

# Impact of Foreign Direct Investment (FDI) and Idiosyncratic Risk on Economic Growth and Clean Energy Development in ASEAN Countries: An Empirical Analysis

Marselinus Asri<sup>1</sup>

<sup>1</sup>Universitas Atma Jaya Makassar

Email: [marselinus.asri@yahoo.co.id](mailto:marselinus.asri@yahoo.co.id)

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## Abstract:

This study aims to review The relationship between foreign direct investment (FDI), idiosyncratic risks, and economic growth in ASEAN Countries. It seeks to provide insight into how FDI and associated risks affect economic development and the achievement of the Sustainable Development Goals (SDGs). The theoretical framework is based on endogenous growth theory, which posits that FDI contributes to economic growth through technology transfer, capital accumulation, and skill enhancement. Idiosyncratic risks, characterized by country-specific economic uncertainties, are believed to have a complex impact on growth. Although FDI is often considered a catalyst for economic growth, unique risks pose challenges that can hinder or moderate its impact.

Understanding these dynamics is critical for policymakers wishing to attract FDI and promote sustainable growth—research using quantitative methods, and analyzing secondary data from ASEAN countries. The data set includes 80 observations on GDP growth, specific risks, and SDG indicators. Descriptive statistics and regression analysis were used to explore relationships between variables. Regression analysis indicates that SDG 7 (Affordable and Clean Energy) negatively and significantly impacts GDP growth, suggesting a short-term trade-off between investing in clean and open energy economic expansion. Idiosyncratic risks also have a significant impact on GDP growth, highlighting the need for appropriate risk management strategies. Specific risks play an important role in the process of developing FDI economic growth in ASEAN countries. Policymakers must consider these risks and their interactions with the SDGs to create effective sustainable development strategies. The results highlight the importance of integrating sustainable development and risk management goals into FDI policy. By addressing unique risks, ASEAN countries can better leverage FDI for long-term economic growth.

**Keywords:** Foreign Direct Investment (FDI), Economic Growth, Sustainable Development Goals (SDGs), Clean Energy, Risk Management

## 1. Introduction:

Foreign direct investment (FDI) plays an important role in the economic development of countries, especially in the ASEAN region. This investment not only brings capital but also technology transfer, skills upgrading, and productivity enhancement. ASEAN countries, with their diverse economic contexts, offer a unique opportunity to study the interactions between FDI, economic growth, and various risk factors, including idiosyncratic risks (Jiao et al., 2024; Tiwari & Mutascu, 2011). This article aims to investigate the relationship between FDI, GDP growth, and idiosyncratic risks in ASEAN countries, providing insight into how these factors influence each other. The relationship between FDI and economic growth is the subject of much research and debate.

While FDI is often seen as a catalyst for economic development, the presence of country-specific economic uncertainties – known as idiosyncratic risks – can pose significant challenges. Understanding these dynamics is essential for policymakers who want to attract FDI while promoting sustainable growth and minimizing associated risks. This study is based on endogenous growth theory, which posits that FDI contributes to economic growth through mechanisms such as technology transfer, capital accumulation, and skill enhancement. However, the impact of specific risks, characterized by country-specific economic uncertainties, further increases the complexity of this relationship (Barinov, 2011; Khan & Shoaib, 2024; Tiwari & Mutascu, 2011) (Triatmanto et al., 2023).

The study explores how these risks affect the benefits of FDI and the achievement of the Sustainable Development Goals (SDGs) in the ASEAN region. By analyzing secondary data from ASEAN countries, this study uses a quantitative approach to evaluate the relationship between GDP growth, specific risks, and SDG indicators (Arthur et al., 2024; Samdrup et al., 2023). The findings highlight the complex balance needed between investing in clean energy and promoting economic growth, suggesting policymakers need to integrate

risk management strategies and development goals sustainability into their economic plan to effectively promote FDI for long-term growth.

