The impact of Political Stability on FDI?

A Panel Analysis of ASEAN Economies.

EPOG+

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1. Introduction

Foreign direct investment (FDI), which refers to capital investments in a country by an entity resident in a different country 'reflecting a lasting interest and control' (UNCTAD, 2022), has been an important component of financial globalisation. Particularly for developing countries, FDI inflows have had important consequences on economic growth, infrastructure investment, and microeconomic aspects such as inequality (Herzer, 2012; Kaulihowa & Adjasi, 2018).

Several empirical studies have explored both economic factors, such as market size and growth rates, and institutional factors, such as political stability and corruption. While some factors such as market size and trade openness are seen to have a consistently positive impact on FDI (Nunes et al., 2006; Asongu et al., 2018), mixed results are seen in the case of political stability and institutions (Buchanan et al., 2012; Sabir et al., 2019; Anwar & Iwasaki, 2022).

The countries of the Association of South-East Asian Nations (ASEAN)—Thailand, Vietnam, Indonesia, Cambodia, Brunei, Myanmar, Malaysia, Lao PDR, the Philippines, and Singapore—accounted for 11.5% of global FDI flows before the COVID pandemic(UNCTAD & ASEAN, 2019). FDI inflows have been influential in development, infrastructure, and policy in this region (Raeskyesa & Suryandaru, 2020). Further, this group of countries exhibits high diversity in economic and institutional conditions, making them ideal for analysing the role of political institutions in attracting FDI.

This study conducted a panel data analysis on nine ASEAN countries (excluding Myanmar) to delineate the effect of political stability using four control variables: real GDP, GDP growth rate, inflation, and trade openness, as control variables in accordance with Rashid et al. (2017). The analysis was conducted for the period following the 2008 financial crisis, i.e., 2010–2019, during which time the influence of political institutions has not been well studied for the ASEAN region.

The paper is structured as follows. Section 2 provides a short literature review. Section 3 describes the data. Section 4 presents the empirical strategy 4. The results and discussion are presented in Sections 5 and 6, respectively.

2. Literature survey

Most current theories of determinants of FDI build upon Dunning's (2000) ownership, location, and internalisation (OLI) framework. The 'location' aspect of the framework includes institutional and socioeconomic factors in addition to natural resources and macroeconomic factors such as market size and growth prospects. Several empirical studies have established the importance of

institutional and governance factors in attracting FDI in different parts of the world, particularly in developing countries (Rashid et al., 2017). Thus, the OLI factor encompasses both market (purely economic) and institutional/sociopolitical factors as determinants of FDI.

Several empirical studies have established the importance of these factors in different parts of the world, focusing on developing countries. Regarding macroeconomic factors, Nunes et al. (2006) found a positive impact of market size, trade openness, and infrastructure on FDI in Latin American countries for the period between 1991 and 1998. Asongu et al. (2018) found that market size, trade openness, and infrastructural quality had a positive impact on FDI inflows in several fast-growing economies, viz., the BRICS and MINT (Mexico, Indonesia, Nigeria, and Turkey) countries between 2001 and 2011.

Regarding institutional factors, Buchanan et al. (2012) found institutional quality to have a positive and significant effect on FDI in a panel data analysis of 164 countries between 1996 and 2006. Sabir et al. (2019), using a diverse sample of countries between 1996 and 2016, find institutional quality, including control of corruption and political stability, to have a positive impact on FDI for both developed and developing countries; however, the magnitude of the impact is higher in the case of the former than the latter. However, Anwar and Iwasaki (2022) found that in the case of African countries, FDI from emerging multinationals is affected negatively by institutional quality. Thus, while trade openness and macroeconomic factors such as market size have a consistently positive influence on FDI inflows, institutional factors such as political stability and regulation have mixed impacts that are highly dependent on context.

As a group, developing countries of Asia have been the largest recipients of FDI in recent years. Further, it is the only region of the world where FDI grew instead of shrinking in 2021–2022. Among them, the ten countries of the ASEAN (Association of South-East Asian Nations)—Thailand, Vietnam, Indonesia, Cambodia, Brunei, Myanmar, Malaysia, Lao PDR, the Philippines, and Singapore—have historically received high levels of FDI inflows, accounting for 11.5% of global FDI flows in 2018 at $155 billion dollars (ASEAN & UNCTAD, 2019). After the pandemic slump, FDI inflows in the region saw a record jump of 42% as compared to an average of 30% in developing countries globally (ASEAN portal, n.d.). Thus, the ASEAN countries are an attractive destination for foreign investors, and FDI plays an important role in growth and policy in these countries.

Further, these countries exhibit a wide diversity in institutional and economic conditions. For instance, Singapore is a developed country, receiving more than half of all FDI in the region (ASEAN & UNCTAD, 2019). At the other end of the spectrum, Cambodia and Lao PDR are classified as least developed countries. In terms of institutions, Singapore is perceived to have low corruption whereas Vietnam and Cambodia are perceived to have high corruption (Kaufmann & Kraay, 2023). Thus, it is interesting to exploit these differences through panel data to understand the role of different factors in attracting FDI in the region.

