

Beyond Macroeconomic Stability: Dynamic Determinant of Foreign Direct Investment in ASEAN

Kayla Asyifa^{1*}, Horas Djulius¹, Restu A Suryaman¹

¹Universitas Pasundan

*Corresponding email: kaylaasyifa22@gmail.com

Received: 18 May 2026; Revised: 12 August 2026; Accepted: 27 August 2026

Abstract

This study aims to analyze the determinants of Foreign Direct Investment (FDI) in ASEAN countries during the period 2005–2024. This study is motivated by the important role of FDI as a source of development financing, technology transfer, and regional integration in the global value chain. Different from previous research that tended to be partial, this study integrates macroeconomic, financial, human resources, and economic globalization factors in one empirical framework. The methods used are static panel data through Fixed Effect Model (FEM) and Random Effect Model (REM), as well as dynamic panel data using the Generalized Method of Moments (GMM) to capture investment persistence and address potential endogeneity. The results show that economic growth, exports, and labor productivity have a positive effect on FDI. The FDI lag variable is significant across all dynamic models, indicating the persistence of foreign investment in ASEAN. In contrast, inflation, exchange rates, and interest rates show inconsistent influences. These findings confirm that macroeconomic stability remains important, but it is no longer enough to be a major factor in attracting investment. The quality of the workforce, production capacity, and integration in global production networks increasingly determine the attractiveness of FDI in ASEAN.

Keywords: Export, Economic Growth, Foreign Direct Investment, Generalized Method of Moments (GMM).

Abstrak

Penelitian ini bertujuan menganalisis determinan Foreign Direct Investment (FDI) di negara-negara ASEAN selama periode 2005–2024. Studi ini dilatarbelakangi oleh pentingnya FDI sebagai sumber pembiayaan pembangunan, transfer teknologi, dan integrasi kawasan dalam rantai nilai global. Berbeda dengan penelitian sebelumnya yang cenderung parsial, penelitian ini mengintegrasikan faktor makroekonomi, keuangan, sumber daya manusia, dan globalisasi ekonomi dalam satu kerangka empiris. Metode yang digunakan adalah data panel statis melalui

Fixed Effect Model (FEM) dan *Random Effect Model* (REM), serta data panel dinamis menggunakan *Generalized Method of Moments* (GMM) untuk menangkap persistensi investasi dan mengatasi potensi endogenitas. Hasil penelitian menunjukkan bahwa pertumbuhan ekonomi, ekspor, dan produktivitas tenaga kerja berpengaruh positif terhadap FDI. Variabel lag FDI signifikan pada seluruh model dinamis, mengindikasikan adanya persistensi investasi asing di ASEAN. Sebaliknya, inflasi, nilai tukar, dan suku bunga menunjukkan pengaruh yang tidak konsisten. Temuan ini menegaskan bahwa stabilitas makroekonomi tetap penting, namun tidak lagi cukup menjadi faktor utama penarik investasi. Daya tarik FDI di ASEAN semakin ditentukan oleh kualitas tenaga kerja, kapasitas produksi, dan integrasi dalam jaringan produksi global.

Kata Kunci: Ekspor, FDI, GMM, Pertumbuhan Ekonomi.

INTRODUCTION

Foreign Direct Investment (FDI) inflows have become a central pillar of global economic integration and development in developing countries. In recent decades, FDI is no longer seen solely as a source of external financing but also as a mechanism for technology transfer, productivity gains, job creation, industrial modernization, and expanded access to international markets. The development literature shows that FDI can accelerate the structural transformation of the economy, especially in countries that face limitations in domestic capital, technology, and production capacity (Itsarawadee & Osathanunkul, 2021). FDI is a form of foreign capital flow that is relatively more stable and has less risk than other forms of capital flows, such as portfolio investment and external debt (Dj Julius, 2018). In the midst of increasing intensity of global competition, the ability to attract FDI is often seen as an important indicator of a country's economic competitiveness, institutional quality, and long-term growth prospects.

Changes in global production patterns further strengthen the importance of FDI. World economic activity is now increasingly marked by the growth of Global Value Chains (GVC), which is an international production system in which the process of creating added value is spread across various countries according to their respective comparative advantages. A country no longer has to produce goods in its entirety from upstream to downstream, but can participate through specialization at certain stages, such as assembly, intermediate components, logistics, or production support services (Ingot & Verico, 2021). Involvement in the GVC has been proven to drive trade, technology transfer, production efficiency, and economic growth (Su & Fu, 2021). In this context, FDI is often the main channel connecting multinational companies with cross-border production bases. Thus, understanding the determinants of FDI is becoming increasingly important as foreign investment is not only a flow of capital, but also an integration gateway into global production networks.

Among developing regions, the Association of Southeast Asian Nations (ASEAN) occupies a strategic position on the international investment map. The region has a large population, rapid growth of the middle class, diverse natural resources, a strategic geographical location on world trade routes, and an increasingly strong regional economic integration agenda that has been strengthened through the establishment of the ASEAN Economic Community (AEC). In addition, ASEAN consists of countries with heterogeneous economic structures, ranging from global service and financial centers such as Singapore, export manufacturing bases such as Vietnam and Thailand, to large domestic markets such as Indonesia and the Philippines. Despite having great economic potential, each ASEAN country has different roles and advantages, both

competitive and comparative advantages (Suryaman et al., 2025). These characteristics make ASEAN an attractive region for international investors (Aslam & Rudatin, 2022). In recent years, ASEAN has also been increasingly seen as an alternative destination for global investment amid supply chain diversification, geopolitical tensions, and the "China+1" strategy pursued by many multinational companies (UNCTAD, 2025).

