

Research on the Investment Effect of Chinese Cultural “Going Out”

—Empirical Evidence from the Countries along the “Belt and Road”

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Abstract

This paper is based on 2006-2017 relevant data of 56 countries along the “Belt and Road” to find out the investment effect of cultural “going out”. The empirical results show that: cultural “going out” has a significant promotion effect on China’s foreign direct investment; this effect has national heterogeneity, which is more effective for emerging markets and developing countries; for some traditional influence factors, such as traditional GDP per capita and time for diplomatic relations, cultural “going out” has a substitution effect. Finally, according to the empirical results, put forward targeted suggestions.

Keywords

Confucius Institute, The “Belt and Road”, China’s OFDI, LSDV Model

1. Introduction

As an informal system, culture shows its important position in international investment. The Confucius Institute, as a landmark measure for Chinese cultural “going out”, reduces the negative impact of cultural differences on Outward Foreign Direct Investment (OFDI). Firstly, The Confucius Institute serves as a bridge for cultural exchange, increasing mutual understanding between China and the host country in terms of ideas, culture, customs, etc., and reducing cultural conflicts in the course of OFDI. Secondly, the main function of the Confucius Institute is Chinese education, which can expand the use of Chinese, thereby reducing transaction costs due to different languages [1]. In addition, the Confucius Institute can promote international friendly relations, increase the recognition of Chinese investors along the “Belt and Road” (B & R), and reduce

the information asymmetry in the international market [2], which is conducive to the local production and business activities of Chinese-funded enterprises. As shown in **Figure 1**.

With the development of the B & R, the economic and trade transactions between China and the countries along the B & R have become increasingly frequent. China's investment in countries along the B & R has entered a stage of rapid development, and the risk of cultural conflicts in the investment process poses a great challenge to the cross-cultural management of Chinese companies' investment activities in countries along the B & R. China has carried out diversified foreign cultural exchange activities to reduce conflicts caused by cultural differences and help Chinese capital to "go out". By the end of 2018, 450 of the Confucius Institutes (Classrooms) had been established among the 122 countries that had signed a cooperation document on the Belt and Road Initiative with China. This article takes the Confucius Institute as an important indicator to measure the "going out" of Chinese culture, analyzes its impact on OFDI (Outward Foreign Direct Investment) in countries along B & R, and explores the investment effect of current cultural "going out".

2. Summary and Theoretical Analysis

2.1. Analysis of Influencing Factors of China OFDI

Dunning's [3] international production trade-off theory and monopoly advantage theory are paradigms for studying the factors or drivers of OFDI. Dai Zhongqiang [4] empirically analyzed that the above theories have sufficient explanatory power for China's OFDI. Factors such as economic development level, geographical distance, natural resources, infrastructure, and technological development level have been widely verified [5] [6] [7] [8] [9].

With the rise of new institutional economics (NIE), analyzing the influence factors of China's OFDI from institutional factors has become a new research perspective. Culture is an important part of the informal system, and the cultural difference between China and the host country is also an important factor affecting China's OFDI. Lankhuizen *et al.* [10] believe that cultural differences are conducive to market segmentation of multinational companies, thus promoting OFDI. Zhang Jipeng and Li Ning [11] use empirical analysis of enterprise panel data to verify that cultural distance has a negative impact on OFDI of Chinese

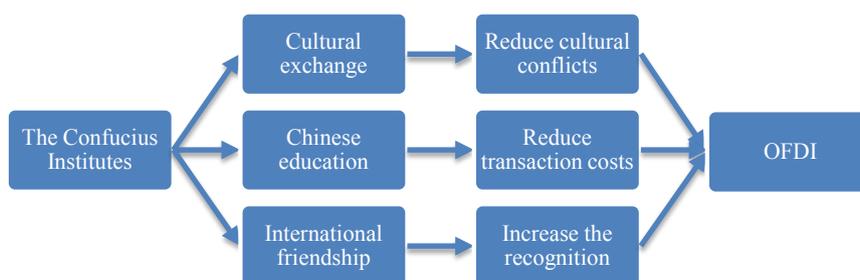


Figure 1. The influence mechanism of Confucius Institute on OFDI in China.

companies, but overseas Chinese networks help mitigate this negative impact. Qi Jianhong *et al.* [12] found that there are threshold effects on the influence of cultural differences on OFDI.

