

Do Inflation, Labor, FDI, and External Debt Influence Economic Growth? Evidence from ASEAN Countries During the Fintech 3.0

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ABSTRACT

Purpose: This research aims to analyze the influence of inflation, labor, foreign direct investment (FDI), and external debt on economic growth in ASEAN countries during fintech 3.0 period.

Method: This research employs a quantitative approach. The study includes 176 observations, comprising 11 cross-sectional units and 16 time series units. For data analysis, a panel data regression model is utilized, incorporating three approaches: the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Based on the results, the Fixed Effect Model (FEM) is identified as the best model. The data used in this study are secondary data obtained from international institutions such as the World Bank, Asian Development Bank (ADB), and International Monetary Fund (IMF).

Result: The results indicate that inflation has a negative but insignificant effect on economic growth, while labor has a significant negative effect. In contrast, foreign direct investment (FDI) and external debt demonstrate significant positive effects, underscoring the importance of strategic management of these two variables to promote economic growth.

Practical Implications for Economic Growth and Development: The research provides recommendations for consistently managing inflation, enhancing technology-based education and training for the workforce, and maximizing the benefits of FDI through strategic management. Additionally, the prudent use of external debt to finance productive sectors, particularly infrastructure, is crucial for promoting inclusive and sustainable economic development in the ASEAN region.

Keywords: *fintech 3.0, ASEAN, economic growth, panel data, inflation*

INTRODUCTION

Economic growth is the primary indicator that reflects a country's success in improving the welfare of its people (Todaro & Smith, 2020). In the Southeast Asia (ASEAN) region, economic growth over the past few decades has exhibited diverse dynamics, influenced by various structural and external factors, such as globalization, foreign investment, and the development of financial technology (Asian Development Bank, 2022). In the context of fintech 3.0, characterized by increasingly intensive financial digitalization, ASEAN countries face new opportunities and challenges in managing their economies (World Bank, 2023). The region has recorded stable growth rates despite facing global challenges such as trade wars, the COVID-19 pandemic, and climate change (Haren, 2019). Additionally, ASEAN's economic growth is driven by increased domestic consumption, international trade, and foreign direct investment flows (Andrawina et al., 2024). The fintech 3.0 era, which began around 2008, has positioned digital transformation as the main driver of economic change (Ozili, 2023). Fintech 3.0 is characterized by the growing adoption of technology in the financial sector, including digital payments, e-money, and blockchain-based financial services (PR Newswire, 2023). This digitalization accelerates financial inclusion and facilitates access to capital for small and



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medium enterprises (SMEs), which are the backbone of the ASEAN economy (Asian Development Bank, 2022).

However, digitalization also poses new challenges, including the risk of digital inequality, dependence on foreign technology investment, and pressure on traditional sectors (Badia et al., 2022). Factors such as inflation, labor, foreign direct investment, and external debt play significant roles in influencing economic growth in ASEAN. Controlled inflation is often associated with macroeconomic stability (Dierks, 2023), while employment reflects a country's productivity and competitiveness (United Nations Economic and Social Commission for Asia and the Pacific, 2017). Foreign direct investment (FDI) serves as a primary source of capital for ASEAN countries, enabling technology transfer and increasing production capacity (Saha, 2021). However, high dependence on external debt can threaten economic stability, especially amid global uncertainty (World Bank, 2010). Although many studies have been conducted on each of these factors, research that simultaneously integrates the effects of inflation, labor, FDI, and external debt on economic growth in ASEAN remains limited (Ramadhanty et al., 2024).

Previous research on economic growth in the ASEAN region has identified various factors that influence regional economic dynamics. For instance, Soekapdjo and Esther (2019) emphasize that capital formation and savings are crucial drivers of economic growth, while inflation, natural resource depletion, and population size have significant negative effects. Their study underscores the need for policy restructuring to enhance economic efficiency and investment attractiveness. This finding is supported by Maulida et al. (2020), who demonstrate that investment and exports positively contribute to growth, although inflation is not significant in their model. Their research highlights the importance of regional cooperation in maximizing the economic benefits of trade and investment.

