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DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN ORGANIZATION OF ISLAMIC COOPERATION COUNTRIES IN ASEAN: EMPIRICAL EVIDENCE OF VECTOR ERROR CORRECTION MODEL

M. Iqbal[1*], Syahrul Gunawan[1], Ajeng Lestari[2], Abdullah[2], Azizan Hadi[3]
[1]Raden Fatah State Islamic University Palembang, Indonesia
[2]Sunan Kalijaga State Islamic University Yogyakarta, Indonesia
[3]Al Azhar University, Egypt
m.iqbal_uin@radenfatah.ac.id

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Abstract: Foreign direct investment is seen as an important source of capital for the economic growth of developing countries. FDI flows to developing countries reached USD 837 billion in 2021, with Southeast Asia being one of the largest recipients. This study uses time series data from 2000–2022 and a VECM model to analyze the causal relationship between FDI, exchange rates, inflation, CO_2 emissions, exports, and imports. The results show that exchange rates and inflation have a significant impact on foreign direct investment in the long term, while CO_2 emissions, exports, and imports are not significant. These findings indicate that macroeconomic stability, regulation, infrastructure, and institutions are key determinants of FDI flows. Although the impact of green policies has not been significant, initiatives such as carbon taxes and clean energy programs show the potential to attract sustainable investment in the future.

Keywords: Foreign Direct Investment; Exchange Rate; Inflation; CO_2 Emissions

Abstrak: *Investasi langsung asing dipandang sebagai sumber modal penting bagi pertumbuhan ekonomi negara berkembang. Arus FDI ke negara berkembang mencapai USD 837 miliar pada tahun 2021, Asia Tenggara sebagai salah satu penerima terbesar. Penelitian ini menggunakan data time series 2000–2022 dan model VECM untuk menganalisis hubungan kausal antara FDI, nilai tukar, inflasi, emisi CO_2, ekspor, dan impor. Hasil menunjukkan bahwa nilai tukar dan inflasi berpengaruh signifikan terhadap investasi langsung asing dalam jangka panjang, sementara emisi CO_2, ekspor, dan impor tidak signifikan. Temuan ini mengindikasikan bahwa stabilitas makroekonomi, regulasi, infrastruktur, dan institusi menjadi faktor utama penentu arus FDI. Meskipun pengaruh kebijakan hijau belum signifikan, inisiatif seperti pajak karbon dan program energi bersih menunjukkan potensi menarik investasi berkelanjutan di masa depan.*

Kata Kunci: *Investasi Langsung Asing; Nilai Tukar; Inflasi; Emisi CO_2*

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Introduction

Rather than merely providing financial inflows, Foreign Direct Investment (FDI) has evolved into a catalyst that enhances productivity, fosters industrial upgrading, and strengthens global value chain participation.[1] The determinants of foreign direct investment are primarily centered on economic, social, political, and institutional quality factors. Economic determinants of foreign direct investment encompass market size, trade openness, and overall economic stability. Economic stability, in particular, is characterized by variables such as interest rates, inflation, and exchange rates, all of which influence investment flows.Developing countries need investment, both domestic and foreign, to increase productivity and economic growth. FDI extends beyond being a mere international capital transfer; it alsso represents a mechanism for global production.[2] Choose investments that generate profits, investors need a variety of information as a basis for making decisions to obtain large profits.[3] The definition of investment is the placement of funds in financial instruments that are expected to increase in value, thereby generating profits from short-term differences (purchase and sale prices) and/or long-term differences (dividends).[4] In developing countries, growth patterns are often marked by insufficient capital investment, with FDI playing a crucial role in addressing this gap.[5] FDI not only provides much-needed capital but also facilitates technology transfer, managerial expertise, and access to international markets, which collectively stimulate economic development and productivity. According to Dunning's Eclectic Paradigm (OLI Framework), multinational enterprises (MNEs) engage in foreign investment due to ownership advantages, location advantages, and internalization benefits.[6] These factors explain why FDI inflows tend to concentrate in countries offering macroeconomic stability, skilled labor, and supportive policy environments.

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[2] Sabrine Dhahri And Anis Omri, "Does Foreign Capital Really Matter For The Host Country Agricultural Production? Evidence From Developing Countries," *Review Of World Economics* 156, no. 1 (2020): 153.