2.2. Research on the Impact of Cultural “Going Out” on Trade and Investment

Some scholars regard the cross-border movement of talents as a bridge for cultural “going out”. Among them, Wei Hao and Chen Kaijun [13] found that the cross-border movement of talents will reduce the transaction costs and opportunity costs of international trade; Gu Yuanyuan and Qiu Bin [14] studied the interactive relationship between overseas education and China’s foreign direct investment, they believed that after returning to motherland, foreign students can penetrate Chinese culture into the host country’s culture, thereby accelerating the promotion of China’s foreign direct investment. Another scholar used the Confucius Institute as a proxy variable for cultural “going out”. Lian Daxiang [13] found that compared with export trade, the Confucius Institute has a more significant positive effect on OFDI; Chen Yinmo *et al.* [14] from the perspective of home culture promotion, examine the influence mechanism of Confucius Institutes on OFDI of Chinese companies in countries along the “Belt and Road”; Xie Mengjun [1] used differential GMM and systematic GMM methods to verify that the investment promotion effect of Confucius Institutes has obvious Economic heterogeneity and intercontinental heterogeneity.

There are many literatures that studied the influencing factors of OFDI in China, but the influence of culture as an informal institutional factor on OFDI activities in China is still a brand new perspective, so this article aims to make up for the shortcomings of existing literature; On the other hand, as time goes by and the environment changes, the influence of culture on investment activities also changes, it is necessary to analyze the specific environment in recent years. This article uses the Confucius Institute as a proxy variable for cultural “going out” and explores the impact of the Confucius Institute on China’s foreign direct investment in countries along the B & R, based on which put forward policy recommendations and gives practical significance.

3. Model Establishment

3.1. Sample Selection

According to the statistics of the “ydyl.china.com.cn”, as of the end of 2018, there were 123 countries along the B & R (including China). Based on the construction of the Confucius Institute (Classroom) and data availability, this paper selects panel data on China’s foreign direct investment in 56 countries along the B&R from 2006 to 2017 (Table 1).

3.2. Variable Selection

This article selects China’s OFDI flow to the host country as the explained variable.

Table 1. Countries along the B & R and the number of Confucius Institutes (Classrooms) in 2017.

Division	Country along the B & R (Number of Confucius Institutes and Classroom)	Number of countries	Number of Confucius Institutes and Classroom
Emerging markets and developing countries	Albania (1), Afghanistan (1), United Arab Emirates (2), Oman (0), Azerbaijan (2), Egypt (6), Pakistan (6), Bahrain (1), Belarus (11), Bulgaria (10), Poland (7), Bosnia and Herzegovina (2), East Timor (0), Russia (22), Philippines (7), Georgia (2), Kazakhstan (5), Montenegro (1), Kyrgyzstan (24), Cambodia (4), Qatar (0), Kuwait (0), Croatia (0), Laos (3), Lebanon (1), Romania (14), Maldives (0), Malaysia (3), Mongolia (9), Bangladesh (3), Myanmar (3), Moldova (2), Nepal (7), The former Yugoslav Republic of Macedonia (1), Serbia (4), Saudi Arabia (0), Sri Lanka (3), Tajikistan (3), Turkey (6), Brunei (0), Ukraine (7), Uzbekistan (2), Hungary (6), Armenia (4), Iraq (0), Iran (2), Indonesia (8), Vietnam (1)	48	206
Developed countries	Estonia (1), Korea (36), Czech Republic (2), Latvia (5), Lithuania (2), Slovakia (4), Slovenia (5), Singapore (3)	8	58

Note: () indicates the number of Confucius Institutes. Data source: International Monetary Fund; 2017 “Confucius Institute Annual Development Report”.

