

The Role of International Trade in Sustainable Development: Policies and Practices

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Abstract: Nowadays, sustainable development and international trade have become important topics in the world. With the growth of the global economy, every country faces a serious problem: how to develop the economy while protecting the environment. This is a difficult challenge. Therefore, the focus of this article is to explore how international trade can bring benefits to sustainable development. The core idea of the research is to explore how trade policies such as carbon tariffs can promote economic growth while reducing environmental damage. This research adopts a combination of data analysis and case studies, and the relationship between trade practices and sustainable development efforts in different countries is also examined. The research question is: Can trade policies support environmental goals without harming economic interests? At the same time, the role of governments and international organizations in creating a fair-trade system is also examined in this article. The research results show that as long as appropriate policy arrangements are made, trade can become a tool for achieving sustainable development. It is also ensured that both developed and developing countries can benefit from it.

Keywords: Sustainable Development, International Trade, Carbon Tariffs, Trade Policies, Environmental Economics.

1. Introduction

Nowadays, sustainable development and international trade are hot topics. With the rapid growth of the global economy, every country confronts a major issue: how to develop the economy while safeguarding the environment. According to *The Research Between Our Trade and Environment Under Sustainable Development Strategy* [1], China's past trade development was marked by "high consumption, high input, and low return", which strained the environment. Moreover, the increasing global demand for forestry products, emphasizes the need for sustainable development of trade. This global challenge requires action on the part of all countries.

The focus of this article is to explore how international trade can contribute to sustainable development, especially by examining trade policies such as carbon tariffs. For example, *Is a Carbon-motivated Border Tax Justifiable?* [2] mentions that carbon tariffs have a complex influence on economies and the environment, forming the basis of our research. However, the very important question is: Can trade policies support sustainable development goals without harming the economy?

To answer this question, data analysis and case study methods are employed in the research, and the relationship between trade practices and sustainable development in different countries is also examined. According to *The Relationship between Sustainable Development and International Trade*

and Its Practical Experience [3], it is contended that sustainable development and international trade go hand in hand. Research has shown that through appropriate policies and trade can be important tools for sustainable development, which can get a lot of benefits for the developed and developing countries. Finally, this research explores how to coordinate trade and sustainable development, which can provide useful suggestions for promoting economic growth and protecting the environment.

2. The role of international trade in sustainable development

2.1. The challenge of economic growth and environmental protection

The first is the pressure of economic growth on the environment, such as resource consumption and efficiency. China's past trade pattern of "high consumption, high input, low yield" led to an eight-fold annual increase in finished steel and cement consumption between 1983 and 2003. However, in terms of resource use efficiency, China still has a certain gap with developed countries, for example, China's energy consumption equipment energy use efficiency is generally 30%-40% lower than developed countries. Therefore, this means that the efficiency of resource use in developing countries is very low under the consumption and utilization of resources. Secondly, there is the problem of environmental pollution, which is always increasing in parallel with the development of trade. For example, in China in 2004, chemical oxygen demand emissions in wastewater exceeded the environmental capacity by 67%, and sulfur dioxide emissions exceeded the environmental capacity by 88%. However, the restriction of environmental protection on economic growth is also a big challenge, such as the impact of green trade barriers on China's exports, green trade barriers to China's agricultural and sideline products and industrial exports have a great problem. For example, the EU suspended the import of many animal products from China due to excessive chloramphenicol content in frozen shrimp. Therefore, this causes the market share of enterprises in developing countries to decline and increases the cost of enterprises and so on [3].

On the other hand, it is important to balance the development of international trade and the coordination of the environment, because the realization of sustainable development is an inevitable requirement for a country. International trade, as an important engine of economic development, is interdependent with the environment. Therefore, only by achieving the balance between international trade development and the environment can we ensure that the ecological environment can be protected while promoting economic growth [4,5].

