

The Determinant Effect of Macroeconomic Variables on Political Stability of Six ASEAN Member States

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Abstract. ASEAN (Association of Southeast Asian Nations) member countries experience complex political and economic dynamics, which are interrelated and can impact each other. Political stability and economic growth are critical to the success of a country. The dependent variable in this research is the Political Stability variable and the independent variables used in this study are the Economic Growth, Foreign Direct Investment, Inflation, and Exchange Rate variables. The purpose of this study is to determine how much influence macroeconomic variables have on the political stability of a country in the ASEAN region. The model used in this study is a panel data regression model. The data source used in this study was obtained from the worldbank indicator. The time series data used is data from 2015-2022 and the cross section data used consists of six ASEAN member countries. The results showed that the economic growth variable and the inflation variable had a significant positive effect on political stability and the foreign direct investment variable and the exchange rate had no significant effect on the political stability variable of six ASEAN member countries..

Keywords: Political Stability, Economic Growth, Foreign Direct Investment, Inflation, Exchange Rate
1 Introduction

1. INTRODUCTION

ASEAN (Association of Southeast Asian Nations) countries have complex political and economic dynamics, which are interrelated and can influence each other. A country's success depends on two critical elements: political stability and economic growth. A pattern of beliefs and actions shared by all elements of the political process that represents the durability of power structures and dynamics with the aim of controlling the effectiveness of governance is known as political stability. According to Plano (1989), stability is the absence of major changes to the political system or changes that occur within predetermined parameters. According to Saint (1982), there are three interconnected elements that make up political stability: appropriate economic growth, modification of institutional structures, and political processes. Macro-prudential policies have an important position in the financial aspects of many countries (Davis et al. 2022). Macro-prudential policies implemented in developing countries are carried out to mitigate and prevent future financial stability risks (Salim & Suripto, 2023).

ASEAN is a region of eleven countries with striking cultural, social, and economic diversity. Although there are significant differences among ASEAN countries they have a common goal to achieve political and economic integration in the region. The government has the power and authority to regulate its territory by optimizing, recording and managing existing resources with the aim of implementing economic development through the management of central and regional areas (Ramadhona et al., 2022). In a globalized world, the relationship between macroeconomic variables and political stability is becoming increasingly important. Economic fluctuations can impact a country's political resilience, while good political stability can create a conducive environment for economic growth.

The Political Stability Index, released by the World Bank, evaluates a country's level of stability, respect for human rights, record of constitutional order, and level of democracy. The index measures the relationship between potential threats to national security and the effectiveness of the country's government. According to Wahid (2018), threats include revolution, instability, and terrorism. Macroeconomic factors such as economic growth and inflation have a significant impact on political stability. Significant changes in these variables can trigger political shifts and affect the stability of a country. In contrast, other macroeconomic factors such as foreign direct investment and real interest rates do not have a significant impact on a country's political stability. Leadership changes, internal conflicts, and threats from extremist groups are some of the signs of political stability in ASEAN countries. It is important to develop effective policies to manage political stability in the region.

Accelerating economic growth in the Southeast Asian region is one of the objectives behind the formation of ASEAN (Arno, 2015). A country or region experiences economic growth when the production of its products and services increases over time. Gross National Product (GNP), GDP, and per capita income are some examples of measures used to evaluate economic progress. If a country achieves significant economic improvement, these indicators are used (Todaro & Smith, 2013). With a high growth rate, the economy can show how good the economic health of a country is (A'yun & Khasanah, 2022). However, it is important to remember that foreign aid and foreign direct investment do not always contribute to economic growth, especially when political stability is shaky (Afdhal Mubarak et al., 2023). In fact, a country's economic condition may deteriorate due to unstable political policies. Therefore, it is

important to consider the level of political stability in developing countries to promote economic progress (Bhandari et al., 2007). In fact, the political stability of developing countries needs to be carefully considered if they hope to spur economic expansion. According to the Harrod-Domar theory (Mankiw, 2006), economic growth is achieved through increased production capacity followed by increased investment. However, unbalanced growth can lead to social and political conflict (Sari & Satrianto, 2021).