Due to the high importance of FDI in the region, its determinants and impacts have been studied extensively. Raeskyesa and Suryandaru (2020) used unbalanced panel data analysis on 12 determinants of FDI based on the Global Competitiveness Index in the period of 2007 to 2017. They found that market size and quality of institutions had a positive effect on FDI. Hoang and Bui (2015) found that market size, trade openness, and infrastructural quality had a positive effect on FDI in 1991–2009. Kaliappan et al. (2015) and Sasana and Fathoni (2019) found similar results for 2000–2010 and 2007–2016, respectively. However, Dang and Nguyen (2021) found that quality of political institutions has a *negative* effect on FDI inflows. Thus, in the ASEAN region as elsewhere, the effect of political institutions in determining FDI is unclear.

Thus, this study aims to delineate the effect of political institutional factors on FDI inflows in the ASEAN region. In particular, the focus is on the aspect of *political stability* as defined by the Worldwide Governance Indicators (Kaufmann & Kraay, 2023). Further, as of writing, no study has been published on the role of political stability in determining FDI in ASEAN countries in the period after the 2008 financial crisis; hence, the focus is on the period between 2010 and 2019, ending before the pandemic. Thus, our study aims to contribute to the literature by attempting to demystify the role of political institutions in determining FDI inflows in the ASEAN region post the 2008 financial crisis.

3. Data

This study investigates the impact of political stability on FDI inflows in ASEAN countries between 2010 and 2019. In accordance with the formulation of Rashid et al. (2017), the present study uses the following control variables:

i. Real GDP
ii. GDP growth rate
iii. Cost-price index (CPI) inflation
iv. Trade openness

Data on FDI, real GDP, growth, inflation, and trade openness are obtained from the World Bank Database (World Bank, 2023). CPI inflation is given in terms of annual growth in prices. For trade openness, the trade percentage from the database is used as a proxy, in accordance with Rashid et al. (2017).

For the independent variable, political stability, the indicator ‘Political Stability and the Absence of Violence / Terrorism’ from the World Governance Indicators database of the World Bank is used (Kaufmann & Kraay, 2023). The indicator captures ‘perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism’ (Kaufman et al. 2010: 4). It is based on surveys of relevant actors such as commercial businesses and members of public bodies. Thus, it is a good

measure of the perception of a country's institutions in the eyes of relevant decision makers in the context of FDI.

This study uses panel data of FDI along with the independent variable (political stability) and four control variables for the period 2010–2019, starting after the 2008 financial crisis and ending with the onset of the COVID pandemic. Myanmar is omitted from the analysis because of high political volatility in recent years. Summary statistics for the data are provided in Table 1.

Table 1

Descriptive statistics of the input variables

Variable	N	Mean	SD	Min	Max
Dependent Variable					
LnFDI	89	22.52	1.83	18.96	32.29
Independent Variable					
PS	90	0.03	0.84	-1.65	1.59
Control Variables					
LnGDP	90	25.53	1.55	23.01	27.68
GDP growth	90	5.25	2.60	-2.5	14.52
CPI	90	2.88	2.76	-1.26	18.68
T	87	127.05	84.69	37.42	379.1

4. Empirical strategy

This study replicates the methodology of Rashid et al. (2017), who investigated a similar question for a different set of countries[1] from 2000 to 2013. Our study attempts to analyze the impact of political stability on FDI inflows in ASEAN economies in the period between 2010 and 2019. The regression model is:

$$LnFDI_{it} = \alpha + \beta_1 PS_{it} + \beta_2 LnGDP_{it} + \beta_3 GDP_{growth} + \beta_4 CPI_{it} + \beta_5 T_{it} + \varepsilon_{it}$$

Where: LnFDI - Natural logarithm of FDI inflows

[1] Australia, China, Hong Kong, India, Indonesia, Japan, South Korea, Malaysia, New Zealand, Philippines, Russian Federation, Singapore, Thailand, Turkey, and Vietnam

PS - Political Stability

LnGDP - Natural logarithm of real GDP

GDP_{growth} - Growth rate of GDP

CPI - Inflation rate

T - Trade openness

ε -Disturbance term

Due to space constraints, GMM-system and Panel ARDL tests have been omitted from this paper. Our study employs two basic models for panel data analysis: fixed and random effects models. To avoid misspecification and understand the relative importance of the control variables included in our model, the panel data analysis consists of 5 specifications. Both Hausman and Breusch-Pagan LM tests will help to determine the suitable model: pooled OLS, fixed or random effects model. Once the optimal specification is found, the next step is to check whether the Gauss-Markov assumptions hold through diagnostic checks and analyses.

5. Results

Figure 1 shows the correlation of the input variables. The log-transformed FDI inflow has a relatively higher correlation with real GDP and trade openness in comparison with political stability, inflation GDP growth rate.