The data comes from the 2006-2017 Statistical Bulletin of China’s Foreign Direct Investment. In view of the fact that part of the investment flow data is non-positive, this article uses the suggestion of Busse and Hefeker to process OFDI flow data according to the formula $y = \ln\left(x + \left(x^2 + 1\right)^{0.5}\right)$ [15]. Take the number of Confucius Institutes (Classrooms) as a proxy variable for cultural “going out” [2]. The data comes from the 2006-2017 Annual Development Report of the Confucius Institute issued by Hanban/Confucius Institute Head-quarter.

Since the OFDI behavior of the home country is China, the control variables in the model only contain the characteristics of the host country, and a total of 6 control variables are selected. GDP and GDP per capita reflect the economic development level of the host country; learning from the trade gravity model, this paper uses the geographical distance between China and the host country to explore the impact of geographical distance on OFDI; the bilateral trade volume reflects the degree of economic closeness; the number of resident patent applications reflects the technological level of the host country; the time for the establishment of diplomatic relations between China and the host country reflects the degree of political exchanges between the two countries. The specific description of each variable is shown in **Table 2**.

3.3. Model Setting

Based on the investment gravity model, this article sets up the panel regression model as follows:

Table 2. Variable description.

Variable type	Variable name	Symbol	Meaning	Data source
Explained variable	China's OFDI	OFDI	China's annual OFDI flow to the host country	Statistical Bulletin of Outward Direct Investment in China
Core explanatory variables	The Confucius Institute (Classroom)	CI	Total number of Confucius Institutes (Classrooms) in host country	Confucius Institute Annual Development Report
	GDP	GDP	GDP of the host country per year (US \$ million)	CSMAR database
	GDP per capita	PGDP	Annual GDP per capita of the host country (calculated in current US dollars)	CSMAR database
	Geographic distance	Distcap	Spherical distance between China and the host country's capital (km)	CEPII database
Control variables	Number of patent applications by residents	Patent	Number of patent applications by residents per year in the host country	World Bank database
	Bilateral trade volume	Trade	Annual import and export volume between China and the host country (ten thousand US dollars)	National Bureau of Statistics of China
	Time to establish diplomatic relations	Diplomacy	Years of establishing diplomatic relations between China and the host country	China Consular Service Network

$$\text{OFDI}_{it} = \beta_0 + \beta_1 \text{CI}_{it} + \beta_2 \text{GDP}_{it} + \beta_3 \text{PGDP}_{it} + \beta_4 \text{Distcap}_{it} + \beta_5 \text{Patent}_{it} + \beta_6 \text{Trade}_{it} + \beta_7 \text{Diplomacy}_{it} + \lambda_t + \varepsilon_{it} \quad (1)$$

Among them, OFDI, CI and other variables are described in **Table 2**, β is the model parameter, i is the country, t is the year, λ is the time effect, and ε is the random disturbance term.

4. Empirical Results and Analysis

4.1. Estimation Method

Since the mean-variance inflation factor (Mean VIF) of the explanatory variables is 2.51, and the variance inflation factor (VIF) of each explanatory variable is less than 10, there is no serious multicollinearity problem. The Hausman test results indicate that a fixed-effect model is used. One of the explained variables, the geographic distance does not change with time in a country, so this article uses the Least Squares Dummy Variable Model (LSDV) for regression, introduces the time dummy variable, and uses the clustering robust standard error, which is consistent with the methods of Qi Jianhong *et al.* [12], Gu Yuanyuan and Qiu Bin [14]. This paper uses Stata14.0 software for data processing and analysis.

4.2. Regression Results and Analysis of the Full Sample

The results in **Table 3** show that the number of variable Confucius Institutes (Classrooms) in Model 3 passes the 5% significance test; compared with Model 2, after adding this variable, the model's fitting effect index R^2 rises. According to the Model 3 results, the coefficient of this variable (CI) is 0.1769, indicating

Table 3. Full sample regression model results.

