Institutions and Economies
Vol. 16, No. 3, July 2024, pp. 1-25 https://doi.org/10.22452/IJIE.vol16no3.1

Governance and Economic Growth: The Mediating Role of FDI Inflows

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Abstract: *Many studies have attempted to examine the effect of governance on economic growth. However, these studies reveal heterogeneities that make it difficult to implement policy. This current study attempts to fill these gaps by employing foreign direct investment (FDI) inflows as a mediating variable. This study employs balanced panel data for the 10 Association of Southeast Asian Nations (ASEAN) between the period of 2000 to 2021. Based on the mediation framework in a random effect model, this study reveals that political stability (PV) and government effectiveness (GE) affect FDI positively. Moreover, this study finds that FDI can mediate the indirect effect of PV and GE on economic growth. However, this study also reveals that the direct effect of GE on economic growth is negative. This implies that ASEAN countries should be practical, effective, and systematic in improving GE to minimise opportunity costs. On the other hand, ASEAN countries should focus on maintaining PV to attract more FDI and encourage economic growth.*

Keywords: Foreign direct investment; Economic growth; Political institutions
JEL Classification: F200, O430, O400

1. Introduction

Covid-19 had the effect of reducing global foreign direct investment (FDI) margins, both in home and host countries (Fu et al., 2021). Likewise, FDI inflows that entered Association of Southeast Asian Nations (ASEAN) experienced a sharp decline during the global pandemic. In 2020, this FDI fell by 29% to USD135 billion from USD190 billion the year before, before rebounding to USD179 billion in 2021. This indicates that after opening up, ASEAN countries became more aggressive in trying to attract

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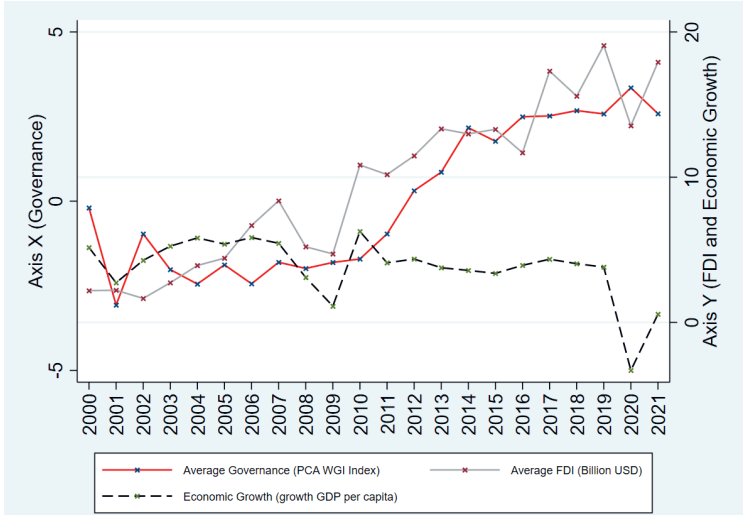
FDI. Indonesia, Malaysia, and Thailand, for instance, have enacted several specific policies to attract more FDI.

Indonesia formed its Ministry of Investment and passed the Omnibus Law on Job Creation to attract more foreign capital. Malaysia issued a tax budget incentive to attract more FDI, especially in the technological sector. Thailand offered more attractive tax incentives for investors, especially in the automation, robotics, and human development sectors. These efforts to pursue FDI are logical because most ASEAN countries are developing and need more investment to trigger their economic recovery.

Rammal and Zurbruegg (2006) note that government effectiveness and the enforcement of investment regulations determines the trend of FDI inflows into ASEAN. Excessively strict regulations, such as price controls and excessive foreign trade rules, may decrease FDI. Furthermore, certain institutional aspects of ASEAN countries should be improved because it is crucial to increasing FDI and encouraging economic growth (Raza et al., 2021). Quality governance is essential (Dada & Abanikanda, 2022) because it allows investors to build up various industrial sectors more efficiently. The increase in foreign capital then has the knock-on effect of boosting economic growth. Bad governance, on the other hand, leads to high transaction costs, which hinders investment and economic growth. As such, this study attempts to answer the question of whether institutional aspects affect FDI inflows and economic growth in ASEAN countries. Examining the effect of these institutional aspects is critical, as ASEAN has been proclaimed as the epicentre of growth with great economic potential. In 2021, the total GDP of the region reached USD3.347 trillion, or about 3.48% of the world's gross domestic product (GDP). Likewise, FDI entering ASEAN in 2021 equalled 11.54% of the total world inflow.

