Research on the Impact Mechanism of Fiscal and Tax Policies on Carbon Emissions under the Dual Carbon Goals

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Abstract: It is of great significance to study the impact mechanism of fiscal and tax policies on China's carbon emissions under the double-carbon target to promote China's green development. Based on the carbon emission panel data of 30 provinces in China except Tibet, Hong Kong, Macao and Taiwan from 2010 to 2019, and based on the system GMM model, this paper analyzes the impact mechanism of fiscal and tax policies on China's carbon emissions. The research shows that there is an inverted U-shaped relationship between financial expenditure and carbon emissions, that is, with the increase of financial expenditure, carbon emissions show a trend of first rising and then declining. Tax revenue has the effect of restraining carbon emissions, but the effect is limited. Based on this, this paper puts forward suggestions on the improvement of fiscal and tax policies and the expansion of the implementation path from the perspective of "dual carbon".

Keywords: Double carbon target; Carbon emissions; System GMM estimation; Fiscal and tax policies; Impact mechanism.

1. Introduction

The global climate issue is a major problem facing international economic development. Countries around the world have reached consensus on green and low-carbon development. In 2020, Secretary Xi Jinping announced at the 75th session of the United Nations General Assembly that our country will achieve the "dual carbon" goal by 2060. The main background of this vision is that mankind is facing a serious threat to global warming. At present, the dual carbon target proposed by China is of positive significance to global climate governance, but there are also many challenges in the process of governance. In addition to the 40-70 year window period shorter than that of developed countries, China's economic structure, energy structure, technological innovation and other aspects have strong resistance to achieving the dual carbon target. In this context, China has vigorously developed a green and low-carbon economy, accelerated the establishment of a "1+N" (China has accelerated the construction of a carbon-neutral "1+N" policy system. For details, please refer to the Opinions of the Central Committee of the Communist Party of China on the Complete, Accurate and Comprehensive Implementation of the New Development Concept and Do a Good Job in Carbon-neutralization issued by the Central People's Government of the People's Republic of China on October 4, 2021, which clarifies Overall requirements and main objectives.) policy system, and provided strong support for achieving carbon emission reduction. Although China has provided strong support for the realization of the dual carbon goals in the political and economic fields, there are still many difficulties and bottlenecks in the actual carbon reduction work, which need to be macro regulated through fiscal and tax policies. Through the system GMM model, this paper will explore the following questions: How will fiscal and tax policies affect carbon emissions as a key tool for the country to achieve its goals? What effect will the fiscal and tax policies have on carbon emission reduction? Clarifying the relationship between fiscal and tax policies and carbon emissions, and building a scientific fiscal and tax policy is the key to China's economic decarbonization and green development.

To achieve the goal of "double carbon", the following challenges are faced: First, the economic transformation and industrial upgrading have not been completed (Huang Xiao, 2021), the energy consumption per unit GDP of traditional industries is high, the cost of developing new technologies is high, and the process of industrial upgrading is slow [1]. Second, the energy structure urgently needs to be transformed (Zhuang Guiyang, 2021). Coal ranks first in China's energy consumption structure, leading to the phenomenon of large and high carbon emissions. Therefore, it is necessary to realize the energy transformation and promote the popularization and application of new energy [2]. Third, low carbon technology has not broken the bottleneck. Zhuang Guiyang (2021) emphasized and proposed in the article that the current low-carbon key technologies are not mature, the technology cost is high, the market popularization and application are difficult, and there is no strong support for the realization of the dual carbon goal.

In recent years, domestic and foreign scholars have conducted in-depth research on the impact mechanism of financial expenditure on carbon emissions. Bernarder and Koufi (2006) found that the higher the proportion of government expenditure in GDP, the worse the air quality will be, through the research on the relationship between the scale of national financial expenditure and environmental quality (SO2 concentration) in 42 countries from 1971 to 1996[3]. Qu Xiao'e and Yuan Xiaoqing (2009) studied the differences in China's energy intensity and their influencing factors through panel data from 30 provinces, cities and autonomous regions in the country from 1998 to 2006. They concluded that the greater the government's intervention in the market economy, the lower the efficiency of energy utilization. Some regions developed their economies at the cost of excessive energy
consumption and environmental costs, especially in the energy rich central and western regions [4]. Zhao Zhe and Tan Jianli (2021) obtained an inverted U-shaped relationship between financial expenditure and carbon emissions by estimating and analyzing the system GMM model [5].