Explained variable	OFDI		
Estimation method	LSDV		
Models	Model 1	Model 2	Model 3
CI	0.2963*** (0.0437)		0.1769** (0.0685)
GDP		5.28e-6*** (7.74e-7)	3.98e-6*** (1.09e-6)
PGDP		2.11e-5* (1.07e-5)	2.64e-5** (1.05e-5)
Distcap		-0.0011*** (0.0001)	-0.0011*** (0.0001)
Patent		-9.01e-5*** (1.26e-5)	-0.0001*** (1.36e-5)
Trade		2.84e-7*** (8.61e-8)	3.48e-7*** (1.04e-7)
Diplomacy		0.0326** (0.0112)	0.0317** (0.0115)
Cons	4.1037*** (0.0250)	8.3625*** (0.7794)	8.0292*** (0.8420)
Time effect	√	√	√
R ²	0.0798	0.2584	0.2650
OBS	672	672	672

Notes: The values outside the brackets are variable coefficients, and the values inside the brackets are standard errors. *, **, and *** respectively indicate that the coefficients pass the significance test of 10%, 5%, and 1%.

that cultural “going out” has a significant positive impact on China’s OFDI activities in the countries along the B & R.

For the control variables, the coefficients of GDP and GDP per capita are significantly positive, and the coefficient of geographic distance is significantly negative. This is consistent with the gravity model of the International Economics, indicating that Chinese enterprises invest more in countries with advanced economy and geographical proximity. The coefficient of the number of resident patent applications is significantly negative, indicating that China is more inclined to invest in countries with lower technological development levels. The reason is that infrastructure construction is China’s main investment project in countries along the B & R. It is beneficial to expand the market of its infrastructure export. The bilateral trade volume has a significant positive effect on OFDI, indicating that there is a complementary effect of trade and OFDI in countries along the B & R. The model reflects the significant positive impact of the establishment of diplomatic relations between China and the host country on OFDI, which shows that a more long-term and stable international friendly relationship provides China’s OFDI with a good environment and confidence.

4.3. Regression Results and Analysis of Sub-Samples

According to the classification of countries by the International Monetary Fund (IMF), the countries along the B & R are divided into two samples for emerging markets and developing countries and developed countries, as shown in **Table 1**. This article builds two models separately for two samples, as shown in **Table 4**. According to Model 4, for emerging markets and developing countries, the coefficient of the number of Confucius Institutes (Classrooms) is 0.1878, which has a significant positive impact on OFDI. Model 5 shows that for developed countries, this coefficient is not significant. This shows that the influence of Confucius Institutes on OFDI in China is nationally heterogeneous, and there is no significant influence on developed countries.

Lian Daxiang [16] believes that developed countries have a considerable degree of understanding of China, and the effect of Confucius Institutes will only be realized in a longer period of time. This may be one of the reasons why the Confucius Institute has no significant effect in developed countries. On the other hand, the cultural exchange channels between developed countries and China

Table 4. Sub-sample regression model results.

Explained variable	OFDI	
Estimation method	LSDV	
Models	Model 4 (emerging markets and developing countries)	Model 5 (developed countries)
CI	0.1878** (0.0762)	0.0460 (0.3553)
GDP	5.13e-6*** (1.55e-6)	1.20e-5 (1.26e-5)
PGDP	1.05e-5 (1.19e-5)	0.0002 (0.0001)
Distcap	-0.0009*** (0.0002)	-0.0012 (0.0008)
Patent	-0.0003** (0.0001)	-0.0001 (0.0002)
Trade	3.55e-7** (1.30e-7)	9.30e-9** (5.21e-7)
Diplomacy	0.0255* (0.0117)	0.0761 (0.0507)
Cons	7.8034*** (1.1346)	4.4001 (4.1257)
Time effect	√	√
R ²	0.2395	0.6689
OBS	576	96

Notes: The values outside the brackets are variable coefficients, and the values inside the brackets are standard errors. *, **, and *** respectively indicate that the coefficients pass the significance test of 10%, 5%, and 1%.

are more extensive, and there are many information channels, which also makes the Confucius Institute's investment effect in developed countries less effective.