Figure 1 shows the average FDI entering ASEAN, per capita economic growth, and average governance. Average governance is calculated from the principal component analysis (PCA) of World Governance Indicators (WGI) (Kaufmann et al., 2010). Figure 1 indicates that Covid-19 had a massive impact on FDI and economic growth. In 2021, FDI and economic growth rebounded, but these numbers are still unstable when compared to the pre-pandemic period. On that basis, ASEAN countries should formulate proper governance strategies to increase FDI and economic growth in the coming post-pandemic years.

Figure 1: FDI Inflows, Economic Growth and Governance in ASEAN



New institutional economic (NIE) theory states that the institutional aspect cannot be separated from economic analysis to achieve a better economy. As North (2008) notes, this institutional aspect is the rule of the game, both formal and informal, and the characteristics of its enforcement. In this context, the government has a significant role in enforcing these rules and needs good governance—the tradition or institution used to exercise authority (Kaufmann et al., 2010)—to do so.

The WGI is composed of six governance indicators: political stability and non-violence/terrorism (PV), voice accountability (VA), government effectiveness (GE), rule of law (RL), regulatory quality (RQ), and corruption control (CC). Researchers often employ these indicators to examine the effect of governance on FDI and economic growth. For instance, Bailey (2018) and Ozbozkurt and Satrovic (2018) employ PV and RQ to examine the effect of governance on FDI. They find that governance affects FDI positively. On the other hand, Kosztowniak (2016), Masipa (2018), Osei and Kim (2020), and Rong et al. (2020) find a positive effect of governance proxied by PV and RQ on economic growth.

Unfortunately, the effect of governance on FDI and economic growth is not always robust and consistent. For instance, Kurecic and Kokotovic (2017) note that PV only affects FDI positively in low-income countries. This result corroborates the findings of Gangi and Abdulrazak (2012), who

find no positive effect of governance proxied by PV and RQ on FDI. On the other hand, Feyisa et al. (2022) find no positive effect of PV on economic growth. The heterogeneity between studies on the effect of governance on FDI and economic growth makes it difficult to implement policy. Therefore, this study seeks to fill this gap by employing FDI as a mediating variable to examine the direct and indirect effects of governance on economic growth in ASEAN countries. As far as we know, no other studies have employed FDI as a mediating variable in panel data analysis. Hopefully, this study can become a helpful reference for decision-making, especially for ASEAN countries in governance and FDI policies.

We organise this paper into five sections. In the first, we describe our study motivation, and provide a critical overview of the relevant literature in the second. Section 3 outlines the methodology that describes the data sources and analytical methods. Section 4 reports the main results, which are discussed in Section 5. Section 6 concludes the study.

2. Literature Review

2.1 Relationship between governance and FDI

In the context of NIE theory, competition is the key to institutional change. North (2008) indicates that institutional change in an organisation or a country is crucial to increasing investment and economic growth. NIE theory explains the relationship between institutional or governance on FDI and economic growth. Moreover, tough competition in obtaining FDI means that many countries need institutional changes. If a government does not adequately protect property rights, it could lead to high transaction costs, which in turn lowers trade, specialisation, investment, and productivity (Shirley, 2008).

By employing WGI indicators, researchers examined the relationships between governance and FDI. For instance, Jadhav (2012) finds that RQ and GE positively affect FDI in Brazil, Russia, India, China and South Africa (BRICS) countries. In Latin America, VA, RL, RQ, and CC positively impact incoming FDI (Biro et al., 2019). In ASEAN countries, the governance indicators that affect FDI are RQ, RL, and CC (Niarachma et al., 2021). In China, Kayani and Ganic (2021) prove that CC, RL, and RQ affect FDI, while GE, PV, and VA do not. Meanwhile, in Pakistan, PV, RQ, and GE

affect FDI, but CC and RL do not (Khushnood et al., 2020).

Besides WGI, other researchers use other proxies in measuring governance. For instance, Uddin et al. (2017) use data from the Economic Freedom of the World index. Meanwhile, Contractor et al. (2020) measure the quality of regulations using World Development Indicators (WDI) data such as the enforcement of contracts, ease of starting a business, and ease of exiting a business index. As a result, they find a positive effect of regulatory quality on FDI.

One of the governance indicators that have been extensively examined is PV (Abdella et al., 2018; Fakiri & Cherkaoui, 2022; Ozbozkurt & Satrovic, 2018). Cieślik and Gurshev (2020) state that PV only has a slight effect on FDI. On the other hand, PV, as noted by Gangi and Abdulrazak (2012) as well as Kayani and Ganic (2021) do not affect FDI, while Jafari et al. (2011) find that it has a negative effect. From this point of view, the effect of governance indicators on FDI is still unclear. This seems to be determined by many factors, such as country characteristics. Therefore, it is still necessary to re-examine the effect of governance on FDI in specific situations and conditions.