Fu Sha et al. (2018) estimated through GMM model that the green tax system has an inhibitory effect on carbon emissions in the east, central and western regions, but the effect is not obvious in the west [6]. Yin Zhonghai and Xie Lan (2021) found by building a panel threshold model that the extent to which environmental subsidies and tax policies inhibit carbon emissions is different among the eastern, central and western regions. The subsidy policy is the best in the central region, but the effect of fiscal expenditure is not significant among different regions [7]. To achieve the dual carbon goal, we need to pay attention to the coordination between policies. Wang Jiadeng et al. (2021) used the CGE model to draw a conclusion that environmental protection tax has a synergistic effect on carbon emission reduction, and also stressed that the reduction of greenhouse effect cannot be achieved only by relying on environmental protection tax [8].

Green technology upgrading is an effective means to achieve carbon emission reduction. Li Xiaohong (2019) found that financial subsidies and preferential tax policies can promote the innovation of clean energy technology [9]. Li Xiangju (2020) studied the interaction between scientific and technological innovation, fiscal and taxation policies and energy intensity by using empirical analysis methods, and found that fiscal and taxation policies can reduce the use of high carbon emission energy by promoting green technological innovation, and have a stronger incentive in the achievement link [10].

To sum up, the existing research shows that the challenges faced by China to achieve the dual carbon goals at this stage, as well as the impact of fiscal and tax policies on carbon emissions, lay the foundation for this study. However, the current research, especially the financial and tax policy research literature is insufficient, and the research on policies has gradually increased in recent years, but the overall number is small. There are still some deficiencies and institutional barriers in the current fiscal and taxation policies to deal with carbon emission reduction, such as incomplete fiscal and taxation tools, weak linkage, and the fiscal and taxation system and mechanism to deal with carbon emission reduction have not yet been formed. Based on this, through empirical and theoretical analysis, this study aims to further deepen and enrich fiscal and tax policies to meet the requirements of the dual carbon goals.

2. Theoretical Analysis and Assumptions

2.1. Fiscal expenditure has a dual impact on carbon emissions

Financial instruments are an important lever to regulate economic growth. In the process of curbing carbon emissions, the Chinese government has adopted green procurement, financial subsidies and other measures to positively stimulate green and low-carbon development at the production and consumption ends. With regard to the impact of fiscal policy on carbon emissions, current scholars at home and abroad believe that the relationship between fiscal expenditure and carbon emissions is an inverted U-shaped relationship that first rises and then falls. Financial expenditure affects the behavior of local governments and enterprises by changing the allocation of resources between them. Therefore, it is particularly important to study carbon emissions from the perspective of financial expenditure.

2.1.1. Direct impact of financial expenditure on carbon emissions

Finance is the foundation and important pillar of national governance. With a wide range of influence and good compatibility, fiscal policy has become an indispensable part of responding to public events. Previous studies have shown that environmental pollution has a certain correlation with China's fiscal decentralization. China's fiscal decentralization reform has driven the prosperity and development of local economy and the fierce competition between governments. And because the central government has adopted GDP performance evaluation criteria for local governments, fiscal decentralization has also stimulated the political promotion of local officials, which, to a certain extent, has caused bad competition among governments at the expense of the environment to complete performance indicators. As mentioned above, economic development will lead to environmental degradation to a certain extent, which reflects that local governments have relaxed their requirements for the environment in pursuit of economic growth and aggravated the pollution problem in some areas. On the other hand, when the economy develops to a certain extent, the public's requirements for environmental quality will continue to increase. The government will accelerate the pace of improving the environment, strengthen the role of environmental supervision, and promote the reduction of carbon dioxide emissions.

Li Meng (2009) said as early as in his research that the relationship between the degree of environmental pollution and the local per capita financial income is an inverted U-shaped one (also known as the environmental Kuznets curve), but at this stage, the per capita financial capacity has not yet reached the inflection point of the U-shaped curve, so the current financial expenditure is positively related to environmental pollution [11]. With the continuous growth of the economy, the continuous improvement of the quality of the public makes its requirements for environmental quality will continue to increase. The government will accelerate the pace of improving the environment, strengthen the role of environmental supervision, and promote the reduction of carbon dioxide emissions.

