

# Evaluating the Effect of Institutional Distance on the Bilateral Trade of China and EU

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## Abstract

Under the trend of global economic integration, in order to achieve China's long-term goal of sustainable economic development, China is committed to strengthening its bilateral trade with countries around the world. The EU have long played an important role in China's foreign trade, but there are still many problems in China's bilateral trade with the EU. Therefore, many scholars have conducted a series of studies on the factors affecting bilateral trade between China and the EU in attempt to find positive economic and trade strategies to promote bilateral trade between China and the EU. At present, there is a growing consensus among scholars that is "institutions determine trade". However, the results of previous studies do not provide a quantitative analysis of the impact of institutional distance on bilateral trade between China and the EU. Thus, the research on the impact of institutional distance on bilateral trade between China and the EU is rather one-sided. However, in fact, different categories of institutional distance may have different impacts. Therefore, this paper presents a classification study of the specific impact of institutional distance on bilateral trade between China and the EU.

**Keywords:** institutional distance, international trade, China-EU, applied economics

## 1. Introduction

This paper studies how institutional distance affects China's bilateral trade between regions. It is not only conducive to deepening the research in this field, but also can specifically analyze the influence mechanism of institutional distance on China-EU bilateral trade according to the actual situation, which enriches the relevant theories of China-EU trade influencing factors analysis to a certain extent.

## 2. Related Theories of Institutional Distance Affecting China and EU Bilateral Trade

### 2.1 Transaction Cost Theory

Transaction cost theory is mainly used to explain the inhibition of institutional distance in bilateral trade. The expansion or contraction of bilateral trade depends on how much both sides of the trade profit from it. The impact of institutional factors on transaction costs can also be divided into two aspects. On the one hand, human factors, such as incomplete information, bounded rationality and opportunism, are more influenced by informal institutions. The formal system mainly determines the transaction factors, such as asset specificity, uncertainty, transaction frequency and the number of counterparties. On the other hand, when the

cooperation is reached and entered to the implementation stage, the two partners with small differences in institutional distance generally won't break the contract or change the terms. On the contrary, if the partners with different institutional distances have many adaptation problems in the prior negotiations, which will lead to increase previous costs, and at the same time, the transaction costs will be increased afterwards due to the performance problems.

Therefore, from the perspective of transaction costs, institutional distance will increase the transaction costs in bilateral trade and become a major factor that inhibits bilateral trade.

### 2.2 Comparative Advantage Theory

The theory of comparative advantage points out that both sides of the trade can produce and export their goods with comparative advantages according to the division of labor and import their goods with comparative disadvantages, so both importers and exporters can benefit from the trade. The difference in quality is regarded as an opportunity for the formation of comparative advantages among countries. A country's excellent institutional environment can bring advantages to its export trade. This is an exogenous factor in comparative advantage. The endogenous factors in comparative advantage are reflected by the incompleteness of the contract. Such institutional differences will promote the formation of comparative advantages between domestic and foreign parties. The greater the gap between the comparative advantages of the two countries, the greater the space for trade. Comparative advantage may lead to differences in a country's factor endowments, technological level and capital abundance, but even if these factors are identical, the institutional gap between the two countries will still lead to the emergence of relative advantages or disadvantages. This shows that the domestic institutional environment can be regarded as an important source of a country's long-term trade interests. After all, countries with higher institutional

quality and more stable institutional environment have strong comparative advantages in rational allocation of resources, specialized division of labor and improvement of total factor productivity. Although the influence of distance on comparative advantages can't be directly reflected in the gravity model, its positive influence on the key links of production and sales can't be ignored.

### 2.3 Consumer Preference Theory

The formation of consumer preference is inseparable from the participation and penetration of the system. The formation of consumers preference is usually directly influenced by informal system greatly. Informal system has more effect on potential psychological factors such as consumption concept, consumption psychology and consumption appreciation level. The formal system plays a role in the preference of consumers. In addition, the formation of consumer preference is inseparable from the influence of the cultural environment. The process of learning culture is often the process of the emergence of new consumer preferences. Cultural values and standards are the evaluation basis for consumers to form preferences. This can fully reflect that the cultural system is involved in the formation of consumer preferences. Therefore, the formation of consumer preference will directly affect the audience of domestic products in exporting countries, and the impact on expanding the trade scale between the two countries will be obvious.

