

## Understanding Idiosyncratic Risk and Economic Growth in ASEAN



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**ABSTRACT:** This study examines the relationship between idiosyncratic risks, foreign direct investment (FDI), and economic growth in ASEAN countries using data from 2013 to 2022. Idiosyncratic risks refer to specific assets or individual sectors, distinct from systemic or market-wide risk. This study aims to determine whether idiosyncratic risks affect the ASEAN region's FDI flows and economic growth. The study uses structural equation modeling (SEM) analysis to analyze the ASEAN Statistical Database data. Regression weights are used to evaluate the relationship between idiosyncratic risks, FDI, inflation, SDG availability, and economic growth. The results indicate that although there is no significant direct relationship between idiosyncratic risk and FDI inflows, there is a significant positive correlation between idiosyncratic risk and economic growth. These findings have implications for policymakers and investors seeking to promote sustainable economic development in ASEAN countries. Understanding the dynamics of specific risks can inform strategies to attract FDI and stimulate economic growth. This study contributes to the theoretical basis of risk management and economic development in emerging market economies such as those in the ASEAN region.

**KEYWORDS:** Idiosyncratic Risk, Inflation, SDGs, Economic Growth

### 1. INTRODUCTION:

Idiosyncratic risks refer to risks specific to individual assets or sectors, as distinct from systemic or market-wide risks. Understanding the impact of idiosyncratic risks on economic growth is important for policymakers and investors. This study aims to analyze how idiosyncratic risks interact with FDI, inflation, SDG availability, and other factors that influence economic growth in ASEAN countries (Nahar, 2024)(Salman et al., 2023). Idiosyncratic risk, characterized by its specificity to individual assets or sectors, poses a special challenge to economic analysis and policy making, especially in the context of ASEAN countries. As economies in the ASEAN region continue to grow and integrate into global markets, policymakers, investors and researchers need to understand the impact of unique risks on economic growth. Idiosyncratic risks include a range of factors that can affect economic outcomes in specific sectors or industries, independent of broader market trends (Shi et al., 2016)(Chen et al., 2020; Sarwar & Muradoglu, 2013).

Unlike systemic risk that pervades the entire market, idiosyncratic risk is local and can have important implications for investment decisions, resource allocation, and economic development strategies (Dogah, 2021). This study aims to further explore the unique risk phenomenon in the context of ASEAN countries, over the period from 2013 to 2022 (the Asean secretariat, 2023). By analyzing a comprehensive data set covering direct investment and foreign investment (FDI), investment rate inflation, and Sustainable Development Goals (SDG). ) availability and other relevant factors, this study aims to shed light on the nuanced relationship between idiosyncratic risk and economic growth. (Saeed et al., 2021) (Yin et al., 2022)

**Research Objectives** The main objective of this study is to examine how idiosyncratic risks interact with key economic indicators, including FDI, inflation, and SDG availability, to influence the economic growth trajectory in ASEAN countries. Specific objectives include:

1. Assess the impact of specific risks on economic growth in the ASEAN region over the past decade.
2. Investigate the relationship between specific risks and FDI flows, considering both regional and domestic investments.
3. Analyze how idiosyncratic risks interact with inflationary pressures and the availability of SDG-aligned resources to shape economic outcomes.

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To achieve these goals, the research aims to provide valuable insights into the areas of economic policy, investment strategy, and risk management, with a focus on improving economic resilience and sustainable development in ASEAN countries. Significance of the Study The significance of this study lies in its ability to inform evidence-based policy-making and investment decisions in the ASEAN region. As governments and stakeholders seek to promote economic growth while effectively managing risk, a deep understanding of unique risk dynamics is critical. Furthermore, this study has implications for international investors and multilateral organizations operating in ASEAN countries. By shedding light on the drivers and consequences of idiosyncratic risk, research can guide strategies to optimize investment portfolios and promote responsible economic development. Through this structured approach, the study aims to provide insights into the complex interactions between idiosyncratic risks, FDI, and economic growth in the ASEAN context.

