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Foreign Direct Investment, Trade Dynamics, and Economic Growth in Indonesia: Evidence from a Vector Error Correction Model

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Abstract

This study examines the short-run dynamics and long-run relationships between foreign direct investment (FDI), exports, imports, and economic growth in Indonesia using annual time-series data from 1990 to 2024. Employing a Vector Error Correction Model (VECM), the analysis captures both long-term equilibrium relationships and short-term adjustments among the variables. The results reveal the existence of cointegration, indicating a stable long-run relationship. Empirical findings show that, in the long run, FDI has a statistically significant negative effect on economic growth, while imports exert a positive and significant impact. Exports, however, do not demonstrate a significant effect on growth in either the short or long run. These results suggest that FDI inflows in Indonesia are largely concentrated in non-productive sectors, limiting their contribution to sustainable economic growth, whereas imports play a crucial role in supporting industrial production through capital goods and intermediate inputs. The study highlights the importance of redirecting FDI toward high-value-added sectors and maintaining strategic import policies to promote long-term economic growth.

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1. Introduction

Economic growth remains a central objective of development policy, particularly for emerging economies such as Indonesia. Sustained growth reflects the ability of an economy to expand its productive capacity and improve overall welfare. In an increasingly globalized environment, international economic integration has intensified through trade liberalization and cross-border capital flows, reshaping the growth dynamics of developing countries (Aswad & Azijah, 2021). International trade, encompassing exports and imports, allows countries to overcome domestic resource constraints and exploit comparative advantages, thereby influencing national income and economic performance (Safitri et al., 2022).

Trade openness is commonly regarded as a key driver of economic growth. Expanding exports can stimulate production, increase foreign exchange earnings, and enhance economic efficiency, while imports may support growth by providing capital goods, intermediate inputs, and technology unavailable domestically (Hodijah & Angelina, 2021). Several empirical studies suggest that exports and imports jointly contribute to long-run economic growth by strengthening aggregate demand and

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industrial capacity (Hanifah, 2022; Putra, 2022). Nevertheless, the growth effects of trade are not always uniform and depend heavily on export structure, value-added content, and the composition of imports.

Beyond trade, foreign direct investment (FDI) plays an increasingly important role in the growth process of developing economies. FDI is expected to contribute to economic growth through capital accumulation, technology transfer, productivity spillovers, and employment creation (Emako et al., 2022). Indonesia has attracted substantial FDI inflows over the past decades, particularly following economic liberalization and regional integration. Theoretically, FDI can complement domestic investment and enhance industrial competitiveness; however, its actual impact depends on sectoral allocation, absorptive capacity, and linkages with the domestic economy (Pratama, 2024).

Empirical evidence on the relationship between FDI, trade, and economic growth in Indonesia remains inconclusive. Some studies find that exports, imports, and FDI jointly exert a positive influence on economic growth (Prawira et al., 2019; Hanifah, 2022), while others report insignificant or even negative effects, particularly for FDI (Agustin & Cahyono, 2017; Safira & Setyowati, 2025). These mixed findings suggest that the growth impact of external economic factors is context-specific and may vary between the short and long run.

Given these inconsistencies, a dynamic time-series approach is required to capture both short-term adjustments and long-term equilibrium relationships among economic growth, trade, and FDI. This study addresses this gap by employing a Vector Error Correction Model (VECM) to examine the interactions between exports, imports, foreign direct investment, and economic growth in Indonesia over the period 1990–2024. By distinguishing between short-run dynamics and long-run effects, this research contributes to a more nuanced understanding of how trade and investment flows shape Indonesia's economic growth trajectory and provides policy-relevant insights for designing more effective trade and investment strategies.

2. Literature Review

Economic Growth

Economic growth is a fundamental indicator of development performance, reflecting an economy's capacity to increase output and improve living standards over time. Classical growth theory emphasizes the role of market mechanisms, capital accumulation, and specialization as key drivers of economic expansion, as articulated by early economists such as Adam Smith and David Ricardo. In contrast, modern growth theories, including the Harrod–Domar model, highlight the central role of investment in sustaining long-term economic growth by expanding productive capacity and stimulating aggregate demand.