2.2 Relationship between FDI and economic growth

Findlay (1978) argues that FDI could increase economic growth through technological advances. According to Romer (1990), economic growth is driven by technological changes from intentional investments. Moreover, neoclassical theory indicates that FDI is a perfect substitution for domestic investment that could affect economic growth by contributing to stock capital (Mehic et al., 2013). Solow (2007) argues that FDI plays an essential role on a practical level, and that a country can develop foreign capital and technology by attracting foreign investment. Based on these statements, FDI entering a country could be a means of transferring technology to increase productivity and economic growth.

In the last two decades, studies examining the effect of FDI on economic growth have increased massively. For instance, Sothan (2017), Siddiqui and Parikh (2018), and Hakim and Rosini (2022) find a positive effect of FDI on developing countries' economic growth. Also, FDI affects economic growth in developed countries (Kosztowniak, 2016; Osei & Kim, 2020; Rong et al., 2020). However, Carbonell and Werner (2018) find no positive

effect of FDI on economic growth. Li et al. (2018) argue that FDI can only affect economic growth if supported by an excellent economic structure and infrastructure. If a country's capital market is unstable, the effect of FDI on economic growth will be meaningless (Osei & Kim, 2020). This implies that the effect of FDI on economic growth needs to be re-examined in specific countries, including those in ASEAN.

2.3 Relationship between governance and economic growth

One of the main discussions of NIE theory is about the relationship between institutional aspects and economic growth. Based on the NIE theory, the governance aspect can increase economic growth. Researchers employ different indicators to examine the effect of governance on economic growth. For instance, Uddin et al. (2017), Acar (2019), Phul et al. (2020), and Yakubu et al. (2020) use PV, and find that it positively affects economic growth. Meanwhile, Olaoye et al. (2021) and Nedić et al. (2020) note a positive effect of GE on economic growth in low- and high-income countries.

In Gulf Cooperation Council (GCC) countries, GE and RQ significantly affect economic growth, but CC and RL do not (Al-Naser & Hamdan, 2021). In 14 Latin American and Caribbean Countries, Azam (2022) finds that CC, PV, and GE affect economic growth. Meanwhile, by using developing and developed country data, Fawaz et al. (2021) declare that RL and CC positively affect economic growth, while the effect of VA was negative. In developing Africa, PV and VA do not affect economic growth (Feyisa et al., 2022). Bassam (2013) finds that the relationship between governance and economic development was unstable. Meanwhile, by employing data from 50 countries, Fraj et al. (2018) argue that governance does not strongly affect growth.

Based on previous studies, governance has not always been proven to affect economic growth. Besides, several studies are beset by methodological problems. For instance, Gangi and Abdulrazak (2012) do not control for multicollinearity. In addition, some of these studies do not explain the reasons for choosing governance indicators, which can potentially lead to bias. This study seeks to re-examine the effect of governance on economic growth by selecting governance indicators that follow the characteristics of ASEAN countries.

3. Method

This study employs panel data from 10 ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapura, Thailand, and Vietnam) from 2000 to 2021 with 220 observations. We use economic growth proxied by real per capita GDP annual growth as the dependent variable from WDI data. FDI inflow proxied by the FDI inflows percent of GDP is the mediator variable. In contrast, the explanatory variable in this study is governance from WGI indicators: PV, VA, GE, RL, RQ, and CC. However, this study does not employ all these indicators because of multicollinearity.

All the WGI indicators are an aggregation index derived from survey data on the perceptions of respondents whom experts assess. Kaufmann et al. (2010) employed the unobserved components (UCM) as the aggregation method to construct the WGI. This aggregation method produces an index value for each governance indicator between -2.5 to 2.5, from low to high categories.

The WGI comes from three dimensions: constitution, policy, and institutions. The constitutional dimension is a state system that includes choosing a head of state. The policy dimension measures the quality of a government's policies. In contrast, the institutional dimension measures trust in institutions that regulate interactions between community activities (Kaufmann et al., 2010). In the WGI indicators, the constitutional dimensions consist of PV and VA. The policy dimension consists of GE and RQ, while the institutional dimension consists of CC and RL.

We model the governance indicators based on the correlation analysis results. The correlation matrix is given in Table 1. This study sets a correlation threshold of 0.8 as an indication of multicollinearity. Table 1 shows that each governance indicator has a high correlation. The principal component variables: CONST, POLICY, and INST, are highly correlated. For instance, CONST correlates with POLICY of 0.915 and 0.880 with INST. Thus, we cannot use those three composite indices in the research model.