## 2. Literature Review:

The literature on FDI and economic growth is rich, with many studies highlighting the positive impact of FDI on economic development. Borensztein, (Alvarado et al., 2017) argue that FDI contributes more to economic growth than domestic investment because it brings advanced technology and management know-how. On the other hand, (Aloui et al., 2024) argue that the benefits of FDI are not automatic but depend on the absorptive capacity of the host country, especially human capital and infrastructure. Moreover, recent studies have begun to consider the role of idiosyncratic risk on economic growth. (Doytch et al., 2024) Emphasizes that idiosyncratic risk can discourage investment and slow economic growth, while others argue that it can stimulate innovation and dynamic efficiency (Ayad & Lefilef, 2024)

(Li & Park, 2006) (Ali & Asri, 2019) emphasize that idiosyncratic risk can discourage investment and slow economic growth, while others argue that it can stimulate innovation and dynamic efficiency (Camino-Mogro & Armijos, 2022). The complex nature of specific risks requires a deep understanding of their impact on FDI and economic development, especially in the context of ASEAN countries having significantly different economic conditions and risks. Tell. Research also shows that the relationship between FDI and economic growth is influenced by the institutional and regulatory framework of the host country. (Adams & Opoku, 2015; Balasubramanyam et al., 1996; Behera & Dash, 2017; Hunjra et al., 2024) Shows that countries with well-developed financial markets are more likely to benefit from FDI. Similarly, (Anetor et al., 2020) believe that regulatory quality and trade openness are necessary to maximize the positive impact of FDI on economic growth.

Furthermore, the interaction between FDI and the Sustainable Development Goals (SDGs) has attracted attention in recent years. SDG 7, focused

on clean and affordable energy, brings both opportunities and challenges for economic growth. While investments in clean energy are necessary for sustainable development, they can also involve short-term trade-offs, as shown by studies showing a negative relationship between clean energy and GDP growth (Hunjra et al., 2024). In summary, the existing literature emphasizes the multifaceted nature of FDI's impact on economic growth, influenced by factors such as absorptive capacity, institutional quality, legal framework, and objectives. Sustainable development goals. This study aims to contribute to this body of knowledge by examining the specific context of ASEAN countries and the role of idiosyncratic risks in shaping FDI outcomes.

### 3. Methodology:

This study employs a quantitative approach to investigate the relationship between Foreign Direct Investment (FDI), Gross Domestic Product (GDP) growth, and idiosyncratic risks in ASEAN countries. The methodology includes the collection of secondary data, descriptive statistics, and regression analysis to understand the interactions between these variables. Data Collection The data used in this study are sourced from various reliable databases, covering a range of indicators relevant to ASEAN countries.

The dataset includes 80 observations on GDP growth rate, FDI inflows, idiosyncratic risks, and Sustainable Development Goals (SDGs) indicators. The period covered by the data spans multiple years to capture the dynamic nature of economic growth and FDI activities in the region (the ASEAN Secretariat, 2023).

#### Variables:

- 1) Dependent Variable: Economic Growth (GDP Growth Rate) This variable represents the annual growth rate of GDP for each ASEAN country in the dataset
- 2) Independent Variables

- a) FDI Inward The total inflows of foreign direct investment into the country.
- b) FDI Intra FDI within the ASEAN region, capturing regional investment flows.
- c) SDG 1 (No Poverty) An indicator measuring progress toward reducing poverty, used to understand the broader impact of economic growth.
- d) SDG 7 (Affordable and Clean Energy) An indicator assessing investments in clean energy, relevant for understanding the trade-offs between economic growth and sustainable development.
- e) Idiosyncratic Risk A measure of country-specific economic uncertainties that could impact growth and investment decisions.

#### Analysis:

- 1) Descriptive statistics are used to summarize the central tendencies and variations within the data. Key metrics such as the mean, standard deviation, minimum, and maximum values of the variables are calculated to provide an overview of the data distribution and to identify any potential anomalies.
- 2) Regression Analysis To explore the relationships between GDP growth, FDI, idiosyncratic risks, and SDGs, multiple regression analysis is employed.
- 3) Eviews analysis to predict trends.

The analysis includes checking the model's goodness-of-fit using the R-squared value, which indicates the proportion of variance in GDP growth explained by the independent variables.