Further studies by Hafizhy and Sukarniati (2024) and Wau et al. (2022) offer additional insights into the role of macroeconomic variables such as trade openness, government spending, and exchange rates. Their findings indicate that foreign direct investment and trade openness significantly promote growth, while inefficient government spending acts as a barrier. Additionally, research by Setiartiti and Rahmadani (2023) points out that labor and economic freedom are key factors in driving economic growth. Ozili (2023) also emphasizes the importance of digitalization in enhancing financial inclusion.

The transformation seen during the fintech 3.0 era has further influenced employment dynamics in ASEAN, as noted by Chang et al. (2016). The International Labor Organization (ILO) has observed that digitalization creates new job opportunities but also poses a threat to jobs in traditional sectors. However, the interactions among these variables in the context of fintech 3.0 have not been thoroughly explored (Quy, 2021). This research is vital as fintech 3.0 brings fundamental changes to the economic structure in developing countries, including those in ASEAN. Therefore, analyses that consider the combined impact of various economic determinants are increasingly relevant (Ozili, 2023).

The novelty of this research lies in its effort to integrate the effects of key macroeconomic variables—namely, inflation, labor, foreign direct investment (FDI), and external debt—on economic growth in ASEAN countries within the context of fintech 3.0. Unlike previous studies that typically examine one or two variables in isolation, this research utilizes a simultaneous approach based on panel data to uncover the intricate interactions among these variables within a comprehensive analytical framework. Additionally, this study addresses a significant gap in the literature regarding how digital transformation, particularly during the fintech 3.0 era, reshapes the dynamics of economic growth in a region characterized by varying levels of digital maturity and economic structure. Another key contribution is the emphasis on the post-global financial crisis period, providing a unique perspective on the development of modern fintech and its impact on structural economic change and digitalization in developing countries.

The aim of this research is to analyze the influence of key macroeconomic factors—specifically, inflation, labor, foreign direct investment (FDI), and external debt—on economic

growth in ASEAN countries in the context of fintech 3.0 development from 2008 to 2023. The findings are expected to offer strategic guidance for policymakers on leveraging the potential of fintech 3.0 to promote sustainable development, bridge the digital divide, and ensure macroeconomic stability.

METHOD

This study employs panel data regression analysis with three approaches: the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Model selection is performed using the Chow test, Hausman test, and Lagrange Multiplier test to determine the most appropriate model. The research adopts a quantitative descriptive approach, with a total of 176 observations comprising 11 cross-sectional units and 16 time-series units. Data processing is conducted using EViews 12 statistical software.

The study focuses on the ASEAN region, which includes member countries such as Indonesia, Malaysia, Singapore, Thailand, the Philippines, Brunei Darussalam, Vietnam, Laos, Myanmar, Cambodia, and Timor Leste. Secondary data for the analysis is sourced from reputable international institutions, including the World Bank, Asian Development Bank (ADB), and International Monetary Fund (IMF). Data is collected systematically from annual reports, official publications, and publicly accessible online databases, ensuring the validity and relevance of information in line with the study period from 2008 to 2023. The analysis utilizes a linear regression model with panel data, formulated as follows:

$$\text{LogGe}_{it} = \beta_0 + \beta_1 \text{INF}_{it} + \beta_2 \text{LBR}_{it} + \beta_3 \text{LogFDI}_{it} + \beta_4 \text{LogDEBT}_{it} + \varepsilon_{it}$$

Information

LogGe	: Economic growth (percentage)
INF	: Inflation (percentage)
LBR	: Workforce (individual)
LogFDI	: Foreign direct investment (million US dollar)
LogDEBT	: External debt (million US dollar)
β_0	: Constant
$\beta_1, \beta_2, \beta_3, \beta_4$	: Regression Coefficient
i	: 11 countries
t	: 2008-2023
ε_{it}	: Error term

After determining the selected model, the next step involves conducting classical assumption tests, including multicollinearity and heteroscedasticity tests, to ensure the validity of the regression model. Statistical tests are then performed to evaluate the significance of the estimated parameters. These include the F-test, which examines the simultaneous effect of all independent variables on the dependent variable, the t-test, which assesses the partial effect of each independent variable on the dependent variable, and the coefficient of determination test, which measures the strength of the relationship between the independent and dependent variables in the model (Murhadi, 2015).

