

Research on the Impact of "Financial Differences" between China and Central and Western Asian Countries on Bilateral Trade

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Abstract. The construction of "Belt and Road Initiative" cannot be separated from trade cooperation. However, there are qualitative differences between traditional Chinese finance and Islamic finance that are unique to Central and Western countries. In theory, this "financial differences" will hinder the trade cooperation between the two regions. And how strong is this hindrance? Based on this problem, this paper introduces the "financial differences" indicator into the gravity model and combines the relevant data for empirical analysis. The results show that "financial differences" have a significant hindrance effect on bilateral trade between the two regions, and every change of 1 unit of the difference value of "financial differences" will lead to a decrease about 0.4801% of the growth rate on bilateral trade.

Keywords: Islamic finance, financial differences, bilateral trade, trade gravity model.

1. Introduction

Strengthening trade cooperation is an important link in the construction of "Belt and Road Initiative", and strengthening trade cooperation between China and central and west Asian countries is also a top priority. There are 71 countries along the "Belt and Road Initiative", 23 of which are located in the central and west Asia region. The bilateral trade volume between China and Central and Western Asia accounts for 18.7% of the whole "Belt and Road Initiative" countries. Therefore, regardless of the number of countries or the proportion of trade, the trade cooperation between China and central and west Asian countries will be the engine to promote the "Belt and Road Initiative" construction.

However, because of its interests sharing, risk sharing and based on sharia rather than law, Islamic finance has "quality" differences with traditional finance. This "financial differences" will increase the settlement costs of bilateral trade, which will hinder trade cooperation between China and Central and Western Asian countries. So, will the development of Islamic finance in China reduce this "financial differences"? And how much is this "financial differences" hindering bilateral trade?

Based on the research of the relationship between financial development and trade, a large number of literatures show that a country's financial development has a positive impact on trade, and the level of financial development is the source of comparative advantage in the international trade (Kletzer and Bardhan, 1987; Svaleryd and Vlachos, 2005), a well-functioning financial sector of the country can have a positive impact on exports (Hur and Riyanto, 2006; Shahbaz, 2009). Countries with a higher levels of financial development have higher growth rates and higher export shares (Qu and Zhang, 2008; Korhan et al., 2015). The development of Islamic finance in China to reduce the "financial differences" between China and Central and Western Asian countries is the result of financial development. Previous studies on the relationship between financial development and trade are all based on the same financial system. While this paper studies the impact of financial development on trade based on two different financial systems, namely Islamic finance and traditional Chinese finance. The research content is innovative and will fill the gap of relevant empirical research.

2. Economic Model and Data Description

The research object of this paper is the influence of "financial differences" on the bilateral trade between China and Central and Western Asian countries. Based on the basic gravity model and

introducing the “financial differences” indicator, the following measurement model can be obtained (considering that the data of GDP variable has unit root, but the first-order difference is stable, so the model conducts first-order difference treatment for all variables (except the distance variable)) :

$$D.\ln(T_{ict}) = \alpha_0 + \alpha_1 D.\ln(Y_{it}) + \alpha_2 D.\ln(Y_{ct}) + \alpha_3 \ln(D_{ic}) + \beta_1 D.FD + u_i + v_{it} \quad (1)$$

In the above formula, let i denote the Central and Western Asian countries and c denote China. T_{ict} represents the total potential import and export volume of the i -th Central and Western Asian countries and China at time t , Y_{it} represents the GDP of the i -th Central and Western Asian countries at time t , Y_{ct} represents China's GDP at time t , D_{ic} represents the spatial distance between the i -th Central and Western Asian countries and China, and “financial differences” is represented by FD . u_i represents the portion of the residual term that does not change with time, and v_{it} represents the portion of the residual term that changes with time.

According to formula (1), the relationship between “financial differences” and trade can be expressed as: every unit of change in the difference of “financial differences” will result in the change rate of trade volume by β_1 percentage point.

The “financial differences” indicator in this paper can be constructed by the difference in the degree of Islamic financial development between China and Central and Western Asian countries. The development of Islamic finance in China includes five dimensions: the Islamic Bank window, Islamic bonds, Islamic funds, Islamic financial cooperation memorandum and an organizational platform to promote the development of Islamic finance in China. The indicators of China's Islamic financial development are obtained by means of the Likert five-level scale and Principal component analysis and standardization. The degree of Islamic financial development in Central and Western Asian countries is regarded as “1”, and the difference in Islamic financial development between the two regions is “financial differences”.