Foreign direct investment (FDI) can strategically drive the economy. Even more than portfolio investment funding, FDI has become a major source of external financing in developing countries. More than 40% of the 1.75 trillion dollars of global foreign investment went to developing countries in 2016 (ASEAN Secretariat, 2016). FDI has the ability to bring new technologies, increase productivity, and create more jobs (Kurniawan & A'yun, 2022). However, as there are possible conflicts associated with the distribution of economic benefits, the impact of FDI on political stability should be further scrutinized.

Executive instability and signs of public unrest and political violence are two markers of political instability. Executive instability refers to "constitutional" or "unconstitutional" changes of government, such as coups (Odionye et al., 2023). Policy uncertainty and property rights risks can arise from high levels of executive change. It is important to remember that the actual rate of change may differ from the trend of executive change (Alesina & Perotti, 1996). Economic growth driven by foreign investment can be influenced by political stability in developing countries, leading to increased economic development (Hastuti, 2018). Political instability can hinder international aid efforts, reducing foreign investment interest (Nurhasanah, 2022). Therefore, political stability needs to be taken into account when evaluating how aid and foreign investment affect developing countries' potential to develop economically (Asiedu, 2006).

After the monetary crisis in 1998, the development of the Indonesian economy began to change so that the inflation rate between 1999-2019 could be controlled by the government through various policy instruments. To maintain people's purchasing power, the inflation rate must be controlled (Murtaza Hussain et al. 2022, n.d.). According to Rahardja and Manurung (2008), inflation is defined as an increase in the prices of common goods. However, high or unstable inflation can lead to economic uncertainty and political stress. As a result, it is important to understand the impact of inflation on ASEAN's political stability (Tanaya et al., 2022). Maintaining political and economic stability requires continued monetary stability. Changes in exchange rates have the potential to create uncertainty and impact a country's political climate. Previous research usually focuses on analyzing macroeconomic variables such as FDI, which affect economic growth if a particular country is politically stable and only at the national level, without paying attention to the overall ASEAN regional context and also does not really discuss how the influence of macroeconomic variables itself on political stability in the six ASEAN member countries (Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam). This research will fill this gap by providing a more comprehensive understanding of how economic and political variables interact with each other at the ASEAN regional level.

2. RESEARCH METHODS

This study investigates the influence of macroeconomic variable determinants on political stability in ASEAN countries using a comprehensive methodology. The panel data regression

test will be carried out by selecting the best model consisting of model estimation, model fit test, classical assumption test, and statistical test (Nurul Azizah Az zakiyyah, Firsty Ramadhona Amalia Lubis, 2023). The data analysis method in this research uses quantitative data analysis techniques. Quantitative data analysis is done by analyzing problems that are realized with data that can be explained quantitatively (Yuniarti & Sukarniati, 2021). Statistical analysis methods are used to identify quantitative relationships between macroeconomic variables, which include economic growth, foreign direct investment, inflation, and exchange rates, and political stability at the national and ASEAN regional levels. As the data used in this analysis are cross-sectional data covering six ASEAN countries and time series data from 2015 to 2022, econometric analysis tools-specifically panel data analysis-were used.

This study uses a wide range of variables, including independent and dependent factors. In this study, economic growth, foreign direct investment, inflation, and exchange rate are the independent variables, and political stability is the dependent variable. Furthermore, the panel data sample used in this study consists of six ASEAN member countries: Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam.

