

# *International Analysis of the Fiscal Efficiency Characteristics of Guangdong Special Economic Zone-Based on Korean Indicators*

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**Keywords:** Economic special area, Comparative analysis, Local fiscal efficiency

**Abstract:** The purpose of this paper is to combine the existing local government financial efficiency system between Korea and China, and to combine a new system to study the financial efficiency of Guangdong's Special Economic Zone. The system is applied to the local financial efficiency analysis of three special zone cities in Guangdong Province. This paper analyzes the data information of the Index of Local Fiscal Efficiency in Three Special Economic Zones of Guangdong Province between 2015 and 2019. The comparative analysis method is used to analyze the problems of local finance in each special economic zone. The results showed that, Among the three special economic zones, the city with the highest local financial efficiency is Shenzhen, the second is Zhuhai, and Shantou is the worst. Conclusion show that in order to improve the efficiency of local government finance, the key lies in optimizing the local tax system structure and talent structure, the good local tax system structure ensures the financial soundness, and the good talent structure can make the local financial efficiency grow steadily.

## 1. Introduction

On August 26, 1980, the fifteenth session of the Standing Committee of the Fifth National People's Congress approved the establishment of special economic zones, and adopted the Provisional Regulations of the Guangdong Special Economic Zones, which were officially born in China. At that time, foreign television media marveled: "the hands of great change in China are ringing."

The 18th report on China's most competitive cities, jointly released by the Chinese Academy of Social Sciences and Economic Daily on October 22, 2020, conducted a multi-dimensional comparative study of 291 cities. The comprehensive competitiveness index and sustainable competitiveness index are composed of five indicators. Shenzhen ranks first in comprehensive

competitiveness.” In the nearly 40 years of reform and opening up, China's most notable practice has been the special economic zones. There are over 4,000 special economic zones in the world, and the number one success story is the 'Shenzhen miracle.’’ So says the Economist. When talking about supporting construction funds, Comrade Deng Xiaoping said :’’ the Central Committee has no money, you go to make money yourself, kill a bloody road! As a result, the central government has given the special economic zone the greatest financial privilege, greatly liberalizing the financial freedom of the special economic zone.

According to the economic essence, special economic zones are also one of the main forms of free port areas in the world. They promote the economic and technological development of the countries where the special economic zones are located by creating a favorable investment environment, encouraging foreign investment and introducing advanced technology and scientific management methods by means of preferential measures such as reducing or exempting tariffs. Special economic zones adopt special economic policies, flexible economic measures and special economic management systems, and adhere to the development goal of export-oriented economy.

China established four special economic zones in 1980: Shenzhen, Zhuhai, Shantou and Xiamen, and Guangdong Province accounted for three.

Since the establishment of the three special economic zones, Guangdong's three special economic zones have taken the export-oriented economy as the development goal, and foreign trade and foreign economic and technological exchanges and cooperation have been increasing. By 2016, the three special economic zones have established trade relations with many countries and regions, such as Europe, America and Asia, and the total import and export volume has increased from \$288 million in 1980 to \$295.9214 billion in 2016. The achievements and prospects of Guangdong Special Economic Zone in the 40 years of reform and opening up are 10275 times higher in 2016 than in 1980, accounting for 12.16 times of the whole country in 2016, and the growth rate is relatively fast.

From an international perspective, looking at the economic development of Southeast Asia as a whole, in 2019, South Korea ranked fifth in the world in the global business environment report and became the first in Asia's economic competitiveness. After the Asian financial storm in 2008, the Korean economy recuperated, the business environment structure was optimized and improved, and the international competitiveness was rising.