## 3. Empirical Model

This paper use Gravity model which is the basic model to research the international trade. The gravity has a theory that is the trade flow between two countries is proportional to the GDP and is in reverse ratio with the geographical distance. According to the above determination and enrichment of variables, this paper changes the classical trade gravity model. Therefore, the extended model is:

$$\ln M_{cjt} = a_0 + a_1 * \ln GDP_{ct} + a_2 * \ln GDP_{jt} + a_3 * ID_{cjt} + a_4 * \ln DID_{cj} + a_5 * \sum u_{jt} + a_6 * LFP + \varepsilon_{cj}$$

Among them,  $\ln GDP_{ct}$  means China's economic scale at a certain time,  $\ln GDP_{jt}$  means the economic scale of a certain EU country at a certain time, and the variables that measure the

population size and inflation of the host country.  $\ln DID_{cj}$  represents the geographical distance between the two countries, which is expressed as the linear distance between China's capital

and the capital of a certain EU country in this paper.

According to the categorize for the institutional distance, I exchange the ID to the specific one to get those models:

$$\begin{aligned} \ln M_{cjt} &= a_0 + a_1 * \ln GDP_{ct} + a_2 * \ln GDP_{jt} + a_3 * CID_{cjt} + a_4 * \ln DID_{cj} + a_5 * \sum u_{jt} + a_6 * LFP + \varepsilon_{cj} \\ \ln M_{cjt} &= a_0 + a_1 * \ln GDP_{ct} + a_2 * \ln GDP_{jt} + a_3 * PID_{cjt} + a_4 * \ln DID_{cj} + a_5 * \sum u_{jt} + a_6 * LFP + \varepsilon_{cj} \\ \ln M_{cjt} &= a_0 + a_1 * \ln GDP_{ct} + a_2 * \ln GDP_{jt} + a_3 * LID_{cjt} + a_4 * \ln DID_{cj} + a_5 * \sum u_{jt} + a_6 * LFP + \varepsilon_{cj} \\ \ln M_{cjt} &= a_0 + a_1 * \ln GDP_{ct} + a_2 * \ln GDP_{jt} + a_3 * EID_{cjt} + a_4 * \ln DID_{cj} + a_5 * \sum u_{jt} + a_6 * LFP + \varepsilon_{cj} \end{aligned}$$

The formula to calculate the CID, PID, LID, EID:

$$ID = \frac{1}{n} \sum_{k=1}^n \binom{n}{k} \frac{(ID_{kct} - ID_{kjt})^2}{V_{kt}}$$

CID means the cultural institutional distance. PID means the political institutional distance. LID means the legal institutional distance. EID means the economic institutional distance.

Moreover, this paper adopts the model practice proposed by Qi Jianhong et al. (2012) to improve the data processing model of CID:

$$CID = \frac{1}{n} \sum_{k=1}^n \binom{n}{k} \frac{(CID_{kct} - CID_{kjt})^2}{V_{kt}} \left(1 + \frac{1}{T_{cjt}}\right)$$

Which indicates the time of establishing diplomatic relations, greatly improved the significance of CID.

## 4. Empirical Result

### 4.1 Economic Institutional Distance

**Table 1.** OLS for economic institutional distance

VARIABLES	OLS
Constant	-4.586** (-4.063)
lnDIDj	0.188** (4.344)
lnGDPjt	0.008** (2.765)
lnGDPct	0.124** (4.243)
LFP	0.001 (1.249)
CPI	0.240** (34.996)
EID	0.003*

VARIABLES	OLS
	(2.240)
Observations	270
R <sup>2</sup>	0.955
ROBUST R <sup>2</sup>	0.954
F	F (6,263) = 329.236, p=0.000
Note: Standard errors in parentheses * p<0.05, ** p<0.01	

The analysis shows that EID will have a significant positive impact on lnM.