2.1.2. Indirect impact of financial expenditure on carbon emissions

First of all, fiscal expenditure affects carbon emissions by affecting the industrial structure. Financial expenditure realizes the adjustment of industrial structure by redistributing production factors such as capital, labor force and technology among different industries. Its ultimate purpose is to maximize economic benefits. The industrial structure is closely related to carbon emissions. Research shows that the economic structure dominated by primary and secondary industries produces more carbon emissions, especially the secondary industry dominated by heavy industry, whose carbon emissions level is significantly higher than other industries. If a large number of production factors are put into the industry, it will lead to the deterioration of environmental pollution.

Secondly, fiscal expenditure promotes the development of
new urbanization and affects carbon dioxide emissions. Financial expenditure is an important source of funds for the development of urbanization. With the continuous in-depth development of urbanization, energy consumption is also growing. A large amount of energy consumption directly leads to a sharp increase in carbon emissions. Liu Xiya (2015) and others analyzed the main sources of carbon emissions in the process of urbanization, and concluded that urbanization is an important factor in increasing carbon emissions [12].

Thirdly, fiscal expenditure affects carbon dioxide emissions by affecting the energy structure. China's resource endowment has long been characterized by "rich coal, poor oil and less gas". Although the proportion of coal in total resource consumption has declined significantly in recent years, it has always remained above 55%, which means that coal has always played a dominant role in China's energy system, and the impact of coal combustion on the state of life is far-reaching and extensive. Therefore, the intervention of financial means can effectively improve the energy structure, promote clean energy and promote technological innovation.

Finally, fiscal expenditure is highly related to population size, which is an important factor affecting carbon emissions. A large number of studies have shown that a large population means more frequent economic activities and more energy consumption, leading to higher carbon dioxide emissions.

2.2. The tax policy promotes the realization of the dual carbon goal

Tax is an important policy tool for government macro-control, which plays an important role in correcting environmental externalities, promoting environmental improvement and coping with climate change. The tax policy mainly curbs carbon emissions and increases carbon sinks through the following two aspects:

2.2.1. Control and reduce carbon dioxide emissions with preferential tax policies

The existing corporate income tax in China stipulates the credit policy for investment in energy-saving equipment and the tax relief policy for energy management contract projects, energy conservation and environmental protection, comprehensive utilization of resources or products, which reduces the production costs of enterprises to a certain extent, and also causes enterprises to pay attention to energy conservation and emission reduction, green and low-carbon development (Gong Huiwen, 2021) [13]. Tax exemption policy for energy contract management projects and tax refund policy for comprehensive utilization of resources and wind power generation in VAT. These preferential tax policies are conducive to encouraging enterprises to use energy-saving and environmental protection equipment and green energy for production and operation, and promote the energy transformation.

China will halve the vehicle and vessel tax on energy saving vehicles and vessels, exempt new energy vehicles from vehicle purchase tax, and exempt new energy vehicles and vessels from vehicle and vessel tax. These preferential tax policies have become consumption oriented, and residents tend to buy energy saving vehicles and ships to promote energy conservation and emission reduction.

Moreover, the development of low-carbon technologies and carbon sinks has been promoted by reducing and exempting corporate income tax for forestry projects and giving preferential tax policies to carbon capture and storage technologies.

2.2.2. Tax policy increases carbon sequestration

The restrictive tax levied on the development and utilization of forest resources mainly includes the tax items related to forest resources in resource tax and consumption tax. These tax policies are conducive to reducing people's use of forest resources to achieve the purpose of increasing carbon sinks. China's current consumption tax on disposable wooden chopsticks and solid wood flooring is to protect forest resources and increase carbon sequestration. For the comprehensive use of waste paper and Crop straw production pulp, the preferential policy of 50% VAT refund on straw pulp and paper is also conducive to protecting forest resources and increasing carbon sequestration [14].

3. Research and Design Based on System GMM Model

3.1. Selection of variables and indicators

3.1.1. Interpreted variable

The carbon emission (ln$\text{CO}_2$) is measured by the logarithm of carbon dioxide emission. Because the main source of carbon emissions is the burning of fossil fuels, this paper uses Zhang Tengfei's (2016) (The 17 categories are raw coal, refined coal, other washing coal washing, briquette, coking coal, coke oven gas, other gas, other coking products, crude oil, gasoline, kerosene, diesel oil, fuel oil, liquefied petroleum gas, dry gas from refinery, other petroleum products, and natural gas.) research to divide the sources of carbon emissions into 17 categories, and this data is from China's carbon accounting database [15].

