

Rules and Regulation of China's Civil Aviation Transportation Industry

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Abstract: China's civil aviation transport industry is still facing further reform on the basis of the previous industrial system reform and industrial development achievements. At this time, the in-depth study of China's civil aviation transport system reform, not only has high academic value, but also has a strong practical significance. The purpose of this paper is to study the regulation of China's civil aviation industry. This paper first expounds the connotation of the civil aviation transportation industry, and then analyzes the problems existing in the current civil aviation transportation industry in China from the perspectives of legal system, government functions and government control. In the experiment part, this paper uses the operation data of three enterprises, avic group, China southern airlines group and China Eastern airlines group, as the data source, and applies the industry concentration degree (including the concentration degree of three enterprises CR3) to measure the concentration degree of the civil aviation transportation industry. The experimental results show that the concentration degree of these three enterprises reached the highest in 2015, with the concentration degree of total transport turnover, total passenger turnover and total freight and mail turnover being 70.53, 71.06 and 67.9 respectively.

1. Introduction

At present, China is gradually entering the era of market economy [1]. With the deepening of the reform of the market economy system, China's natural monopoly industry has become the object of concern at all stages [2]. Studies have found that, under the strict control of the government, some natural monopoly industries have problems such as inappropriate resource allocation, weak market competitiveness, unprotected consumer rights and high enterprise costs [3]. This can be said to be the key to solving the development of natural monopoly industries such as civil aviation [4]. In China's "eleventh five-year plan", it is clearly stated that China is in a difficult stage of reform and should speed up the development of problems, find a breakthrough for the major institutional problems related to comprehensive economic and social development, and make more efforts [5]. Therefore, the government's restrictions on natural monopoly industries such as civil aviation will become the core project of China's economic system reform.

The civil aviation transportation industry is one of the typical monopoly industries, and its systematic reform has become a hot topic in domestic academic circles [6]. From the perspective of macroeconomic system reform, scholars have conducted a lot of studies on the reform of China's civil aviation transport system and achieved beneficial results [7]. Some scholars have studied the western theory of restrictive economy and monopoly theory. These research results are of high academic value, but they are generally scattered and unsystematic. In addition, the previous achievements are not fully integrated with China's actual national conditions, especially in the current period of strategic opportunities [8]. At this time, a systematic and in-depth study on the development and reform of China's civil aviation transportation industry is of great significance in the research field of the reform of China's civil aviation transportation industry [9-10].

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measure the concentration degree of the civil aviation transportation industry. The results show that the concentration of these three enterprises reached the highest level in 2015.

2. Method

2.1 Civil Aviation Industry

The term "civil aviation transport" refers to the transport industry that uses civil aircraft as a means of transport. The main basis for defining the civil aviation transportation industry is that the products provided are transportation services and the civil aircraft used as a means of transportation in the production process. The industry that accords with these two characteristics should belong to civil aviation transportation industry.

2.2 Analysis of Existing Problems in China's Civil Aviation Transport Industry

(1) Legal system is not perfect

In the operation of the civil aviation transport industry, China has made corresponding laws and regulations with reference to the relevant provisions of the international civil aviation organization (ICAO). However, with the development of the times, some laws and regulations not only cannot promote the continued development of the civil aviation transport industry, but also hinder its development. In the face of these problems, the government lacks the basis for regulation, the temporary policy lacks long-term consideration, and the flexibility is relatively strong, which is not conducive to inspection and supervision, and is not conducive to regulating market competition.

(2) Function of government regulation is not single-minded

The government control department of China's civil aviation transportation industry should perform its duties through the allocation of resources, the interpretation of policies, and the impartial adjudication to promote the development of enterprises. However, due to its diversified functions and wide intervention, relevant enterprises are highly dependent on it and gradually form a community of interests. The profits brought by improving production efficiency and the benefits that should be returned to consumers will be applied to the common interests of both parties. At the same time, the overlapping functions and great powers of the government will also result in heavy work, difficult checks and balances, and resistance to the implementation of the new deal.