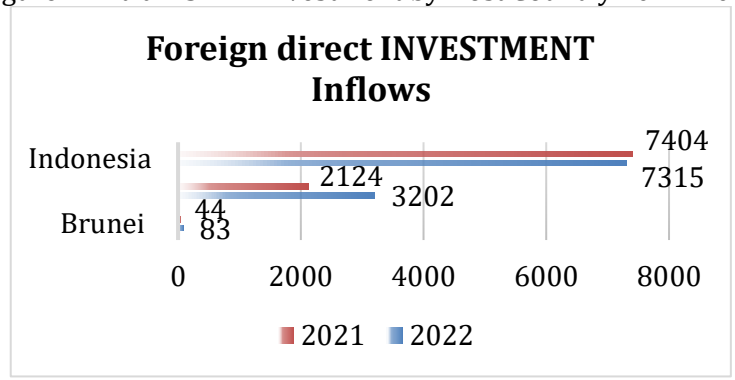
[3] Enny Puji Lestari, Nyimas Lidya Putri Pertiwi, Agus Alimuddin, And Danil Asbihani, "Minat Investasi Pekerja Migran Indonesia Dalam Meningkatkan Ketahanan Ekonomi Keluarga Di Lampung Timur," *FINANSIA : Jurnal Akuntansi Dan Perbankan Syariah* 6, no. 1 (2023): 89.

[4] Sofiah Br Sinaga And Argo Putra Prima, "Pengaruh Return On Equity, Return On Asset Dan Ukuran Perusahaan Terhadap Nilai Perusahaan Di Bursa Efek Indonesia," *FINANSIA : Jurnal Akuntansi Dan Perbankan Syariah* 4, no. 2 (2022): 223.

[5] Abdul Rehman, Hengyun Ma, Munir Ahmad, Ilhan Ozturk, And Cem Işık, "An Asymmetrical Analysis To Explore The Dynamic Impacts Of CO2 Emission To Renewable Energy, Expenditures, Foreign Direct Investment, And Trade In Pakistan," *Environmental Science And Pollution Research* 28, no. 38 (2021): 53520.

[6] John H. Dunning, "The Eclectic Paradigm Of International Production: A Restatement And Some Possible Extensions," *Journal Of International Business Studies* 19, no. 1 (1988): 1.

Figure 1. Intra-ASEAN Investment by Host Country 2021–2022



Source : ASEAN Secretariat

Three ASEAN member countries recorded higher inflows in 2022 than in 2021 (figure 1). Indonesia experienced the highest increase in absolute value, contributing more than 60 percent of FDI in the region with flat growth but investment levels remaining high, while Malaysia recorded the highest growth, and Brunei experienced the lowest investment inflow among the 3 countries. foreign direct investment in developing countries continues to be an engine of growth. Significant inflows over the years pushed the foreign direct investment stock in ASEAN countries to $3.6 trillion. The exchange rate reflects the relative value of one country's currency against another, and is considered a significant determinant of FDI. A stable exchange rate is likely to have a beneficial effect on foreign direct investment by providing a predictable environment for investment decisions.[7] Depreciation of the exchange rate may hinder the influx of horizontal foreign direct investment by making local assets more expensive, while potentially stimulating the attraction of vertical foreign direct investment by reducing the cost of production inputs.[8] Over the past two decades, foreign direct investment has emerged as a central component of globalization at a global scale. In the context of production, foreign direct investment is acknowledged for its scale effect, which pertains to the impact on economic activity driven by the infusion of additional investment into the economy.[9] Scale effects are thought to contribute to pollution, waste, and ecological degradation. Climate change, with carbon dioxide (CO_2) accounting for 82% of total greenhouse gas emissions, represents a significant global issue affecting both developing and developed nations.[10] According to Shijie Yang's research, there was a positive relationship between FDI and CO_2 emissions for the majority of the study period.

[7] Muhammad Mahmud Mostafa, "Impacts Of Inflation And Exchange Rate On Foreign Direct Investment In Bangladesh," *International Journal Of Science And Business,* 4750 (2020): 53.