3.1.2. Interpreting variables

Green environmental protection fiscal expenditure and green tax revenue. We take the proportion of green environmental fiscal expenditure in total fiscal expenditure as the basis for measuring the impact of fiscal expenditure on carbon emissions, and at the same time, we use green tax revenue to define the tax revenue related to environmental carbon emission reduction (green tax mainly consists of resource tax, consumption tax, vehicle and vessel tax, urban maintenance and construction tax, and consumption tax), and measure the basis for the impact of tax revenue on carbon emissions by the proportion of green tax revenue in tax revenue.

3.1.3. Control variables

The control variables are selected as follows: (1) Industrial structure (Ind), which is measured by the proportion of the output value of the secondary industry in the total industrial value of the region. (2) Urbanization level (Urb) is usually measured by the proportion of urban population in the year-end resident population of each region. (3) Trade openness (Tra), expressed by the proportion of total imports and exports of each region to the GDP of the region. (4) The population size (P) is measured by the resident population of different provinces and regions in this year.

3.1.4. Variable source and descriptive analysis

The sample data in this paper is from the panel data of 30 provinces in China except Tibet, Hong Kong, Macao and Taiwan in 2010-2019. The carbon dioxide emissions are from China's carbon accounting database, and the two explanatory variables, green environmental fiscal expenditure and green tax revenue, are respectively from the China Fiscal Yearbook and the China Tax Yearbook. The population in the control variables is derived from the permanent population data in the
China Demographic Yearbook, and the industrial structure, urbanization level and trade openness are derived from the China Energy Statistical Yearbook and the China Statistical Yearbook. The following figure shows the descriptive statistics of variables:

### Table 1. Descriptive Statistics of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sample</th>
<th>Mean</th>
<th>S.D.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon dioxide emissions (million tons)</td>
<td>300</td>
<td>5.544</td>
<td>0.726</td>
<td>3.229</td>
<td>6.792</td>
</tr>
<tr>
<td>Green fiscal expenditure (%)</td>
<td>300</td>
<td>14.256</td>
<td>6.213</td>
<td>2.925</td>
<td>31.426</td>
</tr>
<tr>
<td>Green tax revenue (%)</td>
<td>300</td>
<td>16.852</td>
<td>2.658</td>
<td>9.684</td>
<td>29.478</td>
</tr>
<tr>
<td>Industrial structure (%)</td>
<td>300</td>
<td>44.256</td>
<td>8.663</td>
<td>16.258</td>
<td>56.834</td>
</tr>
<tr>
<td>Urbanization level (%)</td>
<td>300</td>
<td>0.483</td>
<td>0.16</td>
<td>0.892</td>
<td>0.189</td>
</tr>
<tr>
<td>Trade openness (%)</td>
<td>300</td>
<td>0.350</td>
<td>0.385</td>
<td>1.658</td>
<td>0.030</td>
</tr>
<tr>
<td>Population size (10000 persons)</td>
<td>300</td>
<td>4548.952</td>
<td>2723.502</td>
<td>567.420</td>
<td>11346.269</td>
</tr>
</tbody>
</table>

### 3.2. Model Construction

The emission of carbon dioxide is a dynamic and continuous process, which is not only affected by the energy consumption in the same period, industrial structure, seasonal climate and other factors, but also by the carbon emissions in the previous period. Therefore, we believe that the carbon dioxide emissions have inertia. When studying the carbon dioxide emissions of this period, we need to add the data of carbon dioxide lagging behind the emissions of the first period as an explanatory variable into the empirical model. The green environmental protection fiscal expenditure variable and green tax revenue variable are introduced into the model in order to estimate the model.

\[
\ln{CO_{2t-1}} = \beta_0 + \beta_1\ln{CO_{2t-2}} + \beta_2\ln{Tax}_{it} + \\
\beta_3\ln{Ind}_{it} + \beta_4\ln{Urb}_{it} + \beta_5\ln{Tra}_{it} + \beta_6\ln{P}_{it} + \epsilon_{it}
\]

(1)

In order to remove the heteroscedasticity of data, we add the logarithmic form of variables in the formula to the model calculation to reduce empirical error. Where \(i\) and \(t\) represent provinces and years respectively, \(\ln{CO}_{2t-1}\) represents the natural logarithm of carbon dioxide emissions of province \(i\) in year \(t\); \(\ln{CO}_{2t-2}\) represents the logarithm of the carbon dioxide emissions of the province lagging behind by one period; \(\ln{Tax}_{it}\) represents the logarithm of green tax revenue of province \(i\) in year \(t\); \(\ln{Ind}_{it}\) represents the logarithm of green environmental protection fiscal expenditure of province \(i\) in year \(t\); \(\ln{Urb}_{it}\) is the logarithm of industrial structure; \(\ln{Tra}_{it}\) is the logarithm of urbanization level; \(\ln{P}_{it}\) the logarithm of trade openness; \(\epsilon_{it}\) represents the random disturbance term of province \(i\).

