

The Impact and Countermeasures of Technical Trade Barriers on Jiangsu's Export Trade

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Abstract: As the largest trading country in the world, China lags behind developed countries in terms of development level. There is a technological gap, lack of innovation and often suffers from technical barriers to trade. Whether in terms of direct losses, indirect losses or the degree of impact, TBT has exceeded the traditional trade barriers and become the most frequent and difficult trade measures that export enterprises in Jiangsu face after exchange rate and tariff. How to correctly view and reasonable treatment of technical barriers to trade on the impact of Jiangsu Province, foster strengths and circumvent weaknesses, is the focus of this study. Firstly, This paper expounds the basis of the topic and the significance of the paper, and summarizes the research status at home and abroad. Introduced the technical trade barrier, its expression form and function. Then, based on the specific export cases of mechanical and electrical industry, agricultural and food industry, light industry and textile industry in Jiangsu Province, it is demonstrated that TBT has caused huge capital loss to Jiangsu's export, lost part of the market, reduced export competitiveness, aggravated trade friction between countries and a series of problems. Through the collection of a large number of data, the objective conclusion is that the export of Jiangsu Province is faced with technical barriers to trade export price and cost increase, profit margin is compressed, backward technology, low productivity efficiency and other problems, resulting in a sharp decline in export volume and export speed, slow customs clearance time, cumbersome inspection procedures and other consequences. Finally, this paper from the government and enterprises point of view to Jiangsu Province to deal with the technical barriers to trade countermeasures and methods.

Keywords: Export trade, Influence and countermeasures, Technical barriers to trade.

1. Introduction

1.1. Research Background

Since China's accession to the WTO, a large number of Chinese products have been exported, and there have been more and more technical trade barriers, and their role has become more and more prominent, and the correct analysis of the impact of technical trade barriers on the economy of Jiangsu Province has important practical significance for analyzing and solving the impact of technical trade barriers currently facing Jiangsu Province. On the one hand, technical trade barriers will have a positive impact on the export of Jiangsu Province, but at the same time, technical trade barriers will greatly restrict the export trade of our province. Based on this, we have conducted in-depth research on the measures of technical barriers to trade, analyzed the current situation of the implementation of technical trade measures in Jiangsu Province, the future development trend and the impact on overseas exports of Jiangsu Province, and finally put forward countermeasures and suggestions to provide reference for the government and enterprises, which is not only beneficial for Jiangsu export enterprises to obtain and deal with information on technical barriers to trade in a timely manner, but also helpful for promoting the smooth progress of export trade of Jiangsu products, reducing trade disputes, and enhancing product competitiveness. Promote the healthy development of foreign trade enterprises.

1.2. Research status at home and abroad

1.2.1. Current status of foreign research

In foreign research, scholar Robert (1970) believes that technical barriers to trade are standards or regulations adopted by a country for health, safety, and the environment. [1]

Hillman (1991) directly defines it as directly impeding the import of products and discriminate against imports (excluding tariffs) as a non-trade barrier to any government strategy or action. Alan · Alan Osek (1995) pointed out that there are differences in standards, evaluation and inspection procedures for the sale of products in different countries. The emergence of technical trade barriers, the rise in market prices and the refusal of substandard products to enter will lead to a reduction in the variety of goods on the market, and a decrease in the types of goods and welfare levels that consumers can choose from. According to Ronald Fischer (2000), technical barriers to trade are a government-led action [2]. Urironan believes that "consumers are willing to pay higher prices for better products, but the government is pushing minimum quality standards from a soft, external point of view." Fisher and Wolff further pointed out that the root cause of this behavior is trade protection. Professors La Casera, Shuzian Genzberg and others argue that not only government actions but also corporate actions can be. Alexander Cassel says that companies can become product standard setters. Max Coase and John Wilson (2000, 2001) have summarized the causes of technical barriers to trade from various aspects based on the research results [3].

1.2.2. Current status of domestic research

Technical barriers to trade were first studied in the 90s. Domestic intellectuals mainly study the definition, manifestations, characteristics, role and economic effects of technical barriers to trade. The specific concept was proposed by Yep Berlin and Chen Zhitian (1992), who argued that technical barriers have two sides, on the one hand, they help to increase the export of goods quality, protecting the interests of consumers, on the other hand, will become a measure of trade protection [4]. Zhang Xigu believes that developed

countries or regions such as the United States, Japan and Europe have established a series of technical regulations, standards and conformity assessment procedures based on the advantages of technology, management and environmental protection, setting extreme harsh conditions for market access. He studied in detail the agreements and actions on technical barriers to trade between the WTO and major economies such as the United States, Japan and Europe. Zhang Haidong (2007) introduced the relevant systems of technical barriers to trade in major developed countries[5]. Feng Zongxian and Ke Jianjian (2001) believe that technical barriers to trade mainly serve to limit the quantity of imported goods while controlling the price of imported goods. When certain conditions are met, it will affect the social welfare and industrial structure of the importing and exporting countries [6]. Wang Zhigang and Li Zhijun conducted in-depth research on South Korea's relevant technology trade measures, mainly expounding on South Korea's application of the WTO/TBT protocol. Jin Deyou and Han Jianping mainly elaborated on the application of WTO/TBT in Europe, the United States, Japan, South Korea and other countries. Zhong Xin, Chen Ziji, Chen Xiangdong and others for technical trade barriers, qualitative analysis of developed countries' implementation of technical trade barriers, will be for Chinese goods. What impact does export 56 have. At the same time, Chinese scholars Jia Haiji and Li Chunding adopted the method of economic analysis and studied the import countries separately. The short-term and long-term impact of the implementation of technical barriers to trade. They found that the imposition of technical barriers to trade helped importing countries in the short term, but did not necessarily increase the overall well-being of importing countries in the long run[7].