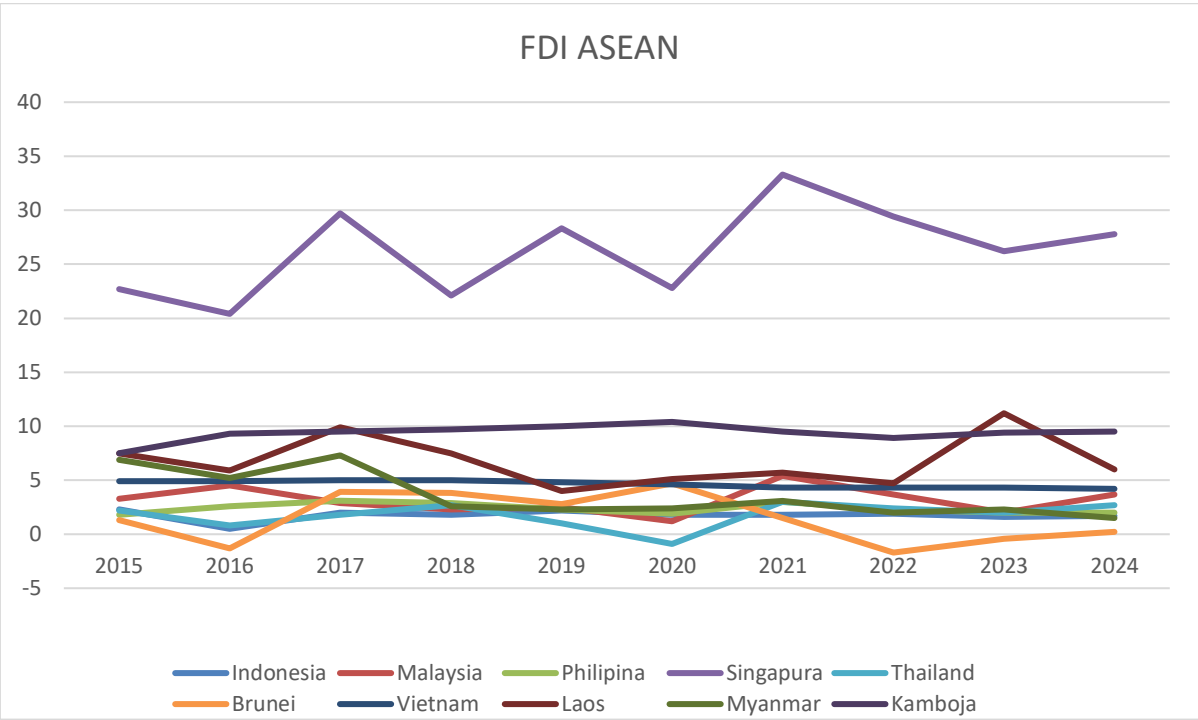


Figure 1. Graph of FDI in the ASEAN Region for the Period 2015-2024.
Source: World Bank

The ASEAN FDI graph for the 2015-2024 period shows differences in foreign investment flows among ASEAN countries. Singapore consistently has the highest FDI rate, followed by Vietnam, which shows a fairly stable and increasing trend. Indonesia and Malaysia tend to fluctuate, while Thailand and Brunei are relatively low. Overall, the difference in FDI is influenced by economic conditions, stability, and investment attractiveness between each country. For ASEAN countries, FDI has strategic significance because it contributes to the expansion of production capacity, job creation, productivity increase, export strengthening, and managerial and technological knowledge transfer. FDI can also increase the competitiveness of the domestic industry through backward linkage and forward linkage between sectors (Rizalihadi & Setyadharma, 2025a). Therefore, increasing the ability to attract FDI is one of the key priorities of economic development in the ASEAN region.

Nevertheless, the distribution of FDI in ASEAN is still very uneven. Singapore has consistently been the region's top recipient of FDI, followed by Indonesia, Vietnam, Malaysia, and Thailand, while several other countries receive relatively small and volatile investment flows. This phenomenon shows that investors do not treat ASEAN as a homogeneous region, but as a collection of countries with different levels of investment attractiveness. These differences can be influenced by market size, economic stability, infrastructure quality, labor productivity, institutional

quality, and international trade connectivity.

Theoretically, foreign investment decisions are determined by various economic factors. Including Macroeconomic conditions such as economic growth, inflation, and exchange rates are often seen as key indicators in assessing investment risks and prospects (Arifin, 2021). Economic growth reflects market potential and long-term profit opportunities, making it an important consideration for foreign investors (Arifin, 2021). Conversely, high inflation can increase business uncertainty and lower investment interest (Purwono et al., 2020). Exchange rate stability is also important as it relates to the risk of repatriation of profits and the cost of importing raw materials.

In addition to macroeconomic factors, trade and financial aspects also affect FDI. Export capacity and trade openness indicate a nation's capability to access global markets and become the base of export production (Astuty, 2017). Interest rates affect the cost of capital and investment financing decisions (Hossain et al., 2024). On the other hand, the quality of human resources is increasingly becoming a major determinant in the era of a productivity-based economy. Labor productivity, skills, and labor cost structure are important considerations for multinational companies in choosing investment locations (Kornieieva et al., 2022). A flexible workforce that is adaptive to technological changes allows foreign companies to expand long-term without facing labor limitations (Rizky Ashari et al., 2025). In other words, the attractiveness of modern FDI is no longer determined only by economic stability, but also by production efficiency, labor quality, and ability to connect to global trade networks.