An Analysis of Variance (ANOVA) is conducted to test the overall significance of the model. The significance of individual predictors is evaluated using t-tests, and p-values are reported to determine the statistical significance of each coefficient. The study concludes that idiosyncratic risk significantly influences GDP growth in ASEAN countries. While FDI remains a critical factor for economic development, its impact is mediated by various

risks and sustainable development goals. Policymakers should consider these dynamics when designing strategies to attract FDI and promote economic growth. Future research should explore the long-term effects of FDI and idiosyncratic risks, considering the evolving economic landscape and policy changes in the region.

**4. Results and Findings:**

Descriptive statistics Table 1 shows that the average GDP growth rate of ASEAN countries is 5.072%, and the standard deviation is 1.1298. The

idiosyncratic risk has a mean value of 0.04016, indicating variation in the economic environment of these countries. Regression analysis shows a significant relationship between GDP growth and several predictors. Notably, SDG 7 (Affordable and Clean Energy) has a negative and significant coefficient (-0.093, p = 0.001), indicating that higher investment in clean energy is associated with low GDP growth in the short term. Domestic and foreign FDI do not have a significant direct impact on GDP growth, which highlights the complexity of their impact.

**Table 1 Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Economic Growth (GDP Growth Rate)	80	3.2	7.5	5.072	1.1298
Idiosyncratic risk	80	.017	.058	.04016	.009739
SDGs(No Poverty)	80	.5	1200.0	24.462	133.1695
SDG 7 (Affordable and Clean Energy)	80	5.0	22.5	14.431	3.9812
FDI inward	100	-4950.99835690875300	92233.72036854776000	9223.372036854777000	9223.372036854777000
FDI Intra	100	-940.7	13083.7	2351.427	2867.5418
FDIintra.Idiosyncratic.Infkasi	80	-392.45	5304.24	350.0166	917.25071
Valid N (listwise)	80				

Valid N (per list) 80 Descriptive statistics provide a comprehensive overview of the data distribution for the key variables in this study. The average GDP growth rate across ASEAN countries is 5.072%, with a standard deviation of 1.1298, indicating moderate volatility around the mean. This suggests that although there are some differences in economic growth rates across these

countries, growth rates tend to cluster around the mean. The idiosyncratic risk variable, which measures country-specific economic uncertainties, has a mean of 0.04016 and a standard deviation of 0.009739, indicating relatively low volatility.

This suggests that although there are differences in the level of economic risk across ASEAN countries, these differences are not very large. The

SDG (No Poverty) indicator shows a mean of 24.462 with a very high standard deviation of 133.1695. This large difference reflects significant disparities in poverty levels and poverty reduction progress across the ASEAN region. Such differences are important for understanding the broader context of economic growth and development. The SDG 7 (Clean and Affordable Energy) index has a mean of 14.431 and a standard deviation of 3.9812, indicating moderate variation in clean energy investment in these countries.

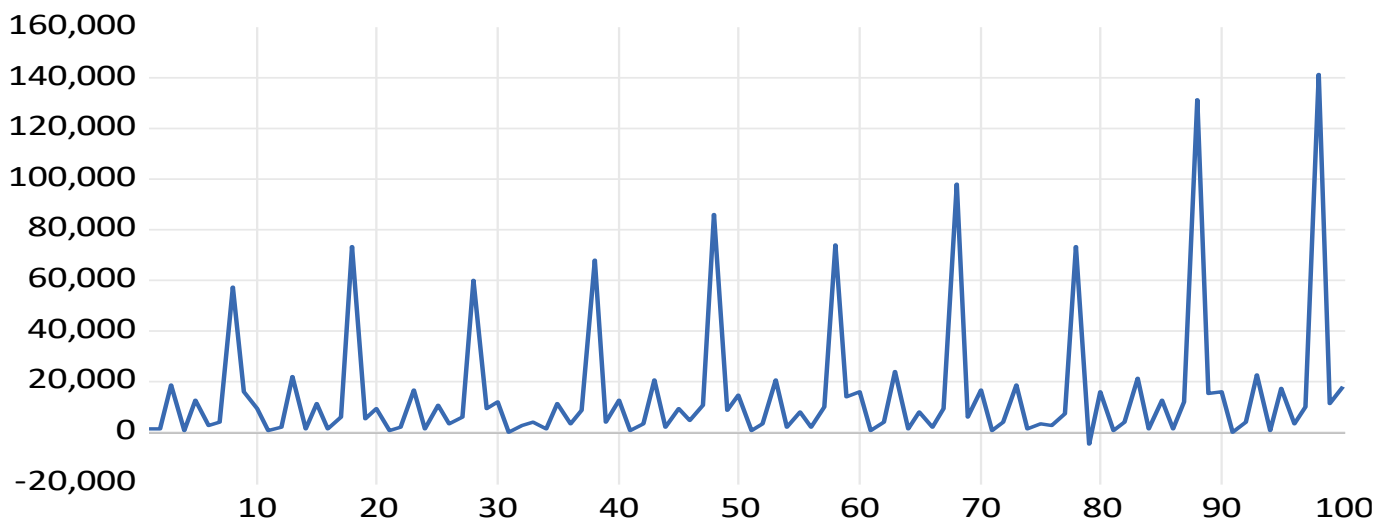
The range from 5.0 to 22.5 shows significant differences in how countries prioritize and invest in clean energy, which can have an impact on both economic growth and environmental sustainability. School. The inward FDI variable has a particularly wide range, with values ranging from -4950.998 to 92233.720 and a median of 9223.372. The large