1.3. Significance of topic selection

With China's increasing strength and increasing foreign export trade, but at the same time, since the 2008 financial crisis, the world economic growth has been sluggish, coupled with the intensification of Sino-US economic and trade frictions and the outbreak of the new crown pneumonia epidemic and other black swan events, protectionist forces in various countries have begun to rise, new trade barriers, strategic protection measures, and various trade protection measures have prevailed.

Because of its characteristics, technical barriers to trade have gradually become the main means of use of current international trade barriers, and their effect on inhibiting imports is more effective than other methods. Developed countries take advantage of strong technical conditions and cost advantages to set higher technical standards to protect the health and safety of individuals and the environment, not only protect the interests of consumers, but also provide trade protection for the industry. At the same time, they try to maintain international leadership in standards development to ensure an international monopoly competitive advantage in their industry, excluding low-cost products from other countries [8].

Due to the late process of China's integration into modernization, lagging behind developed countries for many years, the resistance ability is weak when faced with technical trade barriers, and technical trade barriers have had a serious impact on the export trade of Jiangsu Province. According to a survey by the Jiangsu Bureau of Commerce, in recent years, the direct losses caused by technical trade barriers in Jiangsu

Province have increased year by year, and its losses have always ranked first in the country. Technical barriers have become a problem hindering the export of some enterprises in Jiangsu. It can be seen that technical trade barriers seriously affect the competitiveness of Jiangsu exports, so in-depth study of the problem of technical trade barriers facing China's Jiangsu exports is of far-reaching significance, both in reality and theory.

2. Overview of Technical Barriers to Trade

2.1. 2.1 Definition of technical barriers to trade

The specific concept of "technical barriers to trade" (TBT), also known as "technical trade measures" or "technical barriers", is a form of technical regulations, contracts, standards and certification systems (conformity assessment procedures) issued by the state or locality, mainly including science and technology, health and quarantine, product safety, Environmental protection, product quality and certification, in today's international trade use have sufficient flexibility and show various characteristics. Importers establish various strict requirements for imported goods and various technical standards, technical specifications and certification systems by promulgating laws, rules and regulations to achieve the purpose of restricting imports, such as in health and quarantine, product packaging and corresponding labeling standards. The WTO was formally established on January 1, 1995, through the establishment of trade barriers and the implementation of trade protectionism. It is the most effective means used by all countries, especially developed countries. Almost all sectors and types of trade are covered[9].

2.2. Categories of technical barriers to trade

Technical barriers to trade are classified in the Agreement on Technical Barriers to Trade and are divided into three parts: technical regulations, technical standards and conformity assessment procedures.

The content of technical regulations mainly includes relevant documents for the management of product characteristics, production methods, and production processes, including specific management regulations, and specific terms that will be used in the production process. Symbols, product packaging and logos, specific requirements for related labels, etc. Technical standards refer to documents that have been certified and approved by relevant professional accreditation bodies, the main content includes some rules for products or related processes, and it is not mandatory. It can be seen that in essence, technical regulations and technical standards are not the same, the former is mandatory, while the latter is non-mandatory.

The main content of the conformity assessment procedure is in accordance with the relevant provisions of ISO (International Organization for Standardization), covering each link of production, as well as the entire assurance system for systematic supervision, supervision and inspection. Among the more important are the technical rules and related standards, after qualification, foreign goods are labeled to prove that their products comply with standards and norms.

The conformity assessment process consists of two parts: product certification and system certification. Among them, the main content of product certification is to verify whether the parameters of the product meet the requirements of the relevant technical regulations, while the system certification

is mainly for the production of the product and the management system to verify compliance with the relevant regulations.

2.3. Features of technical barriers to trade

1. Scalability. From the perspective of the product, the entire link of the product is involved, the deeper the accuracy of the product, the higher its technical level, the greater its limitations and impact. From the perspective of its entire production process, from research and development, production, processing, packaging, transportation, sales to consumption, the entire life cycle of a product is covered by the relevant regulations. From the perspective of methods, it mainly includes tangible goods, financial information, trade in services and environmental protection. In terms of expression, it includes laws, regulations, requirements, procedures, and other aspects.

2. Technical barriers to trade are highly concealed in the implementation of trade protection. First, since there are no restrictions on technical barriers to trade, all countries are theoretically treated equally, and there is no clear distinction between the allocation of quotas, licenses and other non-tariff measures and irrationality. Second, technical barriers to trade in various applications are complex and flexible, indirectly making it difficult for exporters to adapt to import restrictions. Third, technical barriers to trade make it easy for people to use safety, health and environmental standards as an excuse to broadly restrict imports and protect people's trade interests, turning to human health and environmental protection.

3. Reasonable. Whether technical regulations, technical standards and inspection procedures are reasonable, mainly from the perspective of safeguarding national interests and consumer interests; The use of technical barriers is described in detail in the Agreement on Technical Barriers to Trade by the World Trade Organization, provided that it does not affect the normal conduct of international trade, Technical barriers to trade are available.

4. Complicated. The complexity of TBTs is mainly in the following aspects, first of all, in terms of technology and use, which are more complex than other NTBs (such as allocation and licensing). According to WTO regulations, countries implement different technical standards than other countries according to regional and consumption characteristics, so it is necessary to prove that technical standards do not interfere with normal international trade.