## 2. LITERATURE REVIEW AND HYPOTHESIS

Earlier inquiries about has highlighted the significance of FDI inflows, expansion rates, and economic improvement activities in driving financial development in ASEAN. Speculations set that peculiar hazards, intervened by FDI and other financial components, essentially impacts financial development inside the locale. The relationship between peculiar hazards, outside coordinate venture (FDI), and financial development has been a subject of intrigue in financial writing, especially inside the setting of ASEAN nations. Quirky chance alludes to dangers that are particular to personal resources or businesses, particularly from broader showcase dangers. Understanding how these dangers are associated with FDI and other financial components is fundamental for policymakers and financial specialists pointing to advance economic financial improvement. A few ponders have inspected the effect of FDI on peculiar hazards inside ASEAN nations. Bayraktar et al. (2023) highlighted the part of multinational enterprises (MNCs) in presenting progressed chance administration hones and broadening methodologies, which can relieve sector-specific vulnerabilities. Demetriades and Law (2006) emphasized the significance of regulation situations and arrangement systems in drawing in FDI and improving chance administration capabilities inside ASEAN. Besides, inquiries have investigated the relationship between peculiar hazards and financial development. Nakhle et al. (2024) found a positive relationship between quirky hazards and financial development in ASEAN nations, recommending that higher levels of chance may invigorate entrepreneurial exercises and development, driving financial extension. Malagon et al. (2017) highlighted the double nature of peculiar dangers, which can either advance development or prevent speculation depending on how they are overseen. Based on this writing, the taking after speculations are defined: Theories 1. H1: Peculiar Hazard and FDI: There's no noteworthy coordinate relationship between quirky chance and FDI streams (both internal and intra-ASEAN) inside ASEAN nations. 2. H2: Peculiar Chance and Financial Development: Idiosyncratic hazard incorporates a critical positive effect on financial development in ASEAN nations, inferring that higher levels of hazard may compare to expanded financial extension. These speculations point to testing the particular connections between peculiar hazards, FDI, and financial development inside the ASEAN locale, considering the special financial flow and arrangement situations of these nations. The technique utilized will include Auxiliary Condition Modeling (SEM) examination utilizing ASEAN measurable information from 2013 to 2022, permitting for a comprehensive examination of these connections and their suggestions for financial advancement.

## 3. METHODOLOGY

This study employs Structural Equation Modeling (SEM) using AMOS software to analyze the relationship between idiosyncratic risk, Foreign Direct Investment (FDI), inflation, Sustainable Development Goals (SDGs) availability, and economic growth in ASEAN countries from 2013 to 2022. The methodology encompasses data collection, model specification, and statistical analysis.

### Data Source

The primary data source for this research is the ASEAN Statistical Database, providing comprehensive economic data for ASEAN countries spanning the period from 2013 to 2022. Key variables include:

Idiosyncratic Risk: Representing sector-specific risks within individual industries or assets.

Foreign Direct Investment (FDI): Capturing both intra-regional and inward investment flows into ASEAN countries.

Inflation: Reflecting annual changes in consumer price indices within ASEAN economies.

Sustainable Development Goals (SDGs) Availability: Indicating the extent to which SDGs are integrated into national policies and resource allocation.

Economic Growth: Measured by changes in Gross Domestic Product (GDP) over time.

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### Model Specification

The SEM model is designed to assess the direct and indirect effects of idiosyncratic risk, FDI, inflation, and SDGs availability on economic growth within ASEAN countries. The model includes latent constructs to capture complex relationships between observed variables.

### Variable Operationalization

Each variable is operationalized based on its definition and measurement in the ASEAN Statistical Database:

Idiosyncratic Risk: Modeled as a latent variable incorporating sector-specific risk factors.

FDI: Represented by observed variables capturing both intra-regional and inward investment flows.

Inflation: Operationalized as an observed variable reflecting annual changes in consumer price indices.

SDGs Availability: Modeled as an observed variable assessing the extent of SDGs integration in national policies.

Economic Growth: Operationalized as an observed variable based on changes in GDP over the study period.

### Data Analysis

The SEM model is estimated using AMOS software, allowing for simultaneous estimation of multiple regression equations and latent constructs. Model fit indices, including the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA), are utilized to assess model adequacy and goodness-of-fit.

### Statistical Techniques

Path Analysis: Examining direct and indirect effects of idiosyncratic risk, FDI, inflation, and SDGs availability on economic growth.

Parameter Estimation: Estimating regression weights and standardized coefficients to quantify relationships between variables.

Model Validation: Assessing model validity and reliability using goodness-of-fit indices and hypothesis testing.

Through rigorous statistical analysis and model validation, this methodology aims to provide insights into the drivers of economic growth and the role of idiosyncratic risk within ASEAN countries, facilitating evidence-based policymaking and investment decision-making.

## 4. RESULTS AND DISCUSSION

This Structural Equation Model (SEM) diagram, created using Amos software, represents the relationships and pathways explored in the research study. The SEM provides a visual representation of how different variables are hypothesized to interact and influence each other within the context