Although the study of FDI determinants has been extensive, previous research in ASEAN still has some limitations. First, most previous research tends to focus on one specific group of variables, such as macroeconomic factors (Aslam & Rudatin, 2022; Maharani & Setyowati, 2024; Sahara, 2024), trade and financial factors (Rizalihadi & Setyadharma, 2025), or economic openness (Khairat, 2025). This partial approach causes the understanding of the determinants of FDI to not be totally comprehensive. Second, the results of previous research still show diverse and inconsistent findings. Some studies found economic growth to be the dominant factor, while others emphasized exports, exchange rates, or economic openness. In fact Hossain et al. (2024) identified that economic openness can have a negative effect on FDI in certain contexts.

Third, most previous studies still use a static panel approach, so they have not been able to capture the dynamic nature of foreign investment. In fact, FDI decisions are often influenced by previous period investments through profit reinvestment mechanisms, the existence of industrial networks, the reputation of investment locations, and the effects of economic agglomeration. Ignoring these dynamic dimensions has the potential to produce biased estimates and is not able to explain the persistence of FDI in the ASEAN region.

Based on these conditions, there is an important research gap in the FDI literature in ASEAN, namely, there are still limited studies that integrate macroeconomic, financial, human resources, and economic globalization factors in an empirical framework, while considering the dynamic nature of foreign investment. In addition, there is still limited research linking the determinants of FDI to the context of global production transformation and the increasing role of GVCs in the Southeast Asian region. In fact, in an era of fragmentation of international production, the attractiveness of investment is greatly influenced by the country's ability to be part of regional and global production networks.

This research aims to fill the existing gap through the application of static and dynamic panel data

methods based on the Generalized Method of Moments (GMM). This approach allows testing the influence of macroeconomic, financial, human resource, and economic globalization variables on FDI, while capturing investment persistence through FDI lag variables and minimizing the potential for endogeneity.

The main contribution of this research lies in three aspects. First, this research offers a multidimensional approach to analyzing the determinants of FDI in ASEAN. Second, this study examines whether FDI in ASEAN has persistence through a dynamic panel model. Third, this study presents the latest empirical findings for the period 2005–2024 that reflect the economic dynamics of the region, including post-global crises, the COVID-19 pandemic, and changes in international investment structures.

In line with this issue, this study evaluates how macroeconomic factors, financial conditions, the quality of human resources, and the dimension of economic globalization affect Foreign Direct Investment (FDI) flows in ASEAN countries. In addition, this study examines whether FDI in the region shows persistence through a dynamic panel approach, while identifying the determinants that play the most significant role in shaping investment attractiveness amid regional economic integration and the development of global production networks. Thus, this study not only expands the empirical understanding of FDI behavior in ASEAN but also provides policy implications for the formulation of more effective, competitive, and sustainable investment strategies.

METHODOLOGY

This research applies a quantitative method using panel data econometrics to analyze the determinants of Foreign Direct Investment (FDI) in ASEAN countries. The panel data approach was chosen because it can combine variations between countries (cross-section) and between time series (time series), resulting in a larger number of observations, increasing estimation efficiency, and allowing control of heterogeneity that is not observed in each country (Baltagi, 2008; Pesaran, 2015; Wooldridge, 2016). The application of panel data methods is highly relevant in international investment research because FDI decisions are driven by structural heterogeneity across countries, including differences in market size, production capacity, labor productivity, and the quality of the business environment (Blonigen & Piger, 2014; Buchanan et al., 2012).

The research objects include ten ASEAN member countries, namely Indonesia, Malaysia, the Philippines, Singapore, Thailand, Brunei Darussalam, Vietnam, Cambodia, Laos, and Myanmar, during the period 2005–2024. The ASEAN region was chosen because, in the last two decades, it has become one of the world's economic growth centers as well as an increasingly important investment destination in the midst of shifting global supply chains. ASEAN has a heterogeneous economic structure, ranging from global financial centers such as Singapore, export manufacturing bases such as Vietnam and Thailand, to large domestic markets such as Indonesia and the Philippines. This diversity makes ASEAN the right empirical laboratory to test the differences in foreign investment attractiveness between countries (World Bank, 2020; UNCTAD, 2025).

The 2005–2024 observation period was chosen to capture the long-term dynamics of FDI and include several important external shocks, such as the 2008–2009 global financial crisis, the global trade slowdown, the COVID-19 pandemic, and the global economic recovery process. These episodes are believed to influence the behavior of multinational investors and the direction

of international capital flows to developing countries, including ASEAN (OECD, 2023; IMF, 2024). The data used are annual secondary data obtained from the World Bank World Development Indicators, International Monetary Fund (IMF), KOF Swiss Economic Institute, ILOSTAT, and Asian Productivity Organization Database. The use of international data sources aims to maintain consistency of definitions, comparability between countries, and statistical reliability.

Variable Measurement and Operational Definition

The dependent variable in this study is Foreign Direct Investment (FDI), which is measured using net inflows (% of GDP). This measure is commonly used in the literature because it allows comparison of investment flows between countries of different economies of scale, as well as reflects the importance of FDI to the domestic economy (Blonigen & Piger, 2014; Jadhav, 2012).

Independent variables are grouped into four main dimensions, namely macroeconomics, finance, human resources, and economic globalization. The macroeconomic dimension is represented by economic growth, inflation, and exports. Economic growth reflects market prospects and profit potential, inflation reflects macroeconomic stability, while exports reflect international trade capacity and integration into global markets (Asamoah et al., 2016; Hossain et al., 2024).

The financial dimension is represented by the exchange rate and interest rates. Exchange rates are concerned with currency conversion risk and the import cost of production inputs, while interest rates reflect capital costs and domestic financing conditions (Boateng et al., 2015; Hayakawa & Kimura, 2009a). The human resource factor is represented by the level of wages and labor productivity. Wages are related to the cost of production, while labor productivity reflects technological efficiency, skills, and adaptability (Ameer et al., 2025; Kornieieva et al., 2022).