Table 1. Data Source

Variable	Description	Source	Unit
sp	Political Stability	Worldbank Indicators	Percent
pe	Economic Growth	Worldbank Indicators	Percent
fdi	Foreign Direct Investment	Worldbank Indicators	Percent
inf	Inflation	Worldbank Indicators	Percent
kurs	Exchange Rate	Worldbank Indicators	Percent

This research uses a panel data equation model, which is as follows:

$$sp_{it} = \beta_0 + \beta_1 fdi_{it} + \beta_2 pe_{it} + \beta_3 inf_{it} + \beta_4 kurs_{it} + e_{it}$$

Keterangan:

sp : Political Stability

pe : Economic Growth

fdi : Foreign Direct Investment

inf : Inflation

kurs : Exchange Rate

β_0 : Mean value modifier

$\beta_{1,2,3,4}$: Slopes

i : Shows Country

t : Time series

e : Combined error time series and cross section

Data analysis

Three models are used in this study to examine panel data statistics: Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect (RAM). Panel data can be used to

estimate model parameters using various methods, including CEM, FEM, and REM. The Lagrange Multiplier is used by the Chow and Hausman tests to select the best panel data regression model. Of the four tests, the CEM, FEM, and REM models will be selected. There is a combination of time series data and cross section data in this panel data because this data consists of both types of data. STATA 14 is used in this study as an analytical tool, and the following tests are some of the many tests conducted:

1. Chou Test

In order to obtain the data, the chou test is required. In addition, the Fixed Effect Model (FEM) and Pooled Last Squared (PLS) will be used to form hypotheses such as:

H0: PLS model is better to use in research

Ha: FEM model is better to use in the study

If a decision is made, the probability value of F should be less than 5% alpha, which signifies rejection of H0 and acceptance of Ha. Conversely, Ha is rejected and H0 is accepted if the probability value of F is higher than 5% alpha.

2. Hausman Test

To collect data and select the Fixed Effect Model (FEM) and Random Effect Model (REM), the Hausman test is required. These models will form hypotheses such as:

H0: Fixed Effect Model (FEM) is better to use in research

Ha: Random Effect Model (REM) is better used in research

If the Prob.F value is less than 5% alpha, then Ha is accepted and H0 is rejected, or vice versa. If the Prob.F value exceeds alpha 5%, then Ha is rejected and H0 is accepted.

3. Individual Significant Test (T-test)

To ascertain whether the independent variable (X) has a significant effect or not on the dependent variable (Y), all variables are tested for individual significance. To run the test, the t-count and t-table values with 5% alpha conditions can be compared. The results can be seen as follows:

Since there is no significant difference between the independent and dependent variables, Ha is rejected and H0 is accepted if the calculated T value is smaller than the T table value.

If the calculated T value is greater than the T table value, Ha is accepted and H0 is rejected. This shows that related factors such as independent and dependent variables have a large influence.

4. Simultaneous Test (F-test)

Simultaneous tests can be used to determine whether the independent and dependent variables together have an influence.

If the F-count is smaller than the F-table then Ha is rejected and H0 is accepted. This indicates that the independent and dependent variables are not simultaneously influenced.

If the F-count is greater than the F-table, it can be stated that H_a is accepted and H_0 is rejected. This shows how the independent and dependent variables have an impact on each other simultaneously.

3. RESULTS AND DISCUSSION

Examining how political stability analysis considers macroeconomic considerations is the objective of this study. This study found, as explained earlier in the panel data regression using Common effect, fixed effect, and random effect models, that Economic Growth and Inflation variables have a significant impact on Political Stability in six ASEAN member countries (Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam). On the other hand, political stability of the six ASEAN member countries is not significantly affected by foreign direct investment or exchange rate variables.

Results of Panel Data Analysis

Table 2 below shows the panel data model for Common Effects, Fixed Effects, and Random Effect.

Table 2. Aggregate Estimation Results of Panel Data Model for 6 ASEAN Member Countries

Variable	CEM	FEM	REM
<i>PE</i>	-0.38 (-0.64)	-0.50 (-2.34)**	-0.53 (-2.35)**
<i>FDI</i>	2.44 (9.32)***	-0.43 (-1.07)	-0.08 (-0.21)
<i>INF</i>	-1.00 (-0.82)	1.50 (2.98)***	1.13 (2.28)**
<i>Kurs</i>	0.59 (0.89)	-31.90 (-1.65)	-3.19 (-1.19)
<i>C</i>	37.89 (7.81)***	207.63 (2.25)**	68.75 (4.13)***

