

# How Does the Host Country's Political Environment Affect China's OFDI to ASEAN

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Keywords: China-ASEAN, Foreign direct investment, Panel data, Fixed effect model.

**Abstract.** In 2010, the China-ASEAN trade area was officially launched, which made China's foreign direct investment to the ten countries of ASEAN increase further. We take a fixed effect model to make a more comprehensive and detailed analysis of the factors influencing the impact of China's direct investment on ASEAN. In this paper, we use a panel dataset for 10 countries of the Association of Southeast Asian Nations and 10 years, between 2005 and 2015.

## Introduction

In 2009, China and ASEAN signed the investment agreement on China-ASEAN Free Trade Area, making the cross-border investment of both enterprises more convenient and free, which provided a good opportunity for Chinese enterprises to invest directly in ASEAN countries. In 2010, China ASEAN formally launched the free trade area, which made the market of ASEAN more open and eliminated some of the original investment barriers, which created more favorable conditions for the economic exchanges between China and ASEAN. In the trend of globalization, the links between countries and regions are increasingly close, economic cooperation in the Asia Pacific region are deepening. ASEAN is the third largest trading partner of China. Studying the factors that influence China's OFDI to ASEAN and putting forward relevant suggestions based on the findings, optimizing China's foreign direct investment is a very significant research topic.

This paper makes an empirical study on the influence factors of China's OFDI to ASEAN, with reference to the selection of control variables in the existing literature, and chose to focus on analysis of the host country political environment level which are rare influence factors in the existing literature.

## Methodology

## **Research Context and Data**

To test the influence factors of China's OFDI to ASEAN, we use a panel dataset for 10 countries of ASEAN and 10 years, between 2005 and 2015. These countries include Malaysia, Indonesia, Thailand, Philippines, Singapore, Brunei, Vietnam, Laos, Burma and Kampuchea.

Our dependent variable is OFDI, measured as the log of outward FDI stocks, from the China foreign direct investment Bulletin (2016)dataset.

We use aset of independent variables: Political Stability and Absence of Violence(PS), Government Effectiveness(GE), Control of Corruption(CC).We use data from Worldwide Governance Indicators (WGI) by the World Bank dataset (2017). In the database, the index is normalized between -2.5 and 2.5. The greater the value indicates, the higher the political stability (or government effectiveness) is. And the greater the value indicates, the better control of corruption.

We use a set of control variables accounts for a number of additional home country factors that have been shown to affect OFDI. Drawing on Dunning's (1981)IDP, we use GDP per capita (PGDP) to reflect the competitive advantages based on home country economic development. We expect appositive relationship between this variable and OFDI. To account for the quality of Infrastructure, we use data on subscriptions of fixed telephone lines by 100 people (TELE) provided by the World Development Indicators (World Bank, 2017) database. We expect a positive relationship with OFDI, as a better infrastructure increases the competitive advantages of firms that can be exploited through OFDI (Porter, 1990). We also control for the impact of trade volume between China and the host country(TV) on OFDI. We expect a positive relationship between this variable and OFDI. This data is from the China Statistical Yearbook (2016) dataset. The last control variable we used is the exchange rate (ER) of the host country. We expect a positive relationship between this variable and OFDI, as the capital of foreign direct investment flows into relatively weak countries from countries with relatively strong currency. This data is from IMF dataset. We describe the variables, their measurement and their data sources in Table 1.