[8] Joshua Aizenman, "Exchange Rate Flexibility, Volatility And The Patterns Of Domestic And Foreign Direct Investment," *IMF Working Papers* 92, no. 20 (1992): 1.

[9] Nadia Doytch, "The Impact of Foreign Direct Investment on the Ecological Footprints of Nations," *Environmental and Sustainability Indicators* 8, (2020): 100085.

[10] Renuka Mahadevan And Yanyan Sun, "Effects Of Foreign Direct Investment On Carbon Emissions: Evidence From China And Its Belt And Road Countries," *Journal Of Environmental Management* 276, (2020).

Additionally, the research examined how carbon emissions affect the rate of bioproductive land depletion within the ecological footprint.[11]

Currently, FDI inflows are playing an optimized role in the export attainment of host countries.[12] Progress in exports has been a catalyst driving economic growth. FDI is experiencing a rapid increase and has proven to be the main source of FDI in various countries with increasing foreign direct investment levels.[13] Exports allow a country to integrate with global markets, which in turn exposes its export sector to strict environmental standards that may be imposed by major trading partners. As a result, these stringent environmental standards encourage exporting countries to adopt more environmentally friendly production techniques and technologies.[14] Developing countries generally adopt import substitution policies by producing domestic goods or implementing export-oriented industrialization strategies that are integrated with the international economy.[15]

The gap in this research lies in the significant changes in economic conditions and investment policies in the regionThe Organization of Islamic Cooperation (OIC) is a member country in ASEAN, but this has not been fully explained by previous studies. The possibility of new factors influencing FDI flows requires more up-to-date analysis. The strength of this research lies in the use of VECM to understand the long-term and short-term relationships between variables and foreign direct investment. Regarding the relationship between foreign direct investment and green economic policy, although developing countries in the OIC member countries in ASEAN region can lower barriers such as environmental regulations to attract foreign direct investment inflows. This study emphasizes that institutional changes and green economic policies stimulate foreign direct investment.

[11] Alexandra Rudolph And Lukas Figge, "Determinants Of Ecological Footprints: What Is The Role Of Globalization?," *Ecological Indicators* 81, (2017): 348.

[12] Shapan Chandra Majumder, Md Hasanur Rahman, And Anobua Acha Arnaud Martial, "The Effects Of Foreign Direct Investment On Export Processing Zones In Bangladesh Using Generalized Method Of Moments Approach," *Social Sciences And Humanities Open* 6, no. 1 (2022): 100277.

[13] Faheem Ur Rehman And Abul Ala Noman, "China's Outward Foreign Direct Investment And Bilateral Export Sophistication: A Cross Countries Panel Data Analysis," *China Finance Review International* 12, no. 1 (2022): 180.

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[15] A. Syzdykova, A. Abubakirova, D. Kelesbayev, A. Omarova, G. Amaniyazova, B. Saubetova, And D. Anshayeva, "The Effect Of Export And Imports On National Income In Kazakhstan: Econometric Analysis," *Espacios* 40, no. 35 (2019).

Methods

This research employs secondary time series data covering the period 2000–2022, a range selected to capture the post-Asian financial crisis recovery, ASEAN economic integration milestones, and the recent COVID-19 shock. The dependent variable is FDI, while the independent variables include Exchange Rate (EXR), Inflation (INF), Carbon Emissions (CO_2), Exports (EKS), and Imports (IMP) in three OIC member states within ASEAN: Indonesia, Malaysia, and Brunei Darussalam. The Vector Error Correction Model (VECM) is applied because it allows for examining both short-run dynamics and long-run equilibrium relationships among non-stationary variables that are cointegrated. Compared to VAR, which requires stationary data, and ARDL, which is more suitable for mixed integration orders, VECM is the most appropriate since macroeconomic and trade variables are expected to share long-run cointegration.