5. Strong adaptability. Technical trade barriers are diverse in form, and the technology of various countries is also constantly breaking through, which has more room for development than other tariff barriers, can be used flexibly, and technical trade barriers are easier to expand.

6. Huge influence. The original intention of using technical barriers to trade is to minimize their impact on domestic trade, but in general, as long as technical barriers are used, the extent and scope of impact will be much higher than tariff barriers and non-tariff barriers. At the same time, due to the strong interconnectedness of world trade, it is easy to have a chain reaction, which quickly spreads from one country to many countries, and even affects the whole world, with a very wide and far-reaching influence [10].

2.4. Role of technical barriers to trade

Technical barriers to trade have a restrictive function, but also have the effect of protecting the domestic market. The

main form of protection is that customs will strictly control the price and quantity of imported goods. Therefore, the price and quantity control mechanism is the most commonly used mechanism and the most basic, so as to determine the formation mechanism of technical barriers to trade in terms of both price and quantity.

Quotas are a distinctive non-tariff barrier that matches the volume of imports by adjusting the commodity quota index. As long as specific quotas are established, the volume of imports of goods can be determined. In other words, the relationship between the quota index and the number of imports corresponds to each other, and quotas serve as a complete mechanism to control the number of goods. This aspect plays a role. Similarly, there will be certain technical obstacles in trade and export, mainly reflected in the restrictions of relevant technical regulations, restrictions on products by technical standards, and product conformity assessment. The program has three aspects. Regulations alone cannot examine the barrier mechanism, and it is difficult to determine whether it is a price control mechanism or a quantity control mechanism. Therefore, to analyze the use of technical trade barriers in the process of realization, one is to formulate regulations or standards, and the other is to implement import bans in accordance with the regulations or standards for the inspection of imported goods, as long as the products comply with the regulations. If the relevant regulatory standards and import requirements are not in line, the import of goods will be prohibited, and there are obvious obstacles. Technical barriers to trade can also be applied in the special case of quota indices, i.e. quota restrictions. After passing the inspection or standard inspection, if the imported product meets the requirements, the filter effect is invalid. Therefore, from a static point of view, the establishment of technical barriers to trade is a quota system, a mechanism formed to control the quantity of commodities [11].

In terms of form and implementation, quantitative technical barriers to trade have a clear dual effect: the two mechanisms of quantity control and price control, for inferior products, they not only control quantity quotas, but also form a special kind of price regulation Mechanism. Its function is similar to that of tariffs, has particularities, and is a composite function.

Technical barriers to trade also have their own particularities, mainly in two aspects, one is that each entrant will carry out a series of modifications to the product in order to meet the specific requirements of the technical barrier, thereby paying a certain price. Under perfectly competitive market conditions, the product market will counteract and stimulate the various entrants to cross the barriers as soon as possible, otherwise they will lose a good period to seize the market and seize opportunities, which is different from tariffs. The second is that before entering the market, the product must meet the corresponding technical standards and rules, and the specific parameters of the product must pass the verification and inspection of trade technical barriers, and pay certain inspection fees and derivative fees, which to a certain extent increases the export price of products. In a sense, the dual mechanism of technical barriers to trade can be seen as a barrier consisting of tariffs and quotas. It also shows that technical barriers to trade come with the development and development of technology, while barriers to international trade exhibit typical forms of integration and complexity under modern economic conditions.

Theoretically, obstacles manifest themselves mainly in the form of external price control mechanisms, while the role of

quantitative control mechanisms is weakened or no longer exists. However, in fact, in order to protect the development of its own industry and control the size of the domestic market, the importing country will also be required and pay import inspection fees for technologies whose data meet the barriers, and it is impossible to enter its own market without any requirements. At this point, the host country can adjust the import volume and ratio accordingly through inspection and process control. In the context of continuous improvement of technical standards, technology is constantly updated and iterated, pushing technical barriers forward [12].

3. Analysis of the Current Export Status of Jiangsu Province under the Influence of TBT

3.1. Export markets are relatively concentrated

The United States, the European Union and Japan are still

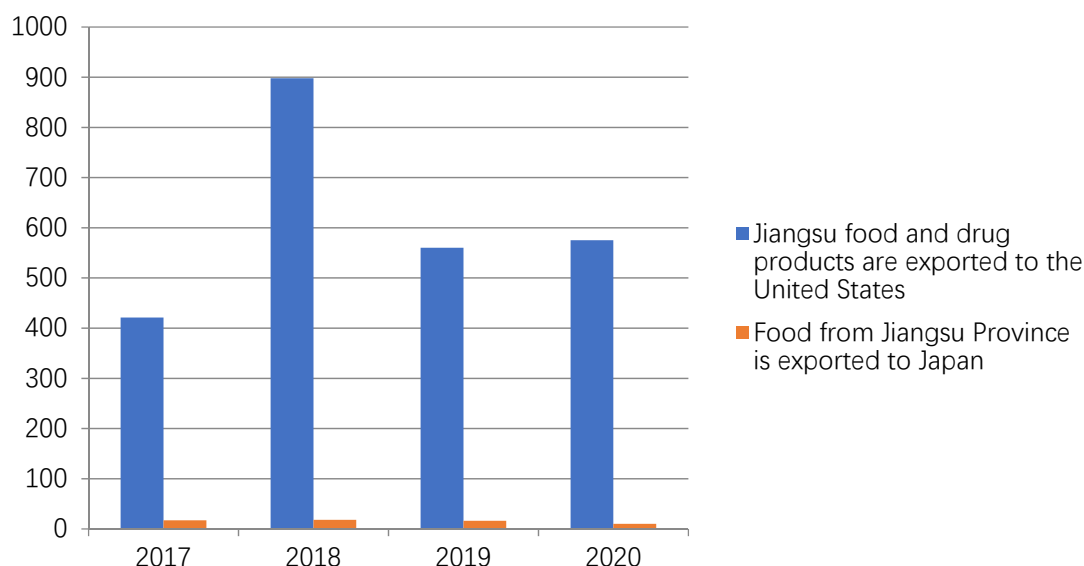


Figure 1. Statistics on the number of TBT encounters encountered by Chinese products exported to their respective target markets (Source: Jiangsu Province Technical Trade Measures Information Platform)

