

# The Investigation and Thinking of China-US Trade Friction: Taking Lu'an Import and Export Enterprises as an Example

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**Abstract:** In recent years, with the escalating trade friction between China and the United States, especially in 2018, the trade war between China and the United States has caused a greater impact on the development of China's foreign trade. Combined with the current situation of export trade in Lu'an City under the China-US trade friction and the impact on import and export enterprises, a linear regression model is established using SPSS software, and an empirical analysis of export trade in Lu'an City is conducted to explore the main factors of China-US trade friction on export trade in Lu'an City and put forward substantial countermeasures and suggestions.

**Keywords:** China-US trade friction; Lu'an City; Import and export enterprises; Countermeasure suggestions

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## 1. Introduction

This study is done to analyze the important impact of the escalation of trade friction between the U.S. and China on import and export enterprises in Lu'an City.

### 1.1. Research Background and Significance

Since the establishment of diplomatic relations between China and the United States in 1979, the trade friction between the two countries has not ceased<sup>[1]</sup>, and since the United States of America announced the imposition of tariffs on Chinese imports in 2018, the trade friction between China and the United States has further escalated to a trade war between China and the United States<sup>[2]</sup>. In the case of Lu'an City, its foreign trade develops late and most of them are small and medium-sized enterprises, which urgently need the government's guidance and support to help them overcome the difficulties<sup>[3]</sup>. This project analyzes the current situation of import and export enterprises in Lu'an City under the Sino-US trade friction, and uses SPSS software to find out the main influencing factors of Sino-US trade friction on export trade in Lu'an City, so as to put forward suggestions and countermeasures to provide theoretical support and guidance for the development of foreign trade in Lu'an City.

## 2. The current situation of the foreign trade export industry in Lu'an

Based on the research theme, this paper mainly provides an overview of the current situation of the foreign trade export industry in Lu'an City.

### **2.1. The total exports of Lu'an City since 2013**

Through the total exports of Lu'an City from 2013-2019 available in the Commerce Bureau of Lu'an City, it can be found that the total exports of Lu'an City show an obvious trend of first decreasing and then increasing. In 2014, the decrease was significant which is by 14.6% compared 2013; in 2017, the increase was especially significant, which is by 20.4% compared to 2016. It can be seen that the total exports in recent years are on an upward trend, but more slowly.

### **2.2. Lu'an City exports of major commodities accounted for the proportion of the city's exports**

Lu'an City exports mainly mechanical and electrical products, high-tech products, labor-intensive products, pharmaceuticals and more. Among them, the largest proportion of exports are electromechanical products and high-tech products, whereas medical and pharmaceutical exports account for a relatively small proportion. It can be seen that the city of Lu'an has an advantage in the export of electromechanical products and high-tech products, and the export of labor-intensive products, textile and garment products have seen the most significant increase<sup>[4]</sup>.

### **2.3. The main export markets in Lu'an**

As of December 2020, the export data of Lu'an City can be found. It shows that in 2020, the export of Lu'an city to Singapore, Saudi Arabia, Iran and The United Kingdom has increased significantly compared to the same period in 2019, while the export to the United States and Japan has a small increase, while the main export countries of Lu'an City are still the United States and Japan<sup>[5]</sup>. It can be seen that due to the impact of trade friction between China and the United States, Lu'an will resort to exporting to Asia, Africa and Europe and other regions, but in the meantime, the United States is still the main export market in Lu'an City.

## **3. The impact of trade friction between the United States and China on the import and export enterprises in Lu'an**

The impact of the trade war between the United States and China on the import and export enterprises in Lu'an City is multifaceted.

### **3.1. The direct impact is relatively minor**

Lu'an City's exports to the United States accounted for 27% of the city's exports in 2017 and 23% of total exports in 2018, which shows that the overall direct impact of the trade friction between China and the United States on Lu'an City's exports is small. The reason is that the main export products of Lu'an are generally non high technology products, and the U.S. trade war between China and the United States is mainly restricted to China's middle and high-end products<sup>[6]</sup>, so the vast majority of these products are not in the taxation list, thus the direct impact on the foreign trade export enterprises in Lu'an City is light.

### **3.2. Difficult to replace mature markets**

Some of the negative effects of the trade friction between the US and China have caused exporters in Lu'an to actively shift their attention to other Asian, African and European countries<sup>[7]</sup>. However, replacing the originally mature market is not easy. This is because although in recent years there has been an obvious increase in exports from Lu'an City to other countries, the United States is still the main export market.

### **3.3. New problems faced in "going global"**

In recent years, the investment process of "going global" has not been smooth<sup>[8]</sup>. Instead, it has become more difficult due to the trade friction between China and the United States. There are two reasons for this

which are as follows: firstly, the risk of outbound investment has increased; secondly, it is difficult to understand the information of foreign investment.

### **3.4. Traditional model is unsustainable**

Application of the traditional “two-headed” trade model is bound to put Chinese enterprises at a disadvantageous position in the international market. For one thing, many foreign trade enterprises in Lu’an City reflect that the biggest problem they face is the increase in raw materials and labor costs followed by logistics, exchange rates and other aspects of the cost of unfair transfer<sup>[9]</sup>. Besides, the business operation is flawed.

## **4. Analysis of the impact of trade friction between China and the United States on the export trade of Lu’an City**

There must be reasons for the existence of these problems, thus this paper briefly analyzes the causes of the problems.