The empirical procedure consists of the analysis in this study follows several econometric procedures to ensure the robustness of the results. First, unit root tests were conducted using the Augmented Dickey–Fuller (ADF) and Phillips–Perron (PP) methods to determine the stationarity of the time series data. Next, the optimal lag length was selected based on the Akaike Information Criterion (AIC) to ensure model accuracy and avoid specification errors. The Johansen cointegration test was then employed to examine the existence of long-run relationships among the variables. After establishing cointegration, the Vector Error Correction Model (VECM) was estimated to capture both short-run adjustments and long-run equilibrium dynamics. Finally, several diagnostic tests were performed—including checks for serial correlation, heteroskedasticity, and model stability—to verify the validity and reliability of the estimated model. The general VECM specification is expressed as follows:

$$\Delta Yt=\alpha+\Pi Yt-1+i=1\sum p-1\Gamma i\Delta Yt-i+\varepsilon t$$

where:

Yt=[FDIt,EXRt,INFt,CO2t,EKSt,IMPt]′Y_t = [FDI_t, EXR_t, INF_t, CO2_t, EKS_t, IMP_t]'Yt=[FDIt ,EXRt,INFt,CO2t,EKSt,IMPt]′ is a vector of endogenous variables,

In the model specification, Δ denotes the first difference operator, which is used to transform non-stationary variables into stationary form. The symbol Π represents the long-run relationship matrix, indicating the presence and strength of equilibrium relationships among the variables. Meanwhile, Γ captures the short-run dynamics, reflecting the immediate adjustments of the dependent variable in response to changes in the explanatory variables. Lastly, E denotes the error term, which is assumed to follow a white noise process, implying that it has a zero mean, constant variance, and no autocorrelation. The error correction term (ECT) derived from cointegration ensures that short-run deviations are corrected toward the long-run equilibrium.

Table 1. Operational Definition of Variables

Variable	Type of Variable	Proxied by	Source
Foreign Direct Investment	Dependent	Current US$	World Bank
Exchange rate	Independent	Index (%)	World Bank
Inflation	Independent	Index (%)	World Bank
Carbon Emissions	Independent	Index	World Bank
Export	Independent	Current US$	World Bank
Import	Independent	Current US$	World Bank

Source: Processed Eviews 12, 2025

To build a relationship between FDI, exchange rate, inflation, $C0_2$, EKS and IMP. This research uses the VECM research model, where the VECM model is a model that makes all endogenous variables or dependent variables.[16] VECM can be written as follows in equation form:

$$FDI_t = \beta_0 + \beta_1 KURS_t + \beta_2 INF_t + \beta_3 C02_t + \beta_4 EKS + \beta_5 IMP + e_t$$

And

$$\Delta FDI = \theta_0 + \sum_{i=1}^{b} a + \sum_{i=1}^{n} \alpha_{1i} \Delta FDI_{t-1} + \sum_{i=1}^{n} \alpha_{2i} \Delta KURS_{t-1} + \sum_{i=1}^{n} \alpha_{3i} \Delta INF_{t-1} + \sum_{i=1}^{n} \alpha_{4i} \Delta C02_{t-1} + \sum_{i=1}^{n} \alpha_{5i} \Delta EKS_{t-1} + \sum_{i=1}^{n} \alpha_{6i} \Delta IMP_{t-1} + \mu_t$$

Result And Discussion

Descriptive Statistics

Table 2. Descriptive Statistics Output

	FDI	EXCHANGE RATE	INF	C02	EX	IMP
Mean	2.408643	3702.908	2.910575	191406.5	60.49967	45.56689
Median	2.314587	3.800000	2.027353	181472.7	67.40747	35.81729
Maximum	9.158164	14849.85	13.10867	605290.6	119.8097	100.5971
Minimum	-2.757440	1.249567	-2.314972	2.330000	17.33117	15.64101
Std. Dev.	1.858708	5434.081	3.158651	183798.2	28.82504	23.88105
Skewness	0.061461	0.899570	1.366293	0.546457	0.168844	0.719327
Kurtosis	5.114215	2.072342	4.826887	2.111467	2.125808	2.269532
Jarque-Bera	12.89442	11.78018	31.06305	5.703862	2.524954	7.484515
Probability	0.001585	0.002767	0.000000	0.057733	0.282952	0.023701
Sum	166.1964	255500.6	200.8297	13207049	4174.478	3144.115
Sum Sq. Dev	234.9260	2.01E+09	678.4412	2.30E+12	56500.05	38780.71
Observations	69	69	69	69	69	69

Source: Processed Eviews 12, 2025

[16] Faten Derouez, Adel Ifa, Abdullah A. Aljughaiman, Mohammed Bu Haya, Abdalwali Lutfi, Mahmaod Alrawad, And Samah Bayomei, "Energy, Technology, And Economic Growth In Saudi Arabia: An ARDL And VECM Analysis Approach," *Heliyon* 10, no. 4 (2024): e26033.