Table 1. Measurement of Variables and Data Sources

Variables	Measurements	Data Sources
Economic Growth	Annual GDP growth rate (%)	World Development Indicators (WDI)
Inflation	Annual percentage change in consumer prices	World Development Indicators (WDI)

Variables	Measurements	Data Sources
Labor	Labor force participation rate (total, % of the population aged 15–64), modeled estimates by the International Labour Organization (ILO)	Asian Development Bank (ADB)
Foreign Direct Investment (FDI)	Net foreign direct investment (current US\$)	World Development Indicators (WDI)
External Debt	Total external debt stocks (DOD, current US\$)	International Monetary Fund (IMF)

Source: Compiled by the authors (2025)

Hypotheses Development

Inflation and Economic Growth

According to Monetarist theory, high inflation increases price uncertainty, making it difficult for economic agents to predict investment returns. This uncertainty discourages capital accumulation and ultimately slows economic growth (Friedman, 1977). Similarly, Keynesian theory highlights that uncontrolled inflation distorts the relative price system, leading to suboptimal consumption and production decisions. These distortions hinder the real sector's contribution to economic growth, further exacerbating economic inefficiencies (Mankiw, 2019).

H1: Inflation has negative significant effect on economic growth

Labor and Economic Growth

In the context of growth theories, Solow's Growth Theory (1956) identifies labor, alongside physical capital and technology, as fundamental inputs driving economic output. An increase in productive labor expands a country's production capacity and supports sustained growth. Building on this, Becker's Human Capital Theory (1964) emphasizes the importance of a skilled and educated workforce. Higher levels of education and skills among the labor force enhance productivity, thereby accelerating economic growth.

H2: Labor has a positive significant effect on economic growth

Foreign Direct Investment on Economic Growth

Endogenous Growth Theory (Romer, 1990) underscores the role of Foreign Direct Investment (FDI) in fostering economic development. FDI introduces advanced technologies and superior managerial practices to recipient countries, enhancing labor productivity and resource efficiency. These improvements contribute to higher economic output and sustained growth.

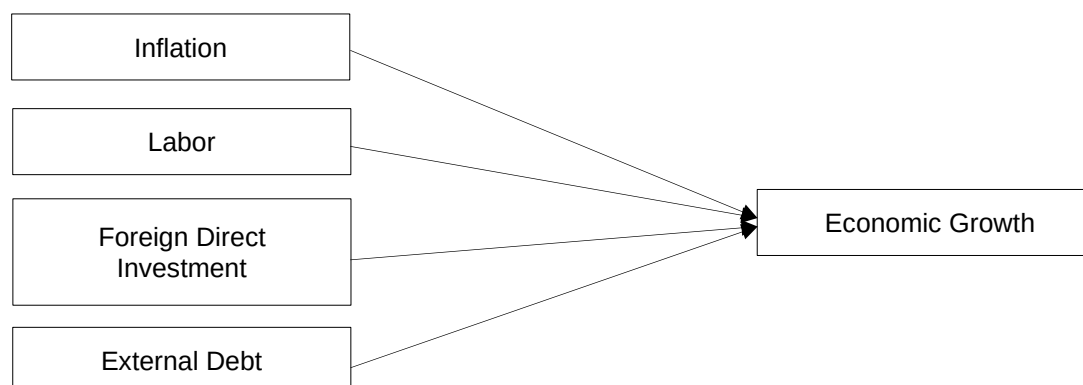
H3: Foreign Direct Investment has a positive significant effect on economic growth

External Debt on Economic Growth

External debt also plays a crucial role in financing development in emerging economies. It can supplement domestic savings, accelerate infrastructure projects, and stimulate economic activity (World Bank, 2020). Additionally, Endogenous Growth Theory posits that foreign debt-financed investments can boost total factor productivity (TFP) and create positive spillover effects across the economy (Romer, 1997).

