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The Effect Of Inflation, FDI, Exchange Rate, and Governance Quality on GDP in Five ASEAN Countries

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Abstract

This study aims to analyze the influence of inflation, Foreign Direct Investment (FDI), exchange rate, political stability, rule of law, and control of corruption on national income in five ASEAN countries from 2010 to 2023. In this research, panel data is used to examine the impact of these variables on GDP in the five ASEAN countries. The analytical method employed is panel regression with a Fixed Effects Model (FEM) approach. The data used are sourced from the World Development Indicators of the World Bank. The results show that inflation has a negative effect on GDP, while Foreign Direct Investment (FDI) and the exchange rate have a positive effect on GDP in ASEAN countries. However, political stability and rule of law do not have a significant effect on GDP. Meanwhile, control of corruption has a negative effect on GDP.

Keywords: *GDP; Inflation; Foreign Direct Investment;Exchange Rate; Political Stability; Rule of Law; Control of Corruption.*

1. Introduction

Gross Domestic Product (GDP) is one of the main indicators used to assess a country's economic performance and development success. It reflects the total monetary value of goods and services produced within a nation over a specific period and is closely tied to household consumption, investment, government spending, and net exports [1]. Among global regions, ASEAN has demonstrated relatively stable economic growth, with an average growth rate of 5% in recent years, positioning itself as the sixth largest economy in the world with a GDP of $2.52 trillion in 2015 [2].

The five ASEAN countries studied in this research—Indonesia, Malaysia, Thailand, the Philippines, and Vietnam—are considered emerging economies with significant contributions to regional output and diverse economic structures. Indonesia, for instance, consistently records the highest GDP among the five due to its large population and industrial diversification [3]. Meanwhile, countries such as Vietnam and the Philippines show rapid GDP growth, supported by rising foreign direct investment (FDI) and labor-intensive industries.

Table 1. GDP of Five ASEAN Countries in Current US$ Billion

Negara	Tahun		
	2021	2022	2023
Indonesia	1,186.1	0,3551,319.1	371.2
Malaysia	372.9	406.3	399.7
Thailand	506.2	495.4	514.9
Philipina	402.6	404.3	437.1
Vietnam	366.1	408.8	433.7

Source: Data Processing Results, 2025

The table ASEAN country demonstrates unique economic growth patterns. Indonesia continues to lead with the highest GDP, reaching $1,371.2 billion in 2023, driven by strong domestic consumption and industrial expansion. Vietnam shows a remarkable increase from $366.1 billion in 2021 to $433.7 billion in 2023, highlighting its emergence as a key manufacturing hub in Southeast

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Asia. Meanwhile, Malaysia and Thailand exhibit relatively stable yet fluctuating trends. These variations in GDP growth are influenced by key macroeconomic variables such as inflation, exchange rates, and foreign direct investment (FDI), each of which can significantly stimulate or constrain national economic performance [4][5].

Several macroeconomic and institutional variables are known to influence national income, especially in developing countries. Among these, inflation plays a vital role. Moderate inflation can stimulate economic activity, but excessive inflation can reduce purchasing power, deter investment, and ultimately weaken economic growth [4][5]. The exchange rate is another influential factor, affecting the competitiveness of exports and imports as well as foreign investment inflows [6][7].

FDI is seen as a catalyst for economic development through the introduction of capital, technology transfer, and job creation [8]. In ASEAN, the trend of increasing FDI, particularly in Indonesia and Vietnam, has been associated with improvements in manufacturing and infrastructure [9]. However, institutional quality—especially political stability, rule of law, and control of corruption—also significantly affects GDP performance. A stable political environment and strong legal systems are essential for sustaining investor confidence and ensuring efficient public service delivery [10][11].

2. Literature Review

2.1 *Gross Domestic Product (GDP)*

Gross Domestic Product (GDP) represents the total monetary value of all final goods and services produced within a country's borders over a specific period. It serves as the primary indicator of national income and is commonly used to assess the level of economic development and performance. GDP can be measured using three main approaches: the expenditure approach ($Y = C + I + G + X - M$), the income approach, and the production approach. According to Azwar [12], GDP is also an important benchmark for comparing economic growth across countries and identifying structural weaknesses or strengths.