Source: Data Processed, Stata 14

Table 3 displays Selecting the appropriate model to use is the next step. Chow test and Hausman test are two steps in this process. The optimal model between Fixed Effect and Random Effect is determined by the Hausman test, while the optimal model between Pooled Least Squared and Fixed Effect is determined by the Chow test. The following are the results of the Hausman test and Chow test:

Table 3. Results of Chow Test and Hausman Test

Diagnostic Tools	
Hausman Test	0.0000
Chow test	0.0000

Source: Data Processed, Stata 14

The results of the Fixed Effect and Pooled Least Squares tests using the Chow Test are shown in Table 3. It is known that the probability value of $0.0000 < 0.05$ percent indicates that the Fixed Effect is the most appropriate model to use because it shows H_a is accepted or significant and H_0 is rejected. In addition, the Hausman test is used to identify the optimal model between Random Effect and Fixed Effect. The Hausman test results are also shown in Table 3, which compares the Fixed Effect and Random Effect using the Hausman Test. The Fixed Effect Model is the best model because the probability value is $0.0000 < 0.05$ percent which means significant

Table 4. Estimation of Fixed Effect Model (FEM) 6 ASEAN Member Countries

<i>Variable</i>	<i>Coef</i>	<i>Prob</i>	<i>Effect of Signification</i>
<i>PE</i>	-0.50 (-2.34)**	0.025	Significant
<i>FDI</i>	-0.43 (-1.07)	0.292	Not significant
<i>INF</i>	1.50 (2.98)***	0.005	Significant
<i>Kurs</i>	-31.90 (-1.65)	0.106	Not significant
<i>C</i>	207.63 (2.25)**	0.030	Significant
F (4,38) = 3.22			
Prob > F = 0.0226			

Source: Data Processed, Stata 14

From the estimation results shown in table 4, it is known that the two independent variables, namely Economic Growth and inflation, have a partial (individual) impact on Political Stability in the six ASEAN member countries with a significance level below alpha 5% or 0.05. This effect is simultaneous, as shown by the f-count value of 3.22 which is greater than the t-table value of 1.67793.

Interpretation Using T-table

With a Hausman value of 0.0000 and a Chow Test result of 0.0000, the Fixed Effect Model (FEM) is the most appropriate model for this study.

The T-table value is obtained using the formula $Df = \text{observation} - 1$ or $48 - 1 = 47$ and gets a T-table value of = 1.67793.

Interpretation of table 4 using the T-table test on the best model, namely the Fixed Effect Model (FEM) with the following results:

1. The Fixed Effect Model calculation produces a t-count value of (-2.34) for the economic growth variable, which is smaller than the t-table value of (1.67793). This is also

supported by the probability value of F which is smaller than alpha 5% or 0.05 so that H_a is accepted and the null hypothesis (H_0) is rejected. This indicates that among the six ASEAN member countries, the political stability variable is significantly influenced by the economic growth variable.

2. The t-count value of foreign direct investment variable (-1.07) is smaller than the t-table value (1.67793) according to the Fixed Effect Model calculation, this indicates that H_a is rejected and the null hypothesis (H_0) is accepted. This indicates that in the six ASEAN member countries, there is no clear correlation between the political stability factor and foreign direct investment.

3. The t-count value of the inflation variable, determined by the Fixed Effect Model, is (2.98) higher than the t-table value (1.67793). thus H_a is accepted and the null hypothesis (H_0) is rejected. This indicates that among the six ASEAN member countries, the political stability variable is significantly influenced by the Inflation variable.

4. The Fixed Effect Model calculation of the exchange rate variable has a t-count value of (-1.65) which is smaller than the t-table value (1.67793) so that H_a is rejected and the null hypothesis (H_0) is accepted. This indicates that among the six ASEAN member countries, the exchange rate variable has no real influence on the political stability variable.

