional differences in industrial concentration in China's civil aviation industry are more significant [6]. The civil aviation industry in eastern China has the group advantage of resisting market risks and plundering market resources based on its mature specialized agglomeration. However, the civil aviation industry in other regions is more significantly hit by the current market fluctuations due to the lagging development of the industry and the market competition pressure is continued to increase, which means the the survival of these businesses is severely challenged. This case further aggravates the imbalance in the distribution of industrial resource elements and fails to reflect good agglomeration and competition effects, which unbalances the market competition and has negative impact on the current development of China’s civil aviation industry [7]. The establishment of an information platform is believed to promote cross-regional cooperation among civil aviation companies. The optimal allocation of resource elements is realized by means of inter-regional industrial transfer and undertaking, deepening the division of labor and cooperation within the civil aviation industry, which finally forming an interactive mode of virtuous circle between regions.

Since 1949, civil aviation of our country developed rapidly. Many researchers have conducted studies on development process, current situation and problems of China’s civil aviation. In terms of development process, Wang [8] divided the development process into three stages according to the properties of civil aviation. The first stage is between 1911 to 1941. At this stage, the civil aviation and air transport industry has been built from simple to complex. This has laid an important foundation for future civil aviation air transport. The second stage mainly refers to 40 years after the end of World War II. During this period, the civil aviation industry continuously expanded its input

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and the scale range constantly increased. The airline company continued to improve their self-viability in the economic fluctuation. The third stage is the maturity of air transport industry, in which air transport industry became global and the airline companies tend to be collectivizing. This stage mainly refers to the period after 1980. Wang [8] pointed out that the development of civil aviation has two characteristics. One is the development of civil aviation is related to laws and policies. In particular, it really rely on capital investment and equipment. Another is the external competition which leads to the union of airline companies. The competition boost these companies' ability to survive.

With the rapid development of China's civil aviation, many scholars have summarized the current situation of China's civil aviation development. Chen found that there exists a big difference between the development of civil aviation in different regions. The number of tourists in Beijing, Shanghai and Guangzhou accounts for near half of the market, while the civil aviation market in Ningxia and Qinghai is still in the developing stage [9]. In terms of the number of airports, though there are many airports in Xinjiang and Yunnan, the number of aircraft taking off and landing in these areas is far less than in Beijing and Shanghai. Transportation and regional economy influence each other. To a certain extent, they are an organic whole. Beijing, Shanghai and Guangzhou are the pioneers of China's economic development. As a result, there are more demands for civil aviation transportation and opportunities for the development of civil aviation industry. Correspondingly, in some regions with relatively backward economic development, the demand for civil aviation transportation is relatively small, resulting in relatively backward industries in the region as a whole.

There are also many scholars who have conducted in depth research on some problems that have been generated by the current situation of China civil aviation. The first problem is the lack of professionals. Shi pointed out that most of airmen are transferred from public transport to civil airlines and they need to pay a large amount of transfer fees [10]. According to the relevant agreement of the airline, after a pilot resigns, he needs a gap of one to two years before he can find a new job, and the training cost is also very expensive. Therefore, there is a shortage of civil pilots. The official terminal is only established in some large airports in Beijing and Shanghai, while most airports don't have. In addition, the management of civil aviation in China mostly adopts the management mode of public aviation, which is relatively single. These rules are not modified with the characteristics of civil aviation. At last, airspace resources and airports are also very scare, which caused serious effects on timeliness and efficiency of civil aviation. One third of airports are located in Beijing, Shanghai and Guangzhou and over two thirds of flights are in Beijing and Shanghai.

2. Problem

2.1. Extensive Management

The rapid development of civil aviation basically depends on the capacity of large-scale projects and the establishment of high standards of civil airports and related supporting facilities to achieve extension means, and the economic benefits of aviation enterprises mainly depend on the substantial increase in ticket prices. With the substitution competition of railway and expressway and the entry of foreign airlines, the structural contradiction of this extensive management will be increasingly prominent. The specific manifestations are as follows: first, air transport services are heavy on passenger transport and light on freight, and freight cannot be replenished in time, leading to the decline of transport development; Second, the policy tendency of light development of general aviation has caused general aviation to be in a wandering state since 2018. Thirdly, too much attention is paid to cities and the development of regional airlines is neglected, which leads to the inability of regional airlines to transport passengers for trunk airlines. Fourth, some airports tend to be large-scale and internationalized, and the large, medium and small facilities are insufficient.