In the context of developing economies, economic growth is closely linked to external economic activities, particularly international trade. Trade enables countries to overcome domestic resource limitations and benefit from specialization based on comparative advantage. Exports and imports, as core components of international trade, influence growth through production expansion, efficiency gains, and access to foreign markets (S & Kusreni, 2017). Consequently, trade openness has become an important channel through which developing countries pursue higher and more sustainable growth trajectories.

Exports and Economic Growth

Exports play a critical role in promoting economic growth by increasing foreign exchange earnings, expanding market access, and stimulating domestic production. According to the Heckscher–Ohlin theory, countries tend to export goods that intensively use their abundant production factors, thereby maximizing efficiency and output. Export expansion contributes to national income growth and accelerates economic development, particularly in open economies (Hanifah, 2022).

Empirical studies generally support the export-led growth hypothesis, suggesting that rapid export growth increases aggregate demand and encourages investment and productivity improvements (Kurniawati & Islami, 2022). In Indonesia, exports remain a major source of foreign exchange and are expected to support economic growth by strengthening industrial output and employment (Hodijah & Angelina, 2021). However, the growth impact of exports depends largely on their composition. Exports dominated by primary commodities with low value added may generate limited spillover effects and weaken their contribution to long-term growth. Consistent with this view, Putri and Siladjaja (2021) find that exports can have both positive and negative effects on economic growth, depending on structural conditions and sectoral characteristics.

Imports and Economic Growth

Imports represent the inflow of goods and services from abroad to meet domestic demand that cannot be fulfilled by local production due to limitations in technology, quality, or factor availability (Sukirno, 2006). Imports are often associated with negative growth effects because they reduce net exports and domestic output, as suggested by Keynesian aggregate demand theory. Higher import levels may lower national income by increasing leakages from the domestic economy, assuming other factors remain constant.

Nevertheless, imports can also support economic growth when they consist of capital goods, intermediate inputs, and advanced technology that enhance domestic productivity. Imports of machinery and raw materials enable industrial expansion and technological upgrading, particularly in developing countries. While Purwaning Astuti and Juniwati Ayuningtyas (2018) find that imports negatively affect economic growth in Indonesia by reducing domestic productivity, other studies emphasize that strategic imports play a vital role in supporting industrial development and long-term growth, highlighting the dual nature of imports in the growth process.

Foreign Direct Investment and Economic Growth

Foreign direct investment (FDI) is widely regarded as a key source of external financing for economic development in developing economies. FDI involves long-term investment by multinational corporations in host countries, often accompanied by technology transfer, managerial expertise, and access to international markets (Emako et al., 2022). In Indonesia, FDI has been promoted as a means to accelerate economic growth without increasing public debt while generating employment opportunities.

Theoretically, FDI can enhance economic growth by complementing domestic investment, improving productivity, and fostering industrial competitiveness through spillover effects (Pratama, 2024). However, empirical evidence on the growth impact of FDI remains mixed. Some studies report a positive and significant relationship between FDI and economic growth (Prawira et al., 2019; Safira & Setyowati, 2025), while others find negative or insignificant effects, particularly when FDI is concentrated in non-productive sectors or crowds out domestic firms (Agustin & Cahyono, 2017).

These divergent findings suggest that the impact of FDI on economic growth depends on host-country conditions, including sectoral allocation, absorptive capacity, and institutional quality. As a result, the relationship between FDI, trade, and economic growth warrants further investigation using dynamic econometric approaches capable of capturing both short-run and long-run effects.

3. Methodology

Research Design

This study employs a quantitative research design using secondary time-series data to examine the

dynamic relationship between economic growth, exports, imports, and foreign direct investment (FDI) in Indonesia.