2.2. Key trade policies: carbon tariffs and their impact

The carbon tariff has been put into practice since the EU incorporated the aviation industry into the carbon trading system, and its impact on the economy and environment of different countries is complicated. From the perspective of carbon emission reduction cost, due to China's high dependence on foreign trade, carbon tariff mainly plays a role through trade channels, so it has a greater negative impact on China, resulting in a higher carbon emission reduction cost, compared with the lower cost of equivalent measures, such as carbon tax. In terms of carbon leakage rate, the carbon tariff scenario is relatively high, because it mainly exerts its effect through trade channels, which will cause competitiveness problems and transnational transfer of production, resulting in an increase in carbon leakage rate [6-8]. In terms of the contribution of carbon tariffs to the reduction of world carbon dioxide emissions, carbon tariff equivalent measures such as carbon taxes contribute more to the reduction of world carbon dioxide emissions. In general, a carbon tariff is not an effective carbon emission reduction tool, and the implementation of a carbon tariff is not reasonable, but it is an effective threat means for developed countries to force developing countries to take carbon emission reduction measures [9].

3. Methodology

3.1. Data analysis approach

3.1.1. Selection of data sources

The data of this study comes from the databases of international organizations, such as the World Bank database, which provide economic, social and environmental data of various countries (such as GDP), which can reflect the development status and trade scale of different countries. The second is the use of the International Energy Agency database, which is very helpful for carbon emissions research [2,6].

3.1.2. Quantitative analysis techniques employed

Quantitative analysis techniques (CGE) are also used to calculate the use of general equilibrium models in trade policy and sustainable development. For example, the model can set production and utility functions, and introduce a multi-country, multi-product and multi-factor framework, so that the impact of carbon tariffs and equivalent measures on countries' welfare, competitiveness, output and carbon emissions can be simulated [2].

3.2. Case study of different countries

3.2.1. Selection criteria for case countries

The United States is a leader in the global economy and trade, with a large and diversified trade scale and rich import and export categories. In the industrial structure, the service industry has a significant advantage, with finance, scientific and technological services, culture and entertainment ranking first in the world. Although the proportion of manufacturing has declined, its competitiveness is strong in high-end manufacturing, aerospace, biotechnology and other fields. Huge investment in scientific research, mastering a large number of core technologies and patents, leading the global scientific and technological development. Environmental policies fluctuate greatly. *The Paris Agreement*, in recent years, some states and enterprises have actively promoted green development, such as California in the promotion of new energy vehicles and renewable energy utilization of strict standards and incentive policies. In international trade, by virtue of technological and market advantages, set technical barriers and green standards to protect domestic industries, and promote the export of green industry products and services through trade agreements.

As the largest developing country, China is now the world's largest trader of goods and has many trading partners. The industrial structure has changed from traditional agriculture and manufacturing to industrial modernization and industrial diversification. It has strong strength in electronic information, home appliances, machinery manufacturing and other manufacturing fields, and the service industry has developed rapidly. Although there is a gap between the technological level and that of developed countries, breakthroughs have been achieved in 5G communications, high-speed rail, new energy and other fields. We attach great importance to sustainable development, incorporate ecological progress into our national strategy, vigorously promote energy conservation and emission reduction, eliminate backward production capacity, and actively develop green industries. The installed capacity and power generation of solar, wind and other renewable energy sources rank among the top in the world. In international trade, we actively respond to green trade barriers, improve product environmental protection standards, share green development experience and technology with countries along the "Belt and Road" Initiative, participate in the construction of clean energy projects, and help local energy transformation and sustainable economic development [3].

3.2.2. Selection criteria for case countries

In the field of international trade, countries formulate different trade policies according to their own economic structure, development stage and strategic intention. As the key players in the global economy, the United States, the European Union and China's trade policies have a great impact on themselves and the global trade pattern.