standard deviation, equal to the mean, highlights the extreme volatility of FDI flows among ASEAN countries.

This change can be attributed to differences in economic scale, political context, and attractiveness to foreign investors. Similarly, the within-FDI variable also has significant fluctuations, with an average value of 2,351.427 and a standard deviation of 2,867.5418, reflecting different levels of investment in the region. The variable `FDIintra.Idiosyncratic.Infkasi`, which represents the interaction between regional FDI and idiosyncratic risk, shows a mean of 350.0166 and a standard deviation of 917.25071, indicating significant variation. This shows that the interaction between regional investment and country-specific risks is complex and varies significantly within the ASEAN region.

Graph 1

FDIinward



The graph1 depicts the Foreign Direct Investment (FDI) inflows for ASEAN over some time, characterized by a series of sharp peaks and troughs, indicative of cyclical investment patterns. The consistent spikes suggest periodic surges in FDI, possibly aligned with economic cycles, policy changes, or significant regional events that attract international investment. Each peak represents a notable increase in inward investment, likely driven by favorable economic conditions or strategic initiatives within the ASEAN region. The troughs, on the other hand, indicate periods of

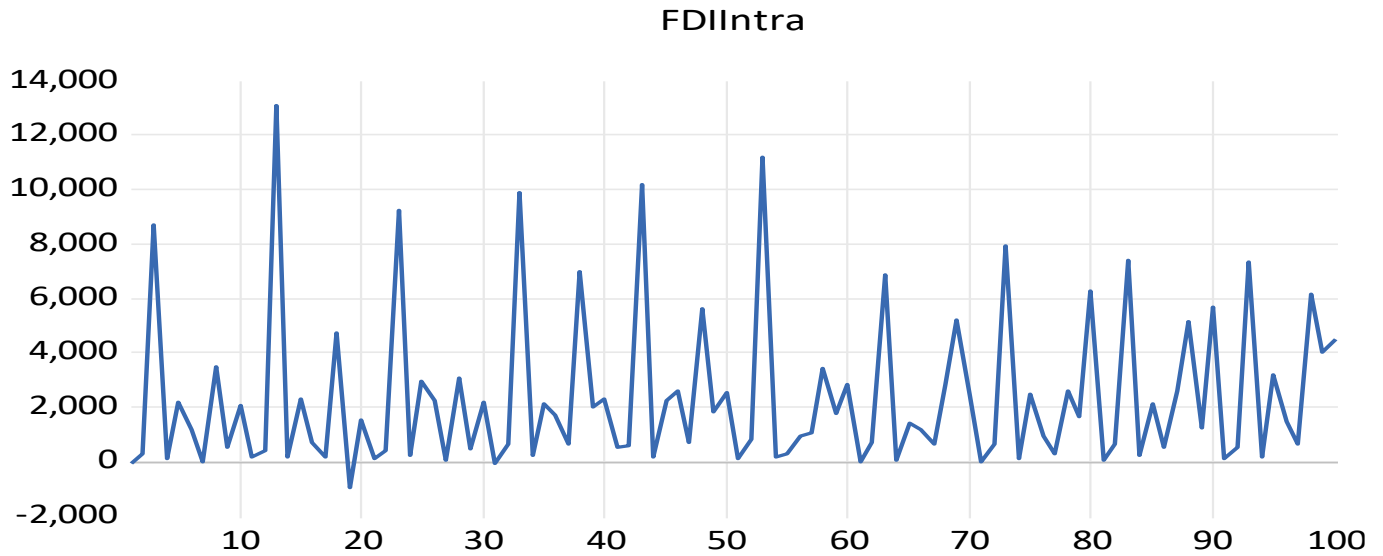
reduced investment activity, which could be attributed to global economic downturns, political instability, or other external factors that dampen investor confidence.