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2.2. Excessive Intervention

Over the years, the Civil Aviation Administration of China has effectively operated the civil aviation industry. Several airlines have been established since 1987 by splitting the direct management system to allow local governments to set up airlines. However, the management of directly affiliated airlines is still in the hands of civil aviation authorities. At the same time, the industry's unified pricing and the restrictions on route entry make the competition means of airlines limited to flight setting, service improvement and marketing improvement, and it is difficult to use price means to compete. Although the Civil Aviation Administration implemented the "multiple discounts for one price" approach after the end of 1997, the management of sales agents was out of control, and the competition among airlines turned into a price war, affecting the economic benefits of the entire industry. At present, there is no benign market mechanism to reverse the malpractice of administrative management completely.

2.3. Not Conducive to Reduce Enterprise Costs

Jet fuel is the largest cost item for airlines around the world, accounting for about half of flight costs and one-third of total costs. Jet fuel accounts for about 2/3 of airline flight costs and 1/5-1/4 of total costs. China's jet fuel supply is entirely the responsibility of the China National Aviation Oil Corporation. The mandatory price is 50%~100% higher than the international market price, which is one of the important reasons for the high cost and lack of competitiveness of Chinese airlines. For example, the price of jet fuel in the Singapore oil market has been around $150 / ton for nearly a year, while the price of jet fuel in China is 2,800 yuan/ton, or $337 / ton, 1.82 times that of the Singapore market. In general, airlines cannot place orders directly with aircraft manufacturing companies, but have to work with other domestic airlines to purchase planes in bulk through the China Aviation Equipment Import and Export Corporation, a subsidiary of the CAAC. This administrative monopoly affects the autonomy and decision-making power of airlines in purchasing aircraft. Therefore, the reform of aviation fuel and aviation equipment procurement system is an important part of civil aviation system reform.

2.4. Low Economic Benefits

In 1996, the profits of the directly affiliated airlines reached 1.84 billion yuan; In 1997, it rose to $2.05 billion; In 1998, affected by the Asian financial crisis and the "price war" of airlines, the loss of the whole civil aviation industry reached 2.44 billion yuan, among which the loss of the directly related enterprises reached 2.43 billion yuan. The previously profitable airlines became the top several large and medium-sized enterprises in China. In addition to the above reasons, the main reasons for the loss of enterprises are some internal mechanism problems. Among them, the relative excess capacity, air travel consumption, "three rates" decline, resulting in cost increases; Airlines generally extensive management, cost management is weak; Airlines generally exist debt ratio is too high, financial expenses increase too fast and other problems. Ultimately, industry losses are an institutional problem, not just an operational one.

3. Solution

Firstly, in response to the problem of sloppy management and neglect of industrial restructuring, China has introduced an industrial structure policy for civil aviation. Encourage the development of cargo, support existing air cargo companies, and at the same time, encourage new air cargo companies to enter, improve the cargo pricing system and establish a unified cargo network system. Encourage the development of regional airlines, establish a reasonable route network system, allocate

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capacity reasonably; guide and encourage local airlines to open up regional routes and the construction of small airports serving regional transport, and hub cities to use old former airports or new airstrips to build a good axis connecting regional-dry routes; actively support domestic regional aircraft The Government should also actively support the improvement of the performance of domestic regional aircrafts and, in cases where they cannot meet the requirements, import them as a transitional measure. Encourage the development of general aviation transport, and gradually establish a multiform, decentralised structure of general aviation enterprises that can adapt to the different needs of the market. Support agriculture, forestry, surveying and mapping, mining and other sectors to run their own general aviation, or to set up general aviation enterprises; gradually liberalise restrictions on private general aviation flights; support companies in a position to do so to carry out official flight activities; gradually liberalise the prices charged for general aviation, and improve the labour conditions of general aviation; establish and improve practical flight standards, dispatching, air traffic control, aircraft airworthiness, airport management, safety and security, and aircraft purchase and lease, etc. Regulations. Scientific planning of the airport layout and the establishment of a system of distribution of airports that is compatible with the scale of investment and the objective needs of regional and trunk airports. Establish a safe, efficient and high-quality air traffic management system, and improve the level of air traffic control, communications, navigation, meteorology and other comprehensive management and protection capabilities.