### 4. Empirical Results and Analysis

#### 4.1. Empirical results

Because the value of the explained variable in the panel data of this study is correlated with the residual term, we use the system GMM (System - GMM) estimation method in the analysis, which effectively solves the weak correlation and imprecision of the differential GMM (Diff - GMM) method. The following table shows the estimated data of relevant parameters of the two data models:

### Table 2. Results of model estimation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model (1)</th>
<th>Model (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\ln{CO}_{2t-1})</td>
<td>0.700***</td>
<td>0.726***</td>
</tr>
<tr>
<td>(\ln{Tax}_{it})</td>
<td>-0.024*</td>
<td>-0.029*</td>
</tr>
<tr>
<td>(\ln{Ind}_{it})</td>
<td>0.328***</td>
<td>0.302***</td>
</tr>
<tr>
<td>(\ln{Urb}_{it})</td>
<td>-0.253**</td>
<td>-0.173**</td>
</tr>
<tr>
<td>(\ln{P}_{it})</td>
<td>-0.0230***</td>
<td>-0.031***</td>
</tr>
</tbody>
</table>

Note: *, **, *** represents the significance level of 10%, 5% and 1% respectively; The values in parentheses are z statistics; The original hypothesis of Sargan test is that there is no over identification of tool variables; The original assumption of AR (2) test is that there is no second-order sequence autocorrelation.

#### 4.2. Empirical results and analysis

In the models (1) and (2), the P value of Sargan test is between 0.389 and 0.527. It is considered that the introduced instrumental variables are effective. P values of AR (1) are all 0, indicating that there is first-order autocorrelation between sample variables, while AR (2) is greater than 0.1, indicating that there is no second-order or higher correlation between sample residual sequences. In conclusion, the selection of tool variables in the model is relatively reasonable, and the identification of the model is effective.

The estimation coefficient of carbon dioxide lagging behind the first phase emission is significantly positive, which confirms the lagging effect of carbon dioxide emissions. From the empirical model, it can be concluded that every 1% increase in the total carbon dioxide emissions of the lag phase I will increase the carbon dioxide emissions of the current period by 0.73% - 0.76%.

The coefficient of green tax revenue is significantly negative, indicating that tax revenue can reduce carbon emissions. It can be concluded from the model that every 1% increase in tax revenue will reduce carbon emissions by 0.024% - 0.029%. This is because green tax can offset carbon emissions by reducing carbon emissions and increasing.
carbon sinks at the same time to promote the realization of the dual carbon goals. However, the effect of curbing carbon dioxide emissions through green taxes is limited.

The coefficient of green environmental fiscal expenditure is significantly positive, which indicates that the scale of local green environmental fiscal expenditure is positively related to carbon emissions, that is, the larger the scale of green environmental fiscal expenditure, the higher the carbon emissions. From the model results, for every 1% increase in China’s current environmental fiscal expenditure, carbon emissions will increase by 0.065%. This may be due to the low level of expenditure related to carbon reduction such as energy conservation and environmental protection in financial expenditure, which cannot effectively curb carbon emissions, or the low efficiency of green financial expenditure, that is, most of the financial expenditure is concentrated in the production and consumption end, while ignoring the support for the development of low-carbon technologies.

The industrial structure coefficient is positive, that is, there is a positive correlation between the industrial structure represented by the secondary industry and carbon emissions. The industrial structure represented by the secondary industry is mainly heavy industry with high energy consumption and high pollution. A large number of factor inputs will inevitably lead to a sharp increase in carbon dioxide emissions.

The urbanization structure coefficient is significantly positive. New urbanization is an important feature of China’s current economic and social development. The development of urbanization not only promotes the transformation of China’s economic structure and the upgrading of its industrial structure, but also brings about the growth of energy consumption. The growth of energy consumption leads to the increase of carbon dioxide emissions.

The coefficient of trade openness is negative, that is, the improvement of trade openness will not lead to the increase of carbon emissions. This means that China’s import and export structure has been optimized and some polluting industries have been transferred.