(3) Monopolistic government regulation, resulting in unfair competition

The three lifelines of airlines, routes, aviation materials and aviation fuel, are all under government control. CAAC is responsible for route approval, aviation materials procurement, and China aviation oil group is responsible for supplying jet fuel to all airlines in China. As a result, the operating costs of all airlines have been on the high side for many years.

3. Experiment

3.1 Data Collection

The data of this paper are from the volume 2011-2019 of civil aviation from statistics. The data includes the shipping volume, number of flight routes and mileage, countries of navigation and other operation data of the three enterprises of avic group, China southern airlines group and China Eastern airlines group. In addition, market concentration degree (CR3) is adopted to reflect the changes in the market structure of China's civil aviation industry.

3.2 Measurement Index

Market concentration reflects the concentration of a specific market and is closely related to the formation of market monopoly power. Market concentration includes buyer concentration and seller concentration. Since buyer concentration only occurs in some special industries, the main research of industrial organization theory is seller concentration. The calculation formula of market concentration is as follows:

$$CR_n = \frac{\sum_{i=1}^n X_i}{\sum_{i=1}^N X_i} \quad (1)$$

Where CR_n represents the market concentration of the largest top n enterprises in the X industry, X_i represents the production or sales volume, assets and staff number of the ith enterprise in the X industry, n represents the total number of enterprises in the X industry, and $\sum_{i=1}^n X_i$ represents the sum of production, sales, assets or staff number of n enterprises.

4. Discussion

4.1 Experimental Results and Analysis

In this paper, the market concentration degree of three enterprises (CR3) is used to reflect the changes in the market structure of China's civil aviation industry. The test results are shown in Table 1 and Figure 1.

Table 1. Test results

Year	The concentration ratio of 3 enterprises is CR3		
	Total transport turnover	Total passenger turnover	Total freight forwarding turnover
2011	63.75	57.36	77.88
2012	62.23	58.25	68.32
2013	65.65	63.4	69.99
2014	64.45	63.84	65.75
2015	70.53	71.06	67.9
2016	63.54	74.31	48.54
2017	59.86	68.53	41.21
2018	56.32	65	37.55
2019	54.39	62.01	36.13

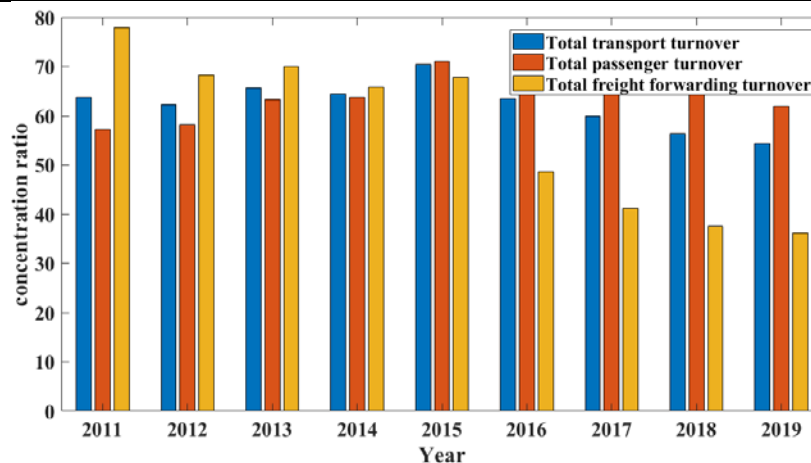


Figure 1. Test results

Can be seen from Table 1 and Figure 1, from the point of absolute value, after the reorganization of airlines since 2012, three market concentration indexes showing a rising trend, in 2015, various market concentration indexes reached its peak, a slow decline trends in 2015, mainly because the momentum of rapid development of regional airlines, there is a phenomenon worthy of note, to goods turnover is much higher market concentration of index calculation with passenger turnover

for the evaluation of market concentration, this may be because the freight is mainly focused on several major airlines, the passenger is relatively decentralized, throughout the country the ground. In short, China's civil aviation industry presents an oligopoly market structure.