Variable	Measurement	Data source				
Dependent variable						
OFDI	the log of outward FDI	Statistical bulletin of				
	stocks(million U.S. dollars)	China's foreign direct				
		investment(2016)				
Control variables						
PGDP	per capita of host country (U.S.	World Bank(2017)				
	dollars)					
TV	trade volume between China and the	China Statistical				
	host country (million U.S. dollars)	Yearbook(2017)				
ER	the exchange rate of the host country	IMF dataset				
	(LCU per U.S. dollars)					
TELE	fixed telephone lines by 100 people	World Bank(2017)				
Independent variables						
PS	Political Stability and Absence of	Worldwide Governance				
	Violence. The index is normalized	Indicators (WGI), the				
	between -2.5 and 2.5, the greater the	World Bank(2017)				
	value indicates, the higher the					
	political stability is.					
GE	Government Effectiveness, The	Worldwide Governance				
	index is normalized between -2.5 and	Indicators (WGI), the				
	2.5, the greater the value indicates,	World Bank(2017)				
	the higher the government					
~~~	effectiveness is.					
CC	Control of Corruption. The index is	Worldwide Governance				
	normalized between -2.5 and 2.5, the	Indicators (WGI), the				
	greater the value indicates, the better	World Bank(2017)				
	control of corruption.					

Table 1 Variables names, description and sources.

Table 2 Means of dependent and independent variables by country and by sample.

variable	mean	sd	min	p50	max
lnOFDI	10.99	1.890	5.250	11.17	14.98
InPGDP	8.160	1.470	5.480	7.750	10.93
lnTV	13.93	1.860	9.460	14.70	16.18
lnER	4.920	3.730	0.220	3.790	9.980
TELE	11.81	10.96	0.190	10.29	41.03
PS	-0.190	0.920	-1.780	-0.150	1.390
CC	-0.300	1.020	-1.670	-0.580	2.250
GE	0.0900	1.040	-1.620	-0.0400	2.440



Table 2 shows the means for the dependent variable and the independent variables, for the entire sample and country by country.

The correlation matrix (Table3) shows that there are no problems with the data. In particular, the correlation between all but one of the pairs of independent variables is lower than 0.80, showing no co linearity issues (Greene, 2012). Table3also shows descriptive statistics for all variables included in our models. Although there is a high correlation between several variables, this does not affect considerably the results, as we only use one variable at a time in our estimations.

	lnOFDI	lnPGDP	lnTV	lnER	TELE	CC	GE	PS
lnOFDI	1							
lnPGDP	0.00240	1						
lnTV	0.589	0.266	1					
lnER	0.219	-0.711	-0.109	1				
TELE	0.141	0.845	0.343	-0.523	1			
CC	0.127	0.913	0.354	-0.631	0.937	1		
GE	0.0530	0.911	0.438	-0.649	0.890	0.952	1	
PS	-0.0270	0.658	-0.155	-0.318	0.733	0.702	0.626	1

Table 3 Correlation matrix and descriptive statistics.

#### **Estimation Method**

Based on the previous discussion, we set up the following model:

 $lnOFDI_{it} = \alpha + \beta_1 lnPGDP_{it} + \beta_2 lnTV_{it} + \beta_3 lnER_{it} + \beta_4 TELE_{it} + \beta_5 CC_{it} + \beta_6 GE_{it} + \beta_7 PS_{it} + \mu_i + \varepsilon_{it}$ (1)

In order to eliminate the heteroscedasticity of the sequence, we take the logarithmic form for the variables except TELE, CC, GE, and PS. In Eq.1,  $\alpha$  is a constant,  $\mu_i$  is an individual effect, and  $\epsilon_{it}$  is a random error term, i is a cross section, representing ten ASEAN countries, t is the year. We use Stata14.0 to estimate the data.

In accordance with Buckley et al. (2007), we use the fixed effect model (FE) and the random effects (RE)generalized least squares estimators. To identify whether FE or RE provides a better model, we conduct the Hausman test. We conclude that the FE estimator is preferable to RE because the p-value for the Hausmantest is  $P=0.0000 \le 0.05$ . We thus report the results for the estimations using the FE estimator below. Our results are shown in Table4.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	lnOFDI	lnOFDI	lnOFDI	lnOFDI	lnOFDI
lnPGDP	2.766***				2.721***
	(0.283)				(0.258)
lnTV	0.343***	1.340***	1.214***	1.334***	0.350***
	(0.124)	(0.105)	(0.120)	(0.122)	(0.125)
lnER	-0.110	-0.0285	-0.115	0.00572	-0.220***
	(0.0745)	(0.0971)	(0.129)	(0.105)	(0.0828)
PS	0.655**	1.395***	0.775**	1.156***	0.728**
	(0.259)	(0.357)	(0.387)	(0.417)	(0.293)
TELE		-0.117***			-0.0948***
		(0.0292)			(0.0199)
CC			1.000		0.783*
			(0.703)		(0.457)
GE				-0.730	0.214
				(0.882)	(0.573)
Constant	-15.70***	-5.866***	-4.897**	-7.334***	-13.56***
	(1.391)	(1.421)	(1.952)	(1.638)	(1.518)