Table 1: Governance Indicators Correlation Matrix

	VA	PV	GE	RQ	RL	CC	CONST	POLICY	INST
VA	1								
PV	0.014	1							
GE	0.593	0.664	1						
RQ	0.669	0.649	0.951	1					
RL	0.556	0.707	0.980	0.948	1				
CC	0.517	0.702	0.947	0.923	0.962	1			
CONST	0.712	0.712	0.883	0.925	0.887	0.856	1		
POLICY	0.639	0.664	0.988	0.988	0.976	0.946	0.915	1	
INST	0.542	0.712	0.972	0.944	0.990	0.990	0.880	0.970	1

Notes: CONST is PV and VA's principal components index (PCA). POLICY is the index of GE and RQ, while INST stands for CC and RL

From the constitutional aspect, this study chooses PV instead of VA because not all ASEAN countries are entirely democratic. VA is a perception of citizen participation in electing state leaders, media freedom, and freedom of expression (Kaufmann et al., 2010). As a result, countries with monarchic systems tend to get lower VA scores. Meanwhile, PV is a measure of political stability, security, and a government's vigorous actions against destabilisation threats such as coups, terrorism, and violence. Therefore, we view PV as more relevant for measuring constitutional aspects in the ASEAN context.

Meanwhile, we choose GE over RQ from a policy perspective. GE captures citizens' perceptions of public service quality, the quality of policy implementation, and the government's credibility and commitment to the policies it makes. On the other hand, RQ is related to citizens' perceptions of the government's ability to formulate policies to support the development of the private sector (Kaufmann et al., 2010). On that basis, the scope of GE tends to be more comprehensive and widely felt by the public. Because we choose PV and GE, we cannot include RL and CC, which are highly correlated with PV and GE.

This study examines the mediating effect on panel data. Studies examining the mediating effect in panel data are still rare. It is due to the lack of references regarding the methods used to test the mediating effect in the panel data. However, it does not mean testing the mediating effect on panel data is impossible. According to Bauer et al. (2006), testing the

mediating effect on the random effect model is possible despite several weaknesses. One of these weaknesses is the low confidence interval if the data is not normally distributed.

Several studies, such as Wahba and Elsayed (2015) and Bakher (2017), estimate the mediating effect on panel data by referring to the Baron and Kenny (1986) procedure. However, these two studies employ different methods in testing the mediating effect. Wahba and Elsayed (2015) use the bootstrapping procedure and the Sobel test, while Bakher (2017) uses the hierarchy regression method. According to Baron and Kenny (1986), there are three steps to employing a mediation analysis. The first step is regressing the independent variables on the mediating variables (path a). The second step is regressing the mediating variables on the dependent variable (path b). The third step is regressing the independent variables on the dependent variables (path c). These procedures can be simplified into two substructures. Substructure 1 is as follows:

$$FDI_{it} = \alpha + \beta_1 PV_{it} + \beta_2 GE_{it} + \varepsilon_{it} \quad (1)$$

where FDI is the value of FDI net inflows % of GDP. PV is a measure of the political stability of country *i* at time *t*. At the same time, GE is a measure of the government effectiveness of *i* at *t*. As for α = constant, while $\beta_{1\text{-}2}$ are the regression coefficient of each independent variable, and ε = error terms. Equation (1) estimates the effect of PV and GE on FDI, also known as path a. As for paths b and c in this study, it can be reflected in substructure 2 as follows:

$$Growth_{it} = \alpha + \beta_1 PV_{it} + \beta_2 GE_{it} + \beta_3 FDI_{it} + \varepsilon_{it} \quad (2)$$

where Growth is the value of annual growth per capita GDP of each country *i* at time *t*. In this case, PV, GE, and FDI are explanatory variables. As for α = constant, while $\beta_{1\text{-}3}$ are the regression coefficient of each independent variable, and ε = error terms.

This study will test seven hypotheses from the above equations. The first substructure hypothesises that PV and GE affect FDI (H1 and H2). Meanwhile, from the second substructure, this study will examine the effect of FDI on growth (H3) and the direct effect of PV and GE on growth (H4 and H5). In addition, this study will also examine the indirect effect of PV

and GE on economic growth through FDI (H6 and H7). The procedure to examine the mediating role of FDI in this study is the Sobel test. The equation for the Sobel test is as follows:

$$z = \frac{\alpha b}{\sqrt{(b^2 SE_\alpha^2) + (\alpha^2 SE_b^2)}} \tag{3}$$

where Z is the Sobel statistic value which refers to the mediating effect coefficient. Meanwhile, α is the regression coefficient of the independent variable on the mediator. At the same time, b is the regression coefficient of the mediator variable to the dependent variable. Then, SE_α is the standard error resulting from the regression coefficient of the independent variable to the mediator, and SE_b is the standard error of the regression coefficient of the mediator to the dependent variable.