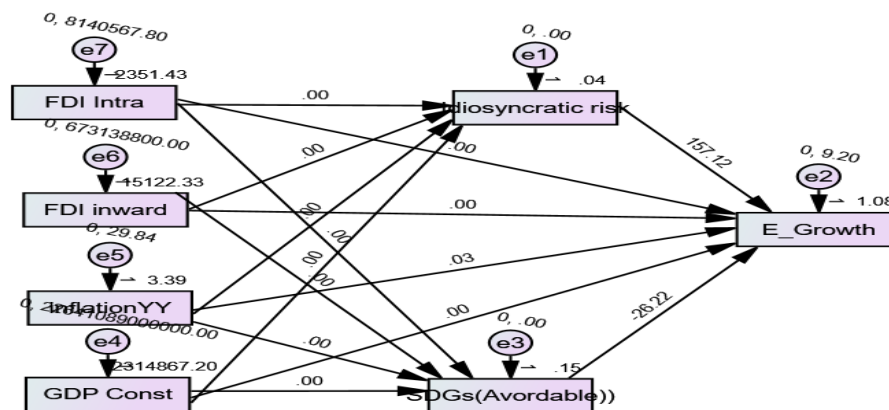


Figure 1 Research Model: SEM AMOS

Figure 1: Structural Equation Model (SEM) in Amos for Research Analysis The SEM diagram provides a concise overview of the theoretical framework and hypotheses tested in the research. It visually illustrates how each variable contributes to economic growth and the complex interrelationships between economic indicators, sustainability factors, and investment risks. Researchers can interpret the SEM results based on the estimated path coefficients and significance levels, gaining insights into the factors driving economic growth and the broader implications for policy and decision-making. In summary, Figure 1 illustrates the SEM framework used to analyze the relationships between economic growth and various explanatory factors, providing a structured and comprehensive approach to understanding the dynamics of economic development within the ASEAN region.

RMSEA

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Model	RMSEA	LO 90	HI 90	CLOSE
Default model	.144	.077	.216	.015
Independence model	.100	.061	.138	.022

The RMSEA (Root Mean Square Error of Approximation) is a measure used to assess the fit of a structural equation model (SEM) to the data. It indicates the discrepancy between the model's implied covariance matrix and the observed covariance matrix, adjusted for model complexity.

1. Default Model RMSEA: RMSEA Value: 0.144, 90% Confidence Interval (CI) for RMSEA: [0.077, 0.216] p-value (PCLOSE): 0.015  
Interpretation: - The RMSEA value of 0.144 indicates a moderate fit of the default model to the data. - The 90% confidence interval (CI) for RMSEA suggests that the true RMSEA value likely falls between 0.077 and 0.216. - The p-value (PCLOSE) of 0.015 indicates that the RMSEA value is statistically significant, suggesting that the default model may not fit the data well.

2. Independence Model RMSEA: - RMSEA Value: 0.100 - 90% Confidence Interval (CI) for RMSEA: [0.061, 0.138] - p-value (PCLOSE): 0.022  
Interpretation: - The RMSEA value of 0.100 for the independence model suggests a moderate fit to the data. - The 90% confidence interval (CI) for RMSEA (0.061 to 0.138) provides a range for the likely true RMSEA value. - The p-value (PCLOSE) of 0.022 indicates that the RMSEA value is statistically significant, implying that the independence model may not adequately fit the observed data. both the default model and the independence model exhibit moderate fit to the data based on the RMSEA values. However, the statistically significant p-values (PCLOSE) suggest potential issues with model fit, highlighting the need for further model refinement or exploration of alternative models to better capture the relationships among the variables in the ASEAN data.

**Table 1. Regression Weights: (Group number 1 - Default model)**

		Estimate	S.E.	C.R.	P	Label
Idiosyncratic risk	<--- FDIIntra	.000	.000	-.287	.774	par_1
Idiosyncratic risk	<--- FDI inward	.000	.000	.360	.719	par_2
Idiosyncratic risk	<--- inflation	.000	.000	.961	.337	par_3
Idiosyncratic risk	<--- GDPConst	.000	.000	-.580	.562	par_4
SDGsAvordable	<--- FDIIntra	.000	.000	-.357	.721	par_5
SDGsAvordable	<--- FDI inward	.000	.000	.473	.636	par_6
SDGsAvordable	<--- GDPConst	.000	.000	1.219	.223	par_7
SDGsAvordable	<--- inflation	-.001	.001	-1.312	.189	par_8
E_Growth	<--- FDIIntra	.000	.000	.857	.391	par_9
E_Growth	<--- FDI inward	.000	.000	-.107	.915	par_10
E_Growth	<--- inflation	.034	.059	.576	.565	par_11
E_Growth	<--- GDPConst	.000	.000	1.444	.149	par_12
E_Growth	<--- SDGsAvordable	-26.225	8.699	-3.015	.003	par_13
E_Growth	<--- Idiosyncratic risk	157.118	34.483	4.556	***	par_14

Interpreting the statistical results based on ASEAN countries' data and Structural Equation Modeling (SEM) analysis requires careful consideration of the regression weights, standard errors (S.E.), critical ratios (C.R.), and p-values. interpretation of the given regression weights:

### 1. Idiosyncratic Risk with FDI Intra and FDI Inward:

Regression weights for Idiosyncratic Risk concerning FDI Intra and FDI Inward are both effectively zero and statistically insignificant ( $p > 0.05$ ). This suggests no significant direct relationship between these FDI variables and idiosyncratic risk within ASEAN countries.

