

*Original Research Article*

# Impact of the Carbon Labelling System on China's International Trade and Countermeasures

Yupei Chen\*

Zhejiang Ocean University, Zhoushan 316022, Zhejiang, China. E-mail: 1198589006@qq.com

---

**Abstract:** Increasingly serious climate change and environmental problems threaten the survival and development of mankind, carbon labeling as a new marketing model has attracted the attention of countries. Although the carbon labeling system can promote the upgrading and transformation of Chinese enterprises to a certain extent, the implementation of this system is also prone to create de facto invisible trade barriers, which will have different degrees of negative impact on the trade exports of Chinese products. Therefore, China should actively take a series of measures to ensure the sustainable and healthy development of foreign trade.

**Keywords:** Carbon Labelling System; International Trade; Impact; Response

---

## 1. Significance of the establishment of a carbon labelling system

### 1.1 Permits for export trade

In the context of global concern about climate warming and attention to the low-carbon economy, carbon labels can identify the greenhouse gas emissions generated during the production cycle of products, and are increasingly supported by developed countries in Europe and the United States. According to statistics, as of 2015, the use of carbon labels have more than 5700 kinds of goods, more than 1000 multinational buyers demand in the supply of products must do "low-carbon"<sup>[1]</sup>. Some companies also explicitly require their suppliers to provide carbon labels when exporting. With the implementation of the carbon label system of the increase in the number of countries, the use of carbon labels as the future development trend, is gradually becoming the international trade export passport.

### 1.2 Improving the competitiveness of Chinese enterprises

As a participant in the implementation of carbon labelling, companies can improve their internal operations, save energy and reduce emissions, save costs, and as a marketing strategy gain a competitive advantage through product carbon footprint analysis. In addition, it is an effective way to meet market demand and facilitate communication. In recent years, due to the increasing cost of domestic factors of production in China, the profit of enterprises is not high. However, there are still some Chinese enterprises through the corresponding authority of foreign carbon label certification, although the short term to pay a high cost, but these enterprises in the future international trade has a strong competitiveness in international trade, to avoid the doom of being eliminated by the market<sup>[2]</sup>.

### 1.3 Achieving a low-carbon economy

At present, China's carbon emissions are still the highest in the world, and promoting green and low-carbon de-

---

Copyright © 2020 Yupei Chen

doi: 10.18282/ff.v9i3.1100

This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License

(<http://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

velopment is an important task in the construction of ecological civilization. The emergence and rapid development of carbon labelling is, on the one hand, a useful supplement to the global response to climate warming and, on the other, to some extent, meets the development needs of a low-carbon economy. With the implementation of the carbon labeling system, consumers will tend to choose low-carbon products, and producers will improve their production and processing technologies to save energy and reduce emissions<sup>[3]</sup>. When society as a whole actively acts in accordance with the carbon labelling system, various industries and economies can further promote the low-carbon transition, thereby reducing greenhouse gas emissions and contributing to the mitigation of global warming.

## **2. The impact of carbon labelling on China's international trade**

### **2.1 Triggering trade imbalances**

The imbalance in the carbon labelling system is mainly reflected in the imbalance between developed and developing countries. As the largest developing country, China is relatively passive in international trade due to the immaturity of low-carbon technologies and the dominant position of some developed countries, which had the right to speak at the early stage of the establishment of the carbon label. Once the developed countries compel export products to label or limit carbon emissions, constructing a new type of trade barriers for export commodities, the sustainable development of China's trade will be affected. The implementation of carbon labeling will increase the cost of international trade, and many small and medium-sized enterprises due to the lack of funds in a wait-and-see mode if the developed countries in the carbon label dispute settlement procedures and legal basis is not yet mature for the sake of their own economic development and unfairly assess the carbon emissions of products from developing countries. China's products do not meet its standards will have to withdraw from the international market, and the imbalance in international trade will be further aggravated<sup>[4]</sup>. In addition, if the international community establishes a standard for measuring carbon emissions and developed countries begin to levy carbon tariffs, China will face great pressure from tariffs, and the dominant position of developed countries in international trade will be further strengthened. In addition, trade disputes will intensify, and the stability of China's foreign trade will be shaken.

### **2.2 Reducing the international competitiveness of Chinese goods**

As the world's largest exporter, China's labor-intensive industries are favored by foreign importers for producing high-quality and inexpensive products. However, in recent years, as environmental awareness has become increasingly popular, consumers in all countries tend to buy low-carbon products, and low-priced products with high carbon emissions have slowly lost their international markets, hampering China's economic development and exports<sup>[5]</sup>. After China loses part of its market share due to the implementation of the carbon labelling system, developed countries will quickly seize those market shares. Take agricultural products as an example, traditional agricultural products in China are mainly labor-intensive in production, characterized by high input, high consumption and low returns. Due to the low level of production technology, most of China's agricultural products are exported abroad as high carbon emission products<sup>[6]</sup>. After the implementation of the carbon labelling system, most developed countries have erected trade barriers, and China's agricultural products have been subjected to high tariffs, which have increased the sales costs of products, and enterprises will naturally raise the prices of agricultural products in order to make profits, which makes China's agricultural products lose their price advantage in international trade, thus reducing their international competitiveness.