The overall trend, despite the fluctuations, appears to show a gradual increase in the magnitude of the FDI inflows, suggesting a long-term growth trajectory. This upward trend signifies increasing investor interest and confidence in the ASEAN region's economic potential. The periodic nature of the inflows might reflect the implementation of economic reforms, infrastructure developments, or

other significant policy measures that enhance the attractiveness of the region for foreign investors. Moreover, the peaks' increasing heights over time

may indicate a growing integration of ASEAN into the global economy, making it a more prominent destination for international capital.

Graph2 FDI Intra



Graph 2 illustrating the intra-ASEAN Foreign Direct Investment (FDI) inflows over time showcases a pattern of frequent and significant fluctuations. The peaks represent periods of high investment activity among ASEAN countries, which could be driven by regional economic agreements, joint ventures, and collaborative projects aimed at boosting intra-regional trade and economic integration. These peaks are interspersed with troughs indicating periods of reduced investment, possibly reflecting economic slowdowns, policy uncertainties, or global economic influences affecting the region's internal investment dynamics.

The cyclical nature of the intra-ASEAN FDI suggests a responsive investment environment where economic and policy changes within member states can significantly impact investment flows. For instance, enhancements in regional infrastructure, improvements in business environments, or trade agreements like the ASEAN Free Trade Area (AFTA) can lead to increased FDI, reflected in the peaks. Conversely, periods of economic instability or unfavorable policy changes could result in the observed declines. The overall

trend seems to show a moderate increase in investment activities over time, highlighting a growing economic interdependence among ASEAN countries.

The economic consequences of these intra-ASEAN FDI flows for regional economic growth are multifaceted. High levels of intra-regional investment can lead to more robust economic integration, enhanced efficiency, and increased competitiveness of the region as a whole. Investments in critical sectors such as manufacturing, services, and infrastructure can drive productivity improvements and create employment opportunities, thereby stimulating economic growth. Moreover, the transfer of technology and expertise facilitated by these investments can enhance innovation and development across member states. However, the fluctuations in FDI inflows also indicate vulnerability to economic cycles and external shocks, suggesting the need for policies that promote stable and sustainable investment environments to ensure consistent economic growth.

**Table 2 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.655 <sup>a</sup>	.429	.373	.8945

a. Predictors: (Constant), GDP Const, FDI inward, SDGs(No Poverty), SDG 7 (Affordable and Clean Energy), FDI.Idiosyncratic.Infkasi, FDI Intra, GDP dengan idiosyncratic risk

Analysis Table 2 model summary shows that the regression model explains a significant portion of the variation in GDP growth rates among ASEAN countries.

The R-squared value of 0.429 indicates that about 42.9% of the variation in economic growth can be explained by the independent variables included in the model: FDI inflows, internal FDI, SDG (no poverty), and SDG 7 (clean and affordable energy). ), idiosyncratic risks, and the interaction terms involving these factors. This level of explanation is quite strong for a model that deals with economic growth that is influenced by many complex and interrelated factors. The adjusted R-squared value is 0.373, which is slightly lower than the R-squared

value, which represents the number of predictors in the model relative to the number of observations.