There are two types of mediating relationships: complete and partial. Complete mediation occurs when path a and path b are significant, but path c is not. Meanwhile, partial mediation occurs if path a, path b, and path c are significant. In other words, complete mediation is a condition where the independent variable only indirectly affects the dependent variable. Partial mediation, meanwhile, is a condition where the independent variable has a direct and indirect effect on the dependent variable.

There will be three estimation models: the ordinary least square (also known as the common effect model), the fixed effect model (FEM), and the random effect model (REM). The determination of which model will be used to test the hypothesis in this study is based on the results of the Chow, Hausman, and Breusch Pagan tests. The Chow test is to compare CEM and FEM, Hausman to choose between FEM and REM, while Breusch Pagan determines the best between REM and CEM. Furthermore, in analysing substructures 1 and 2, we control for Covid-19, inflation rate, and labour force.

The Covid-19 variable was measured categorically. It coded 0 from 2000 to 2019 and coded 1 in 2020 and 2021. Although Covid-19 was discovered in 2019, ASEAN countries began to suffer the economic impact of the pandemic in 2020. The inflation rate and labour force are control variables for country characteristics. Also, inflation and labour force are theoretically considered to impact FDI and economic growth. The inflation variable is the percentage of the annual inflation rate for each country. In contrast,

the labour force variable is the number of the labour force in millions of people. This study also employs a robust standard error to deal with serial correlations.

4. Empirical Results

The descriptive statistics provide an overview of the condition of the data. Table 2 shows that the average economic growth in ASEAN is 3.77%. However, the standard deviation value of 3.9% indicates dispersion in the average economic growth. In a year, the average FDI obtained is USD9.513 billion.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. dev.	Min	Max
FDI	220	5.475	6.108	-2.757	32.170
FDI_USD	220	9,513.907	18,346.130	-4,845.359	120,439.500
Growth	220	3.772	3.922	-18.578	12.722
Labour_Force	220	29.260	33.840	0.156	139.165
Inflation	220	4.558	6.560	-2.315	57.075
VA	220	-0.757	0.689	-2.450	0.468
PV	220	-0.169	0.940	-2.095	1.616
GE	220	0.119	1.013	-1.618	2.437
RQ	220	-0.037	1.022	-2.558	2.261
RL	220	-0.210	0.897	-1.785	1.880
CC	220	-0.264	1.009	-1.801	2.326

Notes: All governance indicators are indexes with values between 2.5 to 2.5, from low to high categories. Meanwhile, growth and FDI are annual average percentage figures. FDI_USD is the amount of FDI inflows that goes on a million-dollar scale. Labour_Force is the number of workers in millions of persons.

The data overview from each ASEAN country in the period 2000 to 2021 is reported in Table 3. Table 3 shows that the country most dependent on FDI is Singapore, with FDI inflows making up 20.34% of the GDP. Meanwhile, Indonesia received the second highest FDI, but with the lowest percentage of its GDP. Myanmar, Cambodia, and Vietnam had the highest average economic growth. However, based on average GDP per capita, these three countries had the lowest total incomes in ASEAN. The countries

with the largest annual per capita GDP, such as Singapore with USD46,010, Brunei with USD30,579, Malaysia with USD8,197, and Indonesia with USD2,571, tended to have lower average economic growth.

Table 3*: Average Data, by Country*

	BRN	KHM	IDN	LAO	MYS	MMR	PHL	SGP	THA	VNM
VA	-0.806	-1.017	-0.014	-1.695	-0.367	-1.695	0.021	-0.111	-0.465	-1.420
PV	1.179	-0.279	-0.996	0.000	0.211	-1.195	-1.282	1.282	-0.801	0.191
GE	0.953	-0.793	-0.173	-0.794	1.050	-1.359	-0.003	2.176	0.307	-0.179
RQ	0.957	-0.475	-0.306	-1.031	0.604	-1.694	-0.080	1.972	0.230	-0.541
RL	0.574	-1.088	-0.574	-0.949	0.490	-1.401	-0.463	1.682	0.006	-0.375
CC	0.603	-1.161	-0.664	-1.099	0.205	-1.220	-0.589	2.179	-0.345	-0.553
FDIINF	2.855	9.346	1.314	4.550	3.110	3.488	1.683	20.342	2.572	5.495
FDI_USD	349	1545.7	11894.9	535.8	7562.8	1451.4	4243.5	52015.7	7414	8125.8
Growth	-0.533	5.319	3.523	4.927	2.755	7.439	3.028	3.302	2.867	5.098
Labour_ Force	0.191	7.788	116.439	3.139	12.877	23.227	37.882	2.920	38.317	49.818
Inflation	0.433	3.850	6.158	6.448	2.026	13.492	3.776	1.524	1.854	6.019
GDP per capita	30579.2	895.3	2649.3	1389.8	8341.7	751.9	2254.1	46010.1	4833	1812.2

The results of the multiple regression analysis to test substructure 1 are reported in Table 4. The Chow, Hausman, and Breusch Pagan tests show that the best regression model is REM. Based on this REM model, PV and GE positively affected FDI. In other words, higher political stability and government effectiveness will attract more foreign investors to the country. Compared to PV, GE has a more significant effect on FDI. This means that investors are more interested in countries with better quality public services, and those with high commitment and credibility in implementing their policies.

