

## Analysis on the Causes and Countermeasures of Sino-US Trade Friction

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### Abstract

The study attempts to investigate the causes of Sino-U.S. trade friction in recent years and provides countermeasures accordingly. The import and export volume of two countries, the product structure of China's export, the 337th Act lawsuits related to China, the industries involved in trade friction, and the G-L Index of Sino-U.S. Products are analyzed in detail. The causes of Sino-US trade frictions are discussed from the aspect of mercantilism and trade protectionism, interest groups and governments' trade policies, Chinese product structure, intellectual property protection in China, and performance of Chinese enterprises in litigation. Based on these, countermeasures are put forward. China needs to implement industrial upgrading, increasing the added value of products, and improving intellectual property protection. A trade friction warning system also needs to be constructed. The Chinese government needs to carry out strategic dialogue and international negotiation.

**Keywords:** Sino-US, Trade Frictions, Trade Protectionism, Grubel-Lloyd Index

**JEL Classifications:** F10, F18

### 1. Introduction

China is the largest developing country in the world, and has great market potential. The United States is the most developed country with the highest degree of economic development. China and the United States are important trade partners of each other. In recent years, export becomes the engine of

boosting Chinese economy and China runs trade surplus in Sino-US trade. The trade disputes have become fierce between two countries. The friction breaks the smooth process of China's international business communication, and generates negative impacts on the trade relations of two countries. The purpose of this research is to find the causes of trade friction and provide coun-

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termeasures accordingly so as to provide China the opportunities to realize present economic and political benefits and the referential experience to solve the trade friction problems with other countries in the future.

## 2. Literature Review

Trade friction is discussed by scholars from many aspects.

From the political aspect, there are two views. First, trade friction occurs with political factors. Mancur Olson (2014) supported public choice and developed theory of group behaviour. He discovered that providing benefits were tasks for groups or organisations, if there were large amount of members in an organisation, the much more difficulties organisers would face when achieving deals. Charles W. L. Hill (2016) pointed that in some anti-dumping lawsuits, governors would set policies which were beneficial for labour unions because officials considered their votes. The second point mentions strategic conversation in order to reduce trade friction. Zachary Karabell (2010) thought there would be more uncertainties in future trade under complex world pattern, and trade frictions should be under control. Christopher Layne (2012) pointed that the trade friction was unavoidable and these countries could minimize loss by strategic dialogues. Shuai Jianlin (2013) developed Dependence Theory and found importance of settling relationship between political and economical systems.

Many researches investigated the trade dispute from the intellectual property aspect. Hernando de Soto (2012) found that the majority of countries gained less benefit before copyright protection, and recent trade

disputes were mostly concerned with protecting intellectual properties. Wang Qiang (2013) said the punishment scope of intellectual property became wider. Wang Min & Tian Ze (2014) explains the meaning of 337th Act and punishment consequences by 337th investigations. Jiang Yonghong & Yu Chengcheng (2015) said the 337th investigations adjust the focus from China's raw material industry to electronic field.

Scholars also analysed trade friction from mercantilism and trade protectionism aspects. Yuan Chi (2012) proposed some advice to deal with mercantilism like product innovation. Douglas Irwin (2012) discovered there was economic downturn worldly in post-crisis era, and trade protectionism gradually rooted in commercial environments. Ronald .I. McKinnon (2013) described American situation and he said under trade imbalance, the U.S. would put trade protectionism into practice. P. R. Krugman (2014) identified the 'New Mercantilism' that a country protect domestic production, main actions included encouraging export and limiting import.

From the intra-industry trade aspect, Balassa (1966) said the adjustment cost could be calculated based on intra-industry trade index. Grubel & Lloyd (1975) explained G-L index was one of 'Intra-Industry Trade' measurements. Wan Zhaoquan (2013) introduced how the intra-industry trade influenced the trade friction.

From the product structure aspect, P. R. Krugman (2013) suggested that production expansion was the first way to form competitive market, lowering production costs and improving products' add value could improve exporter's competitiveness. Liu Hong (2013) summarised that China's advantageous industry was labour intensive, and higher quality

of technological goods should be provided in markets.