Observations	110	109	110	110	109
R-squared	0.828	0.704	0.665	0.660	0.869
Number of id	10	10	10	10	10

Table 4 The determinants of OFDI from China.

Notes: Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1



To check the robustness of our results we choose to use the cluster robust standard of country as clustering variable for the mixed regression of variables. We run several equations with these alternative specifications of our independent variables. The results show that overall, our coefficients are robust.

## Results

The result of the variable estimation is shown in Table4. According to the results, the coefficient of PGDP, TV, PS, TELE is significant, other explanatory variable coefficient is not significant. We can find that PGDP, TV, and PS have a significant positive relationship with China's OFDI. TELE have a significant negative relationship with China's OFDI. ER, CC, and GE have no significant relationship with China's OFDI.

## Conclusion

First, the results of this study indicate that the host country's per capita GDP have a significant positive relationship with China's OFDI to the host country. Between the two variables, the elasticity is bigger, and the slope is 2.766. That is to say, when the host country's per capita GDP increases by 1%, China's direct investment volume will increase 276.6%. This conclusion is different from the conclusions of previous scholars. The main reason is that previous studies have selected a wide range of host countries, and this article only selects ten ASEAN countries with relatively low level of economic development. The results show that the higher the level of economic development and the larger the market size of the host country will attract more foreign direct investment.

Second, the results of this study indicate that the trade volume between China and the host country have a significant positive relationship with China's OFDI to the host country. It is same to our previous expectations. This shows that the import and export trade between Chinese enterprises and ASEAN countries has a positive effect on China's direct investment activities, that is, the more import and export of China to ASEAN, the more direct investment China will have to ASEAN.

Third, we find that there is a significant positive relationship between China's OFDI in host countries and the political stability of host countries, which is the same as what we did before. This shows that China's multinational enterprises are inclined to direct investment in the political environment of the ASEAN countries. The more stable the host country's political environment is, the more it is beneficial to the development of the foreign direct investment enterprises in the host country, thus bringing more foreign direct investment.

Fourth, there is a significant negative correlation between China's direct investment in host country and the development level of infrastructure in the host country, which is different from our previous expectations. The slope between the two variables is -0.117, that is to say, every 1% increase in the telephone line length of the host country will reduce its direct investment stock by 11.7%. This conclusion is consistent with the conclusions studied by previous scholars Carmen Stoian and Alex Mohr (2015). The results of this paper show that the lower infrastructure level of the host country will attract more foreign direct investment. That is to say, from the current situation, China's outward FDI activities towards ASEAN are more inclined to countries with lower level and infrastructures.

Our paper gives a basic research conclusion, which provides a new perspective for scholars, and further research can be carried out in the follow-up. For example, research on the impact mechanism of various elements or suggestions on investment based on the status of investment

## Acknowledgement

This research was financially supported by Research on the effect of trade Optimization based on China's OFDI to "The Belt and Road" (17BJL014), China's economic and financial system reform (The Ministry of education's brand course for foreign students' English Teaching in China in



2013), and Shandong University of Finance and Economics International Exchange and cooperation special-Course internationalization project International business major and the Prague University of economics, Czech.

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