3.2. The inspection procedure is cumbersome and the time cost is high

Products enter the market of the importing country before strict testing, the review time is too long, the required certificate, materials, after the arrival of the goods at the customs of the importing country, the product needs to be inspected and spot-checked, and some products will even be fully inspected. The increase in inspection time will inevitably lead to the prolongation of the time that the goods are held in the port, slowing down the speed of customs clearance of goods. At the same time, the cost of testing is expensive, and the cost of enterprises in the testing stage will lead to an increase in the total cost. Submit the materials for the declaration of imported products, designate a customs office to handle it, but the place of application is in a poor rural area, and the transportation is inconvenient, which prolongs the time for declaration and approval. For example, toy exports must be certified by international ICTI, and in order to pass certification, toy manufacturers must modify their equipment and improve the working environment, and input costs in terms of raw materials and other aspects are

the main export areas of Jiangsu, and the export areas are too concentrated and have been notified by TBT the most times in these countries. The total export volume to the United States, Europe and Japan exceeds 50% of the province. With the development of the Belt and Road Initiative, exports to countries along the route have increased, but in the Middle East, South America, and Australia, the export volume and export value are much lower than those of the United States, Europe and Japan. The trade deficit with Japan and South Korea is also increasing. In the long run, it will increase the risks and trade frictions in the international trade market, resulting in the deterioration of the foreign trade environment[13]. Figure 1 shows the number of TBT encounters in Jiangsu Province in recent years.

about 20% to 30% higher than before certification. As a result, the profits of toy manufacturers have been greatly compressed[14].

3.3. The certification system is not perfect, which increases trade risks

The development of China's testing and certification system lags far behind developed countries, starts late, has weak testing capabilities, and the right to speak is still in the hands of developed countries. Technology update iteration is faster, facing different countries have different standards, which reduces the motivation of exporters to enter new markets, and exporters will lose part of the market. Moreover, because technical barriers to trade are flexible and uncertain, this makes it difficult for exporters to respond in a short period of time, resulting in risk considerations for some export enterprises, the speed of product exports will slow down significantly, and the export volume will also decrease. The export volume of textile and garment products in Jiangsu Province accounts for a large proportion of the province's export volume, and at present, there are not only 0ko-

TexStandard100 (ecological textile crystal standard 100), ISO9000 quality system standard, ISO14000 At the technical level such as environmental standards, there is also SA8000 social responsibility management system certification at the social level.

According to a survey result, in order to obtain relevant international product and system certification, Yangzhou garment export enterprises increased the cost of export products by more than 10%, reduced profits by more than 10%, and obtained additional investment in advanced cutting-edge technology, equipment and raw materials. Businesses that have no investment capacity can only exit. Textiles and garments are labor-intensive products, so they have been troubled in the SA8000 social expense management system. An enterprise in Yangzhou is an old enterprise specializing in production, export, textiles and garments, and the importer inspects the entire factory every time he orders, but he did not meet the standards of overtime and overtime pay four times in 2002 and one time in 2005 after receiving a non-conformity judgment, was immediately canceled orders, affecting the production capacity of enterprises, increasing the export trouble of enterprises [15].

3.4. Rising export costs

When the technical regulations of the domestic market and the market of the importing country are inconsistent, in order to export, enterprises have to pay additional fees in production, design, packaging, certification, etc. to meet the requirements of the importing country, which increases the production cost. These are all cost increases due to external factors. External factors will also affect the rise in the price of internal production factors, mainly reflected in: First, the rise in technology costs. In order to meet technical requirements, it is necessary to purchase the right to use foreign intellectual property rights, hire high-tech personnel, pay for technology transfer, and so on. In particular, capital investment in high-tech industries such as intelligent manufacturing, Internet of Things, and heavy industry machinery has increased. Hiring high-level talents, experimental costs, scientific research expenses and a series of other expenses are large. Second, labor costs have risen.

With the rapid growth of China's economy, the price level has increased, the quality of labor has also been continuously improved, and the demographic dividend has disappeared, promoting the rapid growth of labor wages. Third, the cost of products has risen. In order to meet the relevant standards, export enterprises have to purchase higher-end, more environmentally friendly raw materials and machinery and equipment. Moreover, it is necessary to improve production technology and technology, improve the ecological environment and labor conditions. As an important industrial town, Jiangsu Province consumes huge amounts of energy and the environment, and more and more environmental problems are emerging. And people pay more and more attention to the protection of the ecological environment, so the environmental cost continues to increase. Fourth, the cost of certification has increased. Inspection and testing costs, certification costs, dispute resolution costs, opportunity costs, warehouse fees, etc. These costs have brought a lot of pressure to enterprises, profit margins have been further compressed, and competitiveness will be seriously affected.