### **2.3 Incentives for enterprise transformation and upgrading**

The carbon labelling scheme is both a challenge and an opportunity for China's export trade. In the context of carbon labelling, the biggest risk for exporters is obsolescence. Under such pressure, improving production technology and reducing carbon emissions from equipment is the driving force for sustainable development. Michael Porter, a famous American competitive strategist, has argued that government environmental regulations will provide a counter incentive for enterprises to reinvent themselves, thus contributing to the improvement of their competitiveness<sup>[1]</sup>. The carbon la-

bellling system will promote the transformation of China's product production and processing model and the development of low-carbon, environment-friendly industries, motivate enterprise transformation and upgrading, and improve the competitiveness of product processing enterprises in international trade. Although the products exported may not be welcomed by developed countries due to substandard carbon emissions, it will also encourage the Chinese government and export enterprises to adopt proactive policies to retain their markets. Only with a proactive response can it can be changed from passive to active in the carbon labeling system and a suitable low-carbon emission reduction path will be found for China and the development of export trade. Therefore, as the low-carbon barriers are approaching, export enterprises should raise awareness, and more attention should be paid to technological innovation, and low-carbon technologies and equipment should be adopted as soon as possible.

### **3. Our strategy for dealing with the carbon labelling system**

#### **3.1 Effective promotion of carbon labels**

It is necessary to create an atmosphere of public opinion. The government needs to give full play to the role of the news media, using radio, television, newspapers and the Internet and other news media to widely publicize the importance of carbon label certification work to the low-carbon development of ecological civilization, especially for enterprises and consumers, making enterprises and consumers from passive acceptance to active support for the promotion of carbon label certification work<sup>[7]</sup>. Carbon labeling is one of the ways for enterprises to proactively disclose product carbon emission information, and on this basis, publicity can be further enhanced to create better market effects. On the basis of product carbon footprint accounting and labeling, enterprises can cultivate and create a low-carbon consumer market and win more market opportunities through a combination of advertising, low-carbon product promotion or related exhibition and display.

#### **3.2 Developing a carbon labelling system adapted to the development of circulation in China**

In order to promote China's export enterprises to survive in the low-carbon economy trend, our government should develop a corresponding carbon labeling system to ensure that enterprises in the production and manufacturing in line with the requirements of the low-carbon economy. Through the construction of carbon labeling system under the low-carbon economy development model, some high pollution and high emission enterprises will be reformed to further strengthen the enterprise's environmental awareness, update the production mode and production process, and make environmental protection and low carbon become part of the enterprise S production costs. And banks should first certify their emissions and carbon labels when lending, limit the credit threshold of some high energy consumption and high pollution enterprises, and relax the certification of environmentally friendly enterprises when limiting the certification of high pollution enterprises, strengthen the competitive position by strengthening environmental protection enterprises, and integrate environmental protection mechanisms in enterprises and production processes<sup>[8]</sup>. Under the protection of policies and regulations, environmentally friendly export enterprises are also able to strengthen the application of energy-saving technologies and the development of new energy sources, and through the transformation and upgrading of production methods, export enterprises that were previously disadvantaged in the competition of the low-carbon economy are able to enhance the environmental competitiveness of their export products.

#### **3.3 Establishment of international cooperation**

The construction of China's carbon labelling system is in its initial stage, but the systems of some developed countries have been relatively perfect, and China lacks direct cooperation with them in the establishment of the carbon labelling system, although it has drawn on the excellent experience of foreign countries. China should strengthen international cooperation to improve the trade environment while reducing its dependence on imported products. China should actively participate in the formulation of relevant rules in the field of trade to prevent developed countries from using the carbon labelling system to build "green barriers" that would hinder China's peaceful development<sup>[9]</sup>. At the same time, China should increase cooperation with developing countries in production and trade, and increase its leverage in

trade with developed countries. The principle of “common but differentiated responsibilities” should be promoted to resist unfeasible emission reductions and to clarify the environmental responsibilities that China should assume.

## 4. Conclusion

In the context of the whole world’s commitment to the development of low-carbon background, the universal implementation of carbon labeling system is inevitable trend. When the carbon label has become the requirements for goods to enter the international market, there is no carbon label to identify the goods will not be able to go out of the country; and some goods even if the carbon label, but also because of its high carbon emissions and carbon tariffs, in the international market to lose competitiveness, so the future of international trade competition to a certain extent is carbon competition. China should establish a carbon labelling system as soon as possible.

## References

---

1. Li C. Research on the impact of carbon labeling System on China’s exports from the perspective of low-carbon economy (in Chinese). *Lanzhou Academic Journal* 2014; (10): 165–168.
2. Yin K. The influence of carbon labeling system on China’s international trade and its countermeasures (in Chinese). *Market Modernization* 2020; (7): 69–70.
3. Shen N. Research on the influence of carbon labeling system on China’s international trade and countermeasures (in Chinese). *Ecological Economy* 2019; 35(5): 21–25.
4. Ruan Y, Li M, Du K. Research on the influence of carbon labeling system on China’s food export trade and countermeasures (in Chinese). *Productivity Research* 2016; (9): 28–32.
5. Zhang Z, Wang Y, Wei H, *et al.* Influence of carbon label on import and export trade of agricultural products in China and countermeasures (in Chinese). *China Population Resources and Environment* 2017; 27(207): 15–18.
6. Zhang X, Wang Y, Wei H, *et al.* The development of carbon labeling system and its countermeasures in China (in Chinese). *Journal of Shanxi Agricultural Sciences* 2017; 45(10): 1714–1718.
7. Li C. Analysis on the trade effect of carbon labeling system on China’s exports (in Chinese). *Business Economics Studies* 2015; (20): 20–22.
8. The data surveyed consumers’ strong willingness to pay for sustainable packaging (in Chinese). *China Packaging* 2020; 40(5): 16.
9. Dai Y. The influence and countermeasure of carbon label system in international trade (in Chinese). *Economic Review* 2014; (5): 108–112.