4.2 Suggestions on Promoting the Regulatory Reform of China's Civil Aviation Industry

(1) Relaxed access

In this regard, we can learn from the experience of the United States, and combine with the actual situation of the development of China's civil aviation industry to formulate policies in line with China's civil aviation market, so as to create a good, free competition market environment and promote the development of the civil aviation industry. For example, the relaxed market access in the United States has led to the emergence of many small low-cost airlines, which is conducive to the large airlines to continuously take measures to reduce costs and improve performance. In terms of market access of China's civil aviation industry, CAAC should successively issue some relevant policies and formulate implementation rules as soon as possible, and continuously implement them. Different airlines should be treated equally and effective competition mechanism should be introduced. However, the characteristics of civil aviation industry decide that the competition can not be carried out completely, but can only be carried out effectively.

(2) Price relaxation

The reform of the price system of civil aviation industry has become the focus of all aspects of the society, which lays a solid foundation for the civil aviation industry to be able to use price leverage. Price leverage is one of the marks to judge whether an enterprise enters the market. Therefore, if the civil aviation industry wants to relax the regulation, it must relax the price control. Price control in the growth of civil aviation has played a positive role, but with the establishment and perfecting of market economy, if the strict control of civil aviation, will strengthen the civil aviation reliance on the government, will lead to price distortions, supply imbalance, is not conducive to civil aviation market operation, competition in the market have no advantage, and so on. Regulatory bodies must therefore make breakthroughs in price reform to bring them into line with international prices. Specific method: the first, execute changeable price. According to different route, plane type, season, time period and so on, can take different fare price. Second, different fares should be charged to different passengers. For example, groups, students, the elderly, soldiers and other ticket prices can be implemented preferential system. Finally, booking tickets can be decided according to the time of day, and allow ticket prices to be changed in certain circumstances.

(3) Route is relaxed

Airlines cannot operate normally without route management rights. In other words, route management is a prerequisite for civil aviation industry to enter the civil aviation market. Until now, route management rights must be approved by CAAC. The civil aviation administration of China does not have a standardized standard for the approval of airlines, with a very strong color. That is to say, CAAC mainly approves the operation right of routes from the perspective of balancing the interests of airlines, rather than making full use of various resources. Therefore, the large-scale aviation enterprises in China have a great influence on the control policy and are often used to protect their rights and interests.

(4) Deregulation of the supply of aviation fuel and materials

In order to make our country aviation fuel and aviation material pricing in line with the world. First, the elimination of customs duties and port fees is conducive to the domestic and foreign aviation oil pricing of China's civil aviation enterprises; second, we should break monopoly, develop the market and introduce market mechanisms. In addition, our country still basically subsidizes the aviation fuel service that the aviation fuel undertakes.

(5) Strengthen the monitoring of service quality

At present, in the protection of the interests of consumers, there is a big gap with developed countries; China's civil aviation industry has no direct provisions. Therefore, in order to be in line with the world, it is necessary to formulate some laws and regulations, such as improving consumers' right to know and increasing airlines' liability for compensation. The CAAC, as the

regulatory authority, should be the place where consumers complain, mainly to monitor the actions of airlines that harm the legitimate interests of consumers in their operations.

Conclusion

It is based on the overall view of the reform and the deep understanding of the existing problems in the development. Only through a number of organic coordinated reform measures to make up for the deep-seated institutional defects in the development of China's civil aviation transport industry can we fundamentally solve the bottleneck restricting the development of the industry. After the system defect is made up, the realistic problems in the industry development can be solved naturally. In short, the reform measures aiming at the institutional defects in the industrial development are the necessary and feasible measures to deepen the system reform of China's civil aviation transport industry. In addition, as one of the important contents of the industrial system reform, the regulation reform must be attached great importance. Under the guidance of the overall idea of the reform at the level of system construction, in-depth study of feasible regulatory reform measures, bold and prudent promotion of regulatory innovation is an important organic part of deepening the institutional reform of China's civil aviation transport industry.

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