Based on table 2 in the Exchange rate section, the standard deviation value is 5434.081 and the probability is 0.00. Furthermore, the INF variable has a standard deviation value of 3.15 and a probability value of 0.00. Variable $C0_2$ has a standard deviation value of 183798.2 and a probability of 0.05. Furthermore, EKS has a standard deviation of 28.82504 and a probability value of 0.28. And the last one is the IMP which has an average of 45.5 with a standard deviation of 23.88105 and a probability of 0.02. The following are the results of a series of tests from VECM:

Lag Criteria

Table 3. Optimal Lag Test

Lag	LogL	L.R	FPE	AIC	S.C	HQ
0	-2091,695	NA	9.38e+22	69.92316	70.13260	70.00508
1	-1756.655	591.9032*	4.43e+18*	59.95518*	61.42122*	60.52863*
2	-1729.815	42.05036	6.22e+18	60.26049	62.98314	61.32547
3	-1703.290	36.25062	9.37e+18	60.57633	64.55558	62.13283

Source: Akaike Information Criterion, 2025

Cointegration Test

Table 4. Cointegration Test Results

HypothesizedNo. of CE(s)	Eigenvalues	Trace Statistics	0.05 Critical Value	Prob*
one *	0.680260	192.0831	95.75366	0.0000
At most 1*	0.562471	123.6682	69.81889	0.0000
At most 2*	0.370724	74.07144	47.85613	0.0000
At most 3*	0.301036	46.28028	29.79707	0.0003
At most 4*	0.247882	24.79088	15.49471	0.0015
At most 5*	0.120427	7.699141	3.841465	0.0055

Note: * indicates significance at 5%.

Granger Causality Test

Table 5. Causality Test Results

Null Hypothesis	Obs	F-Statistics	Prob
The exchange rate does not Granger Cause FDI	69	4.21997	0.0441
FDI does not Granger Cause KURS		0.00838	0.9273
Inflation does not Granger Cause FDI	69	6.36100	0.0142
FDI does not Granger Cause Inflation		4.02311	0.0491
C02 does not Granger Cause FDI	69	0.38635	0.5364
FDI does not Granger Cause C02		0.01100	0.9167
Exports do not Granger Cause FDI	69	3.28882	0.0745
FDI does not Granger Cause Exports		1.70840	0.1959
Import does not Granger Cause FDI	69	3.01841	0.0872
FDI does not Granger Cause Imports		1.78031	0.1869

Source: Processed from Eviews 12, 2025

Table 6. Long-Term And Short-Term VECM Tests

Variable	Coefficient	Std. Error	t-stat	Information
Long Run Results				
D(EXCHANGE)	0.002103	(0.00084)	[2.50210**]	Significant
D(INFLATION)	2.051974	(0.25542)	[8.03357**]	Significant
D(C02)	5.187996	(1.81839)	[0.28531]	Not Significant
D(EXPORT)	-0.009939	(0.12483)	[-0.07963]	Not Significant
D(IMPORT)	0.104817	(0.12455)	[0.84157]	Not Significant
Short Run Results				
CointEq1	-0.31614	(0.09017)	[-3.95729]	
D (FDI (-1),2)	-0.38501	(0.09729)	[-3.95729]	Significant
D (EXCHANGE (-1),2)	-5.28554	(0.00044)	[-0.11933]	Not Significant
D (INFLATION (-1),2)	0.308854	(0.11735)	[2.63188]	Significant
D (C02 (-1),2)	2.876058	(3.65889)	[0.78604]	Not Significant
D (EXPORT (-1),2)	0.011735	(0.04719)	[0.24866]	Not Significant
D (IMPORT (-1),2)	-0.01377	(0.04737)	[-0.29070]	Not Significant
C	-0.07541	(0.27224)	[-0.27703]	