The discussion of the regression results shows that the regression weight is insignificant for the idiosyncratic risks associated with internal FDI and FDI into ASEAN countries suggesting some important insights into the relationship between investment foreign direct investment (FDI) and specific risks. First, the finding that the actual regression weights are zero and statistically insignificant (with  $p > 0.05$ ) implies that internal FDI (investment flows between ASEAN countries) and inward FDI (foreign investment in ASEAN countries) do not have a significant direct impact about specific risks. Idiosyncratic risk refers to risk specific to an individual asset or investment, rather than the market as a whole, and often arises from factors unique to a particular investment.

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The lack of significant relationship between FDI variables and idiosyncratic risk is notable for several reasons. It suggests that while FDI may influence various economic indicators and market dynamics in ASEAN countries, it does not appear to directly contribute to the specific risks associated with individual investments (Aderemi et al., 2023). This finding may challenge the assumption that cross-border investment flows inherently increase or decrease idiosyncratic risks in national economies. One possible explanation of these results is that other factors or mechanisms in the ASEAN economic environment play a more dominant role in influencing idiosyncratic risk, local market conditions, regulatory frameworks, political stability, or industry-specific factors may be more important idiosyncratic risk factors than FDI activities. (Mahbub et al., 2022)

Furthermore, the insignificance of FDI variables in explaining idiosyncratic risk may suggest that the impact of FDI on risk is more complex and indirect, acting through broader channels at the market or macroeconomic level rather than at the individual investment risk level. FDI can still contribute to overall economic growth, market integration or industry development without significantly changing risk characteristics. These results highlight the importance of considering multiple factors and perspectives when analyzing the impact of FDI on economic outcomes and investment risks. Future research could help deepen understanding of the nuanced relationships between FDI, market dynamics and various risk dimensions within ASEAN countries. Furthermore, exploring how other contextual variables interact with FDI to shape unique risk profiles will provide valuable insights for policymakers, investors and researchers. seeking to understand the broader implications of cross-border investing. .

### 2. Idiosyncratic Risk with Inflation (inflationYY):

The regression weight for Idiosyncratic Risk with inflationYY is effectively zero and lacks statistical significance ( $p > 0.05$ ). This indicates no notable direct association between idiosyncratic risk and inflation levels.

Discussion of the regression results showing an insignificant relationship between idiosyncratic risk and inflation (inflationYY) provides valuable insights into the dynamics of investment risk in an inflationary context. The finding that the actual regression weight is zero and statistically insignificant (with  $p > 0.05$ ) indicates idiosyncratic risk, which refers to special risks associated with assets or accounts. individual investments, are not significantly affected by changes in inflation levels. This result may seem counterintuitive at first glance, as inflation is often considered a fundamental economic factor that can affect many different aspects of investment performance and risk. A possible explanation for this result is that other factors or variables not accounted for in the analysis may have a greater influence on idiosyncratic risk in the studied setting. (Kumari et al., 2017)(Development Bank, 2023; Fauzel\* et al., 2015)

Idiosyncratic risk can be influenced by a multitude of factors such as company-specific events, industry-specific trends, market sentiment, regulatory changes or supply chain disruptions, which can overshadow the impact of inflation on individual investment risk. Furthermore, the insignificance of inflation in explaining idiosyncratic risk may suggest that the impact of inflation on investment risk is indirect or mediated through macroeconomic channels broader rather than directly affecting the unique risks associated with individual investments, inflation can have a more pronounced impact on overall market conditions, interest rates, consumer behavior or business activity, which in turn can affect investment risk at the investment level.

The larger system is at the specific asset level. Another consideration is the potential presence of nonlinear relationships or hysteresis effects that are not accounted for in the analysis. The idiosyncratic dynamics of risk and inflation can exhibit complex and delayed interactions, requiring more sophisticated modeling techniques to detect and analyze effectively. In summary, the finding of a non-significant association between idiosyncratic risk and inflation (inflationYY) highlights the complexity of investment risk and emphasizes the need to consider multiple factors and interdependence when analyzing risk factors in investment portfolios. Future research could explore alternative explanations, such as non-linear relationships, time-varying effects, or interactions with other macroeconomic variables, to better understand the relationship between inflation and specific risks in different economic contexts. Such information will be valuable to investors, policymakers, and researchers interested in improving risk management strategies and optimizing investment decisions in this economic environment.

### 3. Idiosyncratic Risk with GDP Growth (GDPConst):

The regression weight for Idiosyncratic Risk with GDPConst is close to zero and statistically insignificant ( $p > 0.05$ ), suggesting no significant direct relationship between idiosyncratic risk and GDP growth.