H4: External debt has a positive significant effect on economic growth

Figure 1. Research Framework



Source: Developed by the authors (2025)

RESULT AND DISCUSSION

Multicollinearity Test

The multicollinearity test is conducted to detect the presence of a strong linear relationship between independent variables in a regression model.

Table 2. Multicollinearity Test

	INF	LBR	Log(FDI)	Log(DEBT)
INF	1.000000	-0.158779	-0.133893	-0.104548
LBR	-0.158779	1.000000	0.326012	0.258748
Log(FDI)	-0.133893	0.326012	1.000000	0.703541
Log(DEBT)	-0.104548	0.258748	0.703541	1.000000

Source: Processed data (2025)

The correlation coefficient between INF and LBR is -0.158779 (< 0.8), between INF and LogFDI is -0.133893 (< 0.8), between INF and LogDEBT is -0.104548 (< 0.8), between LBR and LogFDI is 0.326012 (< 0.8), between LBR and LogDEBT is 0.258748 (< 0.8), and between LogFDI and LogDEBT is 0.703541 (< 0.8). Based on these results, it can be concluded that the data is free from multicollinearity, meaning the data passes the multicollinearity test.

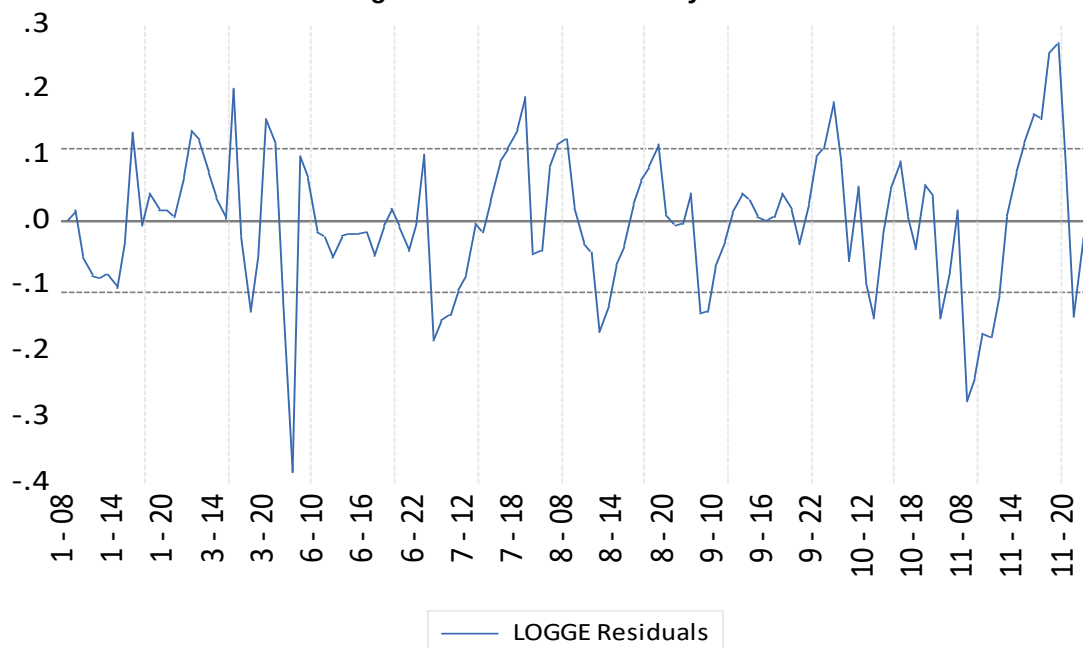
Heteroscedasticity Test

Heteroscedasticity analysis refers to a situation in regression where the error variance, or residuals, are not constant across observations. The fundamental assumption of classical regression models is that the error variance should be homoscedastic, meaning it must remain constant across all observations. This assumption is crucial to ensure that the estimation results are both efficient and valid (Gujarati, 2009).