## 2. Exploration and Development of Financial Efficiency Research System

The local financial efficiency index system of Korea is mainly composed of two parts, one is the financial soundness index, the other is the financial efficiency index, and in the China budget report analysis system, there are also some indicators related to the analysis of government financial efficiency. Through many experiments, this paper constructs a suitable index system for studying the financial efficiency of local governments in special zones, as shown in the following figure:

Construction of Index System for Fiscal Efficiency Analysis of the Government of the Special Administrative Region of China

Financial soundness indicators
1. Combined fiscal revenue and expenditure ratio
2. Current balance ratio
3. Management debt ratio
Financial efficiency indicators
1. Self-supporting ratio
2. Local tax rates
3. Tax dependency
4. Local pension ratio
5. Growth rate of general public service expenditure

### 3. Empirical Analysis

This paper compiles the financial data of three special economic zones in Guangdong and compares them together. Why should these three cities be selected as the research object? The three special zones in Guangdong Province have the following common characteristics: first, Shenzhen, Zhuhai and Shantou are the first special economic zones approved by the state, and they are comparable cities in terms of policy freedom. At the beginning of their establishment, the economic scale of the three cities was the same; Second, the similarity of economic development, Shenzhen, Zhuhai, Shantou are port cities, and the initial reform and opening up to attract foreign investment is the same, Shenzhen corresponds to Hong Kong, Zhuhai corresponds to Macao, Shantou corresponds to Taiwan; Third, the geographical location similarity, Shenzhen Zhuhai Shantou is the port province and city, Shantou's largest port Shantou mouth, the throughput is huge, and Shenzhen's Yantian port, is currently China's largest foreign trade port, Zhuhai's largest Kyushu port, Foreign trade throughput is very large.

#### 3.1 Financial Soundness Indicators Analysis

According to the order of use of indicators, this paper first needs to analyze the local financial soundness of the three special zone cities.

##### 3.1.1 Combined Fiscal Revenue and Expenditure Ratio

Combined fiscal revenue and expenditure ratio					
	2015	2016	2017	2018	2019
Guangdong Province	5.345	5.3798	5.398	4.92	5.37486
Shenzhen	3.244	3.688	2.602	2.9	13.735
Zhuhai	1.909	1.7656	0.839	0.02	0.01
Shantou	0.02	0.01	0.13	0.56	0.54

Source: Guangdong Provincial Government Network

According to figure 1, Combined fiscal revenue and expenditure ratio is used to measure the financial soundness of a city. As we can see, three special economic zones Combined fiscal revenue and expenditure ratio, Shenzhen is the most superior, then Zhuhai, Shantou is the worst. The overall Combined fiscal revenue and expenditure ratio of Guangdong Province in 2015-2019 is higher than that of the three special economic zones, which shows that the Combined fiscal revenue and expenditure ratio of Guangdong Province is very good and has sufficient reserves of capital balance. The data of Shenzhen are increasing year by year, indicating that the index is constantly optimizing and improving. Compared with the other two cities, Shenzhen's local finance has more advantages, which is also the main reason why Shenzhen can become a first-tier city in China in the past ten years. Among the three cities, Shantou is the lowest Combined fiscal revenue and expenditure ratio, which is the main reason for Shantou's economic stagnation, and the financial structure is not perfect.

##### 3.1.2 Current Balance Ratio

Current balance ratio					
	2015	2016	2017	2018	2019
Guangdong Province	59.903	36.256	44	39.521	42.978
Shenzhen	77.34	52.879	123.9356	96.6	11.2427
Zhuhai	142	120	150	151	175.97

Shantou	214	130.3	221	249	279
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As we can see, the Current balance ratio of Shenzhen is obviously superior to the other two special economic zones. According to the data, the proportion is nearly three times lower than Shantou, and the overall average level of Guangdong Province is sound.

### 3.1.3 Management Debt Ratio

Management debt ratio					
	2015	2016	2017	2018	2019
Guangdong Province	14.245	8.3734	8.2592	13.207	15.91162
Shenzhen	2.248	7.29	2.138	4.536691	18.09
Zhuhai	68.	62.74	57	42	22.7
Shantou	38	42.93	43	45	36

Through the indicators, we can find that the overall debt ratio of Shenzhen is very sound, and the overall tax revenue of Shenzhen can fully afford the debt. The Management debt ratio international warning line is 100. It can be seen that the three special zone cities in Guangdong are all below the warning line. The Management debt ratio of Zhuhai and Shantou are relatively poor, but Zhuhai has been falling sharply since 2017, while Shantou has been high. The situation is very not optimistic.