The analysis utilizes annual data covering the period 1990–2024, a timeframe that captures major structural changes in the Indonesian economy, including trade liberalization, economic crises, and post-pandemic recovery.

The data are obtained from the World Bank and the Indonesian Central Bureau of Statistics (Badan Pusat Statistik). Economic growth is measured as the annual growth rate of Indonesia's economy, while exports and imports are expressed as percentages of gross domestic product (GDP), encompassing both oil and gas as well as non-oil and gas components. Foreign direct investment is measured in current US dollars, reflecting long-term capital inflows from foreign investors.

Model Specification

Given the time-series nature of the data and the potential existence of long-run equilibrium relationships among the variables, this study adopts the Vector Error Correction Model (VECM). The VECM is an extension of the Vector Autoregressive (VAR) model that is appropriate when variables are non-stationary at levels but cointegrated. This approach allows for the simultaneous estimation of short-run dynamics and long-run relationships among the variables. The general form of the VECM can be expressed as follows:

$$\Delta Y_t = \alpha + \sum_{i=1}^{k-1} \Gamma_i \, \Delta Y_{t-i} + \Pi Y_{t-1} + \varepsilon_t$$

where $Y_t$is a vector of endogenous variables consisting of economic growth, exports, imports, and FDI; αrepresents the intercept; $\Gamma_i$captures short-run dynamics; $\Pi$is the long-run coefficient matrix containing information about cointegration; and $\varepsilon_t$is the error term.

If cointegration exists, the matrix Π can be decomposed into $\alpha\beta'$, where β represents the cointegrating vectors and αdenotes the speed of adjustment toward long-run equilibrium.

Unit Root Test

Prior to estimating the VECM, it is necessary to examine the stationarity properties of each variable. This study applies the Augmented Dickey-Fuller (ADF) test to determine the presence of unit roots in the time-series data. The ADF test is specified as follows:

$$\Delta Y_t = \beta_0 + \beta_1 t + \delta Y_{t-1} + \sum_{i=1}^{p} \alpha_i \, \Delta Y_{t-i} + \varepsilon_t$$

where $\beta_0$is a constant, $t$represents a deterministic trend, $Y_{t-1}$is the lagged level of the variable, ΔY_{t-i}denotes lagged first differences, and $\varepsilon_t$is the error term.

The null hypothesis of the ADF test states that the variable contains a unit root. If the null hypothesis is rejected, the variable is considered stationary.

Lag Length Selection and Model Stability

The optimal lag length for the VECM is determined using standard information criteria, including the Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan–Quinn Criterion (HQ). The selected lag length is then applied consistently across subsequent tests.

To ensure the reliability of the dynamic model, a stability test is conducted by examining the roots of the characteristic polynomial. The model is considered stable if all roots lie within the unit circle, indicating that the estimated VECM is suitable for dynamic analysis and forecasting.

Cointegration Test

To assess the existence of long-run equilibrium relationships among the variables, this study employs the Johansen cointegration test, which is based on a maximum likelihood estimation framework. Two test statistics are used: the Trace Statistic and the Maximum Eigenvalue Statistic.

The Trace Statistic is defined as:

$$\text{Trace} = -T \sum_{i=r+1}^{n} \ln (1 - \lambda_i)$$

The Maximum Eigenvalue Statistic is defined as:

$$\text{Max-Eigen} = -T \ln (1 - \lambda_{r+1})$$

where $\lambda_i$represents the estimated eigenvalues, Tdenotes the number of observations, and $r$is the number of cointegrating vectors.

If the test statistics exceed their respective critical values, the null hypothesis of no cointegration is rejected.

Granger Causality Test

The Granger causality test is applied to examine the direction of causal relationships among economic growth, exports, imports, and FDI. This test evaluates whether past values of one variable contain information that helps predict another variable. A causal relationship is identified when the probability value is less than the 5% significance level.

Variance Decomposition Analysis

Finally, Forecast Error Variance Decomposition (FEVD) is conducted to assess the relative contribution of each variable to fluctuations in economic growth over time. FEVD decomposes the forecast error variance of economic growth into proportions attributable to its own innovations and to shocks from exports, imports, and FDI. This analysis provides additional insights into the dynamic interactions among variables within the VECM framework.