Table 4: Multiple Regression Results Substructure 1

	I	II	III
Constant	5.932*** (0.500)	6.212** (1.619)	5.955** (2.271)
PV	2.091*** (0.360)	1.964* (0.973)	1.945** (0.873)
GE	1.668** (0.543)	3.603** (1.011)	2.966** (0.935)
Control Variables:			
Covid 19	0.388 (1.369)	-0.236 (0.622)	-0.121 (0.616)
Inflation	0.106** (0.040)	0.006 (0.031)	0.007 (0.030)
Labour_Force	-0.028*** (0.005)	-0.029 (0.053)	-0.018 (0.034)
R^2	0.344	0.316	0.316
sigma_u	-	5.011	5.515
sigma_e	-	2.695	2.695
rho	-	0.776	0.807
Chow (*p-value*)	59.140 (0.000)	59.140 (0.000)	-
Hausman (*p-value*)	-	1.140 (0.950)	1.140 (0.950)
Breusch Pagan (*p-value*)	1098.84 (0.000)	-	1098.84 (0.000)

Notes: *significant at 0.10, **significant at 0.05, ***significant at 0.01. Column I is the estimation result of pooled OLS (CEM). Column II is the fixed effect model (FEM), while column III is the random effect model (REM). Dependent variable = FDI inflows % of GDP. Robust standard errors are in parentheses.

The results of multiple regression substructure 2 are reported in Table 5. Table 5 shows that the best regression model is REM. Based on the REM estimation, PV does not affect economic growth directly. On the other hand, the direct effect of GE is negative on economic growth, while FDI affects economic growth positively. The role of FDI in mediating the indirect effect of PV and GE on growth is reported in Table 5.

Multiple regression for substructures 1 and 2 determined REM as the best model. Therefore, this study also selects the estimation results of the Sobel test on the REM model. Column 3 in Table 6 shows the value of Sobel statistics and its p-value. The Sobel statistic for the role of the PV mediation model on growth via FDI is positive and significant. PV itself has no direct effect on economic growth (see Table 5), so the effect of PV on economic growth is only indirect or complete mediation.

Table 5: Multiple Regression Analysis Substructure 2

	I	II	III
Constant	2.579*** (0.416)	3.154** (1.373)	2.712** (0.823)
FDIINF	0.224*** (0.054)	0.134 (0.124)	0.202** (0.075)
PV	-0.119 (0.390)	1.110 (1.105)	0.275 (0.654)
GE	-1.596*** (0.263)	-0.59 (1.437)	-1.723*** (0.429)
Control Variables:			
Covid 19	-5.292** (1.535)	-5.675** (1.462)	-5.337*** (1.434)
Inflation	0.092** (0.030)	0.071** (0.024)	0.077** (0.025)
Labour_Force	0.007 (0.006)	0.011 (0.036)	0.012 (0.007)
R^2	0.403	0.207	0.398
sigma_u	-	2.104	0.789
sigma_e	-	2.976	2.976
rho	-	0.333	0.065
Chow (*p-value*)	2.56 (0.008)	2.56 (0.008)	-
Hausman (*p-value*)	-	8.680 (0.192)	8.680 (0.192)
Breusch Pagan (Prob)	244.01 (0.000)	-	244.01 (0.000)

Notes: *significant at 0.10, **significant at 0.05, ***significant at 0.01. Column I is the estimation result of pooled OLS (CEM). Column II is the fixed effect model (FEM), while column III is the random effect model (REM). Dependent variable = growth. Robust standard errors are in parentheses.

Table 6: Results of Sobel Test

	I	II	III
PV → FDI → Growth	3.375 (0.000)	0.952 (0.170)	1.716 (0.043)
GE → FDI → Growth	2.468 (0.006)	1.034 (0.150)	2.053 (0.020)

Notes: Column I stands for CEM, column II for FEM, and column III for REM. The values in parentheses are p-values.

Meanwhile, FDI significantly mediates the indirect effect of GE on economic growth. In other words, besides having a direct effect, GE also indirectly affects economic growth via FDI. However, the direct effect of GE on economic growth is negative (see Table 5), while its indirect effect via FDI is positive. It is a partial mediation when the independent variable affects the dependent variable directly and indirectly.

