

Emission Reduction Effect and Development Countermeasures of China's Carbon Trading Policy

Haiying Qin Yongpeng Ning

(The Laboratory for Economic Behaviors and Policy Simulation, Nankai University,
The School of Economics, Nankai University, Tianjin 300071)

Abstract: In order to actively respond to domestic and international environmental challenges and climate change, and achieve low-carbon green sustainable development in China, China actively promotes domestic carbon trading, promotes greenhouse gas emission quota trading, reduces carbon emissions, implements energy conservation and emission reduction goals, and speeds up the transformation of high carbon enterprises. At present, there are still some deficiencies in China's carbon trading market. Local governments should actively improve carbon trading policies, improve the regulatory and legislative system of carbon trading market as soon as possible, further standardize the monitoring and verification of enterprise carbon trading, ensure the stability of carbon trading prices, encourage all kinds of enterprises to actively participate in carbon trading, gradually establish a unified carbon market, promote cooperation between enterprises, build a professional carbon financial trading platform, and simplify the carbon trading process, Fully implement the goal of energy conservation and emission reduction.

Keywords: carbon trading policy; Emission reduction effect; Influencing factors; Optimization countermeasures

Introduction

On July 16, 2021, the online trading of the national carbon market was officially launched. According to the monitoring data of the Ministry of Ecology and Environment, there were more than 2000 key emission units included in the power generation industry in the first performance cycle of the national carbon market, covering about 4.5 billion tons of carbon dioxide emissions annually, which injected a shot in the arm for China to achieve the goal of "carbon peaking and carbon neutralization". Governments at all levels should work with relevant industry associations to find out the carbon emissions of key industries such as steel, building materials and petrochemical, gradually establish a unified carbon trading market, promote the development of carbon trading financial markets, promote the development of energy conservation and emission reduction in China, and implement the goal of green, low-carbon and sustainable economic development.

1. Impact of carbon trading policy on emission reduction in China

1.1. Carbon emission reduction has achieved remarkable results

Carbon trading refers to the trading of carbon emission rights. The government determines the total amount of carbon dioxide that can be emitted in a certain period of time in a certain region according to the local carbon emission reduction goals, and then allocates carbon emission rights according to the characteristics of various enterprises in the region, gradually allocating quotas to each enterprise.

1.2 Changes in domestic energy prices

With the launch of online trading in the national carbon market in 2021, the domestic energy price has fluctuated. Under the influence of the carbon trading policy, some enterprises that rely on traditional energy such as oil and coal, such as power plants and steel plants, will increase their carbon emission costs, as well as their energy procurement expenditure. The higher the emission reduction target, the greater the reduction in energy consumption. Carbon trading has promoted the development of clean energy industries such as photovoltaic power generation and wind power generation, and stimulated the development of new energy industry. The price of new energy should be lower than that of coal, oil and other energies, attracting more enterprises to choose new energy, and stabilizing the domestic energy market price.

1.3 Accelerated the pace of industrial structure adjustment

The introduction of carbon trading policies has promoted the adjustment of China's industrial structure, accelerated the elimination of backward production capacity, encouraged various industries to actively research and develop green production technologies, guided the development of new energy industries, encouraged new energy enterprises to conduct carbon trading with energy enterprises, helped traditional energy enterprises reduce carbon emissions, and adjusted the development of industrial structure. Carbon trading has further promoted the development of new energy enterprises in China, especially photovoltaic power generation, wind power generation and other enterprises, facilitated the cooperation between new energy enterprises and other enterprises, reduced the dependence of enterprises on coal, oil and other traditional energy, let more enterprises use clean and environment-friendly new energy, and achieve the goal of energy conservation and emission reduction in China as soon as possible.

2. Interaction between carbon trading and emission reduction policies

2.1 Carbon trading and tax policy

Carbon tax is the main means of controlling carbon emissions in China, and also an important part of carbon trading. It clarifies the responsibilities of enterprises in the process of carbon emission reduction and carbon trading, and further standardizes the operation of carbon trading market. At present, China takes the carbon tax as the price ceiling of the carbon trading system to stabilize the carbon trading price, urge all kinds of enterprises to reduce carbon emissions, so as to control the share of carbon trading. It can also take the carbon tax as

a punishment for failing to achieve the carbon emission reduction goal, enhance the importance of enterprises on carbon trading, correctly handle the relationship between carbon trading and taxation, and can ensure the economic benefits of enterprises and the quality of carbon emission reduction work in a two-way way.

2.2 Carbon trading and renewable energy policy

In order to further promote the carbon trading policy, China has introduced a renewable energy subsidy policy to make up for the technical deficiencies of current carbon trading. The relationship between the two is complementary. For example, the renewable energy subsidy policy can be used in carbon trading to encourage power enterprises to use renewable resources for power generation, which can effectively reduce electricity prices, reduce their own coal consumption, reduce carbon dioxide emissions, and reduce their own carbon emission quotas, thereby reducing carbon prices. Local governments and relevant departments should organically combine carbon trading with renewable energy subsidies, encourage energy enterprises to use renewable resources, and comprehensively reduce local carbon emissions.