4. Results

Unit Root Test Results

Prior to estimating the Vector Error Correction Model (VECM), the stationarity properties of all variables were examined using the Augmented Dickey–Fuller (ADF) test. The unit root test aims to determine whether the time-series data are stationary or contain unit roots, which is a prerequisite for cointegration analysis.

Tabel 1. Results of the ADF test

Variabel	Decision	Nilai Koefisien
Economic Growth	Stasioner di first difference	0.0023
Export	Stasioner di first difference	0.0178
Import	Stasioner di first difference	0.0000
FDI	Stasioner di first difference	0.0001

The results of the ADF test are reported in Table 1. The findings indicate that economic growth, exports, imports, and foreign direct investment (FDI) are non-stationary at level but become stationary after first differencing. This is evidenced by probability values below the 5% significance level for all variables at first difference. Consequently, all variables are integrated of order one, I(1), satisfying the necessary condition for Johansen cointegration testing and subsequent VECM estimation.

Lag Length Selection

The optimal lag length was determined using several information criteria, including the Akaike Information Criterion (AIC), Schwarz Criterion (SC), Hannan–Quinn Criterion (HQ), and the Final Prediction Error (FPE). The results of the lag selection process are presented in Table 2.

Tabel 2. Results of the lag selection process

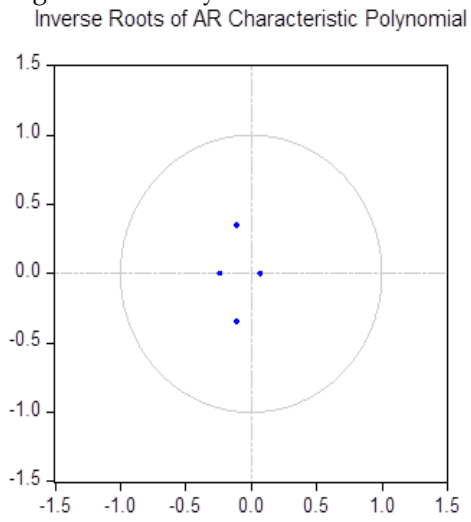
Lag	LogL	Lr	FPE	AIC	SC	HQ
0	-103.1052	NA	0.088400	8.925433*	9.121776*	8.977523*
1	-93.89179	14.58790	0.159491	9.490982	10.47269	9.751431
2	-69.15837*	30.91677*	0.087643*	8.763198*	10.53028	9.232005

Based on the number of minimum values indicated by the information criteria, lag 2 was selected as the optimal lag length for the model. This lag length was then applied consistently across all subsequent tests, including the stability test, cointegration test, Granger causality test, and VECM estimation.

Model Stability Test

To ensure the reliability of the estimated VECM, a stability test was conducted by examining the roots of the characteristic polynomial. The results are illustrated in **Figure 1**, which plots the inverse roots of the autoregressive characteristic polynomial.

Figure 1. Stability test



All roots are found to lie within the unit circle, indicating that the VECM satisfies the stability condition. This confirms that the estimated model is dynamically stable and suitable for analyzing both short-run and long-run relationships among the variables.

Cointegration Test Results

The existence of long-run equilibrium relationships among economic growth, exports, imports, and FDI was examined using the Johansen cointegration test. The test results based on the Trace Statistic and Maximum Eigenvalue Statistic are reported in Table 3 and Table 4, respectively.