Note: ** Indicates Significance At The T-table Level > 2.00030

Variance Decomposition

Table 7. Variance Decomposition of Foreign Direct Investment

Variance Decomposition of D(FDI):							
Period	S.E	D(FDI)	D(EXCHANGE)	D(INF)	D(C02)	D(EXPORT)	D(IMPORT)
1	2.058631	100,0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	2.316300	91.48209	1.033757	6.087115	0.379852	0.063752	0.953433
3	2.786783	89.07681	1.891088	7.640905	0.333935	0.250650	0.806609
4	3.041079	89.04289	2.208246	6.757855	0.694283	0.259256	1.037468
5	3.353233	89.07199	2.115700	7.077521	0.571345	0.249174	0.914270
6	3.591969	88.27771	2.293319	7.272881	0.814268	0.275761	1.066056
7	3.844679	88.30377	2.429049	7.261675	0.717726	0.278777	1.009001
8	4.060211	88.15392	2.436248	7.227947	0.821994	0.290642	1.069249
9	4.279131	88.12900	2.520680	7.273829	0.752730	0.287874	1.035887
10	4.477895	87.97320	2.537250	7.305942	0.808817	0.300012	1.074783

The Exchange Rate Affects Foreign Direct Investment

The exchange rate shows a significant positive effect on foreign direct investment in Indonesia, Malaysia, and Brunei Darussalam. This implies that a 1% change in the exchange rate leads to a 0.002103 adjustment in foreign direct investment inflows, suggesting that stability in currency values reduces uncertainty and increases investor confidence. A stable exchange rate lowers exchange rate risk, facilitates long-term financial planning, and secures returns on investment, making host countries more attractive to foreign investors. This finding is consistent with evidence from the European Monetary Union, where the adoption of a common currency eliminates exchange rate volatility and enhances foreign

direct investment flows.[17] Similarly, studies in ASEAN demonstrate that exchange rate stability plays a crucial role in attracting foreign direct investment: for instance, Nguyen (2019) finds that in Vietnam, currency stability supports long-term foreign direct investment growth, while report that excessive exchange rate volatility in Thailand discourages manufacturing investment [18]. These comparisons reinforce that in the ASEAN-OIC context, exchange rate stability is a critical determinant of foreign investors' decision-making.other.

Inflation Affects Foreign Direct Investment

Inflation has a positive effect on foreign direct investment in 3 developing countries, namely Indonesia, Malaysia and Brunei Darussalam. This variable shows that with inflation of 1%, it will significantly influence foreign direct investment into the 3 countries by 2.05, both long term and short term. This finding is in line with research results which state that the inflation rate has a significant impact on foreign direct investment in long-term[19]. So, it is confirmed by the findings[20] that the impact of inflation on foreign direct investment is analyzed using linearity and non-linearity assumptions. Several empirical studies confirm this finding: report that inflation significantly and positively influences foreign direct investment in Indonesia,[21] while also find a similar effect when examining inflation alongside exchange rate and interest rate variables. However, studies using ASEAN panel data,[22] such as indicate that the effect of inflation may vary across countries, with some showing negative or insignificant impacts,[23] suggesting that the relationship may not always be linear and could change depending on the level of inflation. This highlights the importance of considering both linear and non-linear assumptions, as low to moderate inflation can encourage investment, whereas excessive inflation may reduce investor confidence and hinder long-term FDI growth.

[17] Signe Krogstrup And Sébastien Wälti, "Women And Budget Deficits," *Scandinavian Journal Of Economics* 113, no. 3 (2011): 712.

[18] X. H. Yap And Ng, "An Investigation On Customer Revisit Intention To Theme Restaurants: The Role Of Servicescape And Authentic Perception," *The Electronic Library* 34, no. 1 (2018).

[19] Muhammad Mahmud Mostafa, "Impacts Of Inflation And Exchange.

[20] Komla Agudze And Oyakhilome Ibhagui, "Inflation And FDI In Industrialized And Developing Economies," *International Review Of Applied Economics* 35, no. 5 (2021): 749.

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[22] Nadya Khodijah Putri, Komara Komara, And Tupi Setyowati, "Pengaruh Nilai Tukar, Pertumbuhan Ekonomi, Inflasi, Dan Suku Bunga Terhadap Investasi Asing Langsung Di Indonesia," *Jkbm (Jurnal Konsep Bisnis Dan Manajemen)* 8, no. 1 (2021): 11.