Depending on the empirical result, it is considered that the economic institutional distance has a positive impact on China-EU bilateral trade. It shows that the economic institutional distance has a greater effect on the transaction cost than on the comparative advantage and consumer preference in the bilateral trade between China and EU. In the actual bilateral trade between China and the EU, the large economic institutional distance will lead to a series of trade problems that are not conducive to trade. For example, differences in import tariffs and vague definition of property rights will increase transaction costs, which can also be explained as the negative inhibition of economic institutional distance in trade.

### 4.2 Cultural Institutional Distance

**Table 2.** OLS for cultural Institutional distance

VARIABLES	OLS
Constant	-3.312** (-4.170)
lnDIDj	0.163** (3.925)
lnGDPjt	0.008** (3.007)
lnGDPct	0.085**

VARIABLES	OLS
	(4.428)
LFP	0.005** (3.907)
CPI	0.238** (38.389)
CID	-0.009 (-1.286)
Observations	270
R <sup>2</sup>	0.955
ROBUST R <sup>2</sup>	0.953
F	F (6,263) = 301.151, p=0.000

Note: Standard errors in parentheses \*  $p < 0.05$ , \*\*  $p < 0.01$

The analysis shows that CID have little negative effect on lnM.

Although cultural distance is an informal distance, it will not have a direct impact on bilateral trade, but it can still play a role in all aspects of policy making, trade communication and trade contract regulation in trade, so as to indirectly affect trade. This is also the reason why the empirical result shows that CID have not significant effect on trade. There are significant differences in cultural traditions between China and the European Union, and under the influence of political, economic and legal systems, cultural contradictions have intensified. Institutional distance has a significant effect on the diversification of consumers' preferences, which in turn affects China-EU bilateral trade. The consumer preference here not only represents the demand for different kinds of goods, but also represents the demand for different levels of goods. Although the import and export scale of countries whose products are mainly low-cost living products can be effectively improved, the profit level is often unchanged. However, trading products in service will gain great benefits from it. In this way, the cultural institutional distance between China and EU countries will promote the formation of diverse consumer preferences, and then inhibit the development of bilateral trade between China and EU.

#### 4.3 Political Institutional Distance

**Table 3.** OLS for political institutional distance

VARIABLES	OLS
Constant	-4.217** (-4.666)
lnDIDj	0.132** (3.850)
lnGDPjt	0.006* (2.010)
lnGDPct	0.132** (5.386)
LFP	-0.000 (-0.061)
CPI	0.241** (35.929)
PID	0.002** (4.308)
Observations	270
R <sup>2</sup>	0.956
ROBUST R <sup>2</sup>	0.955
F	F (6,263) = 336.239, p=0.00000

Note: Standard errors in parentheses \*  $p < 0.05$ , \*\*  $p < 0.01$

The analysis shows that PID will have a significant positive impact on lnM.

It shows that the distance of political system in this study mainly promotes the trade between China and EU. When the political distance is large, it can effectively promote China-EU countries to form comparative advantages, attach importance to their own economic and technological development, and rationally use the factor endowments of each country, so as to achieve the effect of expanding the trade scale. When there is a big difference in political system between China and EU countries, especially in corruption control and government efficiency, it will be beneficial to the development of bilateral trade between China and EU. Because of the need to enter the host country's market, the corruption control index of the host country with the host country's government and enterprises is one of the main influencing factors of China's foreign trade. In the trade with most developed countries in the European Union, there is a small gap between the host country's

corruption control and China's. Although it still inevitably produces a certain degree of labor costs, it plays a significant role in opening up new product markets for Chinese enterprises and saving time and cost in transactions. In the EU market, political distance has a great influence on the formation of consumer preferences. Generally speaking, the distance of political system plays a role in the promotion of China-EU bilateral trade mainly by influencing comparative advantage.