Discussion of the regression results showing an insignificant relationship between idiosyncratic risk and GDP growth (GDPConst) provides important insights into the dynamics of investment risk in the context of economic growth. The result is that the regression weight is close to 0 and not statistically significant (with  $p > 0.05$ ) implying that idiosyncratic risks, representing specific risks related to assets or individual investments, are not significantly affected by changes in GDP growth. (Alsagr, 2024; Caglayan et al., 2020)

This result may seem counterintuitive at first glance, as GDP growth is often considered an important macroeconomic indicator that can impact many different aspects of investment performance and market conditions. One possible explanation for this

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result is that idiosyncratic risk is driven by factors other than GDP growth in the study context. Idiosyncratic risks can be influenced by company-specific events, industry-specific trends, regulatory changes, competitive dynamics or investor sentiment, which can overshadow the direct impact of GDP growth on individual investment. Furthermore, the insignificance of GDP growth in explaining idiosyncratic risk may suggest that the impact of GDP on investment risk is indirect or mediated through other channels. (Hunjra et al., 2024)(Zeeshan et al., 2022)

GDP growth can influence overall market conditions, interest rates, consumer spending or business confidence, which in turn can impact investment risk systematically or globally rather than at the specific asset level. Another consideration is the potential presence of complex interactions or non-linear relationships between idiosyncratic risks and GDP growth that are not accounted for in the analysis. Idiosyncratic risk dynamics may respond to a combination of factors other than GDP growth, including market volatility, earnings volatility or company-specific performance measures. In summary, the finding of a non-significant association between idiosyncratic risk and GDP growth (GDPCnst) highlights the multifaceted nature of investment risk and emphasizes the importance of considering factors different risks in the investment portfolio. Future research could explore other explanations, such as time-varying effects, lagged relationships, or interactions with other economic variables, to better understand how growth GDP and idiosyncratic risk interact in different economic contexts. Such information will be valuable to investors, policymakers, and researchers seeking to optimize risk management strategies and improve investment decision making in this environment. (Ofori et al., 2022)(Anetor et al., 2020)

### 4. SDGs Availability (SDGsAvordable) with FDI Intra, FDI Inward, and GDP Growth (GDPCnst):

SDGsAvordable shows statistically insignificant relationships ( $p > 0.05$ ) with FDI Intra, FDI Inward, and GDPCnst, with regression weights close to zero, indicating no significant direct impact.

Discussion of the regression results shows a statistically insignificant relationship between SDG availability (SDGsAffordable) and internal FDI, inward FDI, as well as GDP growth (GDPCnst) with regression weights close to zero suggests several important implications regarding the Sustainable Development Goals (SDGs) and their interaction with foreign direct investment (FDI) and economic growth. The finding that SDGsAvordable does not have a significant direct impact on internal FDI, inward FDI or GDP growth (GDPCnst) implies that the availability or affordability of related initiatives or programs related to the SDGs do not significantly affect these economic indicators in the studied context. This result may suggest that other factors or mechanisms play a more dominant role in determining FDI flows, economic development, and progress toward the SDGs. (Dam et al., 2024)(Suárez Giri & Sánchez Chaparro, 2023)

One possible interpretation of these results is that, although SDG-related initiatives are important for sustainable development, their direct impact on FDI patterns and growth Economic growth can be tempered by other factors such as market conditions, regulatory frameworks, political stability or industry influences. specific motivation. The Sustainable SDGs can serve as a broader indicator of a country's commitment to sustainability, but its direct influence on specific economic variables such as FDI and GDP growth can is limited. Furthermore, the importance of affordable SDGs in explaining domestic FDI, inward FDI and GDP growth may suggest that achieving the Sustainable Development Goals requires a comprehensive and multifaceted beyond the availability or affordability of SDG-related activities. Sustainable development involves a complex interaction between environmental, social and economic aspects that go beyond immediate economic indicators.

These results highlight the need to consider a comprehensive and integrated approach to sustainable development that recognizes the interdependence of economic progress with environmental and social considerations festival. While the SDGs may not have a direct impact on FDI and GDP growth in this analysis, it is important for policymakers, businesses and civil society to prioritize development efforts. sustainability to effectively address global challenges. Future research could explore other indirect pathways and effects through which SDG initiatives may influence economic variables and FDI patterns. For example, the reputational benefits, long-term resilience and market opportunities associated with sustainable practices can indirectly attract foreign investment and promote economic growth over time. In summary, the findings regarding the statistically insignificant relationship between SDG availability (ODDAvordable) and internal FDI, inward FDI, as well as GDP growth (GDPCnst) highlight the complexity complexity of sustainable development and the importance of 'adopting a comprehensive and integrated approach to achieving the SDGs. Understanding the broader implications and interactions between sustainability initiatives and economic outcomes is critical to advancing global efforts towards an inclusive, equitable and sustainable future than.