4. Analysis of the Impact of TBT on Jiangsu Province's Exports

Since its accession to the WTO, due to the transformation and upgrading of its trade structure, Jiangsu Province's foreign trade has been in a stage of rapid development. In 2014, the total import and export value of Jiangsu exceeded 563.7 billion US dollars, breaking through a record high again. However, as foreign TBT becomes more and more demanding, trade frictions caused by TBT are becoming more and more frequent, and the impact on Jiangsu's export trade is becoming deeper and more extensive. According to the follow-up survey of many export enterprises in the province by the State Inspection and Quarantine Administration for eight consecutive years, the proportion of export enterprises in Jiangsu affected was as high as 27.2% in 2013, and the trade loss suffered by TBT reached 180The loss was more than twice that of 2012, and its losses were concentrated in mechanical and electrical equipment and chemical and textile enterprises, with direct losses as high as 3.59 billion US dollars and 32.32 billion US dollars, respectively\$500 million. At the same time, in order to adapt to the new requirements, the new cost of Jiangsu export enterprises reached 2.579 billion US dollars in 2012, accounting for 9.2% of the total new cost of the country, and the impact of TBT on Jiangsu's economic development is becoming more and more severe.

Whether from the perspective of direct losses, new costs or the degree of impact, TBT has exceeded anti-dumping, etc., traditional trade barriers, in addition to conventional methods of hindering commodity imports, technical trade barriers have become the most common and difficult trade measures for Jiangsu export companies. Export enterprises in Jiangsu Province have encountered foreign TBT in a wide range and depth, causing serious losses to Jiangsu related industries, especially the relevant TBT in the EU, the United States and Japan. According to customs data statistics, at present, export enterprises in the province are more affected by TBT, organic electrical products, agricultural and food products, light industrial textiles, chemical products, these industries are affected by TBT The proportion of these industries affected by TBT is more than 40%. According to Nanjing Customs statistics, in 2005, Jiangsu Province's export commodities were returned by foreign parties as high as 124 million US dollars, an increase of 11.4% year-on-yearThe total value of foreign trade exports accounted for 0.1% of the same period; In the first two months of 2006, Jiangsu Province's export commodities were returned by foreign parties to 24.37 million US dollars, an increase of 56.7% year-on-year. From the perspective of export return commodity structure, Jiangsu mechanical and electrical products export volume was the largest in China, reaching 40.65 million US dollars, accounting for 32.8% of the total export commodity return in the province; followed by chemical products and textiles, with export returns reaching US\$22.15 million and US\$22.03 million respectively, accounting for 17.9% and 17.8% of the total export commodity returns in the province, respectively; In addition, the frequency of export returns of base metal products and agricultural products is also relatively high, with the return volume reaching 9.64 million US dollars and 1.5 million US dollars respectively, accounting for 9% of the total export commodity returns in the province. Various complex technical trade barriers are the main reason for the frequent withdrawal of export commodities in Jiangsu Province. It can be seen that Jiangsu Province is seriously affected by foreign

TBT.

4.1. Electromechanical industry

After the reform and opening up in 1978, the export volume of mechanical and electrical products in Jiangsu Province increased greatly, and the export output value was exported by 2012. The total amount is about 220 billion US dollars, accounting for about 67% of the province's total exports. After the economic crisis in 2008, about 70% of Jiangsu's exports of mechanical and electrical products were affected. The overall market demand has plummeted, and the output and export volume of enterprises have fallen sharply, and even affected the province's foreign exchange income. In the following years, the market demand slowly increased, and the mechanical and electrical industry began to "see the light again", the export volume showed a blowout trend, and the profits of mechanical and electrical enterprises showed a gratifying trend. From 2011 to 2012, the export trade of mechanical and electrical products in Jiangsu Province has maintained a relatively high-speed growth, has become the largest export industry in Jiangsu Province. The export of mechanical and electrical products is mainly composed of means of transportation, household appliances, electronic and electrical instruments and equipment. The foreign technical trade barriers faced by the export of mechanical and electrical products in Jiangsu Province are exhaust emissions, electromagnetic compatibility, green environmental protection, packaging materials, etc.

Among the technical trade barriers that restrict the export of the mechanical and electrical industry in Jiangsu Province, the most representative and far-reaching technical trade barriers are mainly from the new RoHS directive of the European Union. In the provisions of the RoHS directive and the WE directive, there are 102 products under ten categories on the categories of hazardous materials and waste recycling, of which the first seven categories of products are related electrical products exported by China.

The latest certification directive is the new RoHS certification directive of the European Union, which refers to the RoHS 2.0 certification directive. RoHS2.0 certification directive is based on the previous addition of some new content, mainly including product scope, restricted substances, relief mechanism and clear responsibilities, etc., adding details to its clauses, strengthening the supervision of mechanical and electrical products, which has caused greater resistance to the export of products from the mechanical and electrical industry in Jiangsu Province to EU countries.

Taking exhaust emissions as an example, the European Union has long made clear regulations on mandatory exhaust emissions of motor vehicles, especially for the concentration and particle size of emissions, and also set for different types of vehicles Different grade requirements. The regulations for cars and buses used in cities are the strictest, so the export restrictions of cars and buses in my province are extremely large. Taking tractors as an example, the European Union stipulates that China's export tractors must meet Euro II standards. However, nearly seventy percent of China's tractor manufacturers have not met this standard, and even more egregiously, since 2003, the United States and Europe and

other countries have only given 200 units of import quota per year, on the basis of this, but also deliberately picky, blame, in the chassis installation interface matching problem, rudely require the use of Japanese diesel engines, install a chassis that matches the wheeled tractor, in order to be able to export to internationally accepted standards, If the requirements are not met, the export of products to the United States and European countries will be strictly restricted. This has greatly restricted the trade and export of wheeled tractors and diesel engines in Changzhou, Wuxi, Yancheng and other regions of Jiangsu Province, and there is a possibility of completely losing the European and American markets. If other regions or countries restrict China's products in accordance with the practices of European and American countries, the export of mechanical and electrical products in Jiangsu Province will be seriously hit.