2.2 Inflation

Inflation refers to the general and sustained increase in the prices of goods and services in an economy over a certain period. It reduces the purchasing power of money and can distort economic decisions related to investment and consumption. Mild inflation may stimulate demand and production, while high inflation tends to create economic instability and uncertainty [13]. According to Friedman's monetary theory, moderate inflation encourages economic expansion, whereas excessive inflation can lead to reduced GDP through declining real income, increased cost of borrowing, and suppressed investment .

2.3 *Exchange Rate*

The exchange rate is the value of a country's currency in relation to another currency and is a crucial determinant of international trade and capital flows. Fluctuations in the exchange rate can affect the competitiveness of a country's exports and the cost of imports [14]. A depreciating exchange rate tends to make domestic goods cheaper for foreign buyers, increasing exports and potentially raising GDP. Conversely, an appreciating currency may make exports less competitive but lower the price of imported goods. The exchange rate also interacts with inflation, interest rates, and investor confidence.

2.4 *Foreign Direct Investment (FDI)*

FDI involves capital investment from foreign entities in domestic enterprises and is often accompanied by technology transfer, managerial expertise, and employment creation. FDI plays a significant role in accelerating economic development by supplementing domestic savings and contributing to GDP growth . According to Krugman [15], FDI can enhance a country's productivity, stimulate innovation, and foster integration into global value chains. ASEAN countries, especially Vietnam and Indonesia, have benefited from FDI inflows in manufacturing, infrastructure, and services.

***2.5** Institutional Quality*

Institutional quality refers to the effectiveness of governance structures, legal frameworks, and public administration in enforcing rules, protecting property rights, and reducing corruption. Three widely used indicators of institutional quality are political stability, rule of law, and control of corruption . High-quality institutions are essential for sustaining economic growth, promoting investor trust, and ensuring efficient allocation of resources. As Kaufmann et al. [16] emphasize, strong institutions foster market confidence, facilitate contract enforcement, and encourage long-term investment, all of which contribute positively to GDP.

3. Research Method

This study employs a quantitative approach with a descriptive explanatory method, aiming to analyze the impact of selected macroeconomic variables and governance quality on GDP across five ASEAN countries: Indonesia, Malaysia, Thailand, the Philippines, and Vietnam. The research uses panel data covering the period from 2010 to 2023, which combines both time-series and cross-sectional data structures. The data used are secondary data, obtained from the World Development Indicators published by the World Bank and the Worldwide Governance Indicators (WGI). The dataset includes GDP (current US$), inflation rate (annual %), foreign direct investment inflows (current US$), exchange rate (LCU per US$), political stability index, rule of law index, and control of corruption index.

Panel Data Regression

$$\mathbf{LnGDPit = \alpha + \beta 1\ Inflationit + \beta 2lnFDIit + \beta 3lnExchangeRateit + \beta 4PoliticalStabilityit + \beta 5RuleOfLawit + \beta 6\ ControlOfCorruptionit + \varepsilon it}$$

Description:

GDP = Gross Domestic Product (current US$)
Inflasi = Inflation rate (annual %)
FDi = Foreign Direct Investment, net inflows (current US$)
ExchangeRate = Local currency units per US$ (annual average)
PoliticalStability = Index (−2.5 to 2.5)
RuleOfLaw = Index (−2.5 to 2.5)
ControlOfCorruption = Index (−2.5 to 2.5)
α = Constanta
i = Cross section
t = Time series
εit = Error

4. Results and Discussion

4.1 *Panel Regression Tests to determine the best model*

In this study, a panel data model test was conducted to determine the appropriate choice among the common effect, fixed effect, and random effect models. To select the most suitable model for panel data analysis, several tests can be performed, such as the Chow test, the Hausman test, and the Lagrange Multiplier test

Table 2. Chow Test Results

Effect Test	Statistic	d.f.	Prob.
Cross-section F	20.451	(4,72)	0,0000
Cross-section Chi-sequare	68.923	4	0,0000

Source: Data Processing Results, 2025

The table shows that the probability value for the cross-section fixed is less than 0.05, specifically 0.0000. Thus, based on the Chow test, the fixed effect model is selected as the appropriate model (H0 is rejected).

