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Government Effectiveness, Political Stability And Economic Development: Evidence From Asean-5 Panel Data Model

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Abstract

This study analyzes the impact of government effectiveness and political stability on economic growth, as measured by GDP per capita, in five ASEAN countries: Indonesia, Malaysia, Singapore, Thailand, and the Philippines. Using panel data analysis from 2002 to 2022, the study explores how institutional factors and macroeconomic variables influence economic performance. Government effectiveness, which reflects the quality of public services, bureaucratic capacity, and policy credibility, and political stability, which indicates the absence of domestic conflict and uncertainty, are the two key variables tested. The study also incorporates macroeconomic indicators such as unemployment and inflation to control for economic conditions. The findings show that both government effectiveness and political stability have a significant positive impact on GDP per capita, while higher unemployment rates negatively affect economic growth. On the other hand, inflation has a relatively small positive effect on GDP per capita. These findings underscore the importance of strong institutions and political stability in fostering an environment conducive to sustainable economic development. This research contributes to the literature on governance and economic growth in Southeast Asia and provides insights for policy formulation aimed at enhancing institutional quality and maintaining political stability for long-term economic prosperity.

Keywords: Government Effectiveness ; Political Stability ; GDP per Capita ; ASEAN ; Panel Data Analysis

1. Introduction

Sustainable economic growth is one of the main goals that many countries in various regions of the world want to achieve, by increasing Gross Domestic Product (GDP) per capita. GDP per capita is used as an indicator of a country's economic welfare because it reflects the average income of the community and national production. Amid global and regional dynamics, internal factors related to governance and issues of strengthening democracy have emerged in economic development studies to see their relationship to economic indicators. This is marked by the World Bank's efforts to adopt the findings Kaufmann et al. (1999) regarding the aggregation of governance indices into the Worldwide Governance Indicators (WGI). WGI contains indicators of government effectiveness, rule of law, control of corruption, political stability, regulatory quality, and people's voice and accountability. We take two of the six indicators contained in WGI, government effectiveness and political stability, to test their effects on per capita income in ASEAN countries.

Government Effectiveness reflects the quality of public services, bureaucratic capacity, and credibility of government policies. Countries with effective governments tend to be able to create an environment conducive to investment and economic growth. Conversely, weak government effectiveness can be an obstacle to long-term economic development. Political Stability is also a crucial factor in creating a safe business climate and attracting investment. Political instability can cause economic uncertainty, hinder economic activities, and reduce investor and market player confidence. Therefore, stable political conditions are believed to be able to support better economic growth.

A number of previous studies have been conducted in showing the role of government effectiveness and political stability on economic development. The study conducted by Alam et al. (2017) in 81 countries using the GMM estimation technique shows that government effectiveness has a significant effect on economic growth. With a similar estimation technique,Han et al. (2014) prove that government effectiveness and political stability affect per capita income in developing countries in the Asian region (Developing Asia). They also observed that Developing Asia countries that have a surplus on indicators of government effectiveness, regulatory quality and corruption control experience annual economic growth two percentage points higher than countries that show deficits on all three indicators. The position of surplus and deficit on the WGI indicator can be observed based on the range of positive 2.5 to minus 2.5 of the indicator value for each country.Emara & Chiu (2016) also shows strong statistical evidence that governance effectiveness aggregated with the other five WGI indicators has a significant impact on economic growth in the Middle Eastern and North African (MENA) region. Meanwhile, on the other hand, a study conducted by The Last Supper (2021) has not shown a strong statistical significance of the influence of government effectiveness and political stability on economic growth across ASEAN countries throughout the period 2002-2018. This invites further discussion regarding the relationship between governance factors that utilize WGI data with economic development indicators in the Southeast Asian region, after seeing various studies in other regions that actually show a significant relationship between the two dimensions.

For this reason, this study focuses on the Southeast Asian region by taking a sample of five ASEAN countries or often referred to as ASEAN-5, Indonesia, Malaysia, Singapore, Thailand, and the Philippines. These five countries have relatively diverse economic and political characteristics, making it interesting to observe how the combination of government effectiveness and political stability variables of GDP per capita in these countries. Furthermore, in order to obtain reliable estimation results, this study also attempts to keep macroeconomic variables used, so that they become control variables in the estimation model. We take the unemployment rate and inflation to represent the macroeconomic conditions of ASEAN countries. The next section of this article consists of Theoretical Background, Methodology, Empirical Findings/Results, Discussion, and Conclusion.