These researches discussed the trade friction from different aspects, however, the comprehensive solution for China to solve the trade friction problem with U.S. was seldom found. Therefore, that becomes the purpose of this research.

### 3. Data and Methodology

Index comparison, case study, and correlation analysis are used in this research.

### 3.1 Sino-U.S. Import and Export Volume

Comparison in import and export results in trade surplus and deficit. Trade imbalance is one of the key reasons of trade friction. In table 1, it can be seen that the trade volume increases greatly before 2011, but increase slowly after 2011. The increasing numbers reflects China maintains trade surplus in these years. It can be explained by labor-intensive advantages and processing deals. The continuing trade surplus has brought the U.S. much concern and makes American government to limit importing Chinese products and approve economic recovery plans.

**Table 1.** Import and Export Volume between China and U.S. in 2010-2014

Unit: hundred million USD

	YEARS				
	2010	2011	2012	2013	2014
Trade volume	29727	36419	38668	41603	43030
Compared with last year (%)	29.2	16.0	8.5	7.5	3.4
Importing	13948	17433	18178	19503	19603
Compared with last year (%)	31.7	20.0	8.8	7.2	0.4
Exporting	15779	18985	20490	22100	23427
Compared with last year (%)	28.3	15.0	8.4	7.8	6.1
Chinese trade plus	1831	1552	2312	2597	3824
Compared with last year (%)	26.5	12.0	8.2	12.3	47.2

Source: www.mofcom.gov.cn

**Table 2.** Product Structure of China's Export to U.S. in 2007-2014

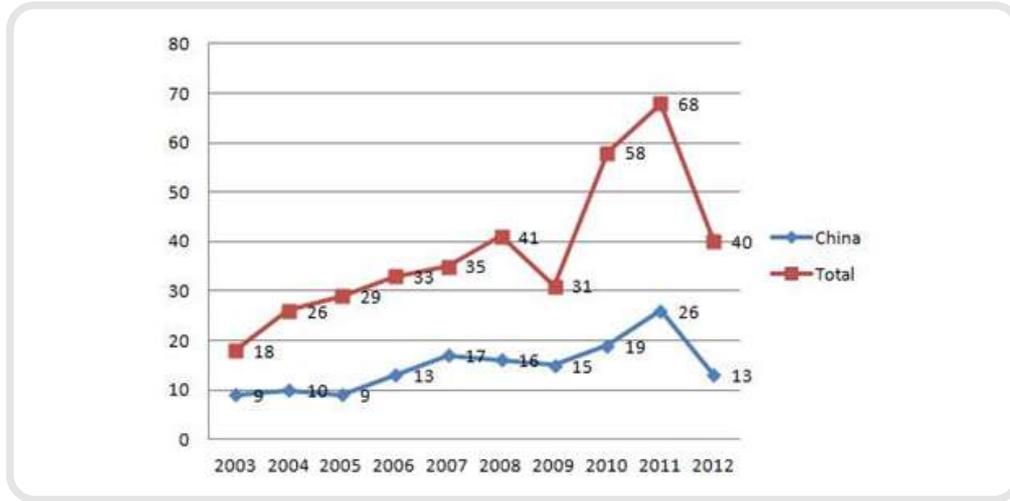
Unit: hundred million USD

	YEARS							
	2007	2008	2009	2010	2011	2012	2013	2014
Mechanical and electronic products	140745	145495	135368	173354	193547	209830	217980	232340
Furniture, toys and others	48304	48457	40916	46950	45214	46800	48290	50746
Textile	31185	31489	30896	37030	39261	39290	40670	41183
Light industrial goods	20791	24090	15664	18786	20090	11168	11890	20228
Base metal goods	16796	17151	15374	17436	19792	21130	21700	24234
Total	257821	266682	238218	293556	317904	328218	340530	368731

Source: www.mofcom.gov.cn

**Fig. 1.** MThe 337th Investigations Aiming at China and the World

Unit: case



Source: cacs.gov.cn

**Table 3.** China's Industries Involved in the 337<sup>th</sup> Investigations in 1998-2013

Unit: case

	YEARS			Total
	1998-2003	2004-2008	2009-2013	
Electronic industry	6	31	60	97
Machine	6	11	19	36
Light industry	6	14	14	34
Chemicals	2	5	2	9
Medicine	1	0	4	5
Cars	0	0	2	2
Metal products	0	0	2	2
Metallurgy	1	0	1	2
Food	0	2	0	2
Building materials	0	1	0	1

Source: cacs.gov.cn

### 3.2 Product Structure of China's Export to U.S.

Table 2 shows the main product structure of China's export to U.S. It reflects the industry

orientation and favourable fields of China's export. The most appealing exporting goods are mechanical and electronic products, furniture and toys, which are labour-intensive products. These data provide reference for China improving export product structures.