Economic globalization is measured using the KOF Economic Globalization Index, which captures trade openness, capital flows, and international economic integration. This variable is important because modern FDI is increasingly linked to cross-border production networks and global supply chain fragmentation (Gygli et al., 2019; Samimi & Jenatabadi, 2014).

Table 1.
Operational Definition of Variables

Variable	Proxy / Measurement	Unit	Expected Sign	Source
Foreign Direct Investment (FDI)	Net inflows	% of GDP	Dependent	World Bank
Economic Growth (GDPG)	Annual GDP growth rate	%	+	World Bank
Exports (EXP)	Exports of goods and services	Current USD	+	World Bank
Inflation (INF)	Consumer price inflation	%	–	IMF / World Bank
Exchange Rate (EXR)	Official exchange rate	LCU per USD	±	IMF / World Bank
Interest Rate (INT)	Real lending interest rate	%	±	World Bank
Labor Productivity	Output per worker	Index	+	APO

Variable	Proxy / Measurement	Unit	Expected Sign	Source
(PROD)	index			Database
Wage Level (WAGE)	Labor income share of GDP	% of GDP	– / ±	ILOSTAT
Economic Globalization (GE)	KOF Economic Globalization Index	Index	+	KOF ETH Zurich

Model Specification

To obtain a comprehensive empirical picture, this study uses four model specifications. The first model is a general model that integrates all groups of variables that determine FDI. The second model focuses on macroeconomic factors. The third model concentrates on financial factors. The fourth model evaluates the role of human resources. A multi-specification strategy is used to test the robustness of the coefficients and avoid model specification bias (Bun & Harrison, 2019; Pesaran, 2015).

The general model is formulated as follows:

$$FDI_{it} = \alpha + \beta_1 GE_{it} + \beta_2 GDPG_{it} + \beta_3 EXP_{it} + \beta_4 INF_{it} + \beta_5 EXR_{it} + \beta_6 INT_{it} + \beta_7 WAGE_{it} + \beta_8 PROD_{it} + \varepsilon_{it}$$

The macroeconomic aspect model is written as:

$$FDI_{it} = \alpha + \beta_1 GE_{it} + \beta_2 INF_{it} + \beta_3 GDPG_{it} + \beta_4 EXP_{it} + \varepsilon_{it}$$

The financial aspect model is formulated as:

$$FDI_{it} = \alpha + \beta_1 GE_{it} + \beta_2 EXR_{it} + \beta_3 INT_{it} + \varepsilon_{it}$$

The human resource aspect model is formulated as:

$$FDI_{it} = \alpha + \beta_1 GE_{it} + \beta_2 WAGE_{it} + \beta_3 PROD_{it} + \varepsilon_{it}$$

In the whole equation, i indicates the country and t indicates the year of observation.

Estimation Technique

Estimation is carried out through two stages, namely static panel estimation and dynamic panel estimation. The first stage uses a static panel approach through Pooled OLS, Fixed Effects Model (FEM), and Random Effects Model (REM). The static panel model remains relevant as a basic estimation because it can describe the average relationship between variables as well as control heterogeneity between countries, especially through FEM (Baltagi, 2008; Wooldridge, 2016). In the context of ASEAN, this approach is important because each country has different historical, institutional, and structural characteristics.

However, the relationship between FDI and explanatory variables has the potential to face the problems of endogeneity, reverse causality, and dynamic persistence. Economic growth can drive FDI, but FDI can also boost economic growth through capital and technology transfers. Similarly, exports can attract FDI, but FDI can also expand a country's export capacity. In addition, past investment flows often influence current investments through the reinvestment of profits, investment reputation, supplier presence, and industrial agglomeration effects (Ameer et al.,

2025; Jude & Leveuge, 2017).

To overcome this problem, this research uses the Generalized Method of Moments (GMM) dynamic panel. This approach is very widely used in international economic studies because it is able to produce consistent estimators when there are lag dependent variables, simultaneity, and heterogeneity that are not observed.

The dynamic model is formulated as follows:

$$FDI_{it} = \gamma FDI_{it-1} + \beta_1 X_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

Where FDI_{it-1} is a lag of one FDI period, X_{it} is an independent variable vector, μ_i indicates a state-specific effect, λ_t captures the effect of time together, and ε_{it} . This is an idiosyncratic error term.

The dynamic incorporates a one-period lag of Foreign Direct Investment (FDI_{it-1}) to capture investment persistence, reflecting the influence of the dynamic panel approach proposed by Arellano and Bond (1991), which is widely adopted in dynamic panel models because it effectively captures investment dynamics while minimizing the loss of observations and avoiding unnecessary model complexity

Coefficient γ measures the persistence rate of foreign investment. Value γ Positive and significant indicates that countries that have received investment in the previous period tend to be more likely to attract additional investment in the next period. This is in line with the concept of a self-reinforcing mechanism, where the existence of initial investment creates an industrial ecosystem, supplier network, and investor trust that further strengthens the attractiveness of investment (Blonigen & Piger, 2014; Buchanan et al., 2012).

Empirical Expectation

Theoretically, economic growth, exports, labor productivity, economic globalization, and FDI lag are expected to have a positive effect on FDI inflows. Economic growth reflects market potential, exports reflect trade connectivity, labor productivity reflects production efficiency, while economic globalization reflects openness to international flows of goods, services, and capital (Gygli et al., 2019; Hossain et al., 2024).

On the other hand, inflation is expected to have a negative effect because it increases macroeconomic uncertainty and operating costs. The influence of exchange rates, interest rates, and wage rates can vary depending on investment motives, sector characteristics, and investor orientation. Efficiency-based investments are generally more sensitive to production costs, while market-based investments are more influenced by market size and growth prospects.