Figure 1

The heat map for correlation of the input variables

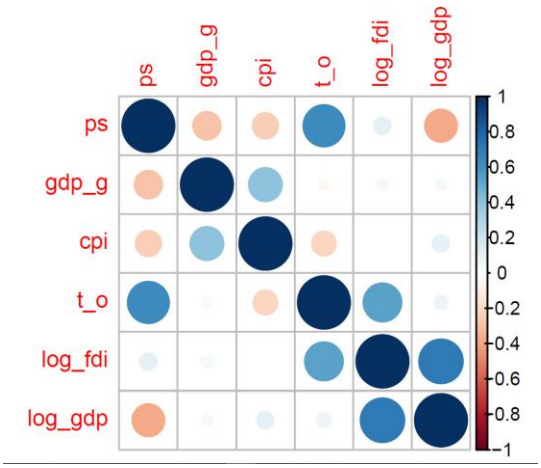

Table 2 presents the output of panel data regression. The Breusch-Pagan LM test shows that pooled OLS regression is not efficient in any of the specifications. However, the Hausman test reveals that all models except for 3 and 5 exhibit random effects. The additional variables might have

some correlation between the individual-specific effects and the independent variables, resulting in the alternation of the dynamics of the model.

The first thing that catches attention is the noticeable change in model fit as R squared increases once a new control variable is introduced; however, the last specification with trade openness dropped the value. This might stem from the fact that political stability and trade openness have a moderately high correlation of 60% causing multicollinearity. It is also possible that trade openness is irrelevant. Another striking thing is the sign of the coefficient of political stability in the fifth specification. It means that more political instability/terror attracts FDI inflow which is counterintuitive. Therefore, the appropriate specification for analysis is the fourth one with one independent variable - political stability and three control variables - real GDP, GDP growth rate, and inflation.

Table 2

Panel data regression results

	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Constant	22.48***	-4.37		-4.14	
Political Stability	0.6	0.76***	-0.24	0.80***	-0.27
Real GDP		1.05***	2.12***	1.04***	2.21**
GDP Growth			-0.05	0.01	-0.05
Inflation				-0.02	0.01
Trade Openness					0.004
	Random	Random	Fixed	Random	Fixed
Breusch-Pagan LM Test	34.64***	6.86***	6.04***	5.9***	2.83***
Hausman Test	0.69	3.45	8.82***	4.35	11.36***
R^2	0.01	0.27	0.14	0.33	0.14
Adjusted R^2	0.001	0.25	0.02	0.30	-0.02
F	2.08	38.23***	4.30***	50.43***	2.32*
Obs	89	89	89	89	86
Groups	9	9	9	9	9

*Note: * Denotes that the null hypothesis is rejected at 0.01 level; ** denotes that the null hypothesis is rejected at 0.05 level; *** denotes that the null hypothesis is rejected at 0.1 level. The null hypothesis is accepted for all other values.*

F-statistics confirms the validity of the model. Ceteris paribus, when the political stability index increases by 0.1 unit, FDI inflows increase by 8 percent. Similarly, real GDP and GDP growth have a positive relationship with FDI inflows, but this relationship is significant only for real GDP. Thus, a 1 percentage increase in real GDP leads to a 1.04 percentage increase in FDI inflows.

Inflation has a negative relationship with FDI inflow; however, the relationship is not significant even at a 10% significance level.

Despite the significant and positive impact of political stability on FDI inflows, the explanatory power of the model assuming random effects is around 30%, which means that the four variables collectively explain only 30% variations in FDI inflow to the ASEAN countries.

The next crucial part of the analysis is a series of diagnostic checks to determine whether our model violates the Gauss-Markov assumptions for panel data analysis. First, the assumption of linearity of the relationship between the dependent variable and the independent variables in parameters is based on the literature review as many studies employed a similar empirical strategy (Hoang & Bui, 2015; Kim, 2010; Tian et al., 2017). Second, the zero conditional mean assumption holds as the Hausman test results suggest the use of a random effects model for the appropriate specification. Third, the Breusch-Pagan test shows no evidence of heteroscedasticity or spherical errors (p-value=0.2). Similarly, the Wooldridge test demonstrates no signs of autocorrelation as the p-value is 0.12, which means that the null hypothesis of no serial correlation cannot be rejected. Additionally, the correlation matrix of coefficients suggests no perfect multicollinearity either. As for the exogeneity of independent variables, since the Hausman test recommends using random effects model, the exogeneity assumption may be violated. Finally, the random sampling assumption is satisfied because the study does not advocate for the generalizability of the results but focuses exclusively on ASEAN countries.

6. Discussion and Conclusion

Countries that need foreign investment to finance economic modernization, competing to attract FDI, are trying to pursue attractive economic policies for potential investors. However, such policies are often not accompanied by the same pace of development of political institutions that guarantee political stability and predictability for sustainable development. Undeveloped political institutions can potentially harm the activities of foreign companies, i.e., "political risk". For countries with developing economies, the importance of political factors is crucial. It is in this area that the most significant risks for investors are concentrated.

Using panel data, this study analyzes the impact of political stability on FDI inflows in ASEAN countries in the period 2010-2019. The results show that political stability has a significant positive impact on FDI inflows. However, the coefficient of determination implies that 70% of the variation in FDI inflows cannot be explained by the variables that are mainly used in similar studies. Therefore, further research should focus on analysing some other indicators that impact FDI inflows in ASEAN countries through Dunning's (2000) OLI framework.

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