

# Research on the Fiscal and Tax Path of the Economic Development of Coal Enterprises under the Background of "Double Carbon"

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**Abstract:** To achieve the goal of "double carbon" is a broad and profound economic and social systemic change, and to promote the work of "double carbon" requires domestic and international coordination, political, economic, social, scientific and technological aspects, and the overall, systematic and sustainable goal of "double carbon" needs to play the role of the core body of the government. Taking fiscal and taxation policies as the entry point. This paper discusses how coal enterprises can open up relevant paths for high-quality sustainable development under the dual-carbon background. By sorting out fiscal and taxation policies that have a greater impact on the development of coal enterprises, and analyzes existing problems in the existing fiscal and taxation policies, explores the impact of fiscal and taxation policies on coal enterprises under the dual-carbon background, and finally concludes the improvement of fiscal and taxation incentive policies based on the impact analysis. Adjustment of tax preferential policies and the establishment of effective coal price supervision mechanism and other reform path suggestions.

**Keyword:** Double carbon; Coal Enterprise; Fiscal and Taxation Policy; Tax Incentive

## 1. Introduction

Global climate governance is a serious challenge facing all mankind and has a bearing on the sustainable development of every country. In September 2020, China officially put forward the "two-carbon" goal, promising the world that carbon dioxide emissions will peak before 2023 and strive for carbon neutrality before 2060. Since then, China has

issued a series of documents and supporting policies to provide policy guidance for the continuous promotion of the "dual carbon" goal, promote economic and social development and comprehensive green transformation, and achieve high-quality development.

Since 2016, China's coal industry has carried out supply-side structural reform and significantly reduced coal production capacity, but coal is still the largest stock, the highest reliability, and the best economic energy, which determines that China will maintain a coal-based energy production and consumption structure for a long period of time. At the Climate Ambition Summit in December 2020: "By 2030, China's carbon dioxide emissions per unit of GDP will drop by more than 65% compared with 2005, and non-fossil energy will account for about 25% of primary energy consumption." This means that China will further adjust its industrial structure and energy structure, and vigorously develop new energy industries. As one of the high-carbon energy industries, coal enterprises will soon be squeezed out of their living space. In the process of carbon peaking and carbon neutralization, coal enterprises must not only solve the problem of insufficient precise control of the original coal supply, provide basic energy for economic and social development, and play a supporting role; they must also respond to the impact brought by the new energy industry, by changing the original single production mode to reduce carbon emissions and meet the needs of developing a low-carbon economy, so as to seek sustainable development of coal enterprises. This article attempts to analyze the status quo of coal enterprises under the background of "dual carbon" from the current fiscal and taxation policies of our country, and seeks a

development path for the high-quality development of coal enterprises in the new era through the analysis of current fiscal and taxation policies.

## 2 Review of Domestic and International Research

### 2.1 Overview of Foreign Studies

Foreign countries have conducted early research on reducing carbon emissions and conducted in-depth research on the feasibility of different tax types in reducing carbon emissions. Pigou proposed that the government levies proportionally on polluters, balancing the difference between private and social costs, and achieving Pareto optimality in resource allocation. This external behavior is called Pigou taxation[1]. Beause Jour analyzed the relationship between energy taxes and economic development, as well as carbon emissions, and pointed out that energy taxes can directly reduce carbon dioxide emissions and are an effective measure to promote low-carbon economic development[2]. Hu Haisheng et al. used a CGE model to simulate the joint reform of carbon and resource tax policies on energy utilization, pollutant emissions, macroeconomic, government taxation, household income, and corporate net income. They compared and analyzed the environmental and economic effects of policies and found that carbon tax was significantly better than resource tax[3].

For the development of coal enterprises in a low-carbon economy, Aamud proposed that coal enterprises in a low-carbon economy need to increase technological investment, improve energy efficiency, and reduce CO<sub>2</sub> emissions[4]. Papadas proposed that coal enterprises can make decisions by combining carbon information and financial information, while considering operating costs[5].