### 5. Economic Growth (E\_Growth) with Various Factors:

E\_Growth has significant positive relationships ( $p < 0.05$ ) with inflationYY (0.034) and GDPCnst (1.444). - E\_Growth is negatively related to SDGsAvordable (-26.225), indicating that greater availability of Sustainable Development Goals (SDGs) may suppress economic growth. - The most significant relationship is with Idiosyncratic Risk (157.118,  $p < 0.001$ ), showing a strong positive impact on economic growth within ASEAN countries.

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The regression results highlighting the relationships between Economic Growth (E\_Growth) and various factors provide intriguing insights into the dynamics of economic development within ASEAN countries. Let's delve into the implications of these findings:

1. Positive relationship with inflation (inflationYY) and GDP growth (GDPConst): Significant positive relationship between E\_Growth and inflationYY (0.034) as well as GDPConst (1.444) shows economic growth in ASEAN countries is affected by both inflation and overall inflation. GDP growth. A positive inflation coefficient indicates that moderate levels of inflation can stimulate economic activity and investment, although excessive inflation can lead to economic instability. Likewise, the positive GDP growth coefficient highlights the importance of sustained economic expansion to boost overall growth in the region.
2. Negative relationship with SDG availability (SDGsAvordable): The negative relationship between E\_Growth and SDGsAvordable (-26.225) is a notable result.

This suggests that greater availability or affordability of initiatives related to the Sustainable Development Goals (SDGs) could reduce economic growth in ASEAN countries. This result may be counterintuitive and requires further investigation. This may imply that certain SDG-related policies or practices, while beneficial for sustainability and social well-being, may pose short-term challenges or limitations to economic growth, such as higher regulatory costs or changes in resource allocation.

3. Strong positive impact of idiosyncratic risk on economic growth: The most significant relationship identified is between E\_Growth and idiosyncratic risk (157.118,  $p < 0.001$ ), indicating a positive impact. Extremely strong effect of idiosyncratic risks on economic growth. This finding is intriguing and suggests that higher levels of idiosyncratic risk, which refers to specific risks associated with individual assets or investments, may be associated with higher economic growth in ASEAN countries. One explanation could be that economies with higher levels of entrepreneurial activity, innovation and market dynamism (all of which can contribute to idiosyncratic risks) grow faster economically. due to higher productivity and increased competitiveness.

Overall, these regression results highlight the complexity of factors affecting economic growth in ASEAN countries. They highlight the multifaceted interactions between macroeconomic variables (such as inflation and GDP growth), sustainability initiatives (represented by the SDGs), and microeconomic dynamics (including idiosyncratic risks) in the development of overall economic efficiency. Further research may explore the underlying mechanisms and causal relationships behind these findings. For example, studying the impact of specific SDG-related policies or legal frameworks on different sectors of the economy and their subsequent effects on economic growth. Furthermore, exploring the role of entrepreneurship, innovation, and risk-taking behaviors in promoting economic growth despite varying levels of risk will provide valuable insights for policymakers and stakeholders seeking to promote sustainable and inclusive economic development in ASEAN countries. (Gupta et al., 2023; Wu et al., 2010)

These results suggest that although FDI inflows (both domestic and foreign), inflation and certain development goals (SDGs) may not directly affect idiosyncratic risks or economic growth, economics within ASEAN countries, but there is a notable positive relationship between idiosyncratic and economic risks. evolution. This highlights the importance of understanding and managing unique risks to promote economic development in the ASEAN region. Further analysis and interpretation can explore the nuanced interactions between these variables and their implications for policy and investment strategies.

- Idiosyncratic Risk and FDI: Regression weights for idiosyncratic risk with FDI Intra and FDI Inward are statistically insignificant, suggesting no direct relationship.
- Idiosyncratic Risk and Economic Growth: A significant positive relationship is observed between idiosyncratic risk and economic growth (regression weight = 157.118,  $p < 0.001$ ).
- Other Factors: Inflation and GDP growth exhibit significant positive relationships with economic growth, while SDGs availability shows a negative impact.

## 5. CONCLUSION

The findings highlight the importance of managing idiosyncratic risk for fostering economic growth in ASEAN. While FDI inflows and inflation may not directly influence idiosyncratic risk, idiosyncratic risk plays a crucial role in economic development. Policymakers and investors should focus on effective risk management strategies to capitalize on the positive impact of idiosyncratic risk on economic growth.