Thus, this methodological framework allows testing that FDI attractiveness in ASEAN is no longer determined solely by macroeconomic stability, but is increasingly influenced by labor quality, export capacity, global connectivity, and persistence of previous investments.

DISCUSSION AND FINDINGS

Findings

This study uses a panel data approach that combines the dimensions between ASEAN countries and the time dimension during the period 2005–2024. The use of panel data allows for more

efficient analysis because it is able to capture the heterogeneity of economic characteristics between countries as well as the dynamics of changes in foreign investment in the long term.

To obtain a comprehensive empirical picture, this study estimated four model specifications. The first model is a general specification that combines all groups of FDI determinant variables. The second model focuses on macroeconomic factors, the third model on financial factors, and the fourth model on the human resource aspect. This multi-equation strategy is used to test the stability of the empirical relationship as well as to minimize the potential bias of model specifications.

In this study, the Generalized Method of Moments (GMM) estimator was used as the main model because the empirical specifications built were dynamic, characterized by the inclusion of lags of dependent variables, namely FDI in the previous period. In addition, some independent variables, such as economic growth, exports, and labor productivity, have the potential to be endogenous, so the GMM approach is seen as more appropriate to produce consistent and simultaneous bias-free estimates.

Meanwhile, the Fixed Effect Model (FEM) is used as a comparative model to test the consistency of direction and significance of the influence of independent variables on FDI, as well as to control for individual heterogeneity between ASEAN countries that are time-invariant. The Random Effect Model (REM) is estimated at the initial stage as part of the panel model selection procedure and to complete the estimation comparison. However, REM is not used as the main reference because the basic assumption of the absence of correlation between individual effects and independent variables is relatively difficult to meet in the context of cross-border FDI studies.

The results of the panel regression estimation are presented in Table 2, which contains the estimates of FEM, REM, and GMM in the four model specifications.

Table 2.
Regression Analysis Results

Var	Model 1			Model 2			Model 3			Model 4		
	Fixed Effect	Random Effect	GMM	Fixed Effect	Random Effect	GMM	Fixed Effect	Random Effect	GMM	Fixed Effect	Random Effect	GMM
FDI (-1)			0.2605			0.2162***			0.4063***			0.2526***
GDPG	0.1116***	0.1381***	3.7468	0.1314***	0.1347***	0.3050***						
EXP	0.0132***	0.0148***	-0.2305	0.0127***	0.0132***	0.0071						
GE	0.0075	0.0487	-2.5131	0.0246	0.0388	0.0593	0.0047	0.0344	-0.3073	-0.0061	0.0206	-0.0133
INF	0.0123	0.0160	1.2304	0.0191	0.0195	0.0494***						
EXR	-0.0002*	-0.0001	0.0294				1.36	5.2	0.0023			
INT	-0.0256	-0.0299	1.1996				-0.0417	0.0398	0.0026			
WAGE	-0.0865	-0.0596	10.345							-0.1795***	0.1683***	0.3849
PROD	-0.6789	-1.8733	-42.266							6.8477***	6.7758***	10.746***
C	8.4301*	5.1541	6.8842	1.6546	0.7123		3.7625	3.7625		8.3928*	6.1280	
R ²	0.8776	0.2483		0.8724	0.1846		0.0127	0.0127		0.8584	0.0800	
F-Stat	72.594	7.4765		92.615	10.472		0.7978	0.7978		90.504	5.9171	
Hansen Test			0.1518			0.2444			0.3963			0.3617
AR (1)			0.9970			0.2268			NA			NA
AR (2)			0.9962			0.7639			0.8255			NA

Note: ***, **, and* show significance levels at 1%, 5%, and 10% respectively, – meaning there is no

Source: data processing results

The results of the GMM estimation show that the FDI variable of the previous period [FDI (-1)] has a positive and significant effect, especially on Model 2, Model 3, and Model 4. These findings indicate that foreign investment flows have a dynamic and persistent character, where the existence of investment in the previous period increases the probability of new investment in the next period. This persistence reflects the effect of investment reputation, the sustainability of global production networks, and the sunk cost of multinational investment in the ASEAN region.

The economic growth (GDPG) variable is the most consistent determinant that has a positive effect on FDI. Strong significance is seen mainly in Model 2 in the GMM estimate, and it still appears in the FEM estimate in Model 1. These results show that the expansion of the domestic economy increases the market size and investment profit prospects, thereby strengthening the attractiveness of ASEAN countries as a location for foreign investment.

The export variable (EXP) tends to show a positive and significant influence on the Fixed Effect estimate, but this influence is inconsistent in the GMM estimate. This difference in results indicates that the significance of exports in the static model is likely influenced by endogeneity bias or reverse causality, where increased FDI can also drive export performance.

The inflation variable (INF) only shows significance in the GMM estimate in Model 2. This suggests that price stability only becomes relevant when investment dynamics are taken into account, and inflation is likely to reflect economic expansion conditions more than as an investment risk factor.

The exchange rate (EXR) and interest rate (INT) variables did not show a stable effect on FDI in most model specifications. This inconsistency indicates that foreign investment decisions in ASEAN are not solely determined by short-term monetary conditions, but are more influenced by structural factors and the long-term economic outlook.

In the human resource variable group, labor productivity (PROD) is the most consistent variable that has a positive effect on FDI, especially in Model 4 in GMM estimation. These findings confirm that labor quality is a key structural factor in attracting foreign investment, in line with the shift in global investment patterns towards efficiency and productivity-based activities.

On the other hand, the labor wage variable does not show a stable influence between model specifications and therefore cannot be seen as the main determinant of FDI. The variable of economic globalization (GE) does not show significance in almost all estimation models. These results indicate that the level of economic globalization in aggregate has not been the main determinant of FDI flows in ASEAN in the observation period of this study, compared to domestic fundamental factors such as economic growth and labor productivity.