Table 3. Trace Statistic

Hypothesized No. of CE(s)	**Eigenvalue**	**Trace Statistic**	**0.05 Critical Value**	**Prob.****
None*	0.774853	60.34881	40.17493	0.0002
At most 1*	0.577897	26.05579	24.27596	0.0295
At most 2	0.154106	6.218173	12.32090	0.4099
At most 3	0.097868	2.368875	4.129906	0.1462

Table 4. Maximum Eigenvalue Statistic

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None*	0.774853	34.29301	24.15921	0.0015
At most 1*	0.577897	19.83762	17.79730	0.0243
At most 2	0.154106	3.849298	11.22480	0.6525
At most 3	0.097868	2.368875	4.129906	0.1462

The Trace test results indicate that the null hypothesis of no cointegration is rejected at the 5% significance level, as the Trace Statistic exceeds the critical value for both the "None" and "At most 1" hypotheses. Similarly, the Maximum Eigenvalue test confirms the presence of cointegration, with test statistics exceeding their respective critical values for the same hypotheses.

Overall, both tests consistently indicate the existence of two cointegrating equations among the variables. This finding confirms a stable long-run relationship and justifies the use of the Vector Error Correction Model.

Granger Causality Test Results

The Granger causality test was employed to examine the direction of causal relationships among the variables. The results of the test are presented in Table 5.

The findings reveal bidirectional causality between foreign direct investment and exports, as well as between imports and exports. Additionally, a bidirectional causal relationship is observed between imports and FDI. These results suggest strong interdependence among trade variables and foreign investment.

Table 5. Granger causality test

Null Hypothesis	Obs	F-Statistic	Prob.
Export does not Granger Cause EG	25	1.21809	0.3168
EG does not Granger Cause Export		4.08430	0.0326
FDI does not Granger Cause EG	25	0.80581	0.4607
EG does not Granger Cause FDI		9.88241	0.0010
Import does not Granger Cause EG	25	1.08770	0.3561
EG does not Granger Cause Import		4.41868	0.0257
FDI does not Granger Cause Export	25	4.23749	0.0209
Export does not Granger Cause FDI		4.05145	0.0009
Import does not Granger Cause Export	25	4.23749	0.0292
Export does not Granger Cause Import		4.05145	0.3333
Import does not Granger Cause FDI	25	6.16521	0.0082
FDI does not Granger Cause Import		4.87593	0.0188

Furthermore, the results indicate unidirectional causality running from economic growth to exports, imports, and FDI. This implies that changes in economic growth precede changes in trade and investment flows, whereas the reverse causal relationships are not statistically significant.

VECM Estimation Results

Given the presence of cointegration, the Vector Error Correction Model was estimated to analyze both short-run dynamics and long-run relationships. The estimation results are reported in Table 6.

The long-run estimation indicates that exports do not have a statistically significant effect on economic growth, as reflected by a t-statistic below the critical value at the 5% significance level. In contrast, foreign direct investment exhibits a negative and statistically significant effect on economic growth, while imports have a positive and statistically significant impact.

These results suggest that, in the long run, FDI inflows are associated with a reduction in economic growth, whereas imports contribute positively to growth.

In the short run, none of the explanatory variables—exports, imports, or FDI—exhibit a statistically significant effect on economic growth. Additionally, the error correction term is not statistically significant, indicating a weak short-run adjustment toward long-run equilibrium.

Table 6. Estimation Results

Long-run			
Variabel	Koefisien	Standard Error	t-statistik
EXPORT	-0.058640	0.05506	-1.06506
FDI	-0.713858	0.10989	-6.49619*
IMPORT	0.138801	0.06466	2.14674*
C	-0.039032		
Short-run			
CoinEq1	-0.038445	0.10058	0.38224
D(EG(-2),2)	-0.382928	0.21894	-1.74899
D(EXPORT(-2),2)	0.014849	0.01517	0.97894
D(FDI(-2),2)	-0.019718	0.02724	-0.72380
D(IMPORT(-2),2)	-0.012738	0.01361	0.93595
C	-0.38269	0.02158	-0.38269
R-squared= 0.555127, Adj. R-squared-0.247138			