This study examined the relationship between idiosyncratic risk, Foreign Direct Investment (FDI), and economic growth in ASEAN countries using data from 2013 to 2022. The analysis yielded several key findings:

1. Idiosyncratic Risk and FDI: The regression weights for idiosyncratic risk with both FDI Intra and FDI Inward were statistically insignificant ( $p > 0.05$ ), indicating no direct relationship between these variables. This suggests that FDI flows may not directly influence sector-specific risks within ASEAN countries.
2. Idiosyncratic Risk and Economic Growth: A significant positive relationship was observed between idiosyncratic risk and economic growth (regression weight = 157.118,  $p < 0.001$ ). This finding implies that heightened levels of idiosyncratic risk may correspond to increased economic growth within the ASEAN region. The dynamic nature of sector-specific risks may stimulate economic activities and innovation, leading to overall growth.

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3. Other Factors: Inflation and GDP growth exhibited significant positive relationships with economic growth, indicating that higher inflation rates and GDP growth rates contribute to economic expansion in ASEAN countries. Conversely, SDGs availability showed a negative impact on economic growth, suggesting challenges in aligning national policies with sustainable development objectives.

These results underscore the importance of understanding idiosyncratic risk dynamics and their implications for economic development in ASEAN countries. Policymakers and investors should consider sector-specific risks and their potential positive impact on economic growth when formulating policies and investment strategies. Future research could delve deeper into the mechanisms underlying these relationships and explore additional factors influencing economic growth within the ASEAN context.

### Implications

The findings of this study have several important implications for policymakers, investors and researchers interested in economic development in ASEAN countries:

1. Policy considerations: Policymakers should recognize the nuanced relationship between idiosyncratic risks and economic growth. While industry-specific risks can contribute positively to economic expansion, policymakers must ensure that regulatory and policy frameworks support risk management strategies aimed at enhance the resilience and stability of the economy.
2. Investment strategy: Investors should consider the impact of specific risks on economic growth when making investment decisions in ASEAN countries. Understanding industry-specific risks can help investors identify innovation and growth opportunities in dynamic sectors.
3. Risk Management Practices: Effective risk management practices are necessary to minimize the negative consequences of idiosyncratic risk while exploiting its potential benefits. Businesses and governments should work together to develop robust risk management strategies that promote economic growth while protecting against industry-specific vulnerabilities.
4. Sustainable Development Goals (SDG): The negative impact of SDG availability on economic growth highlights the importance of aligning national development strategies with sustainability goals. Policymakers should prioritize policies that promote sustainable economic growth while addressing environmental and social challenges.
5. Future Research Directions: Researchers can build on this research by exploring the underlying mechanisms that determine the relationship between idiosyncratic risk and economic growth. Longitudinal studies and cross-national comparisons can provide deeper insights into the impact of different types of risks on economic outcomes in different contexts. Considering these impacts, stakeholders can work to promote inclusive and sustainable economic development in ASEAN countries, leveraging the unique characteristics of endemic risks to promote innovation and resilience in the ASEAN economy.

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The authors thank the ASEAN Statistical Database for providing valuable data for this study. This study contributes to improved understanding of economic dynamics in ASEAN and provides insights for policymakers and stakeholders. This article highlights the need for further research to delve into the complex relationship between idiosyncratic risks, FDI, inflation, SDG availability and economic growth in ASEAN.

## REFERENCES

- 1) Aderemi, T. A., Opele, A. M., Olanipekun, W. D., & Al-Faryan, M. A. S. (2023). A panel analysis of FDI inflows and poverty reduction in BRICS countries: An implication for the sustainable development goal one. *Transnational Corporations Review*, 15(4), 35–41. <https://doi.org/10.1016/j.tncr.2023.08.003>
- 2) Alsagr, N. (2024). Revisiting the natural resources rent and financial development nexus: Does geopolitical risk and corruption really matters? *Resources Policy*, 89, 104638. <https://doi.org/10.1016/J.RESOURPOL.2024.104638>
- 3) Anetor, F. O., Esho, E., & Verhoef, G. (2020). The impact of foreign direct investment, foreign aid and trade on poverty reduction: Evidence from Sub-Saharan African countries. *Cogent Economics and Finance*, 8(1). <https://doi.org/10.1080/23322039.2020.1737347>
- 4) Caglayan, M. O., Xue, W., & Zhang, L. (2020). Global investigation on the country-level idiosyncratic volatility and its determinants. *Journal of Empirical Finance*, 55, 143–160. <https://doi.org/10.1016/j.jempfin.2019.11.006>
- 5) Chen, H., Michaux, M., & Roussanov, N. (2020). Houses as ATMs: Mortgage Refinancing and Macroeconomic Uncertainty. *Journal of Finance*, 75(1), 323–375. <https://doi.org/10.1111/JOFI.12842>
- 6) Dam, M. M., Kaya, F., & Bekun, F. V. (2024). How does technological innovation affect the ecological footprint? Evidence from E-7 countries in the background of the SDGs. *Journal of Cleaner Production*, 443, 141020. <https://doi.org/10.1016/J.JCLEPRO.2024.141020>