4.2. Agricultural and food products industry

The destination of agricultural products and food exports in Jiangsu Province is Japan and the European Union, but these countries have the most severe green barriers, because these countries have a huge demand in this regard, and the relevant agricultural products imported into their own countries and Green food has strict standards. In recent years, with the continuous development of China's technology, Japan and South Korea have increasingly surpassed other countries' technical requirements for the export of agricultural products and food products in our province. The residue of related pesticides and toxic substances plus testing, the high standards of the health quarantine system and the need to protect specific species are agricultural products in our province. An important reason for the decrease in export volume.

As we all know, the use of technical barriers to trade is mainly in technical regulations and standards, product quality certification and conformity assessment procedures, commodity quarantine and inspection regulations, green technical barriers and other aspects. The number of SPS and TBT notifications initiated by Japan to other countries has first increased, then decreased periodically after fluctuations, and many standards have been added in recent years. In this way, the setting of technical barriers to trade is not static, but will be influenced by other factors. If Japan imposes technical barriers on other countries and harms the interests of other countries, partner countries and regions will also build a wall of technical barriers to prevent the import of Japanese agricultural products, resulting in a disadvantage to anyone. It can be seen that Japan's technical trade barriers to imported agricultural products can block the import of foreign goods, but they may also affect its own exports.

From the batch of unqualified agricultural and food products detained by Japan in China in 2019, there were as many as 147 items, with vegetables and products, dried nuts, aquatic products and products, other processed foods and plant-based seasonings being the top five. They accounted for 119 batches, or 80 of the total lots95%. Japan withholds the top five categories of unqualified and unedible products exported by China, as shown in Figure 2.

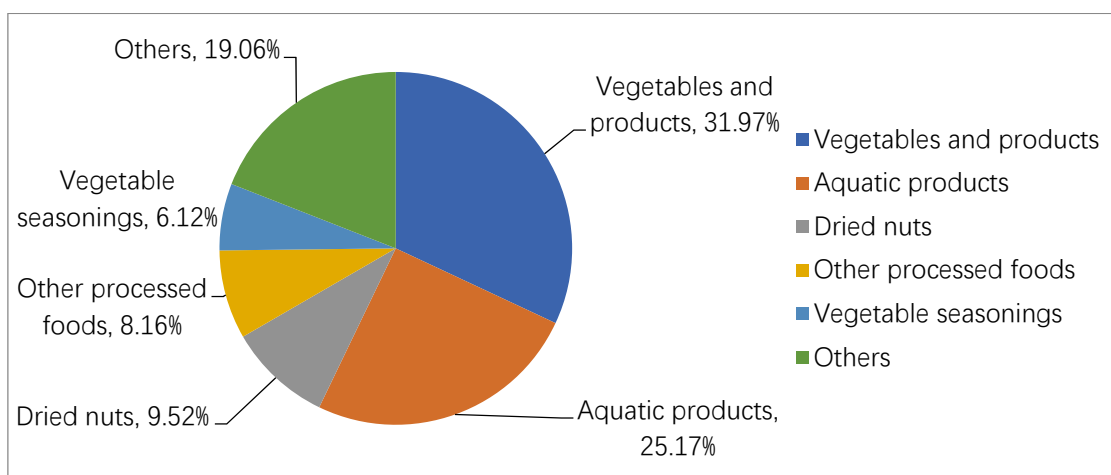


Figure 2. Japan withheld the top five types of unqualified agricultural and food products exported by China in 2019 (data source: China Technical Trade Measures Network).

From the survey data, it can be seen that agricultural products and processing are affected by foreign technical trade barriers. Up to 90% of food export products are affected, and the affected agricultural products cover a wide variety and long restriction time, each year. As a result, huge economic losses have been incurred in our province.

South Korea promulgated the "Special Law on Import Food Safety Management" and the "Pesticide Affirmation List System", and the trade volume of similar products exported to South Korea in Hong Kong City has been greatly reduced. The expert said: "In the context of the China-Korea Free Trade Area, the purpose of the implementation of these two regulations is to restrict the export of Chinese agricultural products to South Korea, which is to Jiangsu Province. It is extremely disadvantageous, and relevant enterprises need to pay great attention to their specific requirements and take proactive measures to deal with them."

To a certain extent, the introduction of these regulations has raised the threshold for agricultural and food products to enter the markets of other countries. Take the Pesticide Affirmation List System as an example, the regulation imposes higher requirements for pesticide residues in agricultural products, if the amount of pesticide residues in agricultural products exported to South Korea. If the requirements cannot be met, the inspection will be carried out in the form of "one standard for all" (0.01ppm). Since most of the pesticide products currently used in our province are included in its inspection scope, the testing costs of related enterprises have increased significantly, export costs have increased significantly, and the price advantages of products have not been reflected. And due to the extension of the inspection cycle, it will seriously affect the customs clearance speed of the product. From the perspective of testing vegetables, a total of nearly 290 pesticide types need to be tested, and not only additional payment is paid in the customs clearance process. The cost of testing is about 10,000 yuan, and the time to pass through customs has been changed from 3 days to 10 days, the purpose of these restrictions is to achieve. Hinder the smooth export of vegetables from our province. Taking Lianyungang City as an example, in order to avoid increasing the risk of excessive residues of toxic and harmful substances in agricultural products in Lianyungang City. In order to pass product certification and inspection and quarantine procedures, agricultural enterprises in Lianyungang need to pay more capital and time costs. At the same time, it is also necessary to invest in scientific and technological research in

experimental areas and demonstration areas, research and development of new green products or find alternatives.