5. Discussion

5.1 The effect of governance on FDI

This study finds that PV and GE have a positive effect on FDI. It confirms the NIE theory that institutional aspects determine the level of investment. The existence of competition in obtaining FDI triggers each country to improve in this regard, i.e., improving the quality of PV and GE. Higher PV and GE could encourage investors to invest in ASEAN countries. This study is in line with previous studies such as Bailey (2018), Ozbozkurt and Satrovic (2018), and Abdella et al. (2018). This study confirms the importance of PV in creating a more productive investment climate.

This study indicates that foreign investors know host countries' political conditions. For instance, Japanese investors invested quite a lot in Vietnam because of its political stability (0.191 PV on average). Brunei, Malaysia and Singapore also get a fair amount of FDI due to their relatively high PV (see Table 3). Because of this, ASEAN countries should be more aware of controlling political conditions in their countries to invite more FDI inflow. Meanwhile, the effect of GE on FDI in this study proves that the quality of public services and the government's ability to formulate and implement policies are critical to foreign investors' decisions.

Foreign investors need certainty that their investment will run smoothly and be supported by the policies of the host country's government. Foreign investors not only consider economic aspects such as wage levels and the availability of raw materials, but also pay attention to ease of investment. This study is in line with Jadhav (2012) and Khushnood et al. (2020), who state that GE positively affects FDI.

5.2 The effect of FDI on economic growth

This study finds that FDI positively affects economic growth in ASEAN countries. This result reinforces the relevance of several economic growth theories, including Keynesian, neoclassical, and Romer's endogenous model. Based on the Keynesian view, FDI is the investment element that increases capital and income (Hong & Li, 2017). FDI can also produce knowledge transfer, which, according to Romer (1986), increases marginal productivity. The result of this study is in line with many studies such as Kosztowniak

(2016) in Poland, Masipa (2018) in South Africa, Mehic et al. (2013) in Southern Europe, and Osei and Kim (2020) in 62 middle and high-income countries.

This study confirms that ASEAN countries' efforts in pursuing more FDI tend to be appropriate, as it can encourage economic growth. However, when referring to Findlay (1978), FDI must be able to increase the technological capacity of host countries. Therefore, ASEAN countries need to consider priority sectors. FDI inflows must support technological capacity building and create more job opportunities for citizens of the host countries.

The findings in this study are in line with previous studies conducted by Sothan (2017), Siddiqui and Parikh (2018), and Hakim and Rosini (2022). The results confirm the positive influence of FDI in developing countries. In this context, most ASEAN countries are developing, so they need more FDI to increase their economic growth. As seen in Table 3, several ASEAN countries, such as Indonesia, the Philippines and Thailand need to be more aggressive in increasing FDI, as the inflows in these countries are low compared to their GDP size.

5.3 The direct effect of governance on economic growth

This study finds no positive direct effect of governance proxied by PV on economic growth. In Table 3, countries with a reasonably high average of PV, such as Brunei, Malaysia, and Singapore, have lower economic growth. However, these three countries have the largest GDP per capita in ASEAN. On that basis, PV may no longer be essential in affecting economic growth in countries with higher incomes. However, this assumption needs to be examined in specific studies that analyse the effect of PV on economic growth in high-income countries.

This study differs from the mainstream studies such as those of Phul et al. (2020) and Yakubu et al. (2020), who find that PV affects economic growth positively. Nevertheless, the findings are in line with those of Feyisa et al. (2022), as well as Shirley (2008), who notes that there is still debate on whether PV affects economic growth, or whether a country with a better economy could produce higher stability. This study implies the importance of using other proxies in measuring political stability. Several researchers, such as Tabassam et al. (2016), examine the effect of political instability on economic growth. In this context, the effect of political instability is

supposed to be more accurate in measuring the level of severity. A country's involvement in a war or prolonged conflict negatively affects its economic growth. This means that there is a need to classify the severity of political instability to ascertain how political stability affects economic growth.

On the other hand, this study reveals a somewhat controversial finding on the direct relationship between GE and economic growth, with its direct effect being negative. We call this controversial because this result contradicts NIE theory and many previous studies—specifically, Nedić et al. (2020), who maintain that GE positively affects economic growth. The quality of governance characterised by commitment, credibility, and policy effectiveness is supposed to affect economic growth positively. However, this negative direct effect may be due to the cost of improving the quality of GE, which becomes an opportunity cost for economic growth. Countries with democratic systems tend to have a higher bureaucracy management cost. In Indonesia, for instance, the budget for bureaucratic reform in 2022 is around USD387 million. The size of this budget may not always correspond with increases in GE. Improving GE is complex, requiring a continuous change in bureaucratic culture.