The US trade policy has prominent features. In terms of trade promotion, the bilateral investment treaty will provide a good policy environment for enterprises to invest overseas, promote the export of high-tech industries, and expand the scale of trade. At the same time, we will actively promote the signing of free trade agreements and expand overseas markets. However, in terms of trade restrictions, trade protection is often carried out in the name of "environmental protection". Carbon tariffs have become a means to restrict the import of foreign high-carbon emission products and maintain the competitive advantage of domestic industries, which disrupts the international trade order and impedes the export of developing countries. In terms of environment-related trade policies, the United States has an unstable position, prioritizing the interests of domestic industries, and performing negatively in international environmental protection cooperation, such as withdrawing from the Paris Agreement, and weakening global environmental coordination efforts.

The EU is committed to promoting the integration of its internal market, eliminating barriers to trade, achieving free movement of goods, services, capital and people, building an efficient single market and enhancing its overall competitiveness. In terms of foreign trade expansion, China has actively signed free trade agreements with other countries and regions to expand its trade territory. The EU attaches great importance to sustainable development, establishes strict green standards and certification systems, promotes the development of environmental protection trade, helps industrial green upgrading, and enhances the voice of international green trade. In terms of trade restrictions, relying on strict standards, such as REACH regulations, set a high environmental threshold for imported products and protects internal industries. In terms of environmental trade policies, with climate change as the core, we will lead global trade in a low-carbon direction through carbon border regulation mechanisms and play an exemplary leading role [7,8].

China actively promotes the "going global" strategy, strengthens investment cooperation with countries along the Belt and Road, and achieves mutual benefit and win-win results by participating in infrastructure construction and promoting industrial cooperation, thus injecting new impetus into global economic development. Various international exhibitions held in China, such as the China International Import Expo, have built international trade exchange platforms, promoted exchanges and cooperation between domestic and foreign enterprises, and expanded trade channels. Domestically, China attaches great importance to the optimization and upgrading of industrial structure and increases support for the cultivation of emerging industries. Take the new energy automobile industry as an example, through policy guidance, technological innovation, etc., to improve the technical content of products and market competitiveness, and promote the continuous expansion of its export scale in the international market. In terms of trade restrictions, China has shifted from passive defense to proactive adjustment, strictly limiting the export of highly polluting and energy-consuming products, and promoting the transformation of domestic industries to a green and low-carbon direction. In the face of unfairness in international trade, China resolutely defends its legitimate rights and interests in accordance with international rules. In terms of environmental trade policies, China has elevated the construction of ecological civilization to a national strategic level, actively promoted the development of green trade by relying on technological innovation and industrial restructuring, and deeply participated in the formulation of international green trade rules, contributing China's wisdom and strength to the construction of a global green trade system, and striving for a fairer and more favorable international market development environment.

There are also significant differences between developing countries and developed countries in the setting and response of green trade barriers. Developing countries usually erect green trade barriers passively, mainly in response to trade restrictions by developed countries or to protect their own industries. As a result, the relevant systems are often incomplete and lack transparency [7].

3.2.3. Evaluation of case countries' sustainable development outcomes related to trade

In the context of globalization, the relationship between trade and sustainable development has become increasingly close. Through the analysis of China and some developed countries from the economic, environmental and social dimensions, we can more comprehensively understand the actual links and interaction mechanisms between trade and sustainable development.

From the economic dimension, China's foreign trade has developed rapidly, with a substantial increase in the total import and export volume from 1980 to 2004. Processing trade has driven industrial agglomeration and employment, but it faces the pressure of industrial upgrading, and the structure of export commodities needs to be further optimized. There is a gap with developed countries in terms of high-end technology and core competitiveness. Some developed countries, such as the United States and Germany, have achieved efficient economic growth and continuous industrial upgrading by virtue of high-end manufacturing and service trade advantages, occupying a high-end position in the global industrial division of labor [6].

In the environmental dimension, high-pollution and energy-consuming industries in China's trade development have caused certain pressure on the environment, and the resource utilization efficiency needs to be improved, but in recent years, it has actively transformed under the promotion of environmental protection policies. Some developed countries, such as the European Union, have implemented strict environmental standards and trade policies, effectively limiting the scale of trade in highly polluting industries, improving the efficiency of resource utilization, and achieving coordinated development of trade and the environment [1].