[23] John Foeh, Ni Kadek Suryani, And Shakti Silpama, "The Influence Of Inflation Level, Exchange Rate And Gross Domestic Product On Foreign Direct Investment In The ASEAN Countries On 2007 - 2018," *European Journal Of Business And Management Research* 5, no. 3 (2020): 3.

Carbon Emissions Have No Effect On Foreign Direct Investment

Further research reveals that carbon emissions have no significant effect on FDI in the long term, as indicated by the t-statistic value of 0.28531, which is lower than the t-table value of 2.00030, leading to the rejection of the hypothesis. This suggests that many investors perceive carbon emissions as a global externality that requires collective policy responses by governments or international bodies rather than as a determinant in individual investment projects. In practice, investors tend to prioritize traditional locational advantages such as market access, tax incentives, labor costs, infrastructure, and political stability, while environmental considerations are often secondary unless supported by strict regulations or strong institutional frameworks. Empirical evidence supports this view: found no long-term impact of foreign direct investment on CO_2 emissions in developing countries,[24] while emphasized that governance quality plays a crucial role in linking foreign direct investment and environmental outcomes, and a meta-analysis by concluded that the overall effect of FDI on emissions is close to zero when accounting for cross-country heterogeneity.[25] These findings highlight that the absence of a long-term relationship between carbon emissions and foreign direct investment reflects both weak environmental enforcement in many developing countries and the dominance of economic over environmental factors in shaping investor decisions.

Exports Have No Effect On Foreign Direct Investment

The results of further research reveal that exports have no effect on Foreign Direct Investment in the long term. This is proven by the t-stat value (t-table)-0.07963 is less than the t-table significance level of 2.00030. This finding states that exports have no effect on FDI because the two have different goals and mechanisms. Exports relate to the sale of products or services to foreign markets, which focuses on income from international sales without the need to invest capital directly in other countries. This research is in line with Amin Mansoor's research which states that exports have no effect on foreign direct investment.[26] On the other hand, foreign direct investment involves investment by a company or investor in a foreign country with the aim of controlling or participating in the management of the company in that country.

Imports Have No Effect On Foreign Direct Investment

The results of further research reveal that imports have no effect on Foreign Direct Investment in the long term. This is proven by the t-stat value (t-table)-0.84157 is less than the t-table significance level of 2.00030. Import does not always have an effect on FDI because both have different mechanisms and objectives. This research is in line with Mahmood's research which states that imports have a negative impact on foreign direct

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investment because there is a trend of increasing imports in the period studied.[27] foreign direct investment involves direct foreign investment in a country to control or manage business operations, while imports only relate to the purchase of goods and services from abroad. Therefore, although imports reflect domestic demand, this is not enough to attract foreign investment without clear prospects for long-term profits.

Conclusion

This research examines the determinants of FDI in selected member countries of the OIC within ASEAN, namely Indonesia, Malaysia, and Brunei Darussalam. By employing the VECM, the study provides empirical evidence that, in the long run, macroeconomic fundamentals such as the exchange rate and inflation rate significantly influence the inflow of foreign direct investment. In contrast, in the short run, only inflation exhibits a statistically significant effect, whereas other variables, including CO_2 emissions, exports, and imports, show no substantial impact. These findings emphasize that macroeconomic stability and prudent fiscal policies are indispensable for fostering a favorable investment climate. Furthermore, the study highlights the necessity of institutional reforms and the adoption of environmentally sustainable policies as complementary measures to attract foreign direct investment, particularly in light of the increasing global emphasis on sustainable development. Consequently, this research offers important policy implications for governments in the region to design more comprehensive strategies aimed at enhancing investment attractiveness, while simultaneously contributing to the academic discourse on the dynamics of foreign direct investment in developing economies.

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Author Contributions Statement

The study on the determinants of FDI in OIC countries in ASEAN was designed and conceptualized with contributions from all authors. MI and SG collected data and prepared time series data from 2000 to 2022. AL applied VECM for analysis and interpreted the short- and long-term dynamics of FDI. AA and AH conducted the literature review, drafted the manuscript, and critically revised it, ensuring that theoretical and empirical findings were clearly integrated. All authors reviewed and approved the final manuscript.

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