### 3.3 The 337th Investigation

The 337th investigation focuses on the unfair competition and trade behaviors. Once companies receive the 337th investigation, they are facing strict sanction. Figure 1 depicts American 337th lawsuit index within 10 years. It clearly shows the trends of the 337th investigation exerting on China and other countries. In 2010, the number of 337th investigation received by China peaked at 26, which took up nearly 40% of the total volume. It means 337th investigation gradually becomes the American main practice of protecting domestic industries and punishing China.

### 3.4 Industries Involved in Trade Friction

At the end of 2009, Obama introduced reindustrialise strategy to encourage technological innovation and emerging companies' development. The U.S. starts to cultivate advanced manufacture such as new energy and biological technology. Under reindustrialise policy, the U.S. aggravates trade friction with China. Table 3 displays China's main industries suffered from 337th rules investigation. It indicates that the U.S. decreases the 337th investigation

in chemical and foods fields, and pays much more attention to electronic industries and machine industry. In addition, it also explains that with the development of China's industry, more industries are suffered, such as cars and metal products.

### 3.5 Correlation Analysis in Intra-industry Trade and Trade Friction

According to Balassa's smooth adjustment hypothesis, an industry type decides adjustment cost. The cost degree can be figured out by intra-industry trade index. To get the data of intra-industry trade index, G-L exponent is used in this research. Grubel-Lloyd (abbreviated as G-L) exponent is created by economist Grubel and Lloyd in 1975, it is the common calculation of intra-industry trade index. The formula is as following:

$$GL_i = \frac{(X_i + M_i) - |X_i - M_i|}{X_i + M_i} \times 100\%$$

also equals to:  $1 - \frac{|X_i - M_i|}{X_i + M_i}$

*i* represents industry type;  $X_i$  is the expor-

**Table 4.** G-L Index of Sino-U.S. Products in 2003-2013

SITC1(section) CODE	YEAR										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
5	0.98	0.96	0.95	0.94	0.97	0.90	0.95	0.95	0.99	0.94	0.88
6	0.20	0.17	0.18	0.17	0.17	0.19	0.22	0.22	0.21	0.21	0.21
7	0.33	0.29	0.28	0.31	0.32	0.31	0.25	0.26	0.25	0.23	0.18
8	0.05	0.06	0.06	0.07	0.06	0.07	0.08	0.09	0.10	0.11	0.12
Total	0.22	0.21	0.21	0.23	0.24	0.24	0.23	0.25	0.25	0.23	0.23

Source: [www.comtrade.un.org](http://www.comtrade.un.org)

ting data while  $M_i$  is the importing number concerning this industry.  $GL_i$  calculated later is the intra-industry trade.

G-L result ranges from 0 to 1 and has positive correlation with intra-industry trade. When the index is approaching 0, it indicates that the degree of trade of the commodity is low. When the index is approaching 1, it indicates that the degree of trade of the commodity is high. There will be obvious intraindustry trade when the index is bigger than 0.5.

In international trade statistics, commodities are classified according to SITC (Standard of International Trade Classification) in the United Union. SITC is a statistical classification of the commodities entering external trade. It is designed to provide the commodity aggregates required for purposes of economic analysis and to facilitate the international comparison of trade-by-commodity data. The hierarchical structure of the classification comprises sections, divisions, groups, sub-groups and items. SITC1 is based on section. According to SITC1, code 5 represents chemicals and related products. Code 6 represents manufactured goods classified chiefly by material. Code 7 represents machinery and transport equipment. Code 8 represents miscellaneous manufactured articles. As indicated in Table 4, the G-L index of commodities under Code 6, 7, 8 are less than 0.5, which means the upgrading of these industries will bring greater adjustment cost.