Relationship between Economic Growth and Political Stability

This study shows that in six ASEAN member countries, the economic growth variable has a significant positive impact on the political stability variable. This is supported by the results of the T-count value which is greater than the T-table value or the probability value of $0.025 < 5\%$, which means it shows that if economic growth increases by 1%, it will increase political stability by 0.50%. So it can be said that the economic growth variable simultaneously affects political stability in the six ASEAN member countries. Economically, it can be seen that if there is an increase in political stability in the six ASEAN member countries, it will increase economic growth in countries that have stable politics, because countries that have good political stability will increase the country's economic growth steadily as well. This is in line with research (Sottilotta, 2012) which indicates that political risk is a risk caused by political unrest in a country which can then have an impact on the country's economy. So in other words, a country that has a good level of political stability will also be able to encourage positive economic growth.

Relationship between Foreign Direct Investment and Political Stability

The findings of this study show that, although foreign direct investment has a relatively negative or insignificant impact on political stability in six ASEAN member countries - Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam foreign direct investment does not significantly affect political stability. This is reinforced by the T-count value that exceeds the T-table value and the probability value of $0.292 > 5\%$, which indicates that the foreign direct investment variable has no effect on political stability in the six ASEAN member countries. Investors consider several political risks, such as destination country laws, government policies, and political stability (Elleuch et al., 2015). Economically, an increase in foreign investment in the six ASEAN member states will also increase the political stability of the six member states although not very significant. Thus, the current political risk can be attributed to the way the government functions to improve the economic climate for foreign investors (Agarwal & Feils, 2007; Elleuch et al., 2015). Although currently the influence of foreign direct investment has not been large enough on the stability of the six ASEAN member countries.

Relationship between Inflation and Political Stability

This analysis shows that inflation has a significant influence on political stability in six ASEAN member countries: Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. The probability value of $0.005 < 5\%$ or the t-count value which is smaller than the t-table value indicates that the inflation variable has a significant influence on political stability. This indicates that a 1% increase in inflation will cause an increase in political stability by 1.50%. So it can be said that the inflation variable simultaneously affects political stability in the six ASEAN member countries. The Consumer Price Index is the most commonly used inflation index. This index, which shows trends in consumer expenditure, is based on the costs of a chosen basket of commodities (Basit & Haryono, 2021). Economically, it can be seen that if there is an increase in political stability in the six ASEAN member countries, it will also increase inflation stability in countries that have stable politics, because countries that have good political stability will maintain and regulate their inflation rates well.

Relationship between Exchange Rate and Political Stability

This study shows that exchange rates have a negative impact or do not have a significant influence on political stability in six ASEAN member countries (Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam), although the effect of exchange rates on the

political stability of six ASEAN member countries is relatively negative or does not affect. This is supported by the results of the t-count value which is greater than the t-table value or the probability value of $0.106 > 5\%$, which means that the exchange rate variable has no effect on political stability in the six ASEAN member countries. From an economic perspective, exchange rates have little impact on political stability in a country. Because in terms of economics, currency exchange rates are very important, especially in terms of exchange rate certainty and minimizing the possibility of losing money due to exchange rate fluctuations (Subanti et al., 2019). Economically, the stability of exchange rates in the six ASEAN member countries will also be able to increase the political stability of the six member countries although not too significant because the maintained exchange rate can maintain exchange rate fluctuations.

4. CONCLUSIONS AND RECOMMENDATION

ASEAN (Association of Southeast Asian Nations) is a region of eleven countries with striking cultural, social and economic diversity. The success of a country depends on two essential elements: political stability and economic growth. All elements of the political process that embody the continuity of forms and power relationships to govern effectively exhibit a pattern of attitudes and actions known as stability.

A country's stability, its record of upholding constitutional order, respect for human rights, and the general strength of democracy are all measured by the Political Stability Index. This index calculates the relationship between a country's level of governance and potential risks to its security. Macroeconomic factors such as economic growth and inflation have a significant impact on political stability. Significant changes in these variables can trigger political shifts and affect the stability of a country.

The impact of macroeconomic factors on political stability in ASEAN countries is investigated in this study. The study found that while foreign direct investment and exchange rates do not significantly affect political stability, factors such as economic growth and inflation do. The Fixed Effect Model (FEM) reveals that foreign direct investment and exchange rate may not significantly affect political stability. However, economic growth and inflation have a positive influence on political stability.

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