Table 7. Results of the FEVD analysis

Period	S.E.	D(EG)	D(EXPORT)	D(FDI)	D(IMPORT)
1	0.101379	100.0000	0.000000	0.000000	0.000000
2	0.113620	91.49503	3.341795	0.298877	4.864297
3	0.121655	89.20034	3.667391	0.982000	6.150267
4	0.126469	89.62523	3.394596	1.274267	5.705904
5	0.136212	90.27869	3.368435	1.202393	5.150482
6	0.148664	90.87732	3.140502	1.140920	4.841256
7	0.154084	90.37401	3.170735	1.101222	5.354030
8	0.160427	90.07676	3.218094	1.246318	5.458831
9	0.167474	90.38244	3.223539	1.159439	5.234579
10	0.173918	90.65962	3.153214	1.108838	5.078332

Variance Decomposition Analysis

Forecast Error Variance Decomposition (FEVD) was conducted to assess the relative contribution of each variable to variations in economic growth over time. The results of the FEVD analysis are reported in Table 7.

In the first period, economic growth is entirely explained by its own shocks. Over subsequent periods, the contribution of exports, imports, and FDI gradually increases, although economic growth remains the dominant source of its own variation. By the tenth period, imports account for the largest share of variation among external variables, followed by exports and FDI.

These findings indicate that, while economic growth is largely driven by its own dynamics, trade variables—particularly imports—play a meaningful role in explaining long-term fluctuations in growth.

5. Discussion

This study investigates the dynamic relationship between foreign direct investment (FDI), exports, imports, and economic growth in Indonesia using a Vector Error Correction Model. The empirical findings provide important insights into the heterogeneous roles of trade and investment in shaping Indonesia's economic growth, particularly when distinguishing between short-run dynamics and long-run equilibrium effects.

Exports and Economic Growth

The results indicate that exports do not have a statistically significant effect on economic growth in either the short run or the long run. This finding suggests that export expansion alone has not been sufficient to stimulate sustained economic growth in Indonesia during the study period. One plausible explanation lies in the structure of Indonesia's exports, which remain heavily concentrated in primary commodities and resource-based products with relatively low value added. As such, export growth may not generate strong backward and forward linkages within the domestic economy.

This result is consistent with previous studies that report insignificant or mixed effects of exports on economic growth in Indonesia (Putri & Siladjaja, 2021; Safira & Setyowati, 2025). While export-oriented growth is often associated with higher productivity and scale effects, these benefits depend critically on export diversification, technological content, and industrial upgrading. In the absence of such structural transformation, export growth may fail to translate into broader economic expansion.

Foreign Direct Investment and Economic Growth

A key finding of this study is the negative and statistically significant long-run effect of foreign direct investment on economic growth. This result challenges the conventional view that FDI universally promotes growth through capital accumulation and technology transfer. In the Indonesian context, the negative long-run effect of FDI may reflect the sectoral concentration of foreign investment in extractive industries, real estate, and other non-productive sectors that generate limited spillover effects.

This outcome aligns with earlier evidence suggesting that FDI can crowd out domestic investment and weaken local industries when absorptive capacity and institutional quality are insufficient (Agustin & Cahyono, 2017; Widianatasari, 2021; Muh. Nadzir & Kenda, 2023). Moreover, when FDI is primarily oriented toward resource extraction or enclave-type activities, its contribution to employment creation, technology diffusion, and value-added production remains limited. As a result, the long-term growth benefits of FDI may be outweighed by structural dependencies and reduced competitiveness of domestic firms.

In the short run, FDI does not exhibit a significant effect on economic growth. This suggests that FDI inflows do not immediately translate into increased output or aggregate demand, as investment projects typically require time to become operational. Similar findings are reported by Emako et al. (2022), who emphasize that the growth impact of FDI depends on the timing and nature of investment activities.

Imports and Economic Growth

In contrast to exports and FDI, imports are found to have a positive and statistically significant effect on economic growth in the long run. This finding highlights the important role of imports in supporting Indonesia's production capacity, particularly through the provision of capital goods, intermediate inputs, and advanced technologies that are not readily available domestically.