4.4. Increase the Regression Results and Analysis of Interactive Items

Wang Yongqin *et al.* [17], Gu Yuanyuan and Qiu Bin [14] all use the interaction terms to examine the interaction between variables. This paper draws on its ideas and introduces interaction terms into the regression model. In **Table 5**, Models 6 - 7 respectively introduce the interactive items of the number of Confucius Institutes (Classrooms) with per capita GDP and the time of establishing diplomatic relations with China into the regression model. The interaction between the Confucius Institute and GDP per capita in Model 6 is negative at the 10% significance level, which shows that there is a substitution effect between cultural "going out" and GDP per capita, that is cultural "going out" can reduce

Table 5. The relationship between Confucius Institute and traditional factors.

Explained variable	OFDI	
Estimation method	LSDV	
Models	Model 6	Model 7
CI	0.1021* (0.0491)	0.5096*** (0.0869)
GDP	3.72e-6*** (1.20e-7)	5.82e-6*** (1.23e-6)
PGDP	1.71e-5 (1.10e-5)	2.61e-5** (1.06e-5)
Distcap	-0.0011*** (0.0001)	-0.0010*** (0.0001)
Patent	-0.0002*** (3.01e-5)	-0.0001*** (1.60e-5)
Trade	3.98e-7*** (1.23e-7)	2.96e-7** (1.10e-7)
Diplomacy	0.0314** (0.0117)	0.0488*** (0.0126)
CI*PGDP	-1.04e-5* (5.07e-6)	-
CI*Diplomacy	-	-0.0084*** (0.0019)
Cons	8.1986*** (0.8082)	7.3481*** (0.8457)
Time effect	√	√
R ²	0.2684	0.2742
OBS	672	672

Notes: The values outside the brackets are variable coefficients, and the values inside the brackets are standard errors. *, **, and *** respectively indicate that the coefficients pass the significance test of 10%, 5%, and 1%.

the negative influence of the host country's economic backwardness on OFDI. Similarly, according to Model 7, when China has fewer international exchanges with the host country, cultural "going out" can offset its negative impact on OFDI to a certain extent.

The mechanism behind it is summarized in two aspects: on the one hand, the Confucius Institutes promote the spread of Chinese in the host country, reduces the transaction costs of Chinese enterprises investing in the host country, and to a certain extent increases its cost advantage in the host country behind an economic level. On the other hand, as an important representative of Chinese cultural "going out", the Confucius Institute has demonstrated China's friendly and open international image, which has improved the understanding and recognition of the host country people in China.

5. Conclusions and Recommendations

In this paper, the number of Confucius Institutes (Classrooms) is used as a proxy variable for cultural "going out", using the relevant data of 56 countries along the "Belt and Road" from 2006 to 2017, and using the least squares virtual variable method to make an empirical research on the investment effect of cultural "going out". Conclusions as below: as a bridge for the spread of culture and friendship, the Confucius Institute also has a role in promoting China's OFDI; this promoting effect has national heterogeneity; the Confucius Institute and traditional influencing factors (per capita GDP, the time for establishing diplomatic relations) have a substitution effect on the impact of OFDI. The following recommendations are made accordingly.

Firstly, the promotion and substitution effects of Confucius Institutes on OFDI should be paid attention to. In today's economic globalization, cultural differences have become an important factor affecting OFDI. To a certain extent, it will increase transaction costs and transaction risks for Chinese enterprises' investments in countries along the B & R. The Confucius Institute, as an important representative of cultural "going out", can reduce the cultural differences and the negative impact it brings to some extent, thereby promoting the investment effect of China in the countries along the B & R.

Secondly, the establishment of the Confucius Institute should be based on the differences in different countries, scientific layout and site selection. More established Confucius Institutes (Classrooms) in emerging markets and developing countries. Especially when the countries along the B & R are countries with backward economic development and short diplomatic ties with China, the establishment of Confucius Institutes in the country should be promoted to weaken the negative impact of these traditional factors on OFDI.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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