2. Methodology

This study uses a quantitative approach with panel data analysis to examine the influence of independent variables (government effectiveness, political stability, unemployment rate, and inflation) on the dependent variable (GDP per capita) empirically in five ASEAN countries : Indonesia, Malaysia, Singapore, Thailand and the Philippines. Panel data was chosen because it allows for a more in-depth analysis by combining time dimensions (time series) and individual dimensions (cross-section), so that it can capture temporal dynamics and heterogeneity between countries. The data used comes from the World Bank, both for GDP per capita data and data on government effectiveness, political stability, unemployment rate and inflation. The observation period ranges from 21 years, 2002 to 2022 to obtain a stable trend.

The model used in this study is the Random Effect Model, after going through a series of the most relevant panel data tests. The testing process is reported in the empirical findings in the next section. The research model is as follows.

$$log\_gdp_{it} = \beta_0 + \beta_1 govnes_{it} + \beta_2 polstab_{it} + \beta_3 unem_{it} + \beta_4 inf_{it} + \varepsilon_{it}$$

Where:$log_gdp$is GDP per capita in logarithmic form; is the level of government effectiveness; is the level of political stability; is the unemployment rate; is the inflation rate; is a constant; , , are regression coefficients; is the error term; indicates individual variation in ASEAN-5 countries; and refers to the observed time variation. $govnes\ polstab\ unem\ in\ f\beta_0\beta_1, \beta_2\beta_3\beta_4\varepsilon it$ For this reason, there are a number of hypotheses put forward based on the previous theoretical background and framework :

H1: Government effectiveness has a significant positive effect on GDP per capita.
H2: Political stability has a significant positive effect on GDP per capita.
H3: Unemployment rate has a significant negative effect on GDP per capita.
H4: Inflation has a significant negative effect on GDP per capita.

In estimating the panel data regression model, we use the Stata 14 application. The estimation procedure begins by observing the statistical summary of each variable, selecting the most suitable panel data model, and testing

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the selected panel data. The study observes the estimation results by comparing them with the degree of significance or alpha (α), either at the level of 0.01; 0.05; or 0.10. The hypothesis is said to be proven by taking one of the P-Value values, if the estimation result is less than the alpha (α) value, then the regression output is proven to be statistically significant. For example, if the P-Value <0.05, it means that there is a significant influence between one independent variable on the dependent variable, conversely if the P value> 0.05, then there is no significant influence between one independent variable on the dependent variable.

3. Result and Discussion

Based on the statistical summary, it can be observed that the average value of per capita income (log_gdp) was recorded at 8.798 with a minimum value of 6.790 and a maximum of 11.390. This indicates a relatively striking heterogeneity in the level of per capita income among ASEAN-5 countries throughout 2002 to 2022. The transformation of data into logarithmic form aims to normalize the distribution of income data to facilitate the interpretation process. Furthermore, the level of government effectiveness (govnes) shows an average value of 0.658 with a range of -0.597 to 2.470. This variation shows differences in the institutional capacity of ASEAN-5 countries in designing and implementing policies and public services. Meanwhile, the polstab variable which reflects political stability shows a negative average of -0.294, with a minimum value of -2.095 and a maximum of 1.599. The negative average value indicates that the ASEAN-5 countries observed still tend to be in political instability. This certainly has the potential to be an obstacle in the development process.

In addition to institutional indicators, this study also prepares two other macroeconomic indicators, the unemployment rate (unem) and inflation (inf) with the aim of observing the consistency of the estimated output of per capita income when linked to key macroeconomic indicators. On average, the unemployment rate in ASEAN-5 countries is at 3.514 percent. The lowest unemployment rate occurred in Thailand at 0.249 percent in 2013, while the highest was 8.060 percent in Indonesia in 2006. Finally, the inflation rate shows an average of 2.814 percent in ASEAN-5, with the highest inflation being 13.106 percent which occurred in Indonesia in 2005 and the lowest touching the deflation position, minus 1.139 percent which occurred in Malaysia in 2021, coinciding with the Covid-19 Pandemic. In general, this statistical summary shows the complexity and diversity of development dynamics, both in terms of economic performance and institutional quality. The variations reflected in the available data provide a strong empirical basis for analyzing the correlation between indicators of governance, macroeconomic stability, and development achievements as indicated by GDP per capita.

Table 1. Summary Statistics

Variable	Obs.	Mean	Min.	Max.
Country	105	3	1	5
Year	105	2012	2002	2022
log_gdp (percent)	105	8,798	6,790	11,390
government (point)	105	0.658	-0.597	2,470
polstab (point)	105	-0.294	-2,095	1,599
unem (percent)	101	3,514	0.249	8,060
Inf (percent)	105	2,814	-1,139	13,106

*Source:*Data Processed, 2025

Selecting The Data Panel Model

The results of the panel data estimation model testing using three main techniques, the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test. These three tests are carried out sequentially to determine the most appropriate model among Pooled Least Squares (PLS), Fixed Effect Model (FEM), and Random Effect Model (REM). The test begins with the Chow Test which aims to evaluate whether the Fixed Effect model is more

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appropriate than Pooled Least Squares. The test results show a probability value of 0.0001 which is significantly below the significance level of 0.05 (5%). Thus, the null hypothesis stating that the PLS model is rejected. This indicates a significant individual effect between cross-section units in the data, so that FEM tends to be more appropriate than the PLS model.