2.3 Carbon trading and green trading certificate

In order to stabilize carbon prices and reduce electricity prices, China has added green trading certificates to carbon trading market transactions, creating a new pattern of coordinated development of the two, and rationally controlling carbon trading prices and electricity prices. Different regions have different energy and power demands. Relevant departments should reasonably control the development of green trading certificates, monitor carbon prices and electricity prices throughout the process. Once abnormal price fluctuations are found, they should intervene to adjust carbon prices, stabilize the carbon trading market, ensure the legitimate rights and interests of enterprises, and create a good market environment for carbon trading.

3. Factors restricting emission reduction in the development of China's carbon trading market

3.1 Market supervision and legislation need to be improved

At present, China has not established a special carbon trading regulatory department, which is mostly supervised by local governments or environmental protection departments. The supervision of enterprises is not in place, and the punishment for enterprises violating the regulations is relatively light. In addition, although China has formulated the Carbon Emission Trading Management Rules (for trial implementation), it has not made clear legal provisions on some issues in the carbon trading process, such as the property right nature of carbon emission rights, and the punishment standards of various carbon emission trading subjects and third-party verification institutions are not uniform, which indicates that China's carbon trading market regulation and legislation need to be improved urgently.

3.2 The carbon trading quota allocation is not mature

China's carbon emissions trading is mainly divided into paid and unpaid distribution methods. The central government allocates carbon emissions based on the "principle of payment capacity", ignoring the consideration of carbon emissions and environmental pollution control costs of each province, so the fairness needs to be improved. The distribution methods used by China's seven major carbon trading markets are different. For example, Guangdong and Shenzhen trading markets have adopted the paid distribution method, followed the historical method and the baseline method in the free distribution, and have not yet established the paid auction method, which affects the enthusiasm of enterprises to participate in carbon trading.

3.3 The ability of market participants to participate in carbon trading is relatively weak

Some enterprises lack in-depth understanding of the carbon emission policy, and only equate this policy with the environmental protection policy. They do not make carbon trading plans according to their own production mode, energy structure, etc., which affects the quality of carbon trading. Many enterprises have not set up special carbon trading departments, lack professional carbon emission data monitoring and analysis personnel, have inaccurate grasp of the dynamics of the carbon trading market, collect inaccurate data, and formulate unreasonable carbon trading schemes, which have virtually increased the carbon trading expenditure of enterprises and affected the development of energy conservation and emission reduction work of enterprises.

4. Strategies to improve the emission reduction effect of China's carbon trading policies in the new era

4.1 Promote the establishment of carbon trading market supervision and legislation system

China's carbon trading policy is still in the exploratory stage. We should actively learn from international excellent experience, pay attention to the supervision and legislation of the carbon trading market, and create a standardized, legal and healthy carbon trading market. First of all, local governments should actively establish professional carbon emission trading supervision departments, supervise the high pollution areas, key industries and enterprises under their jurisdiction under the premise of controlling the total amount of local carbon emissions, scientifically divide carbon emission quotas to relevant enterprises, and urge enterprises to improve production technology and adopt clean energy. Secondly, the government should define the enterprise reward and punishment system based on the total amount of local carbon emissions and carbon trading, reward enterprises that actively participate in carbon trading and fulfill the energy conservation and emission reduction goals, punish enterprises that discharge pollutants in violation of regulations and fail to meet the carbon emission reduction standards, and order relevant enterprises to rectify, severely crack down on the illegal acts of enterprises that undermine carbon trading, and ensure the smooth progress of carbon trading. In addition, China should also strengthen relevant legislation on carbon trading, formulate national unified carbon trading legislation, and clarify carbon trading rules, trading dispute handling methods, quota allocation

principles, and punishment standards for enterprises that violate regulations. The legislative department should integrate the data of China's seven major carbon emission trading markets, analyze the characteristics of different provinces and industries, and reasonably allocate carbon trading quotas, such as giving more carbon emission quotas to new energy enterprises, so as to urge enterprises to introduce green environmental protection technologies, promote the development of new energy enterprises, and ensure the smooth operation of China's carbon trading market.

4.2 Build a perfect carbon emission detection and verification system

China's carbon trading market uses the MRV system to monitor, report and verify the carbon emission data of various regions, but there is a lack of unified carbon emission monitoring and verification standards. In order to solve this problem, the central government should improve the MRV system by combining the carbon emission data of various provinces and various enterprises, and clarify the responsibilities of various departments in carbon emission supervision, the cooperation of third-party verification agencies, and the construction of supporting facilities for the carbon trading market. First, China should clarify the regulatory responsibilities of the central and local governments in the carbon trading market, manage the seven major carbon emission trading markets, uniformly introduce the MRV system by the central government, regularly organize local carbon trading regulatory authorities to hold seminars, adjust the total carbon emission target of different provinces, and have more carbon trading prices, and constantly improve the MRV system guidelines and implementation standards. Second, based on local carbon emission data and key enterprise data, all localities should actively seek cooperation from third-party verification agencies, improve the MRV system access standards, and verify the carbon emissions of key enterprises in their jurisdictions. The third party institutions should maintain their neutrality, check the enterprises with reference to the energy conservation and emission reduction standards formulated by the state, adhere to the principle of seeking truth from facts, truly reflect the content of carbon dioxide, sulfur dioxide, etc. in the enterprise's exhaust gas, provide verification reports to the carbon trading regulatory authorities and competent authorities, strengthen the supervision of enterprises, and further improve China's carbon emissions and verification system.