#### 4.4 Legal Institutional Distance

**Table 4.** OLS for legal institutional distance

VARIABLES	OLS
Constant	-4.344** (-4.943)
lnDIDj	0.151** (4.470)
lnGDPjt	0.004 (1.486)
lnGDPct	0.133** (5.734)
LFP	-0.001 (-0.914)
CPI	0.241** (35.815)
LID	0.003** (5.492)
Observations	270
R <sup>2</sup>	0.957
ROBUST R <sup>2</sup>	0.956
F	F (6,263) = 320.406, p=0.000

Note: Standard errors in parentheses \*  $p < 0.05$ , \*\*  $p < 0.01$

The analysis shows that LID will have a significant positive impact on lnM.

The greater the bilateral trade between China and the EU will be, to a certain extent. The legal system mainly affects China-EU bilateral trade in the form of legal level and supervision quality. First of all, it must be acknowledged that when enterprises produce complex technical products, the transaction costs paid by countries with

mature legal system are lower than those of countries with backward legal system. However, as the largest manufacturer in the European Union, China's trade is mostly labor-intensive products, and there is no doubt that stricter labor supervision will reduce the profits of enterprises from international trade. In addition, the regulation of enterprise entry will distort the industrial structure and reduce the number of small and medium-sized enterprises that are on the rise, which is obviously extremely unfavorable for China.

#### 4.5 Overall Institutional Distance

**Table 5.** OLS for overall institutional distance

VARIABLES	OLS
Constant	-4.642** (-4.914)
lnDIDj	0.154** (4.384)
lnGDPjt	0.006 (1.877)
lnGDPct	0.141** (5.568)
LFP	-0.001 (-0.862)
CPI	0.241** (35.708)
ID	0.001** (4.628)
Observations	270
R <sup>2</sup>	0.957
ROBUST R <sup>2</sup>	0.956
F	F (6,263) = 339.390, p=0.000

Note: Standard errors in parentheses \*  $p < 0.05$ , \*\*  $p < 0.01$

The greater the institutional distance, the more it will inhibit the development of bilateral trade between China and EU. In addition, it can be seen that China's economic scale plays a strong role in the bilateral trade between China and EU, which confirms the fact that China is the main exporter of EU in actual trade operation. The coefficient of lnDIDj is 0.154, and the significance test of 1% shows that geographical



distance has promoted the trade between China and EU. This means that when China conducts economic and trade exchanges with EU countries, the choice of partners can focus on those countries that are geographically far away from China. The CPI of controlled variable inflation is significant under the level coefficient of 1%, which is proved by the influence of dependent variable. This shows that, on the premise that the EU is dependent on China's import market, and the inflation of the euro is increasing, it will be beneficial for China to export products to EU countries and increase the bilateral trade flow between China and the EU. In addition, although LFP's negative impact on  $\ln M$  is not significant, it also shows to a certain extent that the larger the gap of labor force advantage, the more it will inhibit the bilateral trade between China and EU. The labor gap between China and Europe is too large, and China's export trade depends on labor-intensive products. However, China is the largest import market of the European Union. On this basis, the greater the labor advantage gap between China and Europe, the more China prefers to produce labor-intensive products as a foundry of the European Union. On basis of the fact that the EU has vigorously introduced anti-dumping policies, it can be seen that if China still maintains its position as a "contract factory" in bilateral trade, it will actually be at a disadvantage in bilateral trade.

## 5. Suggestions for China and EU Bilateral Trade

From China perspective, this paper gives some suggestions to promote the healthy development of bilateral trade between China and EU.