The coefficient of population size is significantly negative. The larger the population size, the less carbon emissions. As the relationship between population size and energy consumption is affected by multiple factors such as personal consumption preference and activity type, it is negative in this regression result.

5. Conclusions and Suggestions

5.1. Conclusion

Firstly, green environmental fiscal expenditure has not effectively curbed carbon dioxide emissions. There are many ways for green environmental finance to affect carbon emissions, among which the most important is the structure and efficiency of green financial expenditure. Due to the irrational structure and low efficiency of green fiscal expenditure, it cannot curb carbon dioxide emissions. However, with the continuous progress of China’s industrialization and urbanization, the expansion effect of carbon emissions and fiscal expenditure will continue to weaken in the future (Li Meng, 2009).

Secondly, green tax revenue inhibits carbon emissions, but the effect is limited. Due to the different preferential tax policies in different regions, it is difficult to obtain data. The author believes that if relevant data such as preferential tax policies are included in the empirical model, the emission reduction effect of tax on carbon emissions should be more obvious. Tax is an effective tool for national governance. As mentioned above, tax policy can reduce carbon dioxide emissions and increase carbon sink reserves at the same time, which is conducive to the realization of the dual carbon goals.

Thirdly, the industrial structure promotes the emission of carbon dioxide. The expansion of trade openness inhibits carbon dioxide emissions, mainly because of the optimization of domestic import and export structure and the transfer of polluting industries. The level of urbanization promotes the emission of carbon dioxide, which is caused by the close relationship between energy consumption and industrial structure. Not only that, the carbon dioxide in this period is affected by the carbon dioxide emissions lagging behind the first period.

5.2. Suggestions

Firstly, improve the structure of green fiscal expenditure and minimize direct or indirect carbon dioxide emissions. Establish a special account for financial funds for energy conservation and environmental protection, and make unified allocation to enhance the efficiency of fund use. Highlight the purpose orientation of the dual carbon goals, and provide a package of financial expenditure guarantees for carbon capture, utilization and storage (CCUS) technology, new energy technology, green funds, public research and development, and green public procurement. Improve the assessment and incentive standards of local governments, and add carbon emission reduction to the assessment standards to guide the green and low-carbon development of the region, so as to avoid the continued deterioration of the regional environment caused by fiscal decentralization. Scientifically plan the scale of financial expenditure in different regions, provide financial subsidies to the central and western regions and cities relying on resource development to help them realize the transformation of energy structure, and play the government function of financial expenditure according to the development heterogeneity of different regions and local conditions.

Secondly, improve green taxes such as consumption tax, resource tax and vehicle purchase tax, and strengthen their regulatory role in carbon emission reduction and carbon sink reserves. It is suggested that the main fossil energy except refined oil should be included in the scope of consumption tax collection, especially for coal. Improving the consumption tax on cars and vehicle purchase tax is conducive to encouraging the consumption of energy-saving cars and the popularization of new energy. Forest resources will be included in the scope of resource tax collection, and the protection of forest carbon sink, an important resource, will be strengthened. We will improve preferential tax relief policies to promote low-carbon development, such as lowering the threshold standards for enterprises to enjoy preferential tax treatment for energy contract management projects, and giving full play to the positive role of SMEs in energy conservation services. The carbon tax should be levied in a timely manner. China’s existing carbon trading market has a certain threshold, and only enterprises with carbon emissions of a certain scale can enter, which makes some small and medium-sized enterprises become loopholes. The introduction of carbon tax is conducive to limiting the carbon dioxide emissions of SMEs. The carbon tax directly on carbon emissions can be determined as an independent tax, or it can be levied by
setting a carbon dioxide account in the environmental protection tax. The carbon tax and carbon trading market constitute a composite pricing mechanism. This combination is conducive to achieving the policy effect of "1+1>2".

Thirdly, comprehensively use fiscal and tax policies to promote the transformation of industrial structure, use tax tools to increase the tax pressure on enterprises with high pollution, high energy consumption and high emissions, inject financial funds to stimulate innovation, and introduce clean energy and high-tech equipment to achieve low-carbon green development of industry and economy. Promote the development of new urbanization, publicize the concept of low-carbon development to the public and enterprises, encourage enterprises and individuals to green production and consumption with supporting fiscal and tax policies, and achieve carbon emission reduction in the process of constantly promoting urbanization. In addition, we will continue to optimize the industrial structure of import and export, increase tax collection on enterprises exporting highly polluting products, and continue to promote low-carbon and green development of foreign trade.

References