

# Economic High-quality Development Research Based on Tax Cut and Fee Reduction

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**Abstract:** In order to promote high-quality economic development, China has implemented large-scale tax cut and fee reduction. In order to verify the role of tax cut and fee reduction in promoting high-quality economic development, the author uses entropy weight method and relative deviation fuzzy evaluation method to establish a multi-dimensional index system to measure the level of China's economic development. Finally, the author also puts forward countermeasures and suggestions from the perspective of tax cut and fee reduction policy optimization, which include publicizing the preferential policies of tax cut and fee reduction through multiple channels, strengthening the efforts of tax cut and fee reduction of private enterprises and comprehensively implementing the legal principles of tax and so on to provide theoretical reference for the high-quality development of China's economy.

**Keywords:** Tax Cut and Fee Reduction; High Quality Economic Development; Entropy Method; Relative Deviation Fuzzy Evaluation

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## 1. Introduction

In recent years, the policy of reducing taxes and fees has been deeply rooted in people's hearts. This policy reduces the burden of enterprises in the process of implementation and stimulates market vitality. In order to further promote China's high-quality economic development and economic transformation, China has expanded the scale of tax cut and fee reduction since 2019. China has implemented a series of measures, such as preferential individual income tax relief and deepening the reform of value-added tax, which has driven China's GDP growth by about 0.8 percentage points in 2019. However, what is the role of tax cut and fee reduction in promoting high-quality economic development? This requires us to establish a high-quality development index system to measure China's economic development level in multiple dimensions. To a certain extent, this solves the problem of establishing an index system to measure the high-quality development of the economy. At the same time, this index system can also be extended to the economic development of enterprises, which has far-reaching practical significance for exploring the path of high-quality and sustainable development of China's economy, and for optimizing the tax reduction path.

## 2. Research ideas

In order to further verify the implementation of the tax cut and fee reduction policy and its impact on the high-quality development of China's economy, based on the existing research<sup>[10,11]</sup>, this article first analyzed and refined the primary indicators of the enterprise's profit source<sup>[1,2]</sup>. Then entropy weight method is used to calculate the weight of each index, and a multi index, macro and micro high-quality economic development index system is established. Af-

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ter that, this article takes the profit, employee income and tax payment of 20 national top 500 enterprises as the evaluation index. Through the establishment of the index system, using the relative deviation fuzzy evaluation method, the relative deviation matrix of the ideal scheme of high-quality economic benefits is established, and MATLAB software is used to calculate the comprehensive score of each enterprise. This article also empirically tests the impact of tax cut and fee reduction policies in the comprehensive evaluation index system of high-quality economy. Finally, some countermeasures and suggestions on how to better promote the high-quality development of economy are put forward in this article<sup>[3,4]</sup>.

### **3. Research design**

#### **3.1 Sample selection and data source**

In order to study the economic development of Chinese enterprises under the background of tax cut and fee reduction, based on the representativeness and availability of data, 20 most representative enterprises were selected among the top 500 enterprises as the research samples. The data of operating cost, operating income, investment income per share, operating profit, monthly average wage of employees, employee welfare, and so on, are all from wind database, and can ensure the accuracy of data by checking the annual report of listed companies.

#### **3.2 Construction of high quality economic development index system under the background of tax cut and fee reduction**

In order to verify that the implementation of tax cut and fee reduction policy promotes the high-quality development of economy, we select indicators such as enterprise profit, employee income, government tax, and establish a high-quality economic development indicator system.

##### **3.2.1 Selection of indicators**

High quality development means high economic benefits. Therefore, through the investigation and analysis of enterprise profit source, employee income source and government tax revenue source, we first use entropy weight method to quantify the same degree of indicators. On the basis of normalization of different coefficients, we calculate the entropy value and difference coefficient of each index, and get the corresponding weight of each index. So we can select high-quality development indicators with high economic benefits, and establish a high-quality development indicator system based on enterprise profit, employee income and tax<sup>[5,6]</sup>.

Under the high-quality development system, the enterprise profit index can be subdivided into operation cost, operation income, investment income and operation profit index; the employee income can be subdivided into employee salary and employee welfare expense; the government tax mainly includes enterprise tax and individual tax<sup>[7,9]</sup>. Therefore, we can make the index system of high-quality economic development more complete and scientific by taking enterprise profit, employee income and government tax revenue as the first level indicators. Finally, the economic benefit index system is shown in **Table 1**<sup>[8]</sup>.