This result is consistent with the notion of import-led industrialization, whereby imports facilitate productivity gains and industrial upgrading by enabling access to essential inputs (Hodijah & Angelina, 2021). In Indonesia, imports of machinery, industrial equipment, and raw materials have played a critical role in sustaining manufacturing activity and improving production efficiency. While imports may reduce net exports in the short term, their long-run contribution to economic growth appears to be positive when they enhance domestic productive capacity.

However, the absence of a significant short-run effect suggests that the growth benefits of imports materialize gradually, as imported inputs are absorbed into the production process over time. This finding also reflects the dual nature of imports, which can either support or hinder growth depending on their composition and strategic use (Purwaning Astuti & Juniwati Ayuningtyas, 2018).

Dynamic Interactions and Variance Decomposition

The Granger causality results reveal strong interdependence among exports, imports, and FDI, indicating that trade and investment flows are mutually reinforcing. However, economic growth is found to Granger-cause exports, imports, and FDI, rather than the reverse. This suggests that improvements in domestic economic performance precede increases in trade and investment flows, highlighting the importance of internal growth fundamentals.

The variance decomposition analysis further supports this interpretation. Economic growth remains largely driven by its own innovations, while imports contribute the largest share among external variables over time. Exports and FDI play relatively smaller roles in explaining long-term fluctuations in growth. These findings underscore the dominance of domestic factors in shaping economic growth, with trade and investment acting as complementary rather than primary drivers.

Policy Implications and Recommendations

Based on the empirical findings, several policy implications can be drawn.

First, the negative long-run impact of FDI underscores the need to improve the quality and sectoral allocation of foreign investment. Policymakers should prioritize FDI inflows into productive, technology-intensive, and export-oriented sectors that generate strong linkages with domestic industries. Strengthening local content requirements and enhancing absorptive capacity through human capital development may help maximize the growth benefits of FDI.

Second, the positive role of imports highlights the importance of maintaining strategic import policies that support industrial development. Imports of capital goods, intermediate inputs, and technology should be facilitated to enhance productivity and competitiveness. At the same time, excessive dependence on consumer goods imports should be mitigated to avoid undermining domestic production.

Third, the insignificant impact of exports suggests that export promotion policies should move beyond volume expansion toward structural transformation. Policies aimed at export diversification, value-added processing, and industrial upgrading are essential to ensure that exports contribute more effectively to economic growth.

Overall, a coordinated policy framework that aligns investment, trade, and industrial strategies is crucial for achieving sustainable and inclusive economic growth in Indonesia.

6. Conclusion

This study examines the dynamic relationship between foreign direct investment, exports, imports, and economic growth in Indonesia using a Vector Error Correction Model with annual data from 1990 to 2024. The empirical results provide clear evidence that the impacts of trade and investment on economic growth differ substantially across variables and time horizons.

The findings reveal that foreign direct investment exerts a negative and statistically significant effect on economic growth in the long run, while its short-run impact remains insignificant. This suggests that FDI inflows in Indonesia have not consistently contributed to sustainable growth, likely due to their concentration in non-productive or extractive sectors with limited spillover effects. In contrast, imports are found to have a positive and significant long-run effect on economic growth, highlighting their important role in supporting domestic production through the provision of capital goods, intermediate inputs, and technology. Exports, however, do not demonstrate a significant effect on economic growth in either the short run or the long run, indicating that export expansion alone has not been sufficient to drive long-term economic growth during the study period.

The results also indicate that economic growth largely drives trade and investment flows rather than being driven by them, as evidenced by the Granger causality and variance decomposition analyses. This underscores the dominant role of domestic economic fundamentals in shaping Indonesia's growth trajectory, with trade and foreign investment acting as complementary factors.

Overall, this study contributes to the literature by providing dynamic evidence that the growth effects of trade and foreign investment are highly context-dependent. The findings emphasize the importance of improving the quality of foreign direct investment, maintaining strategic import policies that support industrial development, and promoting export diversification and value-added production to achieve more sustainable and resilient economic growth in Indonesia.

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