Based on the results of the heteroscedasticity test on the residual graph (blue), it can be observed that the residuals do not exceed certain limits (500 and -500), indicating that the residual variance remains constant. Therefore, the data is considered to pass the heteroscedasticity test (Napitupulu et al., 2021). Given the results of the classical assumption

tests, it can be concluded that the panel data regression model used in this research is highly suitable.

Figure 2. Heteroscedasticity Test



Source: Processed data (2025)

Chow and Hausman Test

In this study, model specification testing was conducted using the Chow test and Hausman test to determine the most appropriate panel data regression model among the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The first test, the Chow test, is used to compare the Fixed Effect Model (FEM) with the Common Effect Model (CEM) (Gujarati, 2009). The results, as presented in Table 3, show an F-value of 383.682322 with a p-value of 0.000. Since the p-value is significantly smaller than the 0.05 significance level, the null hypothesis (H_0) that the Common Effect Model (CEM) is superior to the Fixed Effect Model (FEM) is rejected. This suggests that the Fixed Effect Model (FEM) is more suitable for this analysis.

The second test, the Hausman test, was performed to determine whether the Fixed Effect Model (FEM) or the Random Effect Model (REM) should be used (Baltagi, 2021). Based on the results in Table 3, the Hausman test yielded a chi-square value of 11.97948 with a p-value of 0.0175. Since the p-value is smaller than the 0.05 significance level, the null hypothesis (H_0) that the Random Effect Model (REM) is preferable over the Fixed Effect Model (FEM) is rejected. Therefore, the Fixed Effect Model (FEM) is considered more appropriate than the Random Effect Model (REM).

The Lagrange Multiplier test was not conducted as its purpose is to compare the Random Effect Model (REM) with the Common Effect Model (CEM). However, since the Hausman test indicated that the Fixed Effect Model (FEM) is the most suitable, this test was deemed unnecessary.

Table 3. FEM and REM Regression Results

Variables	Regression Coefficient	
	FEM	REM
C	15.08392	14.57231
INF	-0.001048	-0.000803
LBR	-0.017396	-0.016524
Log(FDI)	9.26E-12	9.16E-12
Log(DEBT)	0.468694	0.485720
R ²	0.996899	0.802613
Prob F-statistic	0.000000	0.000000

Chow test

Cross-section F (337.117547) = 383.682322; Prob F = 0.000

Hausman Test

Cross-section random χ^2 (4) = 11.97948; Prob χ^2 = 0.0175

Source: Processed data (2025)

Hypotheses Testing

Hypothesis testing was conducted to examine the effect of independent variables on the dependent variable at a significance level of $\alpha = 0.05$. Based on the results presented in Table 4, for hypothesis H1, which posits that inflation has a significant negative effect on economic growth, the results show a probability value of 0.6533 (> 0.05) with a negative coefficient (-0.001048). Therefore, H1 cannot be accepted, as inflation does not have a significant effect on economic growth. In hypothesis H2, which suggests that labor has a significant positive effect on economic growth, the probability value is 0.0008 (< 0.05) with a negative coefficient (-0.017396). As the effect is significant but negative, H2 also cannot be accepted. For hypothesis H3, which asserts that Foreign Direct Investment (FDI) has a significant positive effect on economic growth, the results show a probability value of 0.0025 (< 0.05) with a positive coefficient (9.26E-12). Thus, H3 is accepted, as FDI has a significant positive effect on economic growth. Finally, hypothesis H4, which states that foreign debt has a significant positive effect on economic growth, has a probability value of 0.0000 (< 0.05) with a positive coefficient (0.468694), supporting the acceptance of H4.