5. Analysis of Countermeasures to Promote the Export of Jiangsu Products

5.1. Government Level

5.1.1. Implement the strategy of diversifying the market and optimize the structure of foreign trade

The first is to decentralize the export market of enterprises. Make full use of the "Belt and Road", RCEP free trade area, China-EU bilateral investment agreement and other policy advantages, vigorously trade and invest in these countries by various types of enterprises in the province, broaden market sales channels, and strive to transform the market from agglomeration to diversification, while implementing an import quota system to reduce the export volume of a certain product to a certain country in the same period, and then reduce these to the United States, Japan and Europe. The country concentrates exports and improves the terms of trade. The second is to improve the trade structure. Vigorously develop high-precision, medicine, entertainment and other high-value-added industries, and transfer low-value-added industries to economically underdeveloped areas with comparative advantage resources such as labor or resources.

5.1.2. Accelerate industrial transformation and upgrading, and adjust the export structure

The government should play a leading role in promoting the upgrading of Jiangsu's industrial structure. The first is to improve the quality of key areas. Focusing on the mechanical and electrical and textile, agricultural and food industries, in terms of quality risk assessment and diagnosis, strengthen the research on common product defects, and improve the "discovery of defects - product safety standard suggestions - improve the overall quality of the industry". The mechanism fundamentally helps enterprises eliminate product safety risks, promote technological innovation, and promote the high-quality development of the industry. The second is to accelerate the elimination of backward production capacity, introduce advanced production lines, upgrade the technical content of products, improve the export structure, increase the added value of products, and achieve a magnificent turn in industrial upgrading.

5.1.3. Optimize the business environment and provide high-quality services

First of all, improve the level of market legalization, government efficiency, and simplify administrative examination and approval procedures. Secondly, the government provides different types of low-interest loans and preferential land use policies for enterprises in different industries, and sets up scientific research institutes to help local enterprises cultivate talents and improve surrounding infrastructure supporting measures. Jiangsu Province can also combine domestic and foreign production factors to increase the market competitiveness of export commodities. Subsidize and support key export enterprises in the province, and give small loans and technical assistance to small and medium-sized export enterprises. In addition, the government can also set up bonuses to encourage innovative technical personnel in enterprises, increase innovation enthusiasm, and stimulate the potential of technological innovation.

5.1.4. Talent training

If Chinese enterprises want to be free from the restrictions of technical trade barriers, they must understand and master the rules of the game formulated by Europe and the United States, and use the trade dispute settlement mechanism to protect their rights and interests when necessary. For China's export enterprises, it is essential to be familiar with the international market economy system and understand the relevant rules and norms. When encountering technical limitations, our province should learn to use rules to protect itself, meet its reasonable requirements and avoid unnecessary losses. The cultivation of talents is particularly important. First of all, the government has issued relevant policies to retain talents, relying on many university resources, issuing talent training plans, retaining outstanding college graduates, and using financial advantages to absorb a large number of relevant technical talents. Build high-tech industrial parks and innovation and entrepreneurship incubation parks to form scale effects and agglomeration effects. Secondly, a fund is set up to provide opportunities for outstanding employees of enterprises to study abroad, so that they can learn new foreign technologies, improve their own cultivation and technical level, and better serve the local area. Third, cultivate talents in general legal and economic fields, carefully study the rules of the game formulated by other countries, and delve into the technical trade barriers of the other market. Finally, strengthen government-enterprise cooperation, cooperation between scientific research institutions and universities, integrate knowledge and action, accelerate the pace of transformation of scientific research achievements, and break through the blockade of technical trade barriers.

5.2. Corporate Aspects

5.2.1. Build an information collection platform and improve the intelligence system

Enterprises in our province must first have an information collection platform, such as websites, chambers of commerce, etc. Get information from foreign trade magazines, relevant reports, results of government and industry conferences, and domestic exhibitors. Typically, technical standards prescribe a period of market adjustment from introduction to implementation, which is a critical period for companies to upgrade their technology; In addition, you can also go to other countries to acquire other people's companies, acquire each other's technology and brand, and upgrade yourself.

5.2.2. Increase investment in technology and focus on long-term layout

Export enterprises in our province should make a financial budget and invest in the technical department according to the proportion of enterprise profits. Keep up with market development and do market research. By improving old product technology, developing new products, increasing product categories, and broadening product lines. In order to accelerate technological innovation and increase the technical content of product and technology patents, technical barriers to trade have been formed through science and technology. Only by raising the level of science and technology can we truly overcome the obstacles of technical barriers to trade.

5.2.3. Establish enterprise standard system, establish brand awareness and quality awareness

Enterprises should improve their own management system, establish a modern enterprise management system, and formulate a global strategy: do a good job in quality control, regularly check product quality, and improve the level of enterprise management. Integrate into the international system as soon as possible, strictly implement international standards, pay close attention to the latest developments in the technical regulations of enterprises in various countries, avoid the consequences of asymmetric information, and resolutely safeguard their legitimate rights and interests in response to all kinds of litigation.

5.2.4. Go abroad, establish cooperative relations with multinational companies, and open factories abroad to cross technical barriers

First of all, Chinese export enterprises can use the brand and marketing channels of foreign enterprises to attract potential cooperation projects, such as the production, processing and development of foreign-invested products, and adhere to running through R&D, production, packaging and marketing: enterprises begin to cooperate and compete, forming a long-term win-win and mutually beneficial development relationship. On the other hand, companies should implement aggressively through joint ventures, sole proprietorships, mergers and acquisitions, etc. "quit" Strategy to directly overcome the trade barriers unique to each country and develop the scale of international trade, Stimulate the export of products.