This adjustment indicates that although the model explains GDP growth variation well, the inclusion of additional predictors should be justified by significant improvements in explanatory power. The standard error of the estimate (0.8945) provides a measure of the average distance between the observed values and the regression line. Given the level of GDP growth, this value shows that the model has a moderate level of accuracy in forecasting GDP growth, with some room for improvement through the inclusion of other relevant variables or refinement. Existing variables.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.230	7	6.176	7.718	.000 <sup>b</sup>
	Residual	57.610	72	.800		
	Total	100.840	79			

a. Dependent Variable: Economic Growth (GDP Growth Rate)

b. Predictors: (Constant), GDP Const, FDI inward, SDGs(No Poverty), SDG 7 (Affordable and Clean Energy), FDI.Idiosyncratic.Infkasi, FDI Intra, GDP dengan idiosyncratic risk

Analysis the Table 3 the ANOVA results provide additional information about the overall significance of the regression model. The regression sum of squares (43,230) versus the residual sum of squares (57,610) indicates

that a significant portion of the total variation in GDP growth (100,840) is explained by the model.

This is supported by an F statistic of 7.718, significantly greater than 1, suggesting that the model provides a better fit to the data than the model without the predictor. The significance

value (p-value) associated with the F-statistic is 0.000, much lower than the usual threshold of 0.05. This indicates that the probability of the observed relationship occurring by chance is extremely low, confirming that the predictors generally have a statistically significant impact on GDP growth. In other words, the combination of inward FDI, internal FDI, SDG (zero poverty), SDG 7 (clean

and affordable energy), idiosyncratic risks, and their interaction terms significantly explain differences in the economic growth rates of ASEAN countries. This strong statistical significance highlights the importance of these variables in understanding and forecasting economic growth in the region.

Table 4 Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.393	.393		16.278	.000
	SDGs(No Poverty)	-.001	.001	-.097	-1.088	.280
	SDG 7 (Affordable and Clean Energy)	-.093	.026	-.328	-3.625	.001
	FDI inward	2.408E-6	.000	.046	.448	.655
	FDI Intra	-3.902E-5	.000	-.102	-1.043	.300
	FDI.Idiosyncratic.Infkasi	.000	.000	.431	4.543	.000
	GDP dengan idiosyncratic risk	1.535E-5	.000	2.595	2.620	.011
	GDP Const	-6.584E-7	.000	-2.783	-2.812	.006
a. Dependent Variable: Economic Growth (GDP Growth Rate)						

AnalysisThe coefficient table 4 provides detailed information about the individual contribution of each predictor variable to the GDP growth rate in ASEAN countries. The constant term (6.393) is highly significant (p < 0.001), representing underlying GDP growth when all other variables are held at zero. This positive constant shows that even when Without predictive factors, ASEAN countries are still achieving standard economic growth. For the SDG (No Poverty) variable, the coefficient is negative (-.001) but not statistically

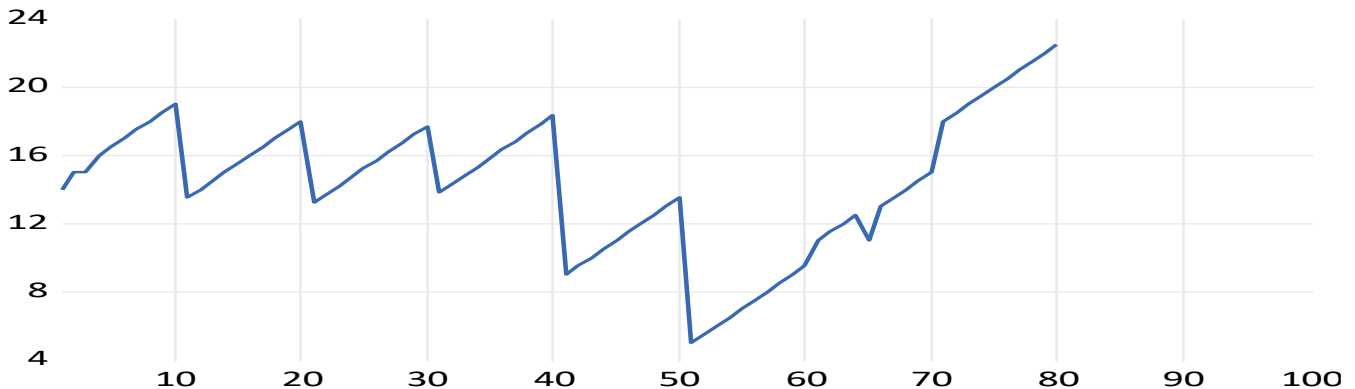
significant (p = .280). This implies that although there is a small negative relationship between poverty reduction efforts and GDP growth, this relationship is not strong enough to be considered statistically significant in this model. This finding may indicate that poverty reduction efforts in ASEAN countries do not have a direct and significant impact on economic growth in the short term, possibly due to the long-term nature of the poverty reduction effects. Variable SDG 7 (Affordable and Clean Energy) shows a significant



negative relationship with GDP growth ( $B = -0.093, p = 0.001$ ).