The Hansen test showed that all specifications of the GMM model using valid instruments were shown with an overall probability value greater than 0.05. These findings indicate that there is no problem of over-identifying restrictions, so the instruments used are feasible in the estimation process. In addition, the results of the Arellano-Bond test show that in model 1, model 2 and model 3 there is no second-order autocorrelation and the GMM estimator is considered consistent. In model 4 it is not calculable (NA), so autocorrelation cannot be evaluated on that model.

Overall, the consistency of the coefficient direction between the FEM and GMM estimates showed that the results of the study had a good robustness level. The findings were strengthened by the results of diagnostic tests that confirmed the validity of the instrument and the absence of second-

order autocorrelation in model 1, model 2, and model 3. However, because the model constructed is dynamic and has the potential to face endogeneity problems, the main interpretation of this study is based on the results of GMM estimation as the most methodologically appropriate estimator. Meanwhile, model 4 needs to be interpreted more carefully because the Arellano-Bond autocorrelation statistics cannot be calculated on the specification.

Discussion of Findings and Policy Implications.

If the results of the estimate are interpreted more deeply, it can be seen that the flow of Foreign Direct Investment (FDI) in this study is not simultaneously influenced by all macroeconomic and financial variables, but is more responsive to a number of certain fundamental factors. In general, there are three main findings that stand out the most, namely the persistence of FDI, the importance of economic growth, and the strategic role of labor productivity as a determinant of foreign investment in the ASEAN region.

The strongest findings came from the significance of the FDI lag variable in several Generalized Method of Moments (GMM) models. These results show that FDI has a dynamic and persistent character. Foreign investment decisions do not take place separately between periods, but follow a previously formed investment path. Foreign investors generally consider the investment track record, project sustainability, operational stability, and a developed production network before making a follow-up investment decision. Thus, the high FDI in the previous period is a signal of economic credibility and increases the probability of investment in the next period. These findings are consistent with the concept of agglomeration economies, where the existence of initial investment creates a reputation and production network effect that strengthens the attractiveness of investment locations (Blonigen & Piger, 2014; Buchanan et al., 2012).

In the context of ASEAN, this pattern of persistence explains why some countries can sustain FDI flows. Countries with a strong initial investment base tend to be more likely to attract follow-up investment than countries that are still in the early stages of investment development. This is also in line with the report UNCTAD, (2025), which suggests that the initial success in attracting foreign investment creates a long-term strengthening effect through the reinvestment and expansion of multinational companies.

Furthermore, economic growth emerged as the most consistent variable that had a positive effect on FDI, both in the comparative model and in part of the dynamic model. These findings confirm that foreign investors continue to view economic growth prospects as a key indicator of long-term profit opportunities. Economic growth not only reflects an increase in national output, but also signals an increase in people's purchasing power, stability of production activities, and optimism about future economic prospects. Therefore, the significance of this variable on various model specifications reinforces its position as a central determinant of FDI. These results are in line with the findings (Hossain et al., 2024), (Aslam & Rudatin, 2022), and (Aziz & Mishra, 2016), which confirm that economic growth is a major factor in attracting FDI in developing countries.

The export variable shows more nuanced results. Exports appear significant in the Fixed Effect estimate, but the effect is not always stable in the GMM estimate. This indicates that the relationship between exports and FDI is likely indirect. Exports can act as a transmission mechanism that reflects industrial capacity, trade integration, and connectivity in global production networks, but are not a key determinant when investment dynamics and endogeneity potential have been taken into account. In other words, exports remain economically relevant, but in a

dynamic model, this has not been the most robust explanation for FDI variations. This interpretation is consistent with the literature on trade openness and international investment (Hossain et al., 2024; Jadhav, 2012; Kumari & Sharma, 2017).

The findings on inflation need to be read contextually. Inflation is only significant in the macroeconomic model in the GMM estimate. These results do not necessarily indicate that high inflation is driving FDI, but rather may reflect conditions of economic expansion in which increased economic activity goes hand in hand with rising prices. In this context, inflation can act as an indicator of increasing domestic demand, rather than solely as a sign of macroeconomic instability. Therefore, its interpretation should be placed within the framework of ongoing economic growth, not as a mechanical causal relationship.

In contrast, financial variables such as exchange rates and interest rates do not show a stable influence on FDI. These results indicate that foreign investors in the context of this study are not very sensitive to short-term financial indicators. Investment decisions seem to be more influenced by medium- and long-term considerations, such as market prospects, production efficiency, labor quality, and the overall business environment. These findings reinforce the argument that macroeconomic stability serves as a basic prerequisite, but not a major differentiating factor in competition to attract international investment (Busse & Hefeker, 2007; Hayakawa & Kimura, 2009b; Kurul & Yalta, 2017).

The next most important result appears in the human resource model, where labor productivity shows a positive and consistent influence, and remains significant in GMM estimation. These findings confirm that global investors are no longer just looking for locations with low labor costs, but more emphasis on production efficiency. A productive workforce allows for increased output, operational efficiency, and reduced production inefficiency costs. These results are in line with the studies by (Bellak et al., 2009), (Jude & Leveuge, 2017), and (Kornieieva et al., 2022), which show that the quality of human resources is a major structural determinant of FDI.

Consistent with these findings, the labor wage variable shows unstable results between models. Wages appear significantly negative on the Fixed Effect estimate, but lose significance in GMM after investment dynamics and endogeneity potential are taken into account. This shows that foreign investors are not solely chasing cheap labor. A more decisive factor is the combination of labor costs and productivity, or what is often referred to as unit labor costs. Countries with higher wages are still able to attract investment if their labor productivity is also high.