The F-test was conducted to determine whether all independent variables simultaneously have a significant influence on the dependent variable. The results, as presented in Table 4, show an F-statistic value of 3272.798 with a probability of 0.0000 (< 0.05), indicating that the variables of inflation (INF), labor (LBR), Foreign Direct Investment (FDI), and foreign debt (DEBT) together have a significant influence on economic growth. This result also confirms that the regression model meets the goodness of fit requirements, as the very small probability value of the F-statistic indicates that the model can explain the relationship between the independent and dependent variables effectively. Additionally, the coefficient of determination (R-squared) value of 0.996899 further strengthens this conclusion, as it shows that 99.69% of the variation in the dependent variable is explained by the independent variables in the model.

Table 4. Panel Data Regression Results

Variables	Coefficient	t-statistic	Prob.	Conclusion
INF	-0.001048	-0.450334	0.6533	INF has a negative effect and not significant at $\alpha = 0.05$
LBR	-0.017396	-3.448638	0.0008	LBR has a negative effect and significant at $\alpha = 0.05$
Log(FDI)	9.26E-12	3.093385	0.0025	FDI has a positive effect and significant at $\alpha = 0.05$

Variables	Coefficient	t-statistic	Prob.	Conclusion
Log(DEBT)	0.468694	19.46654	0.0000	DEBT has a positive effect and significant at $\alpha = 0.05$
F-statistics = 3272.798			R-squared = 0.996899	
F-table = 2.424			P-value = 0.0000	
T-table = 1.974				

Source: Processed data (2025)

Discussion

Inflation on Economic Growth

The results indicate that inflation has a negative but statistically insignificant effect on economic growth in ASEAN over the period 2008–2023. The analysis yielded a coefficient of -0.450334 and a p-value of 0.6533, which is greater than the significance threshold of 0.05. This suggests that while inflation tends to exert downward pressure on economic growth, its impact in the model used is neither strong nor statistically meaningful. This may imply that the fluctuations in inflation within ASEAN during this period did not reach levels sufficient to significantly influence regional economic growth.

Theoretically, inflation is often regarded as a key indicator of macroeconomic stability. According to Todaro and Smith (2020), moderate inflation can stimulate economic activity by encouraging consumption and investment. However, excessive or uncontrolled inflation can create uncertainty and disrupt market functions, thereby hindering economic growth. In the ASEAN context, the insignificant effect of inflation observed in this study may reflect the effectiveness of monetary policies in maintaining price stability during the study period.

Previous research has provided mixed findings on the relationship between inflation and economic growth. For instance, Hafidz et al. (2023) found that unstable or excessively high inflation significantly impairs economic growth, primarily by disrupting consumption and investment. These findings differ from the current study, which demonstrates a negative but insignificant effect. Conversely, Yogatama and Hidayah (2022) concluded that inflation significantly influences economic growth in ASEAN, highlighting the critical role of price control as a macroeconomic policy tool. These contrasting results suggest that the relationship between inflation and economic growth is context-dependent, varying according to factors such as the level of economic development, market structure, and the effectiveness of monetary policy.

In contrast, Maulida et al. (2020) argued that inflation does not have a significant impact on economic growth in ASEAN. This finding aligns with the results of the present study, indicating that the influence of inflation may be indirect or mediated by other factors, such as political stability, investment levels, and labor market conditions. The consistency of these findings underscores the importance of adopting balanced policies that address inflation while considering broader macroeconomic factors.

Labor on Economic Growth

The results indicate that labor participation has a negative and significant effect on economic growth in ASEAN over the period 2008–2023. The analysis reveals a coefficient of -0.017396 and a p-value of 0.0008, which is below the 0.05 significance threshold. This suggests that a 1% increase in the labor participation rate could potentially decrease economic growth by 0.017%. This finding may imply that rising labor participation in ASEAN is not accompanied by proportional increases in labor productivity, or that other factors, such as skill mismatches, hinder the workforce's optimal contribution to economic growth.