From the social dimension, China's trade development plays a positive role in absorbing labor and increasing residents' income, but there are problems such as unbalanced income distribution and insufficient protection of workers' rights and interests. Some developed countries pay attention to the protection of workers' rights and interests and the adjustment of the income gap at home, but in international trade, because of their dominant position, the global income distribution is aggravated [3].

In general, different countries have different characteristics and outcomes in terms of trade and sustainable development. China has made remarkable achievements in the scale of trade and its contribution to economic growth, but there is still room for improvement in industrial upgrading, environment and social equity. Some developed countries perform well in high-end industrial trade, environmental governance and domestic social fairness, but there are shortcomings in global trade fairness. All countries need to constantly adjust and improve their trade policies in order to better realize the synergy between trade and sustainable development [9].

4. Conclusion

This study focuses on trade policy, focusing on the role of carbon tariffs in helping developing countries achieve economic growth, environmental protection and sustainable development goals, and whether economic and environmental development can be balanced. Studies have shown that sound trade policies are an important factor in promoting sustainable development. A carbon tariff can use the price mechanism to encourage enterprises to reduce emissions, promote the low-carbon transformation of the economy, and foster new green industries, which has been successfully practiced in some developed countries. However, countries differ in their national conditions, and

differences should be fully taken into account when formulating and implementing carbon tariff policies to avoid the impact on the economies of developing countries.

There are limitations to this study. The changing economic situation makes it difficult for data and cases to accurately reflect the current situation, which affects the depth of problem analysis. Some developed countries have insufficient understanding and implementation of carbon tariffs, and have not fully played their role in promoting green development. The analysis of the role of international organizations in trade policy coordination and sustainable development promotion is insufficient.

In the future, the integration of trade policy and sustainable development goals will be the focus of research. On the one hand, in-depth analysis should be made of the long-term impact of trade policies, especially carbon tariffs, on the global economic pattern, environmental quality, industrial adjustment and economic growth mode transformation of developing countries, so as to provide the basis for countermeasures for developing countries. On the other hand, it is necessary to explore the restructuring of the global trading system, optimize trade rules, balance the interests of all countries, build an efficient dispute settlement mechanism, and ensure the orderly development of global trade within a sustainable framework. To achieve sustainable development, countries need to work together, formulate policies according to their national conditions, strengthen multilateral cooperation, and jointly build a fair, green and sustainable new global trade order.

References

- [1] Zhao, D. (2006). *The Research Between Our Trade and Environment Under Sustainable Development Strategy*. Master's thesis, Soochow University.
- [2] Lin, B. Q., & Li, A. J. (2012). Is Carbon Motivated Border Tax Justifiable? *Economic Research Journal*, 11, 811-821.
- [3] Li, J. R. (2023). *The Relationship between Sustainable Development and International Trade and Practical Experiences*. *China Management Informationization*, 26(23), 148-151.
- [4] Yue, H. H. (n.d.). *Exploration on the Sustainable Development of China's Forestry Product International Trade*. [Book Review/Advertisement].
- [5] Huang, X. F. (2010). The Impact of "Carbon Tariff" Barriers on China's High-Carbon Industries and Countermeasures. *Economic Review*, (3): 49-51
- [6] Yi, J. C. (2005). *A Study on the Sustainable Development of Foreign Trade in China*. Unpublished master's thesis, Wuhan University.
- [7] Zeng, H. Q. (2013). Investment Policy Framework for Sustainable Development and China's countermeasures. *Journal of Xiamen University (Arts & Social Sciences)*, (6):59-67.
- [8] Zhu, J. A., & Guo, P. (2008). Characteristics, Development Trends of Green Trade Barriers in Developing Countries and Their Implications for China. *Modern Finance & Economics*, 28(6):66-71.
- [9] Liu, X. M., & Wang, Y. J. (2004). On the Idea of Sustainable Development and WTO. *China Business and Market*, 11, 20-23.