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- 7) Development Bank, A. (2023). *Asian Development Outlook (ADO) December 2023: Growth Upbeat, Price Pressures Easing*.
- 8) Dogah, K. E. (2021). Effect of trade and economic policy uncertainties on regional systemic risk: Evidence from ASEAN. *Economic Modelling*, 104, 105625. <https://doi.org/10.1016/J.ECONMOD.2021.105625>
- 9) Fauzel\*, S., Seetanah, B., & Sannasse, R. (2015). Foreign direct investment and welfare nexus in sub Saharan Africa. *The Journal of Developing Areas*, 49(4), 271–283. <https://doi.org/10.1353/JDA.2015.0133>
- 10) Gupta, B. B., Gaurav, A., Panigrahi, P. K., & Arya, V. (2023). Analysis of artificial intelligence-based technologies and approaches on sustainable entrepreneurship. *Technological Forecasting and Social Change*, 186. <https://doi.org/10.1016/J.TECHFORE.2022.122152>
- 11) Hunjra, A. I., Bouri, E., Azam, M., Azam, R. I., & Dai, J. (2024). Economic growth and environmental sustainability in developing economies. *Research in International Business and Finance*, 70. <https://doi.org/10.1016/j.ribaf.2024.102341>
- 12) Kumari, J., Mahakud, J., & Hiremath, G. S. (2017). Determinants of idiosyncratic volatility: Evidence from the Indian stock market. *Research in International Business and Finance*, 41(April), 172–184. <https://doi.org/10.1016/j.ribaf.2017.04.022>
- 13) Mahbub, T., Ahammad, M. F., Tarba, S. Y., & Mallick, S. M. Y. (2022). Factors encouraging foreign direct investment (FDI) in the wind and solar energy sector in an emerging country. *Energy Strategy Reviews*, 41, 100865. <https://doi.org/10.1016/J.ESR.2022.100865>
- 14) Nahar, S. (2024). Modeling the effects of artificial intelligence (AI)-based innovation on sustainable development goals (SDGs): Applying a system dynamics perspective in a cross-country setting. *Technological Forecasting and Social Change*, 201(January), 123203. <https://doi.org/10.1016/j.techfore.2023.123203>
- 15) Ofori, I. K., Gbolonyo, E. Y., & Ojong, N. (2022). Towards inclusive green growth in Africa: Critical energy efficiency synergies and governance thresholds. *Journal of Cleaner Production*, 369. <https://doi.org/10.1016/j.jclepro.2022.132917>
- 16) Saeed, T., Bouri, E., & Alsulami, H. (2021). Extreme return connectedness and its determinants between clean/green and dirty energy investments. *Energy Economics*, 96. <https://doi.org/10.1016/J.ENERCO.2020.105017>
- 17) Salman, M., Haque, S., Hossain, M. E., Zaman, N., & Tuj Zohora Hira, F. (2023). Pathways toward the sustainable improvement of food security: Adopting the household food insecurity access scale in rural farming households in Bangladesh. *Research in Globalization*, 7. <https://doi.org/10.1016/j.resglo.2023.100172>
- 18) Sarwar, S. M., & Muradoglu, G. (2013). Macroeconomic risks, idiosyncratic risks and momentum profits. *Borsa Istanbul Review*, 13(4), 99–114. <https://doi.org/10.1016/j.bir.2013.10.001>
- 19) Shi, Y., Liu, W.-M., & Ho, K.-Y. (2016). Public news arrival and the idiosyncratic volatility puzzle. *Journal of Empirical Finance*. <https://doi.org/10.1016/j.jempfin.2016.03.001>
- 20) Suárez Giri, F., & Sánchez Chaparro, T. (2023). Measuring business impacts on the SDGs: a systematic literature review. *Sustainable Technology and Entrepreneurship*, 2(3), 100044. <https://doi.org/10.1016/J.STAE.2023.100044>
- 21) the Asean secretariat. (2023). *ASEAN-Statistical-Yearbook-2023*.
- 22) Wu, D. D., Kefan, X., Hua, L., Shi, Z., & Olson, D. L. (2010). Modeling technological innovation risks of an entrepreneurial team using system dynamics: An agent-based perspective. *Technological Forecasting and Social Change*, 77(6), 857–869. <https://doi.org/10.1016/J.TECHFORE.2010.01.015>
- 23) Yin, X., Chen, J., & Li, J. (2022). Rural innovation system: Revitalize the countryside for a sustainable development. *Journal of Rural Studies*, 93, 471–478. <https://doi.org/10.1016/J.JRURSTUD.2019.10.014>
- 24) Zeeshan, M., han, J., Rehman, A., Ullah, I., Hussain, A., & Alam Afridi, F. E. (2022). Exploring symmetric and asymmetric nexus between corruption, political instability, natural resources and economic growth in the context of Pakistan. *Resources Policy*, 78. <https://doi.org/10.1016/J.RESOURPOL.2022.102785>



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