Labor is theoretically one of the primary factors of production essential for economic growth. Classical growth models, such as the Solow-Swan model, posit that labor, alongside capital

and technology, is a key driver of economic output (Mankiw, 2010). However, when increased labor participation is not paired with improvements in labor quality or efficiency, its impact on economic growth can become negative (Harnita et al., 2019). Todaro and Smith (2020) further argue that low labor productivity can lead to stagnation or even a decline in economic output, despite a growing workforce.

Previous research aligns with these findings. Swastika (2024) observed that while high labor participation can theoretically boost output, the reality in many developing countries is that the workforce often lacks the necessary training or alignment with market demands. This mismatch can limit labor's contribution to economic growth. In the ASEAN context, challenges such as skill mismatches and low investment in workforce development are significant barriers. Similarly, Melani and Sentosa (2019) found that labor participation in some ASEAN countries negatively correlates with economic growth due to low productivity and weak labor market integration. Their study emphasizes the importance of labor policy reforms to ensure that the workforce entering the market can contribute productively to the economy.

In contrast, some studies present different perspectives. Zakaria (2022) argued that labor participation positively impacts economic growth in countries with robust education and training systems. These divergent findings highlight the critical role of country-specific policies and economic conditions in shaping the relationship between labor force participation and economic growth.

This research underscores the importance of addressing workforce challenges in ASEAN. To unlock the full potential of labor in driving sustainable economic growth, policies should focus on enhancing workforce skills and aligning them with market demands. Investments in technology-driven vocational education and on-the-job training programs could offer effective solutions to these challenges, enabling the ASEAN workforce to contribute more meaningfully to regional economic development.

Foreign Direct Investment on Economic Growth

The findings indicate that foreign direct investment (FDI) has a significant positive effect on economic growth in ASEAN during the period 2008–2023. The analysis shows a coefficient of 9.26E-12 and a p-value of 0.0025, which is below the 0.05 significance threshold. This suggests that every additional US\$1 billion in FDI can increase economic growth by 0.00000009%. While the percentage increase may appear small, its impact is substantial at the macroeconomic level, given ASEAN's large FDI inflows and its diverse and rapidly expanding economic sectors.

Theoretically, FDI is widely recognized as a key driver of economic growth in developing countries. According to endogenous growth theory (Romer, 1986), foreign capital inflows not only provide financial resources but also contribute to technology transfer, managerial expertise, and access to global markets. The positive effects of FDI are further amplified through productivity gains and spillover effects, which facilitate the structural transformation of economies.

This study aligns with previous research. For example, Marwan et al. (2022) found that FDI significantly enhances economic growth in ASEAN countries. Their findings highlight that nations with favorable regulatory frameworks for foreign investment are more successful in attracting FDI, leading to increased employment and higher economic output. Similarly, Melanie and Sentosa (2019) demonstrated that FDI accelerates growth by improving the efficiency of resource allocation across sectors.

However, some studies have raised concerns about potential risks associated with FDI if not properly managed. For instance, Badia et al. (2022) noted that over-reliance on FDI can lead to economic instability, particularly when investments are concentrated in sectors vulnerable to external shocks. These insights underline the importance of strategic FDI management to mitigate risks while maximizing benefits.

This research supports the existing literature on the positive role of FDI in promoting economic growth. By strategically managing foreign investment, ASEAN countries can foster economic inclusion, modernize traditional sectors, and enhance their global competitiveness. Policies aimed at attracting FDI should prioritize not only increasing inflows but also ensuring that investments align with long-term development goals and contribute to sustainable economic growth.