The next step is to perform the Hausman Test to compare FEM and REM. This test is used to determine whether there is a correlation between individual effects and independent variables in the model. The results show a probability value of 0.8613, which is more than 5%. Thus, the null hypothesis is not rejected and indicates that REM is relatively more consistent and more statistically efficient. Therefore, REM is a more appropriate model than FEM in this context.

To ensure that the use of REM is indeed more relevant than the PLS model, the last model was tested using the Lagrange Multiplier Test. The test results show a probability value of 0.0000, which clearly rejects the null hypothesis. This confirms that the individual effect variance is statistically significant and REM is better able to capture cross-country variation than the PLS model or the Common Effect Model (CEM).

Table 2. Summary of Model Testing

Testing Model	P-Value
Chow Test (Prob>F)	0.0001
Hausman Test (Prob>chi2)	0.8613
Lagrange Multiplier Test	0.0000

*Source:*Data Processed, 2025

Panel Data Estimation Result

Table 3 shows a summary of the three Random Effect Model (REM) models used in measuring the influence of government effectiveness and political stability on per capita income in ASEAN-5 countries. Model 1 only places the two governance indicator variables as explanatory variables, model 2 adds two macroeconomic variables, the open unemployment rate and inflation, and model 3 applies the standard error (robustness error).

$$log\_gdp_{it} = 8{,}704 + (0{,}793)govnes_{it} + (0{,}461)polstab_{it} + (-0{,}105)unem_{it} + (0{,}026)inf_{it} + e_{it}$$

The results of panel data estimation using REM, found that government effectiveness (govnes) shows a statistically significant positive relationship to economic growth in all model specifications. In model (1), the coefficient of 0.975 is significant at the one percent (1%) level indicating that a one-point increase in government effectiveness is correlated with a 0.975 percent increase in GDP per capita. The stable coefficient value in models (2) and (3), which is 0.793, further strengthens the evidence that better institutional performance of government in designing and implementing policies has a positive effect on achieving higher economic output. Furthermore, political stability (polstab) also shows a significant contribution to economic growth. The coefficient of 0.2251 in model (1) and increases to 0.4609 in models (2) and (3), each significant at the five percent (5%) level. This finding reflects that a stable political context, which is free from domestic conflict, political pressure, and institutional uncertainty, is correlated with an increase in per capita income. Political stability in a country is able to guarantee the process of capital accumulation and investment, as well as the sustainability of development programs optimally.

In models (2) and (3), the unemployment rate variable (unem) is included, which shows a negative and significant effect at the one percent (1%) level. The coefficient of -0.1047 indicates that when open unemployment increases, GDP per capita is predicted to fall by around 0.105 percent in ASEAN-5 countries. This estimation result is consistently found in models (2) and (3). Furthermore, the inflation variable (inf) also shows a statistically significant positive effect on GDP per capita, with a coefficient of 0.0257. This coefficient is relatively small, but significant at the five percent (5%) level. This estimation result basically indicates that

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what is behind inflation in ASEAN-5 countries is output expansion and increased domestic demand, allowing for an increase in aggregate prices. This condition is a common context in the dynamics of a country's economy.

The final model (model 3) shows an R-squared value of 0.9138, indicating that more than 91.4 percent of the variation in log GDP per capita can be explained by the independent variables used, while the remaining 8.6 percent is explained by other variables not included in the model. The Prob (F-statistic) value of 0.0000 confirms that the applied model has statistical significance and contributes to the variation in economic output simultaneously.

Table 3. The Estimate of Random Effect Model

Dependent Variable: log_gdp (percent)			
Independent Variable	**Coef.** **Std. Err.**	**Coef.** **Std. Err.**	**Coef.** **Std. Err.**
government (point)	0.9753*** (0.1685)	0.7928*** (0.1154)	0.7928*** (0.2008)
polstab (point)	0.2251** (0.1115)	0.4609** (0.1000)	0.4609** (0.2010)
unem (percent)		-0.1047*** (0.0238)	-0.1047*** (0.0332)
Inf (percent)		0.0257 (0.0165)	0.0257** (0.1256)
Cons	8,1941*** (0.1868)	8,7038*** (0.1427)	8,7038*** (0.2446)
Observation	101		
Groups	5		
R-Squared of Model (3)	0.9138		
Prob (F-Statistic)	0.0000		