## 4. Results and Analysis

Based on these observations and findings above, the causes of trade friction from the aspect of China and United States are explored.

### 4.1 The Causes from the Perspective of China

#### 4.1.1 Unreasonable Structure of Export Products

Commodities are essential part in international trade. There are some defects in the structure of China's export products. Most China's export products, such as textile and mechanical goods, are labor-intensive products. Due to the labor cost advantage in China, the prices of these products are lower than American products. American government regards this competitive pricing behavior as dumping to occupy market share, therefore, policies are approved to restrict the import from China.

According to Table 4, commodities under code 6 and code 8 are associated with labour resource and raw materials. Products lack added value and advantages to compete with American goods. Product differentiation and diversification cannot be achieved. And the majority of firms are contract manufacture or original design manufacturer. They do not have their own brands. Moreover, these two types need to effect much adjustment in the process of industrial adaption. New labor resource decreases when China enters aging society. Middle-aged groups become the main source of labor. In addition, domestic textile industry is well treated in the U.S., which is in the large demand of labor. The growth of Chinese textile export to America causes protests from American workers.

#### 4.1.2 Poor Performance of Chinese Enterprises in the Trade Friction Lawsuits

Facing trade disputes, especially 337th in-

investigation, Chinese companies lack capability of gathering information and making strategic analysis of situation. They always fall behind in solving trade disputes. Some managers do not realise foreign enterprises spend much time and energy on patent protection. On one hand, some Chinese enterprises do not figure out why anti-dumping investigations happen. They rarely respond in legal ways when they are accused. The lack of prompt reaction and handling ability bring Chinese enterprises disadvantageous circumstance and large amount of costs. On the other hand, the trial period of anti-dumping, 337th Act is comparatively long. Many small companies think it is waste of time and money, so they are not willing to make quick response to accusation. As for some new industries, their financial status cannot provide a reliable source of information. Their vigorous attitudes towards trade dispute are easy for judges to agree with American statement and this inactive behaviour will impel the U.S. to propose stricter lawsuits.

#### 4.1.3 Unfavorable Condition of China's Intellectual Property Protection

Another reason to the increase of trade friction lawsuits is the intellectual property protection. The intellectual property protection system is not well established in China. Business men may not be able to implement law protection although they know exactly the contents of intellectual property. Moreover, according to the Patent Law of China, the applying period of patents is comparatively long, compared with other foreign countries. It increases the difficulties for intellectual property protection.

The U.S. has great recognition of intellectual

property and regards it as an instrument to accelerate the development of economy. In 8th October 2012, the U.S. Congress published a report that Hua Wei Company and ZTE Corporation provide opportunities of obstacle American internet communications. This report also advised firms to reduce cooperation with these two Chinese companies in case intellectual property was suffered. Some similar cases prevent Chinese products from export in terms of brand image and technological copyrights.

## 4.2 The Causes from the Perspective of U.S.

### 4.2.1 Trade Protectionism

New mercantilism promotes fair trade instead of free trade. Paul Krugman and many economists summarize trade protectionism as new mercantilism. They emphasize the international competitiveness can be increased through government interference. After economic recession in 2008, trade protectionism was generated under negative trends towards American development. The American government started NEI (National Export Initiative) to promote export and limit import from other countries. Given continuous trade deficit with China, the non-tariff trade barriers are widely strengthened, especially the implementing of intellectual property protection and anti-dumping laws. The 337th investigation is a typical example.

### 4.2.2 Interest Groups

According to Group Theory, organizations formed by individuals or enterprises are usually on the way of same interests. Interest groups play important roles in American poli-

tic and economic affairs. These groups interfere with foreign policies upon authorities and financial rights. When Chinese cargos enter American markets, group members will burden government and ask officials to restrict trade with China. In 2009, Obama signed Special Protection on Tire and restricted the Chinese tire to enter markets. The fundamental reason lies in United Steelworkers Union. They complained that Chinese tires occupied too much market share, which cause big domestic industrial loss and increase unemployment ratio. In order to transfer social dilemma and guarantee stable political environment, Obama approved this trade policy and then implement more restricted tariff rules.