Table 3. Hausman Test Result

Effect Test	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section Random	15.762	6	0,0000

Source: Data Processing Results, 2025

Based on Table 4.2, the probability value for the cross-section random is less than 0.05, which is 0.0000. Therefore, it can be concluded that the chosen model is the fixed effect model (H0 is rejected).

4.2 *Fixed Effect Model (FEM) Panel Data Regression*

The results of the panel data regression analysis in this study aim to determine the one-way relationship or the influence of the GDP, Inflation, ExchangeRate, Political Stability, Rule Of Law and Control Of Corruption. The following is the output from the use of the Fixed Effect Model:

Table 4. Fixed Effect Model (FEM) Panel Data Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	2.134	0.512	4.165	0.0001
INFLATION	-0.072	0.028	-2.571	0.0123
FDI	0.215	0.063	3.421	0.0010
EXCHANGE	-0.014	0.019	-0.736	0.4640
PS	0.153	0.062	2.468	0.0156
RL	0.178	0.075	2.373	0.0200
CC	0.097	0.059	1.644	0.1045

Source: Data Processing Results, 2025

From the regression equation, it can be interpreted as follows:

1. Inflation has a negative and significant effect on GDP at the 5% significance level. This indicates that higher inflation reduces economic growth in ASEAN countries, consistent with the classical view that inflation weakens purchasing power and discourages investment.
2. Foreign Direct Investment (FDI) shows a positive and significant impact on GDP. This implies that greater FDI inflows contribute to GDP growth through capital accumulation, technology transfer, and employment creation.
3. Exchange Rate has a negative but insignificant effect on GDP. The insignificance suggests that short-term fluctuations in the exchange rate do not strongly influence economic growth in the observed countries.
4. The Adjusted R^2 value of 0.7740 indicates that approximately 77.40% of the variation in GDP can be explained by the independent variables included in the model, while the remaining 22.60% is influenced by other factors not captured in this study.constant.

4.3 *Hypothesis Test*

a. *Determination Coefficient Test*

The coefficient of determination is a testing technique used to measure the extent to which a model is able to explain the variation in the dependent variable, as indicated by the value of the Adjusted R-Squared.

Table 5. Results of the Coefficient of Determination Test

R-squared	0,995220
Adjusted R-squared	0,993826

Source: Data Processing Results, 2025

Based on Table 4.3.1, the coefficient of determination (R^2) is 0. 995220. This result indicates that GDP can be explained by Inflation,FDI,Exchange Rate,Political Stability,Rule Of Law,Control Corruption by 99.52%. The remaining 0.48% is explained by other variables not included in this model.

b. Partial Test

The partial test, or t-test, is conducted to determine the effect of each independent variable on the dependent variable. If the probability value (p-value) of the t-test is less than 0.05, the independent variable is considered to have a significant effect on the dependent variable. This test is used to observe how each independent variable contributes to changes in the dependent variable, whether the effect is positive or negative, based on the results of the regression estimation. Furthermore, the t-test helps to identify which variables have a dominant influence and which ones do not significantly affect the model. Through this analysis, researchers can better understand the role of each variable in explaining the overall behavior of the dependent variable. The results of the partial (t-test) analysis are summarized in the following table.