Economic benefit index system					
General objective	First level index	Second level index	Third level index	Index number	
Economic performance	Corporate profits	Operating cost (Y1)	Cost of raw materials, depreciation cost of fixed value production, etc	D1	
		Operating income(Y2)	Sales revenue	D2	
		Investment income (Y3)	Dividend and bond interest	D3	
		Operating profit (Y4)	Main business income	D4	
	Employee income	Employee salary(Y5)	Base pay		D5
			Bonus		D6
			Allowance		D7
			Overtime pay		D8
		Employee welfare(Y6)	Five social insurance and one housing fund		D9
			Saving money		D10
	Traffic subsidy			D11	
	Government revenue	Unit tax payment(Y7)	Value added tax		D12
			Excise tax		D13
			Corporate income tax		D14
			Resource tax		D15
		Individual tax(Y8)	Value added tax		D16
			Excise tax		D17
			Individual income tax		D18
			Auto-purchase tax		D19
			Property tax		D20

**Table 1.** High quality economic development index system

### 3.2.2 Entropy method

Information entropy is a measure of the degree of system disorder. Generally, the weight of an index in the overall goal can be calculated by using information entropy through the degree of variation of an index value which has studied.

### 3.2.3 The construction of relative deviation fuzzy evaluation model

From the perspective of specific indicators to measure the development of enterprises, we analyze the indicator system mentioned above. Taking the profits, employees' income and taxes paid by 20 of the top 500 enterprises of China as the evaluation indexes, the relative deviation fuzzy matrix is used to process the financial data of 20 enterprises, and the relative deviation fuzzy matrix and the weight of each evaluation index are obtained. Then the relative deviation fuzzy matrix is established, and the relative deviation fuzzy evaluation model is the foundation for the following. The following is an empirical analysis of the operation of 20 enterprises.

#### A) Construct observation matrix

The observation matrix is constructed for all indicators of the enterprise to be evaluated, and an observation matrix is obtained:

$$A = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \dots & \dots & \dots & \dots \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{pmatrix}$$

B) Establish an ideal plan

$$u = (u_1^0, u_2^0, \dots, u_m^0)$$

C) Establish relative deviation fuzzy matrix

$$R = \begin{pmatrix} r_{11} & r_{12} & \dots & r_{1n} \\ r_{21} & r_{22} & \dots & r_{2n} \\ \dots & \dots & \dots & \dots \\ r_{m1} & r_{m2} & \dots & r_{mn} \end{pmatrix}$$

$$r_{ij} = \frac{|a_{ij} - u_i^0|}{\max_{1 \leq j \leq n} \{a_{ij}\} - \min_{1 \leq j \leq n} \{a_{ij}\}} \quad (i = 1, 2, \dots, m; j = 1, 2, \dots, n)$$

and

D) Establish the weight of each evaluation index

E) Establish a comprehensive evaluation model

$$F_j = \sum_{i=1}^m w_i r_{ij} \quad (j = 1, 2, \dots, n)$$

## 4. Empirical analysis

The following is an empirical analysis of the comprehensive evaluation of the economic benefits of enterprises under the background of tax cut and fee reduction. According to the designed comprehensive evaluation index system of high-quality economic development, we use the evaluation index system of high-quality economic development constructed by the 20 most representative stable enterprises in China to comprehensively evaluate the economic benefits of high-quality development of enterprises in China in the list of top 500 enterprises.

According to the index system above, we select 20 representative samples of China's top 500 enterprises. We have analyzed the economic benefit data of these 20 enterprises, such as the operating income, investment income per share, operating profit, monthly average wage of employees in 2019. In terms of index design, we select seven indexes from the established index system that can reflect the high-quality economic benefits of enterprises, and then conduct comprehensive evaluation and analysis. These seven indicators include operating cost (x1), operating income (x2), investment income (x3), operating profit (x4), employee salary (x5), employee welfare (x6), and income tax (X7). For these 20 high-quality development evaluation enterprises, including Sinopec, CSCEC, Ping An, SAIC, ICBC, China Railway, China railway construction, China Life Insurance, China Construction Bank, Agricultural Bank of China, Bank of China, HNA technology, Greenland holding, Baosteel, Shenhua, Vanke, Midea Group and China Merchants Bank.