In the U.S., the president election is not based on whether he or she can achieve real national benefits, but the political and economic opinions in the speeches. Candidates will express their trade policies to convince more interest groups so that they can own plenty of campaign funds. So in reality, the president elections become the fight among interest groups serving in different fields. This year is unforgettable due to American election. With the victory of Trump, American people pay more attention to trends of government policies and foreign trade. In election speech, Trump ambiguously considers China as exchange ratio manipulator because of the particular level of CNY ratio and China's trade competitiveness.

## 5. Conclusions and Recommendations

The reasons for Sino-U.S. trade friction

include the inappropriate product structures of China's export, poor performance of Chinese enterprises in the trade friction lawsuits, unfavorable condition of China's intellectual property protection, the implementation of trade protectionism by American government, and the demands of American different interest groups.

### 5.1 Implementing Industrial Upgrading

To solve the problem of trade imbalance in the long run, China needs to upgrade its status of participating in international division of labour. As the main force to promote the economic development of China, China's traditional industries (textile industry, manufacturing industry etc.) take up large proportion in the national economy. It is wise to optimize the resource allocation of other industries provided the steady development of traditional industries. According to table 4, the upgrading of industries related to code 6, 7, 8, will bring greater adjustment cost. Therefore, in the implementation of industrial structure adjustment, appropriate practices need to be implemented according to the characteristics of different industries, so as to protect the welfare of workers and reduce the unemployment rate.

### 5.2 Increasing the Added Value of Products

China should not be only satisfied with the production of low-cost labour-intensive products, but need to produce high technical content and high value-added products. The technological innovation can help enterprises to acquire competitiveness in the world

market, which requires enterprises to analyse the market trend continuously, and introduce customized products accordingly. With the increase of the investment in high value-added products, the investment in products with large resource consumption should decrease.

In the process of production, there is a certain gap between China and U.S. in terms of technology level. Chinese enterprises should make reasonable evaluation and allocation of production factors, implement technological transformation, enhance production efficiency, and improve product quality.

### 5.3 Improving Intellectual Property Protection

Chinese enterprises should respect other countries' patents and brands, and improve the awareness of intellectual property rights. Under the existing intellectual property protection circumstance, enterprises should also speed up the research and development of self-owned brand, make innovation and apply patents, in response to the increasing competitive pressure brought by other countries. When facing intellectual property disputes, enterprises should change the reluctant attitude towards lawsuits and actively study intellectual property laws at home and abroad in order to protect their legitimate rights and interests.

### 5.4 Building Trade Friction Warning System

Many companies do not realise they are in the dangerous of accusation until the loss is sustained. As a result, trade friction prediction system is essential for government to colla-

borate with firms and industry associations. First, Chinese government should set up coordination institution and build strong information exchange system among customs, Ministry of Commerce, State Administration of Quality Supervision, Inspection and Quarantine, and foreign trade enterprises. These institutions and enterprises share information and monitor the symptom of trade dispute in time. The convenient information exchange can help Chinese enterprises come up with solution plans for trade disputes. Second, Chinese government can gather the information of all cases related to trade frictions launched by the U.S., and study whether WTO regulations apply to these cases. With the help of government, enterprises can make full preparation of trade friction lawsuits and have better performance in the process of litigation.

### 5.5 Carrying out Strategic Dialogue and International Negotiation

Interdependence Theory focuses on international relation in political economy. Zachary Karabell points that the way China and the U.S. dealing with each other will have impacts on global economy. Sino-U.S. trade strategic mechanism has become more and more mature after several years of operation, the Strategic Dialogue (SD) and Strategic Economic Dialogue (SED) has become an important role in coordinating the development of the country and maintaining the national core interests. China and America need to share ideas both parties concern and discuss future of bilateral trade relations. China and the U.S. should explore mutual interests, share common views, and decrease the trade disputes. In addition, after Trump wins, the discussion of the economy

future is cared by most American and Chinese people, such as economy trends in post-crisis period and potential transformation of economy. To strengthen international relations, China needs a better understanding of Trump's positions and makes good preparation for the possible consequences.

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