

Study on China's Carbon Emission Trading Market Development under the Globalization

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Abstract: This paper starts by describing China's carbon emissions trading market development history, reveals the existence of its development problems, then, analyzes the experience of successful establishment of the European and American national carbon emissions trading market. At last, this paper recommends for a call of unified effort to improve domestic carbon emissions trading market system.

Keywords: Carbon emissions trading market; Kyoto protocol; Emission right

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1. Introduction

The relationships between climate and human beings are closely related. In recent year, climate situation becomes more and more serious. Excessive emissions of greenhouse gases lead to global warming and seriously damage the normal circulation of the natural ecological system, which brings many unimaginable catastrophe to us. China, as a responsible developing country, actively responds to the "Kyoto Protocol" in the face of severe problems of climate warming, tries to reduce greenhouse gas emissions. And in November 2011, the State Council approved "the Twelfth Five-Year Work Plan for Controlling Greenhouse Gas Emissions " clearly points to explore and establish carbon emissions trading market to further control of greenhouse gas emissions. China, as the world's No.1 of carbon emissions, with the increasing pressure of reducing emissions, has to develop a resource-saving and environment-friendly road. In fact, carbon emissions trading market is a combination of both opportunities and challenges.

The opportunities lie in that the low carbon economy has been increasingly becoming an economic road for various countries. China is committed to the development of carbon emissions trading market, which caters to the trend

of the development of the times, and China's earlier entering into this new market is good for China to get rid of road of "pollution first, treatment later", and the reduction of emissions can be realized through technical exchanges between countries. China's advantage of carbon emission resource is superior and current carbon emissions reduction has accounted around the world's 1/3, next only to the United states. Beside, China's timely access to carbon emissions trading market is conducive to better establish the relevant trading system, to standardize the relevant laws and regulations, to attract the relevant talent, to do a good job related to the supervision, and to improve the entire carbon emissions trading market system. However, the challenge of building carbon emissions trading market should not be ignored. Due to that China is a developing country, carbon emission reduction technology still has a long way to go compared with western countries, which leads to a higher cost of carbon emission reduction in China and weak bargaining ability in carbon emissions trading market, thus making China's discourse power suffer a severer challenge in other countries. This paper aims to figure out the current situation of global carbon emissions trading market, analyzes overseas successful experience, provides reference for China's carbon emissions trading market, and brings up solutions.

2. Reference of International Carbon Trading Market Development for China

2.1 Overview of International Market

Carbon emissions trading market is an emerging commodity market and has gained rapid development since the "Kyoto protocol" enacted in 2005. At present, the international carbon trading market is mainly conducted in the regional market, while various financial institutions play important roles in the market. Due to different responsibilities and national conditions of each region, a unified trading system has not yet formed worldwide, and all the regions are actively exploring their own carbon emissions trading patterns. According to the world bank's data report, during 2005-2011 years, the international carbon trading market trading volume has maintained a good momentum annually, which the total turnover respectively reached 10.8 billion, 31.2 billion, 64 billion, 126.3 billion, 143.7 billion, 159.2 billion and 176 billion. Besides, the U.S. official data predicts that the global carbon market transactions will reach \$2500 -3000 U.S. dollars in 2020 and the market development gradually becomes mature.

2.2 Successful International Carbon Trading Market Model

2.2.1 EU Carbon Emissions Trading System

The EU carbon emissions trading system (EU ETS) plan is divided into two phases: the first three years of the system is the first phase of the system from 2005 to 2007. This phase achieves 45% of "the Kyoto Protocol" commitment to emission reduction targets. The second phase will achieve all the emission reduction targets of the Kyoto Protocol from 2008 to 2012. The trading system adopts a decentralized governance model, the EU members have vast autonomy on the setting of total emission, distribution and transaction registration, bridging the gap between members and balancing the interests between each member and the EU. EU ETS adopt the "limited quantity and trade" trading system that the EU Member States must submit the country's total carbon emissions quota plan to the EU, after the instruction of the specific total amount of carbon emissions, the enterprises of each member should strictly finish the targets in accordance with the instructions. If the enterprise still has an additional amounts of carbon emissions under the premise of the total amount of carbon emissions restrictions, its carbon trading rights in the carbon trading market should be transferred. EU ETS's punishment system is that the relevant corporate would be punished by 40 Euros if its carbon dioxide emissions exceed 1 tons, and the amount has upgraded to 100 Euros since 2008, and the quota would get reduced in number

accordingly in the following year.

2.2.2 Chicago Climate Exchange

Under the Kyoto Protocol, Chicago Climate Exchange (CCX), the world's first legal emissions trading platform, came into being. CCX emission reduction plan is divided into two phases: The first stage (2003 -2006) all commitment member annually reduce 1% of targets based on the baseline emission level. The second stage all commitment members make emission 6% below baseline. In terms of these commitments, members can buy a license from other company through internal emission reduction, or buy credit limit generated by emission reduction projects meeting specific norms to fulfill its commitment. In addition, it also develops an electronic trading platform online transactions of emission reduction members, in which all transactions process information is not disclosed and supervised by the United States National Securities Dealers Association.