Meanwhile, economic globalization shows no significance in almost all models. These findings indicate that the level of economic openness alone is not enough to be a direct determinant of FDI. Investors seem to need more concrete evidence of strong economic growth, adequate production capacity, and a productive workforce. Thus, economic globalization plays more of an enabling role than the main factor of attracting investment.

Overall, the results of the four models show that FDI is more accurately understood as a dynamic, selective, and fundamentals-based phenomenon of the real economy. Dynamic because it is influenced by the investment of the previous period; selective because not all variables have the same explanatory power and based on fundamentals because the most consistent determinants come from economic growth and labor productivity.

In the context of ASEAN, these results show that success in attracting long-term FDI is not enough just through economic liberalization or investment incentives. Foreign investors are more

concerned about the fundamental strength of the domestic economy, particularly sustainable economic growth, labor quality, and institutional consistency. This perspective is in line with the Eclectic Paradigm (OLI), which emphasizes the importance of location advantages, where countries that are able to offer a growing market and production efficiency will be more attractive to international investors.

The persistence of FDI is also in line with Institutional Theory, which asserts that investment reputation, regulatory certainty, and institutional credibility play an important role in shaping investment decisions. Countries that have succeeded in creating a stable investment environment will find it easier to maintain foreign capital flows in the future.

Furthermore, the significance of labor productivity supports the perspective of Human Capital Theory, which emphasizes that the competitiveness of modern investments is increasingly shifting from cost advantage to labor quality advantage. With a productive and technology-adaptive workforce, incoming FDI has a greater opportunity to generate technology transfer, upskill, and domestic value-added creation.

On the other hand, the weak influence of exchange rates, interest rates, and economic globalization confirms that financial indicators and economic openness function more as a basic condition of stability, rather than as the main determinants of FDI. Investors seem to be more responsive to the real economic outlook and production efficiency than short-term macro fluctuations.

Ultimately, an important implication for the ASEAN region is that investment development strategies focus not only on increasing the number of FDI, but also on the quality of incoming investment. Within the framework of endogenous growth theory, the benefits of FDI will be optimal if the investment can create spillover in the form of technology transfer, increased labor productivity, and strengthen the structure of domestic industries. Therefore, the regional policy agenda is not just to attract more FDI, but to ensure that incoming FDI is stable, productive, and makes a real contribution to the transformation of the regional economy.

CONCLUSION

This study examines the determinants of Foreign Direct Investment (FDI) in ASEAN countries over the period 2005-2024 by employing static panel data models, including the Fixed Effect Model (FEM) and Random Effect Model (REM), and the findings suggest that FDI inflows in ASEAN are inherently dynamic and primarily shaped by real economic fundamentals. The significance of the lagged GFI variable highlights that it persistently emerges as the key driver of foreign investment. Conversely, the effects of inflation, exchange rates, interest rates, and economic globalization are found to be less robust across model specifications, indicating that macroeconomic stability serves mainly as a prerequisite for investment rather than its principal

The study contributes to the existing literature by demonstrating that ASEAN's investment attractiveness is influenced not only by conventional macroeconomic conditions but also by investment persistence and structural economic factors, particularly sustained economic growth and labor productivity. These findings underscore the importance of policies aimed at improving workforce productivity, strengthening industrial capacity, enhancing logistics performance, ensuring regulatory consistency, and reinforcing institutional quality to sustain long-term FDI inflows and maximize their contribution to economic development.

Nevertheless, this study has several limitations. The empirical model does not explicitly account for institutional quality, infrastructure development, or political stability, and the analysis is confined to aggregate FDI inflows without differentiating across economic sectors. Future research is therefore encouraged to incorporate institutional variables digitalization understanding of the determinants of FDI in ASEAN.

