

## Research on Technical Barriers and Contemporary International Trade

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**Abstract:** In modern international trade, technical barriers present a new development trend. Formally, TBT has different forms, covering a wide range of content and far-reaching influences. From a dynamic point of view, the impact of scientific and technological progress on the development of TBT is increasing; from the perspective of positioning, the coexistence of rationality, concealment and flexibility will lead to that people have long-term disputes over technical barriers; from a business perspective, in order to circumvent technical barriers, many companies will adopt a variety of investment methods to carry out international operations; in the long run, technical barriers to trade do not always have a negative impact on international trade. It is more likely to be a bitter medicine for developing countries with better foundations.

### 1. Introduction

The Technical Barriers to Trade (TBT) refers to the technical measures taken to safeguard national security, protect human life, animal and plant life and health, prevent fraud, and protect the environment. These measures will have an impact on the organization of goods, services and investments in other countries or regions into the country or markets in the region. TBT has a narrow and broad sense. The narrowly defined TBT mainly refers to the technical regulations, standards and conformity assessment procedures stipulated by the WTO TBT Agreement; the broad TBT also includes inspection and quarantine measures (SPS) for animals and plants and their products, packaging and labeling and marking requirements, green barriers, information. Technical barriers, etc. The emergence of TBT has its profound social and technical background. With the development of the economy, in the production activities, in order to ensure the quality of products, many technical standards have been formulated and a product quality certification system has been established. With the development of science and technology, especially after power technology is widely used in production and consumption, in order to ensure product safety, many countries have formulated technical regulations, further improved product quality certification and gradually expanded safety certification management system certification. After the Second World War, while emphasizing the development of the economy, countries did not pay enough attention to environmental protection, resulting in the deterioration of the ecological environment and the threat to human health and survival. In order to protect the ecological environment, countries have taken technical measures. It has had a major impact on the development of international trade.

### 2. Information Technology Barriers

There are requirements for measurement units and bar code, but the latest developments in TBT are related to the rapid development of information technology. EDI and e-commerce will be the main forms of international trade in the 21st century. Exports from developing countries are affected by low levels of information technology, imperfect markets and lack of relevant laws and regulations and poor enforcement. Developing countries, especially the underdeveloped countries, are at a distinct disadvantage: information is opaque, such as accreditation procedures; information is not delivered in a timely manner, such as technical standards changes; information transmission is blocked. Intel Corporation Chairman Andy Grove predicts that all companies will become network companies within five years, otherwise they will cease to exist. The Internet is the most revolutionary invention in human history, and it changes the way people live faster than other great

inventions of the 20th century, such as electricity, telephone and cars. According to Goldman Sachs, B2B sales have exploded from zero in the past few years to today's \$114 billion. Deloitte Consulting predicts that companies that purchase through the Internet by the end of next year will increase from 31% of the total number of companies to 91%, and by 2003, B2B sales will be the business-to-consumer e-commerce market. Goldman Sachs research believes that B2B will reduce its cost by more than 20% in industries such as electronic components and cargo transportation, and overall business costs are expected to fall by 12.5%, oil, natural gas and telecommunications by 5% to 15%, paper, 10% of chemical, maintenance and repair services, 11% of steel and aerospace, 10% to 15% of media and advertising, 12% to 19% of life sciences, 11% to 20% of computers, and 15% to 20% of goods. Products 15% to 25%, metal processing and other 22%, electronic components 29% to 39%. Many developed countries have clearly proposed timetables for entering e-commerce: the United States in 2000, Canada in 2002, the United Kingdom and Germany in 2003, Japan and France in 2004, and Italy in 2005. Many industries also list timetables: Automotive 2001, Transportation and Warehousing, Petrochemicals, Pharmaceuticals and Pharmaceuticals 2002, Paper and office products, consumer goods, heavy industry, food and agriculture, construction, industrial equipment, etc., 2003 and beyond. In February 2000, General Motors, Ford Motor and DaimlerChrysler Motors announced that they would join forces to create the world's largest online virtual market. The annual online purchases of the three companies will be as high as \$240 billion. This strategic move will force auto parts manufacturers to enter the B2B space, thereby greatly improving efficiency and labor productivity.

### **3. Green barriers**

At present, the rapid development of GM technology and its products (GMO) is becoming an important emerging industry in the 21st century, and has a major impact on agriculture, medicine, chemicals and environmental protection, and shows solutions to food shortages, effective drugs and environmental governance. A good prospect. At present, more than 50 kinds of genetically modified plant products have been put into commercial production in the world. According to statistics, in 1996, the global commercial area of genetically modified organisms was 2.8 million hectares, and in 1999 it reached 39.9 million hectares. The United States, Argentina, Canada, Australia, etc. are major producers. From 1995 to 1998, GMO crop sales revenue surged from \$0.75 billion to \$1.5 billion, and in 1999 it reached \$2.3 billion, which is estimated to increase to \$25 billion by 2010. The international trade of GMO products has also developed rapidly. According to statistics, Japan imported 195.75 million tons of corn and 47.51 million tons of soybeans in 1998 (the United States accounted for 87.9% and 78.6% of imports respectively), GMO corn and soybeans were 4.35 million tons respectively. 1.05 million tons, accounting for 27.2% and 22.1% of imports. The rapid development of GM technology and its products may also pose potential risks and threats to biodiversity, ecological environment and human health. Once errors occur, it may have catastrophic consequences: cause genetic pollution and damage ecological balance; generate new Toxic or allergenic substances, or expanding the scope of the host, leading to the catastrophic spread of the virus; genetically modified organisms and their products may reduce the immunity of animals and even humans, thereby affecting their health, safety and even survival. In order to prevent the impact of GMO products on biosafety and regulate transboundary movements, the international community adopted the Cartagena Protocol on Biosafety in Montreal in January 2000. The Protocol has clearly defined all aspects of transboundary movements of genetically modified products. The impact of these regulations on international trade and investment is enormous: the implementation of risk assessment has a negative impact on international trade; the advance informed consent procedure makes the import procedure more complicated and cumbersome, and the approval process takes a long time, usually 270 days, to the importing contracting party. To protect the many rights of biosafety; data assessment provides an excuse for importing countries to control the import of GMOs. Importers may refuse to import or postpone import decisions without incomplete information or lack of reliable and sufficient scientific evidence; implementation of GMO labelling system will Increasing the psychological fear of GMOs and its products in the importing countries