3. Current Situation of China's Carbon Trading Market

3.1 Development of Carbon Trading Market in China

The construction of carbon trading market is the new direction of the global economic development. In order to meet this challenge and opportunity, China has already actively promote the construction of domestic carbon trading platform. On August 5th, 2008, the Shanghai Environmental and Energy Exchange and the Beijing Environmental Exchange were established on the same day. On September 25th, 2008, Tianjin Climate Exchange was set up. Despite China's positive response to the trend of carbon trading market of international construction, domestic carbon trading volume is small. This is because of the bleak international carbon trading market in 2008 and the poor knowing of carbon trading for domestic intellectuals. However, our country didn't give up the idea of building carbon trading market. In November, 2011, the National Development and Reform Commission issued "About Carrying Out the Carbon Emissions Trading Pilot", which allows Tianjin City, Beijing City, Chongqing City, Guangdong Province, Hubei Province, Shenzhen City to carry out carbon emissions trading pilots, moving a big step toward establishing a unified carbon trading market system. On June 18th, 2013, Shenzhen carbon trading opened; From November to December of 2013, Shanghai, Beijing, Guangdong, Tianjin have started work of carbon trading pilot.

For the actual emission limits of various experimental

unit of carbon emissions, China has also made the corresponding punishment mechanism. If the pilot exceeds the agreed amount of emissions, 3 to 5 times fine of quota price is accepted. For example, if the quota price is 60 Yuan per ton, the fine is 300 Yuan per ton.

At present, the main form of domestic carbon trading is the quota transaction. The government set the corresponding emissions for the relevant industries or enterprises and enterprises can sell or purchase the emission rights according to their own situation. All in all, the emissions of enterprises should meet the requirements of the country. Although, compared with the western countries, China's carbon trading market lags far behind, China is a developing countries. We are not forced to fulfill the obligations of emission reduction while the western developed countries are constrained according to the "Kyoto Protocol", so their emission reduction costs are more than China's, which will attract the developed countries to actively cooperate with us to save emission reduction costs under the premise of commonly achieving target of emission reduction targets.

Around the world, China is already the world's second largest economy, developed countries have asked China to take greater responsibility on emission reduction work. With the international appeal, how to ensure the smooth development of the domestic carbon trading market and growth of GDP without interference has become quite an important problem in need of solution in our country. As China is in the process of industrialization and urbanization, many industries in China are second industries. Many domestic industries' development relies on raw materials like petroleum and coal, which still produce a lot of greenhouse gas, causing a big problem to complete emission reduction work required by international community.

3.2 Problems in Development of Carbon Emissions Trading Market in China

Carbon emissions trading market has many problem in Chinese development. In order to prepare for future integration into the international carbon emission trading market, we need to pay much attention. In general, I think there are six important problems in our country's carbon emissions trading market.

3.2.1 Defective Carbon Financial System, High Transaction Risk

A sound legal protection can regulate and restrict the orderly development of carbon emissions trading, the European Union and the United States of the trading system has a strict law as the guarantee of its development. Carbon emissions have a distinct characteristic of financial

products and carbon index trading involves bank loans, Options and Future, etc. The subjects of carbon emissions trading abroad are mainly investment banks and other financial institutions and these institutions understand the carbon trading well. Due to the fact that our country development of carbon trading market in is late, domestic enterprises is not clear about the value of carbon finance, the operation mode while the financial market is not perfect. There is a huge security risk in such a platform under the transaction.

3.2.2 Common Unfair Initial Distribution of Gas Emission Right

This situation is mainly due to two reasons: first, enterprises are unwilling to prematurely undertaken many emission reduction work, therefore enterprises borrow right of carbon emission from other enterprises in the form of leasing when regulating the total amount of carbon emission, which leads to that more powerful enterprises can guarantee quantity to complete the emission reduction work, meanwhile some small businesses are just shell companies which just match carbon emissions for large companies, so market regulatory role is not apparent. Secondly, the regulation of carbon emissions trading is regulated by the relevant departments of the country for managing the total carbon emissions, which may cause that carbon emissions trading gets controlled by relevant departments.

3.2.3 China's Cleaner Production Technology Restrict the Development

Because our country's cleaner production technology has a long distance away from the European and American countries, the higher cost of our country's production makes the price of carbon emissions right deviate the real price of the product and influences full functions of the market mechanism. Clean production technology has a great impact on the efficiency and fairness of carbon emissions trading mechanism.

3.2.4 Inappropriate Carbon Emissions Trading Policy Planning

Carrying out carbon emissions trading involves many aspects, such as total amount, clearing and settlement system, market supervision system and so on, but our country has no unified regulations, policy disorders, which leads to that the development of carbon trading market cannot be smooth and fast, seriously affecting the implementation of carbon emissions trading.