First of all, establish an ideal plan. Business income (x2), investment income (x3), business profit (x4), employee salary (x5), employee welfare (x6), income tax (X7) are all benefit indicators, and business cost (x1) is cost indicators. According to the above standards, the relative deviation fuzzy matrix is established.

$$r_{ij} = \frac{|a_{ij} - u_1^0|}{\max_{1 \leq j \leq n} (a_{ij}) - \min_{1 \leq j \leq n} (a_{ij})} \quad (i = 1, 2, \dots, m, j = 1, 2, \dots, n).$$

According to the above formula, the following results are calculated:

$$R = \begin{pmatrix} 1 & 0.203 & 0.953 & 0.638 & 0.973 & 0.906 & 0.422 \\ 0.999 & 0 & 0.915 & 0.728 & 0.998 & 0.991 & 0.517 \\ 0.544 & 0.640 & 0.860 & 0.809 & 0.822 & 0.405 & 0.782 \\ 0.399 & 0.724 & 0 & 0.561 & 0 & 0 & 0.423 \\ 0.373 & 0.758 & 0.541 & 0.857 & 0.505 & 0.302 & 0.926 \\ 0.155 & 0.801 & 0.865 & 0 & 0.611 & 0.329 & 0 \\ 0.311 & 0.815 & 0.892 & 0.941 & 0.985 & 0.949 & 0.935 \\ 0.307 & 0.818 & 0.807 & 0.934 & 0.872 & 0.571 & 0.935 \\ 0.289 & 0.851 & 0.935 & 0.963 & 0.906 & 0.683 & 0.979 \\ 0.057 & 0.905 & 0.835 & 0.289 & 1 & 1 & 0.338 \\ 0.123 & 0.868 & 0.903 & 0.327 & 0.973 & 0.843 & 0.337 \\ 0.079 & 0.903 & 0.905 & 0.382 & 0.909 & 0.695 & 0.498 \\ 0.103 & 0.967 & 1 & 1 & 0.992 & 0.969 & 1 \\ 0.091 & 0.962 & 0.850 & 0.935 & 0.763 & 0.511 & 0.894 \\ 0.070 & 0.979 & 0.847 & 0.926 & 0.467 & 0.299 & 0.945 \\ 0.089 & 0.980 & 0.958 & 0.989 & 0.434 & 0.266 & 0.991 \\ 0.008 & 0.994 & 0.616 & 0.805 & 0.721 & 0.577 & 0.788 \\ 0.026 & 0.981 & 0.498 & 0.819 & 0.825 & 0.414 & 0.758 \\ 0.027 & 0.996 & 0.495 & 0.933 & 0.106 & 0.033 & 0.951 \\ 0 & 1 & 0.485 & 0.714 & 0.872 & 0.568 & 0.656 \end{pmatrix}$$

Then, the weight vector is established by entropy method, and the calculation results are as follows:

$$\omega = (0.168 \ 0.175 \ 0.193 \ 0.194 \ 0.065 \ 0.024 \ 0.181)$$

Finally, the comprehensive evaluation model is established, and the comprehensive evaluation score is calculated by the following formula and MATLAB software.

$$F_j = \sum_{i=1}^m w_i r_{ij} \quad (j = 1, 2, \dots, n)$$

MATLAB software is used to calculate the comprehensive evaluation score of the enterprise economic benefit index system. As shown in **Table 2**.

Ranking	Enterprise name	Comprehensive evaluation score
1	Sinopec Group	2.48
2	CNPC	2.25
3	ICBC	0.89
4	China Construction Group	0.59
5	Ping An group of China	0.59
6	Agricultural Bank of China	0.27
7	China Construction Bank	0.16
8	SAIC Group	0.08
9	Bank of China	0.07
10	China Railway Group	-0.23
11	China Railway Construction	-0.23
12	China Life Group	-0.35
13	China Merchants Bank	-0.68
14	Vanke	-0.76
15	China Shenhua	-0.78

16	Greenland Holdings	-0.79
17	Baosteel	-0.84
18	HNA Technology Group	-0.87
19	Property Zhongda	-0.9
20	Midea Group	-0.94

**Table 2.** Comprehensive evaluation score of industrial economic benefit index

It can be seen from the table that the top four comprehensive scores of 20 enterprises are Sinopec, PetroChina, industrial and Commercial Bank of China and CSCEC, among which 4 are state-owned enterprises. This shows that compared with other enterprises, state-owned enterprises have a faster development speed of high quality, while private enterprises have a relatively slow development of high quality. From the phenomenon that the comprehensive evaluation scores of 20 private enterprises are generally low, we can see that the entrepreneurship and innovation vitality of private enterprises need to be further stimulated, and the relevant preferential policies to encourage the high-level development of private enterprises need to be improved.