**Graph: SDG7 Affordable and Clean Energy**

SDG7AffordableandCleanEnergy



The graph3 depicting the progress on SDG7, Affordable and Clean Energy, shows a consistent upward trend over time, despite some noticeable fluctuations. The initial part of the graph indicates a steady increase in efforts toward achieving affordable and clean energy, marked by a series of small peaks and troughs. These fluctuations could be attributed to various factors such as changes in energy policies, investment in renewable energy projects, and technological advancements. The consistent upward trajectory in this phase suggests that overall, there have been continuous improvements and investments in the sector, driving progress toward the goal.

Midway through the graph, a significant dip is observed, indicating a period where progress toward SDG7 faced considerable setbacks. This decline could be due to several potential reasons, including economic crises, political instability, or disruptions in energy markets. Such a downturn highlights the vulnerabilities and challenges that can impede the advancement of sustainable energy initiatives. However, following this dip, the graph shows a robust recovery, with a sharp and continuous rise, suggesting a strong rebound in efforts and investments in affordable and clean energy. This recovery phase indicates renewed commitment and possibly the implementation of more effective policies and innovations in the energy sector.

In the latter part of the graph, the upward trend becomes even more pronounced, demonstrating a substantial acceleration in achieving SDG7. This sharp increase could be reflective of large-scale renewable energy projects, significant policy shifts favoring clean energy, and increased global cooperation and funding aimed at enhancing energy access and sustainability. The overall trajectory of the graph underscores the growing global emphasis on transitioning to clean energy sources and the positive impact of concerted efforts in this direction. Despite the challenges encountered, the persistent upward trend signifies hopeful progress toward achieving affordable and clean energy for all, aligning with the objectives of SDG 7.

This suggests that higher investment in clean energy is associated with lower GDP growth in the short term. The negative coefficient suggests a trade-off, in which investments in sustainable energy may initially slow economic growth due to the high upfront costs and transitory nature of these investments. However, these investments are important for long-term sustainable development, suggesting a potential area where policymakers can balance immediate economic growth and sustainability in the future. Future.

The variables Inward FDI and Internal FDI do not have a significant impact on GDP growth, with  $p$  values of 0.655 and 0.300, respectively. This shows that, in the context of ASEAN countries, overall

FDI flows and intra-regional FDI movements do not have a statistically significant impact on GDP growth when other factors are taken into account. This finding may reflect the complexity of the impact of FDI on economic growth, which can be influenced by other mediating factors such as absorptive capacity, legal environment, and sector-specific investment. Can. Notably, the interaction term  $FDI.Idiosyncratic.Infkasi$  has a very significant positive coefficient ( $B = 0.000$ ,  $p < 0.001$ ), showing that the interaction between intra-regional FDI and idiosyncratic risk helps improve significantly GDP growth.

This suggests that when ASEAN countries face specific economic uncertainties, intra-regional FDI can play an important role in mitigating these risks and promoting economic growth. This highlights the importance of regional economic integration and cooperation to overcome country-specific challenges and build collective economic resilience. GDP variation with idiosyncratic risk also shows a significant positive impact on GDP growth ( $B = 0.00001535$ ,  $p = 0.011$ ), reinforcing the idea that the interaction between economic growth and risk-specific risks is necessary. This shows that while unique risks pose challenges, there are growth opportunities associated with effectively managing and minimizing these risks.