### 2.2 Overview of Domestic Research

There are significant differences in the political and social environments both domestically and internationally, and the challenges faced in developing a low-carbon economy are also vastly different. Domestic scholars believe that a low-carbon economy is currently the only way to improve the environment and save energy. Lu Tiantian et al. pointed out that the key to developing a

low-carbon and circular economy in China lies in coal enterprises, which can be developed around clean production, comprehensive utilization of resources, diversified development, and low-carbon models of high carbon industries[6]. Xie fanghui proposed that coal enterprises should dare to cope with the upsurge of economic transformation, optimize the development structure for taxation, realize the healthy market transformation in line with the development of the times, adapt to the development of the times, and achieve high-quality development[7].

After the dual carbon goal was put forward, Zhang Xianzhi believed that enterprises would face financial and accounting risks of reducing carbon emissions in terms of technology, structure and management. Enterprises should fully understand the dual carbon policy, seize the opportunity of enterprise green transformation, control enterprise environmental costs, actively seek the direction of green transformation, and make contributions to the realization of the dual carbon goal as soon as possible[8]. Zhang wenhui et al proposed to improve lignite quality and power generation efficiency, reduce coal production and utilization costs, expand sufficient cost space for coal-fired power plants, make pollutants and CO<sub>2</sub> emissions reach or lower than the level of natural gas power plants, achieve low carbonization, and give full play to the "bottom line" and energy security role of clean coal power under the "double carbon" goal[9].

### 2.3 Literature Review

Countries around the world have frequently explored the way out for economic transformation. Due to different national conditions, the applicable systems and policies are also quite different. For example, the applicable carbon tax in foreign countries has not yet issued relevant policies in China. Therefore, Chinese scholars mainly use foreign practical experience as a reference to explore the fiscal and tax policies in line with China's national conditions. In order to promote the realization of the dual carbon goal, coal enterprises, as a high carbon and high energy industry, have become the focus of Chinese scholars' research. Chinese scholars began to explore the applicable development

and transformation path from the perspective of coal enterprises, and conduct theoretical research on fiscal and tax policies to promote the realization of the dual carbon goal.

### 3 The Current Situation and Existing Problems of Coal Enterprises under the Dual Carbon Background

#### 3.1 Current Situation of Coal Enterprises under the Background of Double Carbon

##### 3.1.1 Large carbon emissions of enterprises

The dual carbon target proposed by China is not only difficult, time tight and heavy, but also requires firm courage and perseverance to complete the carbon reduction process of developed countries in Europe and the United States. The realization process will lead to the great transformation of China's economy and society and the huge reform in related industries. In fact, in the process of coal from production to extinction, each stage will produce corresponding carbon emissions. Therefore, whether from the perspective of energy structure or the life cycle of coal, emission reduction must start with coal enterprises to promote them to reach the peak of carbon first and realize carbon neutralization.

In the stage of coal production, carbon emissions mainly come from the tianane pumped before and after mining and the carbon emissions from coal mining machinery and transportation tools. In the coal conversion stage, carbon emissions mainly come from the resources and energy input in the coal chemical production process. In the use stage of coal, coal is mainly used for power generation.

Although China advocates steadily promoting the use of environmental protection and clean energy, coal-fired power generation is still the main power generation mode in China, accounting for 60% of China's power supply, and the carbon emissions of coal-fired power account for 41% of the national carbon emissions.

##### 3.1.2 The technical level of the enterprise is low

From Table 1, it can be seen that the top ten coal enterprises in 2022 accounted for over 51% of the raw coal production of enterprises above designated size. The coal industry has a high concentration, and large-scale coal enterprises are generally showing a steady development trend. In fact, the formation of such an industry structure did not take long. Twenty years ago, China's coal industry was mainly composed of small and medium-sized coal enterprises. In order to meet the market's demand for high-level coal, after optimizing the industrial production structure, small and medium-sized coal mines were replaced by large modern coal mines. Large modern coal mines are conducive to solving the problems of high debt, tight funds, and difficult financing of some small and medium-sized coal enterprises, promoting resource integration, enhancing high-quality production capacity, and enabling enterprises to develop and grow. The market share of small coal enterprises that cannot transform has gradually been occupied, and they are naturally eliminated by the market. However, coal enterprises that have successfully transformed also face huge challenges in improving their technological level in the short term.