## 5. The incentive path optimization of tax cut and fee reduction

Through the above research, we finally determined the fuzzy comprehensive evaluation system of high-quality economic development, and studied the factors that affect the efficient and healthy economic development of enterprises. Therefore, based on the above research, in order to give full play to the incentive effect of tax cut and fee reduction policy on the high-quality development of China's economy and promote the improvement of the economic efficiency of China's enterprises, we put forward the following policy suggestions to optimize the role of tax cut and fee reduction policy on the high-quality development of China's economy.

### 5.1 Promote preferential policies of tax cut and fee reduction through multiple channels

In order to let more business owners understand the preferential measures, the relevant departments should vigorously publicize and promote the policy of tax cut and fee reduction, so as to improve the incentive effect of tax cut and fee reduction. First of all, the tax authorities should update the preferential policies on the official website of the tax authorities in time. At the same time, the government should introduce the process and relevant conditions for enterprises to enjoy the policies in detail in the relevant columns of the official website<sup>[10]</sup>. Only by browsing the website of the tax authorities can enterprises be familiar with the preferential policies. The tax authorities can open online communication platform, create government departments WeChat official account, micro-blog, etc., and promote the preferential tax policy with the help of new media platform, publish information on policy change, and transfer tax reduction preferential policies to enterprises. In addition, the tax department can also expand the audience of the new round of tax reduction policies and effectively convey the preferential policies to enterprises and relevant taxpayers through various channels such as publishing brochures, holding lectures on tax reduction policies regularly, sending SMS to taxpayers, etc.

### 5.2 Increase tax cut and fee reduction for private enterprises

China should adhere to the policy of tax cut and fee reduction as an important entry point to promote supply side reform and high-quality economic development. In addition, China should further increase tax cut and fee reduction for private enterprises. At present, China has introduced a number of preferential measures to reduce taxes and fees. The functional departments of the government should continue to implement the policy of tax cut and fee reduction, and ensure the timely implementation of preferential measures, so as to effectively reduce the tax burden of enterprises. In particular, private enterprises are faced with not only the burden of tax and social insurance funds, but also the problems of high external financing burden, high logistics costs, rising land prices, rising wages and so on. For some private enterprises, the financing cost is often higher than the tax burden of enterprises, which is the main aspect of increasing

the production and operation cost of enterprises. Therefore, it is suggested that the relevant departments increase the tax cut and fee reduction for local private enterprises, especially small and micro enterprises, and improve the investment and financing service system for local small and medium enterprises. These measures can alleviate the financing difficulties and expensive situation faced by local private enterprises, and reduce the burden of survival and development of private enterprises.

### 5.3 Fully implement the principle of tax law

At present, there are only eight kinds of taxes that have been levied in our country, which are formulated in the form of laws. And the rest is in the form of tax administrative regulations and departmental rules, which reflects the imperfection of our tax legal system. This paper suggests that the taxes to be levied should not be issued in the form of administrative regulations, but should be strengthened, and the corresponding draft laws with extensive enforcement and enforcement effect should be issued, and submitted to the National People's Congress and its Standing Committee for deliberation. China gradually improves the legal level of value-added tax and other taxes, and upgrades the administrative regulations to the legal level, so as to realize the legalization of tax<sup>[11]</sup>.

### 5.4 Further deepen the reform of tax system

By analyzing the current tax structure, we can find that the proportion of indirect tax is high and the proportion of direct tax is low. The imbalance of the proportion of indirect tax and direct tax is obviously disadvantageous to China's economic transformation and upgrading. Therefore, in order to pursue high-quality and high-level economic development, it is necessary to speed up the optimization of tax system structure. In China, efforts have been made to reduce the operating cost of the real economy and the tax burden of enterprises, which on the surface has reduced the national tax revenue. However, in the long run, it has played a practical role in promoting the high-quality development of the real economy through in-depth reform measures in exchange for the substantial benefits of enterprise growth.

## 6. Conclusion

Entropy method is used to establish the relative deviation fuzzy evaluation index system of high-quality economic development. In view of the economic benefits of enterprises, the comprehensive evaluation system of high-quality economic development established in this paper has certain practical significance. It can make up for the shortcomings of the ranking standard of the top 500 enterprises in the common sense, and evaluate the economic benefits and development potential of an enterprise reasonably.

This comprehensive evaluation model can provide a scientific theoretical basis and reference for the high-quality economic development of some regions in China. To some extent, it can solve the problem of establishing an indicator system to measure the high-quality economic development, and can also be extended to the economic development of enterprises. At the same time, it can better promote the high-level economic development of enterprises and the high-level economic development of China, and it provides path guidance for the tax cut and fee reduction policies.

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