### **4.1. Variable Selection**

In order to study the impact of export trade in Lu’an City by trade friction between China and the United States, the total exports of Lu’an City are taken as the dependent variable (Y) for modeling. Since there is a great variety of factors affecting foreign trade exports, and by browsing much literature, we find that scholars pay special attention to the factor of exchange rate<sup>[10]</sup>, the average monthly exchange rate of US dollar to RMB is considered as the independent variable ( $X_1$ ). Since modeling can be subject to pitfalls such as endogeneity and multicollinearity, the GDP of Lu'an City and the intensity of tariff increase can be selected as control variables of this model to eliminate these pitfalls<sup>[11]</sup>.

### **4.2. Build a linear regression model**

The ordinary least squares estimation model was first performed and found  $R^2=0.97$  close to 1, indicating a good fit. Then a multicollinearity test was performed and it is found that GDP of Lu'an city is highly correlated with USD-RMB exchange rate as an independent variable. Therefore, the control variable of GDP of Lu'an City is excluded, leaving the intensity of the tariff increase considered as a control variable ( $X_2$ ).

Constructing regression models:  $\ln Y = \beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \mu$ , where:  $\beta_0$  is a constant term,  $\mu$  is a random term, Y and  $X_2$  the unit of measurement of the sum is billion.

### **4.3. Correlation test and heteroskedasticity test**

By calculating the Pearson correlation coefficient among the variables and the significance test of the correlation<sup>[12]</sup>, it can be seen that: there is a significant positive correlation between the exchange rate of US dollar to RMB and total exports of Lu’an City, while the intensity of tariff increase and total exports of Lu’an City is also positively correlated, but not significantly. The modeling in this paper was tested for heteroskedasticity by White test,  $P=0.153>0.05$ , indicating that the results accept the original hypothesis that the model does not have heteroskedasticity.

### **4.4. Analysis of results**

A linear regression analysis was conducted with the total exports of Lu’an City as the dependent variable and the US dollar to RMB exchange rate and the intensity of the tariff increase as independent variables<sup>[13]</sup>. By  $R^2=0.947$ ,  $F=77.277$  and  $p=0.000<0.05$ ,  $VIF=3.491<5$ ,  $D-W=1.668$ , it means that at least one of the USD-RMB exchange rate and the intensity of the tariff increase will have an impact relationship on the

total exports of Lu'an City and there is no multicollinearity problem.<sup>[14]</sup>

The regression coefficient of US dollar to RMB exchange rate is 1.322 ( $t=7.019, p=0.000<0.01$ ), rejecting the hypothesis that there is no correlation, indicating that the US dollar to RMB exchange rate has a significant positive influence on the total exports of Lu'an City. The regression coefficient of the intensity of tariff increase is 133.224 ( $t=0.679, p=0.516>0.05$ ), accepting the hypothesis that there is no correlation, indicating that the tariff revenue does not have an impact on the total exports of Lu'an City.

The exchange rate of US dollar against RMB and total exports of Lu'an city are positively correlated, while too high exchange rate will lead to instability of RMB, large capital outflow and serious loss of foreign exchange reserves; the price surge of materials of national importance leads to inflation, which is a fatal blow to both people and enterprises. In short, the exchange rate of the US dollar against the RMB can only be controlled within a certain range and must not be too high<sup>[15]</sup>.

## **5. Countermeasures and suggestions**

From the current foreign trade situation in Lu'an City, measures should be taken to minimize the impact of fluctuations in the exchange rate of the U.S. dollar against RMB.

### **5.1. Establishing core technologies**

The government should encourage enterprises to increase the development and application of technology, increase support for the introduction of talents, and help enterprises to connect with universities or research institutes<sup>[16]</sup>. Besides, the government should also encourage enterprises to strive to create their own brands, accelerate the creation of new advantages in foreign trade with brands, services and intellectual property rights as the core, increase the added value of their own products<sup>[17]</sup>, and strive to change from processing trade to general trade and improve profits.

### **5.2. Actively guide enterprises to develop domestic sales market**

With the improvement of the epidemic, as China's domestic economy began to recover, it was proposed that the "gradual formation of a new development pattern of domestic circulation as the main body, domestic and international double circulation"<sup>[18]</sup>. Therefore, foreign trade enterprises in Lu'an should firmly grasp this opportunity, and with the expansion of domestic demand in the domestic market, the government should actively guide enterprises to develop domestic sales market to avoid over-reliance on foreign markets and suffer bankruptcy.

### **5.3. Government support**

The development and growth of private enterprises cannot be achieved without the government's support in all aspects. The government should reduce taxes and relax loans to give enterprises more start-up capital and improve product quality. For small and medium-sized enterprises with low risk prevention and control ability and poor prevention and control foundation, export tax rebates and export credit insurance can be used to help enterprises reduce business risks and accelerate capital operation<sup>[19]</sup>.

### **5.4. Optimize industrial structure**

On one hand, using scientific and technological innovation to increase the export of new high-tech and high value-added products and reduce the proportion of exports of heavy pollution products<sup>[20]</sup>. On the other hand, Lu'an has many characteristic primary industries, which can be combined with intelligent technology, taking advantage of the Hefei Economic Circle and the Yangtze River Delta "Innovation Circle" plan to open up diversified export markets.

## Disclosure statement

The authors declare no conflict of interest.

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