External Debt on Economic Growth

The findings of this research indicate that external debt has a significant positive effect on economic growth in ASEAN during the period 2008–2023. The analysis reveals a coefficient of 0.468694 and a p-value of 0.0000, which is below the 0.05 significance threshold. This implies that every US\$1 million increase in external debt is associated with a 0.468694% increase in economic growth. This finding suggests that, when managed productively, external debt can serve as an effective tool for fostering economic growth by financing infrastructure projects and enhancing production capacity.

Theoretically, external debt is often leveraged by developing countries to address domestic funding shortages and finance key development projects. Todaro and Smith (2020) argue that external debt can be a vital source of development financing, particularly for infrastructure and education sectors, which are critical drivers of long-term economic growth. However, they also caution that excessive reliance on debt can lead to long-term economic risks, including high debt servicing burdens and dependence on foreign creditors.

This study aligns with the findings of Bilatula et al. (2023), who concluded that external debt positively impacts economic growth when allocated to productive development financing. Their research highlights that countries investing external debt in strategic sectors, such as infrastructure and technology, experience higher economic growth. In the ASEAN context, this is particularly relevant as many countries in the region rely on external debt to fund infrastructure development, which serves as the backbone of economic expansion.

Similarly, Marwan et al. (2022) support this perspective, noting that external debt can yield significant economic benefits when well-managed. They emphasize the importance of maintaining a manageable debt-to-GDP ratio to ensure debt sustainability. In contrast, Yuliana et al. (2023) argue that external debt can become a burden when used unproductively or when revenues generated from debt-financed projects are insufficient to cover repayment obligations. These contrasting views underscore the critical importance of effective debt management to maximize its positive impact on economic growth.

This study underscores the potential of external debt to drive economic growth in ASEAN when accompanied by prudent fiscal policies and strategic allocation. To ensure long-term benefits, policymakers should focus on directing external debt toward productive sectors, maintaining sustainable debt levels, and implementing sound debt management strategies. By doing so, ASEAN countries can harness the full potential of external debt as a catalyst for sustainable economic development.

CONCLUSION

ASEAN's economic growth is influenced by globalization, foreign investment, and digital transformation, particularly in the fintech 3.0 era. Since 2008, digitalization has driven financial innovations such as e-money and blockchain, fostering financial inclusion and supporting small and medium enterprises (SMEs). Despite these advancements, challenges like digital inequality and technological dependence have not significantly disrupted the region's economic stability, allowing ASEAN to sustain its economic trajectory.

This study examines the effects of inflation, labor, foreign direct investment (FDI), and external debt on economic growth in ASEAN countries during the fintech 3.0 period. A fixed effect

model (FEM) panel data analysis approach was employed to identify the relationships between these variables and economic growth.

The findings reveal varied impacts of these factors on ASEAN's economic growth. Inflation was found to have a negative but statistically insignificant effect, suggesting that price levels do not strongly influence growth during this period. Labor, on the other hand, exhibits a significant negative effect, pointing to structural barriers within ASEAN's labor market, such as skill mismatches and low productivity. FDI demonstrates a significant positive effect, highlighting its role in fostering economic growth. However, the sub-optimal distribution of FDI remains a challenge, as its benefits are not evenly spread across sectors or regions. External debt also shows a significant positive impact, emphasizing the importance of productive debt management to finance infrastructure and other strategic investments that contribute to growth.

This study suggest that policymakers should prioritize consistent inflation control to ensure macroeconomic stability. Addressing labor market inefficiencies through technology-driven education and training can help overcome structural barriers. FDI policies should focus on optimizing investment distribution to ensure equitable benefits across sectors. Additionally, external debt should be managed prudently, with funds allocated to productive sectors like infrastructure and technology to maximize its positive impact on economic growth.

Future research should explore the dynamic interactions among these variables in the context of digital transformation, as fintech advancements and technological shifts could further shape their relationships. Moreover, it is essential to consider the diverse economic characteristics of ASEAN countries to provide more specific, contextualized insights that reflect each nation's unique circumstances.

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