### 5.1 Accelerate Export Commodity Structure Upgrading

Nowadays, Chinese export commodity structure is still dominated by labor-intensive products. Although the proportion of capital and technology-intensive products is on the rise, it will still be at a comparative disadvantage. That is no doubt that it is vital for China to form the comparative advantage so that it can enlarge the economic institutional distance between China and EU. Therefore, China must lose no time in implementing the strategy of upgrading the structure of export commodities and speeding up technological progress. On the one hand, technological progress has increased

productivity and reduced production costs. on the other hand, it has improved product quality or increased product varieties. We should not only imitate the advanced technology of developed countries, but also increase investment in research and development, and establish a sound technological innovation system.

### 5.2 Establish a TBT System with World Norms

China put effort into reducing the extra transaction cost brought by the political difference between China and EU. China needs to strengthen scientific and technological research, especially the research and development of product technical standards and quality standards, improve the certification system, and speed up the establishment of China's trade technical barrier system that conforms to the world norms. On the one hand, China should strengthen the role of government actions. The state should establish an early warning mechanism for technical barriers to trade, study the technical standards, policies and relevant laws and regulations of the European Union, pay close attention to the latest developments of the European Union TBT, and give early warning information so that export enterprises to Europe can get ready in advance to avoid being caught off guard when a certain standard is officially promulgated. On the other hand, China should improve the coping ability of enterprises. It is the best way to break through barriers and expand China's trading countries to speed up the pace of technological innovation and improve the technological content of products.

### 5.3 Strengthen Cultural Exchanges with Other Countries

With regard with the empirical analysis, the cultural institutional distance will restrain the bilateral trade. As we all know, the culture of a country determines its regional ideology, and cultural differences can cause ideological conflicts between China and EU. In the research results, the influence of cultural institutional distance between China and EU on bilateral trade cannot be ignored. Similarly, deep-seated reason for the conflict between EU and China lies in ideological differences. Therefore, China should establish relevant communication and coordination mechanisms, solve trade frictions caused by cultural difference, build communication bridges with other countries,

and respect each other's cultures. With regard with cultural differences, China should seize the opportunity to spread its culture globally and promote relevant industries in China by virtue of its favorable factors of consumer preference and comparative advantage.

## 6. Conclusion

### 6.1 Different Types of Institutional Distances Will Have Different Influences

From the analysis, I draw the conclusion of that four types of institutional distance have different effects for the bilateral trade between China and EU.

The political distance plays a positive role in the bilateral trade between China and EU. Firstly, because there is a big gap in economic development between China and EU countries, it is perfectly normal that they will have the large politics institution distance. A suitable political system will indirectly promote the bilateral trade. Secondly, the existing of politics institutional distance is conducive to generate comparative advantages. In other words, politics institutional distance has effect on the professional manufacture so that they have more reasonable and various modes of trade construction.

Economic distance also plays a positive role in China-EU bilateral trade. From the perspective of Chinese enterprises, China's looser financial supervision and market are more conducive to have the financial activities with EU countries, like the financing activities of enterprises, facilitating the expansion of enterprise production, increasing R&D investment, encouraging enterprises' import and export behavior to EU countries, and attracting enterprises from EU countries to invest in China.

The legal distance will have a positive impact on the EU-China bilateral trade. Increasing the legal distance will simplify the relevant regulatory procedures and relax the trade export conditions, especially for fast-moving products, which will reduce the trade cost and speed up the trade progress to a certain extent and have an important impact on promoting the import and export processing trade, thus benefiting the bilateral trade between China and EU.

Cultural distance will inhibit the bilateral trade between China and EU. Institutional distance will have effect on China-EU bilateral trade by influencing consumer preferences and

transaction costs. The greater the cultural distance, the more diversified consumer preferences difference is. Consumers in different countries have great differences in product demand, which is not conducive to target other country market demand, so it is not conducive to entering other countries' markets.

### 6.2 Institutional Distance Promote China and EU Bilateral Trade

Institutional distance has two kinds of effect on trade, but as far as the EU-China bilateral trade, the empirical analysis shows that institutional distance plays a positive role here. By that I mean, the larger the institutional distance is, the more favorable it is for the EU-China bilateral trade. That means the positive impact of comparative advantage and consumer preference is greater than the negative impact of increasing transaction costs.

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