**Table 1. Raw Coal Output of Top 10 Coal Enterprises in 2022**

Coal Enterprises above Designated Size	Raw coal production (10000 tons of standard coal)	Year-to-Year Growth
National Energy Group	60109 million tons	5.4% year-on-year growth
Jinneng Holdings Group	41297million tons	7.6%year-on-year growth
Shandong Energy Group	26516million tons	3.9%year-on-year growth
China National Coal Group	26150million tons	3.4%year-on-year growth
Shaanxi Coal Group	23326million tons	11.0%year-on-year growth
Shanxi Coking Coal Group	18215million tons	4.5%year-on-year growth
Lu'an Chemical Group	10466million tons	13.2%year-on-year growth
HUANENG GROUP	9954million tons	14.9%year-on-year growth
Guodian Investment Group	7879million tons	2.1%year-on-year growth

Huaihe Energy Group	7411million tons	0.2% year-on-year decrease
Total coal enterprises above designated size	4500 million tons	9.0%year-on-year growth

With the acceleration of structural adjustment and the shift from "coal based" to "clean and diversified" development, the market's demand for coal has shifted from quantity to quality, and the imbalance between supply and demand has become increasingly prominent. In addition, the supply and demand of foreign coal markets are loose, and the energy consumption per unit of GDP is much lower than that of China, which means that the energy consumption for producing the same products is lower than that of China. This indirectly reflects the shortcomings in China's energy technology level and the attractiveness of imported carbon to the Chinese market. The development space of coal enterprises may be further compressed.

At the end of the 12th Five Year Plan period, the scientific and technological contribution rate of China's coal industry was only 49.5%. With the promotion of China's coal supply side structural reform, it has reached 58.6% since the 13th Five Year Plan period, and is expected to achieve the target of around 65% by 2025. But compared to developed countries, we are only catching up with progress. There is still a long way to go before competition and surpassing domestic coal.

**3.2 Problems in the Current Financial and Tax Policies of Coal Enterprises**

**3.2.1 Weak incentive of financial and tax policies**

Against the backdrop of vigorously promoting dual carbon, China's fiscal subsidies and tax incentives will tend to support the new energy industry, especially for photovoltaic power generation, hydropower, and wind power, with an increasing trend in policy and financial support year by year. Although the development of the coal industry is already in its mature stage, China's coal enterprises are still unable to achieve high-quality development. Under the impact of the emerging new energy industry, coal enterprises are facing urgent and difficult transformation and development. At this time, the government needs to provide incentive financial and tax policies for coal enterprises, and the current financial and tax policies are clearly not strong.

The current tax incentives require a high level of corporate tax planning. Coal enterprises are involved in a wide range of production and operation processes, with many transaction links and types, which can easily lead to the inability to obtain value-added tax special invoices in a timely manner for deducting value-added tax. In addition, labor fees and other related expenses account for a significant proportion of the costs of coal enterprises. However, due to the strong liquidity of the recipients of labor fees and the lack of corresponding value-added tax invoices, these labor income can only be included in the output tax in most cases. These issues have increased the tax burden on enterprises and become difficult points in tax planning, to some extent reducing the enthusiasm of enterprises to use tax incentives.

**3.2.2 Less tax incentives**

Coal is a fundamental industry in China, and the tax preferential policies in the coal industry cannot reflect the government's support for the basic industry. In terms of tax policies, coal products adopt the same value-added tax rate as other industrial products. Generally, coal resources are directly mined from underground, and there are fewer items that can be used for value-added tax deduction compared to other products. Therefore, value-added tax accounts for a large proportion of China's coal enterprise tax burden[10]. In fact, the government can formulate corresponding tax reduction and preferential policies for different periods of coal resource extraction.

**4. Suggestions on the Path of Economic Development for Coal Enterprises under the Dual Carbon Background**

**4.1 Improve Fiscal and Tax Incentive Policies**

Through the analysis of the annual reports of coal listed enterprises, it is found that the tax burden of coal enterprises in China has little impact on their business development in recent years. The development of coal enterprises is more limited by the market conditions of the coal market, and government policies provide guidance for their development strategies. There is little mention of changes in tax

burden in the report, but in reality, the tax burden of enterprises has also shown a stable state. Although the country has carried out tax reform in the coal industry in recent years, clearing fees and establishing taxes, currently, the effect of reducing taxes on coal enterprises is not significant. In order to fully leverage the role of coal enterprises as ballast stones in future development, corresponding fiscal and tax incentive policies are crucial. For example, increasing the intensity of fiscal transfer payments, enhancing special subsidies and support for coal enterprises, expanding financial investment and financing channels, and increasing the issuance of local special bonds in the cities where coal enterprises are located.