3.2.5 Defective Carbon Emission Pricing Mechanism

Price can reflect the value of the product; the real price can effectively promote the reasonable development of the market. In China, the value of the product is generally

measured in accordance with the foreign pricing mechanism which ignores to establish our own pricing mechanism. In addition, due to the country's initial emissions share, under the interests of the government and enterprises, the price of carbon emissions trading is distorted by man-made, which results in the market transaction price is not standardized.

3.2.6 Lack of Intensity of Government's Supervision on Trading Market

At present, China's carbon emissions trading market trading mechanism is not perfect, there are still many problems in the environmental monitoring and monitoring facilities for technical development, how to establish a supervisory authority with prestige has become a guarantee for the development of carbon trading market in the future.

4. Countermeasures and Enlightenment of China's Carbon Emissions Trading Market

This paper puts forward the following suggestions:

4.1 Increasing Technical Input of CDM Project

When foreign buyers of CDM project cooperate with China, mostly, funds instead of technical output. A large part of the reason is worrying about their production technology to be stolen, even if the introduce production technology comes true, the technology has been eliminated in foreign country. Therefore, improving the protection of domestic intellectual property rights ensures that foreign countries provide more technical assistance to China, so China's enterprises can improve production efficiency and increase economic benefits. However, this approach is not always a long-term plan; our country should get technical assistance and continue to develop their original production technology as far as possible to get closer the foreign advanced production technology to develop cleaner production technology with Chinese characteristics.

4.2 Actively Chang the Position of China's Carbon Trading Industry Chain

China is the world's largest supplier of CDM carbon emission. Due to the weak discourse right in the international carbon emissions market, our country has been in the lowest part of carbon trading industry chain in a long term. And Chinese CER is usually purchased by developed countries with very low price, while developed countries sell it to in second market with a high price to get huge profits, which make our government lose a lot of economic interests. Therefore, our country strives to cultivate more talents of carbon trading market, accelerates the transformation of industrial structure and improves the

clean production technology, obtains the right of discourse in the international carbon trading market and gets himself out of the lowest part of the carbon trading industry chain.

4.3 Improving Legal System of Carbon Trading Market

The perfect legal system is an important measure for the smooth development of the carbon trading market. However, there are no clear legal provisions on the confirmation of the legal status of carbon emissions trading, as well as the settlements of the problems in the process of carbon trading. Therefore, China should expedite the construction of the legal system of carbon trading market, and make detailed provisions on the formulation, distribution, transaction and punishment rules in carbon trading process. In addition, it should clearly show that how to deal with the bankrupt enterprises in carbon trading market, so domestic enterprises have laws to go by.

4.4 Strengthening Carbon Trading Market Supervision

The intangible nature of carbon trading rights makes the supervision of the domestic relevant departments of the carbon trading market have a relatively large loss. Because of the intangible nature of carbon trading, the relevant departments are difficult to accurately identify the different stages of corporations' carbon emissions, which affects the confirmation of the carbon volume and finally influences the normal operation of carbon trading market. In order to solve this problem, I think that the relevant departments should strictly audit the qualification of the emissions of carbon dioxide emissions market requirements and then establish a compliance reporting system in which the report includes the condition of carbon emissions, the condition of carbon trading, etc. Finally, relevant departments should set up a specific regulatory system to monitor whether the enterprise in accordance with the requirements of the carbon emissions quotas and to monitor the Legal compliance of domestic carbon trading market requirements.

4.5 Vigorously Promoting the Application of High and New Technology

At present, when Chinese carbon emissions technology is relatively backward, we should actively learn from foreign advanced cleaner production technology and encourage enterprises to introduce advanced production technology, improve the utilization rate of fuel, which can reduce emissions and increase economic benefits. At the same time, China should actively call for industry restructuring, adjust the industrial structure and further improve China's carbon emissions trading market system, which achieves

the goal of Chinese energy-saving emission reduction and sustainable development.

4.6 Establishment of the Market of Carbon Finance Mechanism

Carbon emissions trading market is developing to the direction of the financial market, during the time, China needs to use financial markets to achieve the economic benefits of carbon industry, while China should strengthen the development of banking, securities, insurance and other financial institutions, forming a variety of carbon finance market.

5. Conclusion

The development of carbon emissions trading market is a great impact on the development of China in the future. With the development of the times, people's awareness of environmental protection is gradually improving, and the development of low-carbon economy is imperative. With the integration of both opportunity and challenge, China should intensify its own cleaner production technology, try hard to reduce the cost of production of carbon products, which makes us get higher international discourse right to get rid of the lowest position of the carbon trading market. In addition, in the process of development, our country should try to learn from successful international experience, develop a set of carbon trading market theory according to specific national condition and cultivate more talents of carbon trading, thus enhancing the com-

petitiveness of our country in the international carbon trading market.

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