Secondly, to address the monopoly in the aviation fuel and material supply sector, which is not conducive to reducing business costs. We propose an anti-monopoly law to effectively manage and control monopolistic practices, complete the construction of laws related to the aviation industry, and form a more reasonable legal system. Reform the regulatory and approval system of the civil aviation industry, reduce administrative intervention and devolve more power to the market. For example, the abolition of restrictions on the range of fare reductions is a form of decentralisation. Reform the monopoly of a few companies in aviation fuel and materials and break the monopoly of state-owned enterprises. Gradually relax restrictions on the entry of other domestic and foreign investors into the aviation oil and materials industry; encourage investors to set up aviation oil companies and related materials companies and encourage investors to hold shares in the relevant companies in the form of equity participation. Strengthen regulatory measures and increase penalties for airlines that compete viciously. Encourage the formation of enterprise groups in the form of asset consolidation, mergers and shareholding systems for aviation oil companies. Provide economic and resource support to new and smaller aviation oil companies to create an economic balance of aviation oil companies conducive to reducing the cost of air transport.

Then, to address the problem of excessive corporate management intervention, which hinders moderate competition in the air transport market, we set relevant goals to first achieve moderate competition among enterprises within civil aviation.Due to the management system, there is a lack of competition among airlines in China based on price competition. We need to break the current administrative practice of uniform pricing by the General Administration of Civil Aviation and, on the basis of fare competition, encourage airlines to gain competitive advantage through non-price competitive means such as improving service quality and creating brands. Second, to achieve scale of operation and enhance the strength of competition with foreign airlines. The entry of too many airlines in China's air transport market, the scale of which is too small, and the relatively low competitiveness, coupled with the relatively high asset and liability ratio of enterprises, have resulted in high operating costs for air transport enterprises. Therefore, it is necessary to make the enterprise reach a reasonable scale to enhance the competitive strength by means of joint, mergers and acquisitions. The formation of large groups and companies is an important means. This should be the focus of development to be actively promoted. While realising the expansion of the average size of

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enterprises, a reasonable configuration of the scale structure of large, medium and small enterprises should be achieved.

Finally, to address the problem of low economic efficiency in civil aviation, China should introduce an industrial investment policy, implement a policy of diversifying the main bodies and channels of investment in air transport, and continue to implement the "civil aviation infrastructure construction fund" system and the airport management fee collection system. A risk-restraint mechanism for investment entities should be formed. The investment structure should be adjusted, the investment management system should be reformed, and different investment policies should be adopted for projects of different economic types, with fully operational facilities being invested and operated by enterprises through the market, while the construction and operation of fully public welfare facilities should be undertaken by the government, and those of both natures should be subsidised by the government. Airlines and airports are encouraged to use a variety of channels to raise funds for development. Existing airlines and airports are encouraged to undergo corporatisation in accordance with the modern enterprise system, and civil aviation enterprises are encouraged to go public. Key civil aviation transport projects should implement a system of responsibility for project legal persons, and those approved by the State may be financed on a shareholding basis. The State has formulated corresponding policies to encourage airline enterprises to invest across regions and sectors and to safeguard the legitimate rights and interests of investors. Subject to approval, civil aviation enterprises may conduct pilot capitalisation of state and financial debts to reduce the level of assets and liabilities.

4. Conclusion

After the founding of New China, some external competition and internal policy support led to the rapid development of civil aviation. In the process of development, some problems have also been found and solved. Up to now, China's civil aviation industry has a huge scale and is one of the most important industries in China, with a growth rate far exceeding the international level. However, due to the unstable international situation, airlines are under pressure due to the rise of oil prices and the reduction of passenger traffic, which also exposes many new problems. This paper describes four current problems of civil aviation. The problems are rough management and neglect of industrial structure, monopoly in the aviation oil and material supply sector, which is not conducive to reducing enterprise costs, excessive intervention in enterprise management, which hinders moderate competition in the air transport market, and relatively low economic efficiency of civil aviation. Solutions are also given to each of the above problems, which include industrial structure policy, industrial investment policy, anti-monopoly law and other related policies and legal systems.

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