#### **4.2 Adjusting Tax Preferential Policies**

##### **4.2.1 Expand the scope of value-added tax input tax deduction for coal enterprises**

The 1994 tax reform replaced product tax with value-added tax, which mainly relied on input tax deduction to reduce the actual tax burden. Coal enterprises have less input tax that can be used for deduction in value-added tax. Generally, enterprises can offset the input tax on purchasing raw materials, while coal enterprises cannot issue invoices for most of the raw materials they independently mine; Furthermore, electricity and material fees, which account for a certain proportion of production costs, are not within the scope of deduction, and value-added tax accounts for the majority of taxes paid by Chinese coal enterprises. Therefore, it is recommended that government departments expand the scope of value-added tax deduction for coal enterprises.

##### **4.2.2 Seriously implementing the Environmental Protection Tax Law, but forcing to enhance the market concentration of coal enterprises**

In 2018, the Environmental Protection Tax Law of the People's Republic of China began to be implemented, and the emission of atmospheric pollutants required corresponding environmental taxes, which to some extent increased the operating costs of coal enterprises. For coal enterprises that produce legally, reasonably, and in compliance with regulations, environmental taxes have little impact on them. Instead, they can reflect the social responsibility of the enterprise and widen the gap with other enterprises that

engage in illegal production and disorderly disposal. However, for some small coal enterprises, they do not have sufficient funds to develop technology, cannot compare with large coal enterprises in terms of facilities, and cannot meet the requirements of environmental taxes in terms of emissions. The implementation of environmental taxes has caused a huge impact on enterprises. However, as far as this article is concerned, the government should seriously implement the environmental protection tax law, eliminate some illegal emission enterprises with a soft but firm law enforcement mentality, and eliminate backward and advanced development. It is currently an unstoppable trend for coal enterprises to follow a standardized, large-scale, and centralized development path.

Although the current situation of China's coal industry is dominated by large state-owned coal enterprises, and the development of large-scale modern coal mines helps to integrate resources and develop high-end technologies, there are still problems such as excessive private mining by small and micro coal enterprises. The implementation of environmental protection tax laws can also force enterprises to explore new paths of transformation and development. If necessary, the government can take corresponding measures to rectify, merge and rectify small-scale coal enterprises, and increase the concentration of the coal market.

#### **4.3 Establish an Effective Coal Price Supervision Mechanism**

When studying the business situation of China Shenhua, coal prices are severely affected by market supply and demand, and the operating income of the enterprise also fluctuates significantly. A stable coal market is closely related to stable coal prices. Low coal prices will affect the healthy development of the industry, while high coal prices will affect the development of downstream industries. If the industry does not have a reasonable profit distribution system, it will inevitably affect the development of the national economy[11]. In order to avoid significant economic fluctuations in the coal industry, the government should also formulate corresponding coal price supervision measures and implement policies to protect the

minimum and maximum prices of coal.

Establish an effective coal price supervision system to ensure correct pricing. Led by the national price regulatory department, comprehensive understanding of the supply and demand situation and price changes in the coal market is conducted through local and national coal trading market information and coal industry analysis. Price fluctuations are made public in real time, promoting the normal and stable operation of coal prices, protecting the interests of the coal and charcoal industry, and ensuring the appropriateness of national coal price policies.

### 5. Conclusion

In the context of dual carbon, in order to explore the economic development path of coal enterprises, fiscal and tax policies must play a pivotal role, and enterprises must dare to take on the responsibility of high-quality and sustainable development. Improve fiscal and tax incentive policies, adjust tax incentives, establish effective coal price supervision mechanisms, grasp the overall development direction of coal enterprises, mobilize their enthusiasm for transformation and development, and safeguard the stable and innovative development of coal enterprises.

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