has led to a decline in the international trade volume of certain GMO products and even withdrawal from the international market. In addition, once the liability and remedial measures are adopted, it is able to protect the legitimate rights and interests of the importing party, but it is extremely unfavorable to the exporting party. Importing countries and major exporting countries are expected to compete in this area. At the same time, the signing of the Protocol will greatly promote the international trade of non-GM O organic foods, especially for the development of green-organic food international trade.

#### **4. Packaging and labeling requirements**

The negative environmental impact of packaging is mainly due to the packaging materials and the resulting packaging waste and packaging container structure. A large amount of packaging waste, especially some wastes that cannot be recycled and reused, has become a major public hazard in society. Unreasonable structure of the packaging container may cause harm to the safety and health of the user or the consumer, and some may cause damage to the environment. In the past decade, developed countries have taken measures to develop green packaging and formulated many packaging laws and directives that contain clear environmental protection measures. It is forbidden to use certain packaging materials to control the environmental pollution of packaging wastes. Responsibility and obligations in waste disposal, and many countries have proposed packaging waste recycling and utilization, established a storage return system, and enforced recycling or reuse laws to control the environmental pollution of packaging waste, thus establishing a relatively complete Green packaging system. In addition to the clear responsibility for the recycling of packaging waste in the form of legislation, many national laws also specify the specific objectives for the recycling, reuse or recycling of packaging waste. In order to promote the recycling and reuse of packaging waste, Europe has designed a set of symbolic symbols for packaging recycling for the packager to mark it on the main side of the package. These include: packaging markings that can be reused for re-use; packaging marks that can be recycled (recycled); labels that use more than 50% of recycled materials; green markings. The green packaging measures in most countries have been implemented through various domestic legal policies. The implementation of these measures has reduced the amount of packaging waste and protected the ecological environment of the country to a certain extent, but some trade measures on green packaging, It triggers trade frictions and has an impact on international trade.

#### **5. Product quarantine, inspection system and measures**

Animal and plant quarantine measures refer to animal health and phytosanitary measures taken to protect the life or health of humans, animals and plants. These include: measures to protect human life from the introduction of additives, contaminants, toxins, and foreign animal and plant pests and diseases in food and beverages; protect animal life from feed additives, contaminants, toxins, and foreign pests and diseases. Hazardous measures; measures to protect the life of plants from the introduction of foreign pests and diseases; measures to prevent the introduction of foreign pests and diseases; the laws, regulations, requirements, standards and procedures related to the above measures. The goods to be inspected are classified into statutory inspection commodities and temporary inspection commodities. The products most affected by this are food and medicine. The food is mainly the provisions on pesticides and veterinary drug residues; the regulations on processing additives; the regulations on animal and plant diseases and insect pests; the regulations on other pollutants; the regulations on production and processing hygiene and safety. In recent years, the European Union has experienced food crises in succession. "Mad cow disease", "dioxin pollution", "Coca-Cola pollution", "Listogram contamination", "foot-and-mouth disease" and other shocked the world. Food safety issues have caused strong consumer dissatisfaction and have caused the EU to attach great importance to solving food safety problems. On January 12, 2000, the European Commission published the "White Paper on Food Safety" and launched a food safety plan with more than 80 specific measures. It decided to establish the "European Food Authority" in 2002

to manage the EU. All matters related to food safety. As the EU further strengthens food safety protection, it is increasingly difficult for developing countries to export food. Beginning on July 1, 2000, the EU imposed new standards for maximum allowable residues of pesticides on imported tea. The maximum allowable residue of pesticide residues in some products is only  $1 / 100 \sim 1 / 200$ . The EU's tea test results imported from China showed that the pesticide residue exceeded the standard year by year, such as the excessive rate of fenvalerate, black tea in 1997 was 14.4%, green tea was 27.5%, and in 1998, it was 42.7%. 37.9%. If no positive measures are taken, Chinese tea will be forced to withdraw from the EU market, and only the A-level green food standard can enter the EU's "green threshold".

## **6. Conclusion**

Technical Barriers to Trade TBT refers to a mandatory or non-mandatory technical nature of a country to safeguard national security, protect human health and safety, protect the ecological environment, prevent fraud, and ensure product quality. Measures that become obstacles to the free entry of goods and services from other countries into the country's markets. The growing number and growing number of TBTs are having an increasing impact on international trade.

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