The import and export data and consumer price index of China and Central and Western Asia countries in this paper are from the China Statistical Yearbook of 2000-2017 and the official website of the National Bureau of Statistics. The GDP data comes from the World Bank database, and the distance data comes from longitude and latitude inquiry system of China's counties and cities and world cities. Major events in the five dimensions of Islamic finance development in China come from the national development and reform commission of the People's Republic of China, the official website of the people's bank of China and related news.

3. Empirical Analysis

According to the properties of panel data, the unit root test, co-integration test, lateral dependence test and granger causality test are carried out. Through tests, the variables $D.\ln(T)$, $D.\ln(Y_c)$, $D.\ln(Y_i)$, $\ln(D)$ and $D.FD$ are stationary variables. The results of co-integration test and transverse dependence test mean that there is a long-term stable relationship between key independent variables and dependent variables and there is no heteroscedasticity problem in panel data. Based on the granger causality test result, the key independent variable is the granger cause of the dependent variable, which means that the specific coefficient will have some practical economic meaning.

Based on equation (1), the regression results are shown in table 1:

Table 1. Regression Result Statistics (the dependent variable:D.ln(T))

Model	(1)	(2)	(3)	(4)
Variables/Methods	Pooled OLS	Random effect	Fixed effective	Pooled OLS
D.ln(Y _c)	2.4806*** (0.6837)	2.4780** (0.6746)	2.4746*** (0.6720)	2.4745*** (0.6720)
D.ln(Y _i)	1.9897*** (0.2320)	1.9295*** (0.2345)	1.7632*** (0.2483)	1.7632*** (0.2483)
Ln(D)	-0.1513*** (0.0499)	-0.1504** (0.0586)	—	-1.4512 (6.1488)
D.FD	-0.4745* (0.2453)	-0.4801** (0.2419)	-0.4953** (0.2407)	-0.4953** (0.2408)
Constant	1.2999*** (0.4375)	1.2964** (0.5125)	—	-12.9721 (54.5821)
R ²	0.2578	0.2434	0.2065	0.3275
Adjusted R ²	0.2491	0.2346	0.1478	0.2777
F test	29.8654 (P=0.0000)	27.6620 (P=0.0000)	28.1096 (P=0.0000)	6.5741 (P=0.0000)
Individual effect	No	No	No	Yes
Observation (N, T)	(22,14~16)	(22,14~16)	(22,14~16)	(22,14~16)

Note:***, ** and * represent significance at 1% , 5% and 10% level.

First of all, the above three methods all show that the trade volume between China and Central and Western Asian countries is directly proportional to the GDP of the two countries and inversely proportional to the space distance between them. This result is consistent with the expected conclusion of the trade gravity model. From regression coefficient, China's GDP changes have a stronger impact on cross-border trade. Secondly, the influence coefficients of the key independent variable “financial differences” on trade are all negative signs under the three methods, which are significant at the confidence level of 90%. This empirical result shows that “financial differences” do hinder the bilateral trade between China and Central and Western Asian countries. Combined with the regression coefficients in the econometric models (1) to (3), each change in the value of the “financial differences” will result in a decrease in the growth rate of cross-border trade of approximately 0.4745%, 0.4801%, and 0.4953%. Correspondingly, the decrease in the difference in “financial differences” will reduce this hindrance. Finally, the model (4) can be obtained by using pooled OLS regression while controlling the individual effect. According to the regression result, it is found that when the individual effect is controlled, the influence coefficient of the key variable D. FD on the dependent variable D. ln(T) is still significant at the 95% confidence level, and the sign of the coefficient is also negative. This result further confirms that “financial differences” do have a significant hindrance effect on bilateral trade between China and Central and Western Asian countries.

4. Conclusion and Policy Implication

In terms of research conclusions, strengthening the trade relationship between China and Western Asian countries is an important part of the construction of “Belt and Road Initiative”. However, the “financial differences” between the two regions have hindered bilateral trade. How much is this hindrance? Based on this problem, in this paper, by building a “financial differences” indicator, using the method of pooled OLS, random effect and fixed effective to regress the trade gravity model including “financial differences”, found that “financial differences” changes 1 unit will lead to the growth rate of the two regional trade fell about 0.4745%, 0.4801% and 0.4953%. Obviously, if the “financial differences” between China and the central and Western Asian countries is narrowed, the impeding effect on trade volume will be reduced accordingly.

In terms of policy implications, China can effectively narrow the “financial differences” by developing Islamic finance and strengthening cooperation with Islamic finance. The narrowing of the “financial differences” can, in turn, reduce settlement costs and increase the trade volume between China and central and Western Asian countries.

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