Through the above three indicators, this paper draws the following conclusions from the analysis of the financial soundness of the three special zone cities: the three special zone cities in Guangdong Province have the best financial health and have very good development potential. Zhuhai's financial soundness is relatively general, but it belongs to the state of sustainable development.

## 3.2 Financial Efficiency Indicators

From five dimensions, local financial efficiency is analyzed: Self-supporting ratio, Local tax rates, Tax dependency, Local pension ratio, Growth rate of general public service expenditure. The local financial efficiency index system can analyze the level of local government governance in one city. From another point of view, the local efficient city will certainly attract more talents to work here to start a business. Improved the business environment of the whole city. This paper will try to use the local government efficiency system constructed in this paper to analyze the financial efficiency of the budget report data of Guangdong three special zones cities in 2015-2019.

### 3.2.1 Self-Supporting Ratio Analysis

Self-supporting ratio					
	2015	2016	2017	2018	2019
Guangdong Province	60	62.998	58.083	56.683	49.553
Shenzhen	38	52.879	87	96.60	64.451
Zhuhai	28.7	29.7	26	26.35	25.377
Shantou	11.4	14.77	13	27	36

Through the 2015-2019 budget statement calculated results, Guangdong Province as a whole the provincial government financial self-sufficiency is very stable. Among them, Shenzhen was the most superior. In 2018, Shenzhen's local financial self-sufficiency reached 96.6 percent, thanks to Shenzhen's local government's efforts to encourage enterprise innovation and give local enterprises great policy encouragement and support. In Shenzhen, the birth of Chinese Huawei, ZTE, Tencent and other high-tech enterprises. Zhuhai's data are very stable, which accords with the development characteristics of Zhuhai's steady growth. Therefore, Zhuhai has not seen too large-scale industrial transfer, and financial funds have been steadily increasing slightly. Shantou as a whole is relatively low, but presents a gradual growth trend.

### 3.2.2 Local Tax Rates

Local tax rates					
	2015	2016	2017	2018	2019
Guangdong Province	4.89	19.61	3.81	14.866	4.4457
Shenzhen	29.50	9.5	12.80	9.2	1.2
Zhuhai	13.4	10.6	7.60	6	9
Shantou	6.20	11.7	10.70	10	-7

According to the data, whether Guangdong Province or Shenzhen City, the tax revenue as a whole shows a downward trend of fluctuation. From the principle of the formula, the higher the index, the higher the degree of local government efforts to increase tax revenue. From the surface of the data, the Local tax rates of Guangdong Province and the three special zone cities show a downward trend from the data of the past five years, which is the realization of the decline in efficiency from the point of view of the data. This is a tax reduction action that has greatly reduced the tax burden on China's tertiary industry and greatly reduced the pressure on enterprises. Therefore, the Local tax rates shows a downward trend. Therefore, when analyzing the Local tax rates of Guangdong data, we can not only look at the changing trend of Local tax rates, but also combine the reality of Guangdong Province. Therefore, this paper concludes that the Local tax of special economic zones in the context of the increase in camp reform The overall local tax growth rate of the three special economic zones in Guangdong is very good. Because of the large number of tertiary industries, Shenzhen is greatly affected by the increase in the rates. Zhuhai is mainly industrial, the impact is small, Shantou is mainly tourism, but also the tertiary industry, so there is a decline, but the Local tax rates of the three special zones are very superior.

### 3.2.3 Tax Dependency

Tax dependency					
	2015	2016	2017	2018	2019
Guangdong Province	28.87	33.94	33.944	35.78	37.78
Shenzhen	46.1776	54.64	68.635	57.2	72.74
Zhuhai	75.4	76	68.43	72.4	77.9
Shantou	65.82	67.67	70.67	71.75	73.56

Through the index data, we can see that in 2015-2019, the Tax dependency of the three special economic zones in Guangdong Province is higher than that of Guangdong Province, and the Tax dependency is higher than that of Shenzhen, Zhuhai and Shantou. Zhuhai and Shantou revenue source is more single, and Shenzhen revenue diversification, will be more flexible.