5.2.5. Vigorously develop green industries and organic agriculture in accordance with local conditions

In recent years, people have continuously enhanced their awareness of environmental protection, and the environmental protection requirements of imported products in various countries have become higher and higher. At the same time, due to the relatively low economic level and technical level of our country, the environmental awareness of relevant export enterprises needs to be improved. Green barriers have a serious impact on and hinder the development of China's export trade. The export of Chinese products needs to be effectively improved in environmental protection, so as to achieve long-term development possibilities.

Enterprises need to strictly control the entire business process, from the business philosophy of the enterprise to the production, transportation and sales of each link, with the green standards of export requirements. Strengthen the development and promotion of pollution-free and pollution-free production materials, improve the stability of biopesticide products, reduce costs, and eliminate chemical fertilizers that are harmful to the human body. In addition, the

active development of green industries by enterprises can improve the ecological protection awareness of export enterprises in Jiangsu Province, and at the same time promote the export of environmental protection products, which is conducive to the sustainable development of enterprises, which is of great significance[16].

6. Summary and Prospects

6.1. Summary

This paper introduces the basic situation of technical barriers to trade, analyzes the impact of technical barriers on the trade of Jiangsu Province, explains the current situation of technical barriers to trade in Jiangsu Province, and puts forward suggestions and measures from two aspects. At the government level, it is necessary to recognize the reality and its own shortcomings, rather than blindly complaining. The introduction of foreign advanced technology can start from imitation, and then achieve transcendence, but we must pay attention to the awareness of intellectual property protection, constantly improve the early warning mechanism in the face of major exporting countries, study new technologies and standards of other countries, and investigate whether the technology can make breakthroughs in China. Yes. Timely update the information, intelligence and data of technical barriers to trade, and classify technical barriers to trade: regularly arrange high-level technical personnel of enterprises to learn new foreign processes, study technical barriers of other countries: actively adopt international standards, and provide enterprises with preferential treatment in terms of capital, technology, finance and taxation. For enterprises, it is necessary to establish brand awareness and quality awareness, strengthen modern enterprise management: increase investment in science and technology, improve their own hard power: implement the concept of green development, enhance the awareness of ecological environmental protection: actively apply for international certification standards, lay a good foundation for exports: actively carry out foreign direct investment, and overcome the adverse effects of technical trade barriers.

At the same time, we must recognize that technical barriers to trade have a dual social function, which on the one hand can promote social progress and protect the environment and the health of humans, animals and plants, and on the other hand, they will undermine social fairness and become a tool for some countries to implement trade protectionism in disguise. We must actively adapt to the upsurge of economic globalization, face up to technical trade barriers, and adopt reasonable and effective measures with a correct attitude to establish our own technical trade barrier system.

In short, breaking through technical trade barriers is difficult, time-consuming, and has high thresholds, requiring the cooperation of governments and enterprises, and is an unremitting long-term work. We must attach great importance to technical barriers to trade at the strategic level, carefully study the impact of technical barriers on Jiangsu's exports, clearly understand the actions that different industries need to take in the face of technical barriers, and take practical and effective measures to avoid and overcome technical barriers.

6.2. Outlook

In some industries, we do have a relatively large gap with foreign countries, but it takes time to get the fruit for the saplings to blossom and bear fruit, and the freezing ruler is

not a day's cold. Industrial development takes time, we should also be patient, give enough time and space to help the industries that need our protection, but not completely protected, such as China's home appliance industry.

In an anarchic free market, where businessmen seek profits and consumers are ignorant, the market does not work well. To be honest, Africa's market economy is free because of the level of governance of the government. This level is much higher than that of European and American countries. However, the result of market competition is the prevalence of counterfeit products and inferior products, while the result of competition in the actual European and American markets is the result of countless experts and scholars and even politicians investing countless talents and hard work, of which the formulation and implementation of standards is a very important item. Today, from the perspective of Chinese companies, it can be seen as technological trade protection, but for the countries that have these protections, it is merely a means to regulate the market and allow it to develop towards the ideal. From the perspective of competition, technology trade is relatively fair, it does not distinguish between friends and foes, survival of the fittest, elimination of inferiors, and the final result is the improvement of the overall standard of the industry. China has always complained about technical barriers to trade, but when we think about why the reputation of Chinese people is so bad in the world, we are not talking about personal methods or national policies. By shaping China's international image, our products should be one of the most important factors. In the absence of external market pressure to force Chinese enterprises to carry out industrial upgrading, some international technical standards can force us to improve ourselves. Therefore, we should first change our mentality and attitude, and complain and swear as a goal. The best way to "break" patent barriers is to "break through". We can develop new products, and then apply for patents at home and abroad, and we can also open up new markets. A smarter approach is to directly set standards and firmly control the right to speak; But this road is also the most difficult, first of all, you have to have enough strength, you need to pay a greater price, and you have these conditions to be qualified to set standards. No matter which road is not easy, but in order to highlight the encirclement, we will work hard. As the saying goes: the root is prosperous, and the root is deep. China's various industries from scratch, from introduction to self-manufacturing, from imitation to innovation, from backwardness to leadership, from weak to strong The arduous development road has taken several generations of hard work. I believe that our country will become stronger and stronger, and the rejuvenation of the Chinese nation is just around the corner.

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