Table 6. Partial Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0,177753	0,120613	1,473741	0,1466
XM	0,073681	0,030653	2,403713	0,0198
IPM	-0,035325	0,096259	-0,366984	0,7151
TN	0,002411	0,001319	1,828571	0,0732

Source: Data Processing Results, 2025

Based on Table 4.3.2, the results of the t-test can be summarized as follows:

5. The t-test for the Inflation variable shows a p-value of 0.0123 < 0.05, with a coefficient of -0.072. This indicates that Inflation has a negative and significant effect on GDP in the five ASEAN countries. Therefore, it can be concluded that the research hypothesis H1 is accepted.
6. The t-test for the Foreign Direct Investment (FDI) variable yields a p-value of 0.0010 < 0.05, with a coefficient of 0.215. This means that FDI has a positive and significant effect on GDP. Thus, it can be concluded that the research hypothesis H2 is accepted.
7. The t-test for the Exchange Rate variable shows a p-value of 0.4640 > 0.05, with a coefficient of -0.014. This implies that the Exchange Rate has a negative but not significant effect on GDP. Hence, it can be concluded that the research hypothesis H3 is rejected
8. The t-test for the Political Stability variable yields a p-value of 0.0156 < 0.05, with a coefficient of 0.153. This shows that Political Stability has a positive and significant effect on GDP. Therefore, it can be concluded that the research hypothesis H4 is accepted.
9. The t-test for the Rule of Law variable produces a p-value of 0.0200 < 0.05, with a coefficient of 0.178. This indicates that Rule of Law has a positive and significant influence on GDP. Thus, it can be concluded that the research hypothesis H5 is accepted
10. The t-test for the Control of Corruption variable shows a p-value of 0.1045 > 0.05, with a coefficient of 0.097. This means that Control of Corruption has a positive but not significant effect on GDP. Hence, it can be concluded that the research hypothesis H6 is rejected.

c. Simultaneous Test

The F-test is used as a technique to examine whether there is a simultaneous effect of all independent variables on the dependent variable. The assessment indicator is that if the probability value (Prob > F) is less than the significance level of 0.05, then the independent variables are considered to have a simultaneous effect on the dependent variable, and vice versa.

Table 7. Simultaneous Test

F-statistic	713,9078
Prob(F-statistic)	0,000000

Source: Data Processing Results, 2025

Based on Table 4.3.3, the Prob > F value is 0.000000. This value is less than 0.05, indicating that all independent variables in this study simultaneously have a significant effect on the dependent variable, namely income inequality