Referring to Table 3, several countries with high average economic growth, such as Cambodia, Indonesia, Laos, Myanmar, and Vietnam, have relatively lower GE. These countries (except Vietnam) adhere to a democratic system. This indicates that democratic countries do not always have a good bureaucracy. Claassen and Magalhães (2022) argue that the relationship between democracy and GE is unclear, while Duho et al. (2020) find no effect of democratic government on GE.

Despite that, these countries also have a relatively large area and bureaucratic structure. The size of the bureaucratic structure can result in inefficiency. The size of the bureaucratic structure indicated a bigger government size. A larger government size will lower economic growth (Nirola & Sahu, 2019). Moreover, the quality of governance has a diminishing marginal return effect on economic growth (Liu et al., 2018). This reinforces this study's finding that a higher GE indicates a more bureaucratic structure, leading to a lower economic growth impact.

5.4 The indirect effect of governance on economic growth

This study finds a complete mediation relationship in the indirect effect of PV on economic growth by FDI as mediating variable. This implies that PV does not directly affect economic growth but should be mediated by FDI. The role of FDI in mediating the indirect effect of PV on economic growth is positive and significant. Although PV does not directly affect economic growth, ASEAN countries still need to maintain PV to maximise FDI levels, as the amount of FDI inflow affected by PV will encourage economic growth. This mediation relationship could explain why PV does not directly affect economic growth. Countries with adequate PV will not necessarily have better economic growth if this is not balanced with significant FDI inflow.

On the other hand, this study finds a partial mediation relationship in the indirect effect of GE on economic growth with FDI as a mediating variable. This implies that GE affects economic growth directly and indirectly. However, the direct effect of GE on economic growth is negative. This may be due to the high cost involved in encouraging the increase of GE. However, adequate GE is still needed to increase FDI, which can in turn encourage economic growth. This study also indicates that the government's efforts to increase GE must align with an increase in FDI. An increase in GE must accompany the size of FDI and vice versa.

5.5 Robustness checks

In declaring the robustness model, we compared the results of the REM model with covariance-based structural equation modelling (CB-SEM) and partial least square structural equation modelling (PLS-SEM) methods. The estimation results summary from the primary analysis and robustness checks in this study are reported in Table 7.

Table 7: Summary Statistics of REM, CB SEM, and PLS-SEM Estimations

	I	II	III
PV → FDI	1.945** (0.873)	2.091*** (0.541)	0.322*** (0.051)
GE → FDI	2.966** (0.935)	1.668*** (0.469)	0.277*** (0.074)
FDI → Growth	0.202** (0.075)	0.224*** (0.041)	0.348*** (0.085)
PV → Growth	0.275 (0.654)	-0.119 (0.343)	-0.029 (0.090)
GE → Growth	-1.723*** (0.429)	-1.596*** (0.296)	-0.412*** (0.078)
PV → FDI → Growth	1.716**	0.468** (0.149)	0.112*** (0.030)
GE → FDI → Growth	2.053**	0.373** (0.126)	0.096** (0.039)

Notes: *significant at 0.10, **significant at 0.05, ***significant at 0.01. Column I is REM from primary analysis (GLS method). Columns II and III are the estimation result from CB SEM and PLS-SEM. All estimates include control variables: Covid 19, inflation, and labour force. Standard errors are in parentheses.

Table 7 shows that the coefficient values from the three estimations are slightly different. However, these coefficients' statistical power (significance) is similar. For example, the positive effect of PV and GE on FDI is significant in all estimation results. Thus, the results of this study are robust based on the REM, CB-SEM, and PLS-SEM models.

6. Conclusion and Recommendation

This study finds that governance proxied by PV and GE positively affects FDI, which in turn has a positive effect on economic growth. However, there is no direct effect of PV on economic growth. A somewhat controversial shred of empirical evidence was found, where the direct effect of GE on economic growth was negative. This study finds a complete mediation relationship between PV, FDI, and economic growth and a partial mediation relationship between GE, FDI, and economic growth. These results indicate the importance of FDI in mediating the indirect effect of governance to encourage growth.

This study suggests that ASEAN countries can improve governance quality, especially PV and GE, to increase the amount of FDI inflow. However, improvements to GE must be practical, effective, and systematic due to government opportunity costs. This is important because this study indicates that inefficiencies in increasing GE could affect economic growth negatively. This study contributes to the literature on the role of FDI in

mediating the effect of governance on economic growth. Nevertheless, this study has limitations, especially in determining the governance indicators, as it only employed PV and GE to measure governance. Therefore, future studies can fill this gap by using better data.

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