4.3 Encourage market participants to actively participate in carbon trading

Many enterprises believe that the carbon trading policy limits their carbon dioxide emissions. Once the carbon emissions exceed the standard, they need to pay additional money to purchase carbon emission quotas. They have a negative attitude towards carbon trading. The central government should actively promote carbon trading policies, make students realize that carbon emission rights are intangible assets of enterprises, encourage enterprises to actively transform, reduce energy consumption of enterprises, and promote sustainable development of enterprises. For example, the government can further promote policies such as carbon tax and green trading certificate, change the concept of enterprises, make them realize the business opportunities contained in carbon emission trading, especially provide a development springboard for new energy enterprises, help them carry out carbon emission trading, and further improve the economic benefits of new energy enterprises. In addition, enterprises should improve their carbon management capabilities, actively seek cooperation with carbon emission regulatory authorities, introduce carbon emission data monitoring professionals, establish a carbon trading department, timely collect the dynamics of the seven major carbon trading markets in China, observe the total amount and price of carbon trading in each province, focus on analyzing the carbon emission quotas of various local enterprises, formulate a carbon trading scheme based on their own total carbon emissions, and actively conduct carbon trading with other enterprises, Reduce the cost of carbon price and achieve the goal of carbon emission reduction.

4.4 Accelerate the transition from carbon trading pilot to a unified carbon market

In order to speed up the establishment of a unified carbon trading market, we need to dynamically manage carbon emission quotas, draw on the opinions of enterprises, regulatory authorities and third-party verification institutions, reasonably formulate carbon prices, and standardize the operation of the carbon trading market. First of all, we need to develop a dynamic allocation method. At the initial stage, we will focus on free allocation, gradually introduce a paid mechanism, specify the price range of carbon trading, and allow provinces to adjust prices and carbon allocation quotas according to their total carbon emissions, types of enterprises, etc., so that all regions can develop carbon trading according to local conditions. Secondly, China should continue to enrich the main body of the carbon trading market. At present, China's carbon trading market is dominated by the power industry. The carbon trading is still in the initial stage of development, and the unified carbon trading market is also under construction. In the future, we will further enrich the main body of the carbon trading market, bring key industries such as steel, petrochemical and building materials into the national carbon trading market system, and penetrate the concept of energy conservation and emission reduction into all fields to achieve China's carbon emission reduction goals as soon as possible. In addition, the government should gradually lower the threshold of carbon trading market access, encourage more natural persons to participate in carbon emissions trading, promote cooperation between enterprises and natural persons, and accelerate the establishment of a unified carbon trading market.

4.5 Build a professional carbon financial trading market platform

Carbon finance is a derivative of the carbon trading market. While promoting carbon trading, local governments can also cooperate with enterprises to develop carbon financial products, incorporate carbon financial products into the carbon trading market, establish different carbon trading institutions, launch different types of carbon financial products, meet the financial needs of enterprises, natural persons, etc., and inject new vitality into the healthy development of the carbon trading market. For example, local governments can cooperate with banks and key enterprises to develop carbon financial products, review the qualification of carbon trading entities, review corporate carbon financial products and trading methods and processes, control financial risks, and gradually enrich carbon trading market products.

In addition, the government should clarify the responsibilities of industry regulatory authorities and financial regulatory authorities, and jointly supervise carbon emissions trading, carbon financial products trading, etc. The financial regulatory authorities should actively review carbon financial products and put them on record. For enterprises violating the rules, carbon trading and carbon financial trading should be suspended. The government should strengthen the qualification review of the main body of the carbon trading market, and timely detect the data of the carbon trading market platform, we will strengthen financial risk prevention to ensure the stable, green and sustainable development of the carbon trading market.

5. Conclusion

There is still a long way to go for China's carbon emission reduction work and carbon trading policy, which requires the cooperation of government departments and enterprises at all levels. The central government should speed up the formulation of carbon trading related legislation, formulate unified carbon trading standards, and deal with trading disputes. Local governments should actively establish regulatory authorities, strengthen supervision over key enterprises, implement corporate carbon emission reduction goals, support the development of new energy enterprises, and help electric power enterprises achieve magnificent transformation, Balance regional carbon emissions, ensure the healthy development of China's carbon trading market, let it play an important role in energy conservation and emission reduction, and protect our green waters and green mountains.

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