*Standard errors in parentheses****p<0.01, **p<0.05, *p<0.10
*Source:*Data Processed, 2025

Discussion

The empirical findings in this study underline the importance of institutional roles, particularly government effectiveness, as a key determinant in driving economic development in the ASEAN-5 region. Government effectiveness as demonstrated through bureaucratic capacity, quality of public services, and policy credibility has been shown to have a significant positive effect on increasing Gross Domestic Product (GDP) per capita. Previously,Alam et al. (2017), Han et al. (2014), And Emara & Chiu (2016)found the same results with different modeling variations.Furthermore, the consistency of the coefficient significance across all estimation models suggests that countries with effective governance tend to be better able to create a stable economic climate, attract investment, and design development policies that can be executed efficiently. This is in line with institutional theory which asserts that the quality of institutions is an essential factor in ensuring economic efficiency and long-term growth.(North, 1990b). Singapore can be used as a concrete illustration, where high government effectiveness is reflected in institutional reform, service efficiency, and policy certainty that ultimately drives stable and sustainable economic growth.

In line with that, political stability also shows a significant role in influencing the economic output of ASEAN-5 countries. The findings support a study conducted by Aisen & Veiga (2013) and Altun (2016) which explains that political instability is associated with low economic growth, which is also observed using panel data analysis.In our investigation, the increase in the political stability coefficient after including macroeconomic variables into the model indicates that the context of a complex economic environment is often followed by political stability becoming more crucial. Political uncertainty such as power conflicts, changes in government that often cause social unrest, or weak legal certainty have the potential to create an uncertain investment climate and hinder the realization of development. The findings of this study also confirm the study Barro (1996) which states that political stability has a negative correlation with economic risk and tends to be positive towards long-term economic growth. Therefore, efforts to maintain political stability, through law enforcement, increasing political accountability, and strengthening the democratic system, need to be a priority agenda in the economic development strategy of ASEAN-5 countries.

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In addition to institutional factors, macroeconomic indicators such as unemployment also make an important contribution in explaining variations in GDP per capita. The estimation results show that an increase in the unemployment rate has a negative and significant impact on GDP per capita. This finding reflects the close relationship between employment and national production capacity. Within the framework of Keynesian theory and Okun's law, high unemployment indicates weak aggregate demand which then suppresses household production and consumption activities. ASEAN countries that are unable to create sufficient jobs for their productive-age population are at risk of economic stagnation, regardless of efforts to increase investment or institutional reform. Therefore, creating an inclusive labor market that is responsive to industry needs is an important requirement to ensure that economic growth is also equitable and sustainable.

Meanwhile, it was found that inflation has a significant positive effect on GDP per capita. Conventionally, high inflation is associated with price instability and disruption to people's purchasing power, which ultimately suppresses economic growth. However, in the context of ASEAN-5, the inflation that occurs seems to reflect dynamic domestic demand growth and increased production activities, not only caused by cost pressures or structural imbalances. In such conditions, inflation can be considered an indication of controlled economic expansion, as long as it remains within tolerance limits and is controlled through prudent monetary policy. Thus, inflation is not always a negative signal, but can reflect the dynamics of active economic growth, especially in the post-pandemic recovery phase or expansion cycle.

Overall, the integration of institutional and macroeconomic factors in this model is able to solidly explain the achievement of economic development output in ASEAN-5 countries. This indicates that economic development is not solely influenced by market factors and monetary policy, but also highly dependent on the quality of governance and the accompanying political stability. Therefore, economic development strategies in ASEAN countries in general need to prioritize a more holistic approach, for example by strengthening the capacity of public institutions, maintaining political stability through strengthening the democratic and legal systems, and creating a conducive macroeconomic climate with an emphasis on job creation and careful inflation control. This study not only provides empirical contributions to the study of development in Southeast Asia, but also offers relevant policy implications in the context of developing countries that are simultaneously building institutional and economic foundations.

4. Conclusion

This study shows that institutional dimensions, particularly government effectiveness and political stability, play a key role in driving economic growth in ASEAN-5 countries. Good governance effectiveness, reflected in the quality of public policies and services, can create a stable and conducive environment for economic development. Political stability also supports the creation of a safe investment climate, which in turn encourages capital accumulation and increased productivity. On the other hand, macroeconomic variables such as unemployment and inflation also affect economic growth, with high unemployment and uncontrolled inflation hampering the achievement of optimal growth. Overall, to achieve inclusive and sustainable growth, ASEAN countries need to strengthen their institutional capacity while maintaining political stability and healthy macroeconomic conditions.

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