Furthermore, the negative coefficient of the GDP constant ( $B = -0.0000006584$ ,  $p = 0.006$ ) suggests a complex relationship between underlying economic conditions and growth dynamics, perhaps reflecting increased productivity growth gradually declines as underlying GDP increases. Regression analysis provides insight into the factors influencing GDP growth in ASEAN countries. Although investment in clean energy appears to pose short-term growth challenges, the role of FDI, especially regional FDI, and the management of unique risks emerge as important contributing factors. Important for economic growth. These results highlight the complexity of reconciling immediate economic goals with long-term sustainable development goals and underscore the importance of regional cooperation

to promote resilience and increase growth. Economic chief.

### Findings:

- 1) Baseline economic growth The fixed term in the model indicates that ASEAN countries have a baseline GDP growth rate of about 6.393%, indicating inherent economic growth potential, independent of forecast factors is included.
- 2) Impact of Poverty Reduction (SDG No Poverty) Poverty reduction efforts (SDG No Poverty) show a slightly negative relationship with GDP growth, but this relationship is not statistically significant. This suggests that poverty reduction efforts do not have a direct short-term impact on economic growth in the context of this study.
- 3) Investment in clean energy (SDG 7) Investment in clean and affordable energy (SDG 7) is significantly associated with reduced GDP growth. A negative coefficient implies a trade-off, in that an initial increase in clean energy infrastructure spending could slow economic growth due to high initial costs and transition challenges.
- 4) . Foreign direct investment (FDI) The variables inward FDI and internal FDI do not show a statistically significant impact on GDP growth. This indicates that, overall, FDI inflows and intra-regional FDI shifts are not the main drivers of economic growth in ASEAN countries when other factors are taken into account.
- 5) Interaction between intra-regional FDI and idiosyncratic risks The interaction between intra-regional FDI and idiosyncratic risks ( $IDE.Idiosyncratic.Infkasi$ ) has a very significant positive impact on GDP growth. This finding highlights the important role of intra-regional investment in reducing country-specific economic uncertainties and promoting growth.

- 6) Economic growth and idiosyncratic risk relationship The interaction term involving GDP and idiosyncratic risk shows a significant positive impact on GDP growth. This indicates that while unique risks pose challenges, effectively managing and mitigating these risks can lead to growth opportunities, highlighting the importance of resilience. Economic recovery and risk management strategies.

## 5. Conclusion:

- 1) Underlying Growth Potential ASEAN countries have high inherent economic growth potential, as indicated by a significant constant in the regression model.
- 2) Poverty eradication Efforts to reduce poverty, although important for social development, have not had a significant short-term impact on the region's economic growth.
- 3) Investment in clean energy Investment in clean energy, essential for sustainable development, is associated with a short-term decline in GDP growth due to high upfront costs and transition challenges.
- 4) Impact of FDI In general, FDI capital flows and intra-regional FDI shifts are not the main driving forces for economic growth in ASEAN countries when considering other factors.
- 5) The role of intra-regional FDI Intra-regional FDI significantly improves GDP growth by minimizing the negative impact of specific risks, thereby emphasizing the importance of regional economic integration.
- 6) Risk Management Effective management of unique risks can create growth opportunities, highlighting the need for robust risk management strategies.
- 7) Complex Dynamics The relationship between FDI, economic growth, and

idiosyncratic risks is complex, requiring a nuanced and multifaceted approach to economic policy and planning.

## Implication

- 1) Balanced approach Policymakers need to balance short-term economic growth goals with long-term sustainable development goals, especially in the field of clean energy investment.
- 2) Regional Integration Strengthening regional economic cooperation can mitigate country-specific risks and improve overall economic growth and resilience.
- 3) Targeted policies Economic policies need to be adjusted to address the unique risks that different ASEAN countries face while capitalizing on FDI in the region.
- 4) Sustainable Investments Investments in sustainable infrastructure, such as clean energy, must be designed to minimize short-term economic disruption while maximizing long-term benefits.

## Policy Recommendations

- 1) Risk mitigation strategies Develop and implement comprehensive risk management strategies to address unique economic uncertainties.
- 2) Promoting regional FDI Encourage and facilitate regional FDI to enhance economic integration and resilience to country-specific risks.
- 3) Clean Energy Support Provide incentives and support for clean energy investment to balance the trade-off between short-term economic growth and long-term sustainability.
- 4) Sustainable Investments Investments in sustainable infrastructure, such as clean energy, should be designed to minimize short-term economic disruption while maximizing long-term benefits.

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