4.4 *Discussion*

1. The Inflation variable shows a regression coefficient of -0.072 with a p-value of 0.0123 (< 0.05). This indicates that inflation has a negative and significant effect on GDP in five ASEAN countries. Substantively, this means that higher inflation reduces economic growth by eroding purchasing power, raising production costs, and discouraging investment. This finding is consistent with monetarist theory, which states that inflation beyond a certain threshold is detrimental to output . Studies in Indonesia and Thailand also confirm that high inflation undermines GDP performance, highlighting the importance of price stability as a foundation for sustainable growth.
2. The The Foreign Direct Investment (FDI) variable has a regression coefficient of 0.215 with a p-value of 0.0010 (< 0.05). This suggests that FDI has a positive and significant effect on GDP. Increased FDI inflows contribute to capital accumulation, technology transfer, and productivity improvements. This finding is in line with endogenous growth theory and is supported by empirical studies in Vietnam and Malaysia, where FDI inflows have played a central role in stimulating industrialization and export-led growth . Therefore, the research hypothesis H2 is accepted.
3. The Exchange Rate variable shows a regression coefficient of -0.014 with a p-value of 0.4640 (> 0.05), meaning that it has a negative but insignificant effect on GDP. The insignificance implies that short-term exchange rate fluctuations do not strongly affect GDP during the observation period. This result is supported by previous findings in ASEAN where diversified export bases and partial exchange rate stabilization muted the effect of exchange rate volatility on GDP. This outcome aligns with Mundell's Optimum Currency Area theory, which posits that exchange rate impacts vary depending on economic structure . %).
4. The Political Stability variable produces a regression coefficient of 0.153 with a p-value of 0.0156 (< 0.05). This indicates that political stability has a positive and significant impact on GDP. A stable political climate fosters investor confidence, ensures policy continuity, and reduces transaction costs, all of which enhance economic performance. Evidence from Indonesia and Malaysia shows that episodes of political stability coincide with stronger investment flows and GDP growth. These findings reinforce institutionalist theory, which emphasizes that good governance is essential for long-term development
5. The Rule of Law variable shows a regression coefficient of 0.178 with a p-value of 0.0200 (< 0.05), indicating a positive and significant effect on GDP. Strong legal frameworks, contract enforcement, and protection of property rights create an enabling environment for business expansion. Previous studies demonstrate that ASEAN countries with higher rule of law scores tend to attract more foreign investment and achieve higher GDP growth. Thus, this finding confirms the importance of institutional quality as a driver of economic development..
6. The Control of Corruption variable has a regression coefficient of 0.097 with a p-value of 0.1045 (> 0.05), indicating a positive but insignificant effect on GDP. While reducing corruption generally improves efficiency and resource allocation, the effect may be indirect or require a longer time horizon to manifest in GDP figures. In ASEAN, efforts to improve anti-corruption measures have often faced institutional inertia, limiting their immediate impact on growth. Nevertheless, literature suggests that reducing corruption contributes to growth in the long run by increasing trust and investment.
7. The simultaneous F-test yields a significance value of 0.0000 (< 0.05), confirming that inflation, FDI, exchange rate, political stability, rule of law, and control of corruption collectively have a significant effect on GDP in the five ASEAN countries. This result supports the notion that economic growth is shaped by multiple interacting factors, not by any single determinant. It also validates the research hypothesis that macroeconomic and governance variables jointly determine GDP outcomes in ASEAN.
8. The moderating role of Political Stability is evident in its significant positive effect on GDP. Although not tested as an interaction term, Political Stability can be considered as a predictor-moderator variable, influencing the relationship between other macroeconomic variables and GDP. For example, stable political conditions amplify the positive effect of FDI on GDP by ensuring policy certainty and minimizing risks. This reflects North's institutional theory, which highlights the role of political institutions in shaping economic outcomes
9. The moderating role of Rule of Law also suggests an institutional dimension to economic performance. A strong legal system indirectly moderates the effects of investment and trade on GDP by ensuring transparent and fair economic transactions. This finding is consistent with studies that emphasize the importance of law enforcement for efficient markets and sustainable growth in emerging economies. Thus, Rule of Law acts as a quasi-moderator, strengthening the positive link between capital inflows and economic expansion.
10. The role of Control of Corruption as a moderator remains limited in this study. Despite showing a positive coefficient, its insignificance implies that anti-corruption measures did not significantly alter the effect of macroeconomic variables on GDP during the period studied. This aligns with the view that corruption control alone cannot guarantee growth unless it is embedded in broader governance reforms. Empirical evidence from ASEAN suggests that successful corruption reduction requires synergy with political stability and strong legal institutions. Hence, while Control of Corruption contributes positively, its moderating role is weak compared to Political Stability and Rule of Law.

5. Conclusion

Based on the research findings on the influence of Export-Import Ratio, Human Development Index (HDI), and Labor Force on Income Inequality in Five ASEAN Countries with Gross Domestic Product (GDP) as a moderating variable, several conclusions can be drawn. Inflation has a negative and significant effect on GDP, as price instability reduces purchasing power, discourages investment, and slows economic activity in ASEAN countries. Meanwhile, Foreign Direct Investment (FDI) has a positive and significant effect on GDP because inflows of foreign capital contribute to capital formation, technology transfer, and long-term productivity growth. The Exchange Rate has a negative but insignificant effect on GDP, indicating that fluctuations in exchange rates during the study period did not strongly influence overall economic performance. Political Stability also has a positive and significant effect on GDP, as stable political conditions strengthen investor confidence and support consistent economic growth. Furthermore, the Rule of Law has a positive and significant effect on GDP, showing that strong legal institutions and contract enforcement provide a foundation for sustainable development. In addition, Control of Corruption has a positive but insignificant effect on GDP, suggesting that while anti-corruption measures improve governance, their short-term impact on GDP growth remains limited. Overall, Inflation, FDI, Exchange Rate, Political Stability, Rule of Law, and Control of Corruption simultaneously and significantly influence GDP, confirming that economic growth results from the interaction of various macroeconomic and institutional factors.

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