### 3.2.4 Local Pension Ratio

Local pension ratio					
	2015	2016	2017	2018	2019
Guangdong Province	6.3869	6.54	6.75	6.0825	7.1582
Shenzhen	0.047	0.076	0.108	0.07631	0.149
Zhuhai	0.1	0.77	1.35	1.24	1.08
Shantou	20.69	29.53	36.3	46.2	48.9

The local pension ratio, mainly from the aging of the population to consider the financial efficiency, the higher the proportion, the efficiency of the stamina will be inhibited. From the data, the data of Shenzhen and Zhuhai are very good, which proves that the aging of Shenzhen and Zhuhai is not serious, the urban population structure is very young, and the aging of Shantou is very serious. This also shows Shantou economy has been stagnant root cause, no labor force.

### 3.2.5 Growth Rate of General Public Service Expenditure

Growth rate of general public service expenditure					
	2015	2016	2017	2018	2019
Guangdong Province	15	37.01	12.89	8,338	-2.11
Shenzhen	26.1	26	26	11.8	5.3
Zhuhai	12	22.3	23	24.2	41.1
Shantou	6.7	8.6	11	7.4	6.5

This index is to analyze the financial efficiency through the vision of “simple government “. This index is a reverse index, which has a negative number, which means that the expenditure begins to decline. Because the general public service expenditure still shows the absolute number increase every year, therefore, through the growth rate index analysis, this paper finds that Guangdong Province as a whole presents the growth rate decline trend, especially since 2019, also appears the absolute number decline, It proves that Jianzheng has achieved initial results in Guangdong Province. For Shenzhen, the steady decline in the effectiveness of the index, after 2018, began to relatively rapid decline, overall analysis, Shenzhen's financial efficiency is very good. Zhuhai has risen in the past five years, this article through the Zhuhai budget report, we know that Zhuhai in the past five years, in the “talent introduction” expenditure is very large reasons. Shantou data is very stable, after 2017, there is a decline.

#### 4. Conclusions and Discussions

This paper develops a research system in accordance with the special economic zone of socialism with Chinese characteristics by combining the system of China and South Korea on the study of local financial efficiency, and applies the system to the analysis of local financial efficiency between 2015-2019 of the three special economic zones in Guangdong Province. The following conclusions were concluded:

(1)According to the analysis in this paper, Shenzhen's local financial health is very high, and the local financial efficiency is also very good. From the index data, the financial efficiency is far more than that of the other two special economic zones. Especially in the tax system structure, through tax concessions to assist the high-tech industry, and the talent structure is very young, is a future development potential can not be ignored. As the central city of Guangdong-Hong Kong-Macau Greater Bay Area, Shenzhen is a city suitable for international investment.

(2)Zhuhai's local finance is generally inferior to that of Shenzhen, mainly because Zhuhai's industrial structure is too dependent on industry and should pay more attention to the development of the financial industry. Through the analysis of tax structure index in local finance, this paper holds that Zhuhai is trying to attract senior talents at home and abroad, especially high-end talents in the financial industry, through various special funds. But according to the trend of data, Zhuhai's future financial industry development potential is also very large.

(3) Shantou, as a special economic zone, is very inefficient from the point of view of local finance, and little special funds, so it is difficult to attract high-end talents and also can not retain the local young labor force, so the aging is very serious and the economic potential is restricted.

#### 5. Acknowledgment

This paper was supported by 2021 Science Planning Project (Special Project for Higher Education) of Department of Education of Guangdong Province: Analysis of Regional Differences and Spatial Convergence of Higher Vocational Education Efficiency in the “One Core, One Belt and One District”, (No.: 88).

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