REFERENCES

- Ameer, W., Shah, S. H., Majeed, M. A., Sohag, K., & Zhu, X.-W. (2025). *Sustainable Futures*.
- Arifin, S. R. (2021). Pengaruh indeks pembangunan manusia (ipm) dan tingkat pengangguran terhadap pertumbuhan ekonomi di Provinsi Jawa Timur Tahun 2016-2018. *IQTISHADIA Jurnal Ekonomi & Perbankan Syariah*, 8(1), 38–59.
- Asamoah, M. E., Adjasi, C. K. D., & Alhassan, A. L. (2016). Macroeconomic uncertainty, foreign direct investment and institutional quality: Evidence from Sub-Saharan Africa. *Economic Systems*, 40(4), 612–621.
- Aslam, F. N., & Rudatin, A. (2022). Analisis determinan aliran Foreign Direct Investment (FDI) di kawasan ASEAN. *Jurnal Kebijakan Ekonomi Dan Keuangan*, 205–211.
- Astuty, F. (2017). Analisis investasi asing langsung dan faktor-faktor yang mempengaruhinya di Indonesia. *Jurnal Mutiara Akuntansi*, 2(2), 48–62.
- Aziz, O. G., & Mishra, A. V. (2016). Determinants of FDI inflows to Arab economies. *The Journal of International Trade & Economic Development*, 25(3), 325–356.
- Baltagi, B. H. (2008). *Econometric analysis of panel data* (Vol. 4). Springer.
- Bellak, C., Leibrecht, M., & Damijan, J. P. (2009). Infrastructure endowment and corporate income taxes as determinants of foreign direct investment in Central and Eastern European countries. *World Economy*, 32(2), 267–290.
- Blonigen, B. A., & Piger, J. (2014). Determinants of foreign direct investment. *Canadian Journal of Economics/Revue Canadienne d'économique*, 47(3), 775–812.
- Boateng, A., Hua, X., Nisar, S., & Wu, J. (2015). Examining the determinants of inward FDI: Evidence from Norway. *Economic Modelling*, 47, 118–127.
- Buchanan, B. G., Le, Q. V., & Rishi, M. (2012). Foreign direct investment and institutional quality: Some empirical evidence. *International Review of Financial Analysis*, 21, 81–89.
- Busse, M., & Hefeker, C. (2007). Political risk, institutions and foreign direct investment. *European Journal of Political Economy*, 23(2), 397–415.
- Dj Julius, H. (2018). Foreign Direct Investment or External Debt and Domestic Saving: Which has Greater Impact on Growth. *ETIKONOMI*, 17(1), 37–44. <https://doi.org/10.15408/etk.v17i1.7120>
- Gygli, S., Haelg, F., Potrafke, N., & Sturm, J.-E. (2019). The KOF globalisation index–revisited. *The Review of International Organizations*, 14(3), 543–574.
- Hayakawa, K., & Kimura, F. (2009a). The effect of exchange rate volatility on international trade in East Asia. *Journal of the Japanese and International Economies*, 23(4), 395–406.
- Hayakawa, K., & Kimura, F. (2009b). The effect of exchange rate volatility on international trade in East Asia. *Journal of the Japanese and International Economies*, 23(4), 395–406.
- Hossain, M. S., Voumik, L. C., Ahmed, T. T., Alam, M. B., & Tasmim, Z. (2024). Impact of geopolitical risk, GDP, inflation, interest rate, and trade openness on foreign direct investment: Evidence from five Southeast Asian countries. *Regional Sustainability*, 5(4), 100177.
- Ingot, S. R., & Verico, K. (2021). Global Value Chains (GVC) Pada Komoditi Primer Dan Manufaktur: Studi ASEAN 6. *Cendekia Niaga*, 5(1), 44–59.
- Itsarawadee, H., & OSATHANUNKUL, R. (2021). The US Contagion Effects on Foreign Direct Investment Flows in Developing Countries. *The Journal of Asian Finance, Economics and Business (JAFEB)*, 8(4), 55–67.
- Jadhav, P. (2012). Determinants of foreign direct investment in BRICS economies: Analysis of economic, institutional and political factor. *Procedia-Social and Behavioral Sciences*, 37, 5–

- Jude, C., & Levieuge, G. (2017). Growth effect of foreign direct investment in developing economies: The role of institutional quality. *The World Economy*, 40(4), 715–742.
- Khairat, A. N. (2025). Apa Yang Menarik Investasi Asing? Studi Empiris Negara D-8. *Jurnal Ekonomi Bisnis, Manajemen Dan Akuntansi (Jebma)*, 5(2), 296–305.
- Kornieieva, T., Varela, M., Luís, A. L., & Teixeira, N. (2022). Assessment of labour productivity and the factors of its increase in European Union 27 and Ukrainian economies. *Economies*, 10(11), 287.
- Kumari, R., & Sharma, A. K. (2017). Determinants of foreign direct investment in developing countries: a panel data study. *International Journal of Emerging Markets*, 12(4), 658–682.
- Kurul, Z., & Yalta, A. Y. (2017). Relationship between institutional factors and FDI flows in developing countries: New evidence from dynamic panel estimation. *Economies*, 5(2), 17.
- Maharani, I. A. E., & Setyowati, E. (2024). Analisis Determinan Foreign Direct Investment di ASEAN-6. *Jurnal Informatika Ekonomi Bisnis*, 177–183. <https://doi.org/10.37034/infeb.v6i1.830>
- Pesaran, M. H. (2015). *Time series and panel data econometrics*. Oxford University Press.
- Purwono, R., Yasin, M. Z., & Mubin, M. K. (2020). Explaining regional inflation programmes in Indonesia: Does inflation rate converge? *Economic Change and Restructuring*, 53(4), 571–590.
- Rizalihadi, F. A., & Setyadharma, A. (2025a). Pengaruh Nilai Tukar, Ekspor, Inflasi, dan Suku Bunga terhadap Foreign Direct Investment di ASEAN. *Media Online*, 6(1), 168–177. <https://doi.org/10.47065/arbitrase.v6i1.2545>
- Rizalihadi, F. A., & Setyadharma, A. (2025b). Pengaruh Nilai Tukar, Ekspor, Inflasi, dan Suku Bunga terhadap Foreign Direct Investment di ASEAN. *Media Online*, 6(1), 168–177. <https://doi.org/10.47065/arbitrase.v6i1.2545>
- Rizky Ashari, N., Qodhari, D., Fahira, K., & Wau, T. (2025). Determinant of Foreign Direct Investment G-20 Countries. *Jurnal Ekonomi Pembangunan*, 14(1), 73–87. <https://doi.org/10.23960/jep.v14i1.3490>
- Sahara, R. (2024). Determinan investasi asing langsung di kawasan ASEAN. *Economics, Finance, and Business Review*, 1(2), 83–96.
- Samimi, P., & Jenatabadi, H. S. (2014). Globalization and economic growth: Empirical evidence on the role of complementarities. *PloS One*, 9(4), e87824.
- Su, H., & Fu, Y. (2021). The impact of the outward and inward FDI on global value chains. *International Journal of Economics and Financial Issues*, 11(6), 1.
- Suryaman, R. A., Hadiyanto, F., Wardhana, A., & Saepudin, T. (2025). The Role of Economic Globalization and Institutions on Regional Inequality in ASEAN Countries. *Journal of Economics and Business*, 8(2). <https://doi.org/10.31014/aior.1992.08.02.673>
- Trade, U. N., & (UNCTAD), D. (2025). *World Investment Report 2025: International Investment in the Digital Economy*. Stylus Publishing, LLC.
- Wooldridge, J. M. (2016). *Introductory econometrics a modern approach*. South-Western cengage learning.