Issues and Perspectives in Business and Social Sciences

Analysing the determinants of Vietnam's FDI inflow

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Abstract

FDI has long been recognised for its positive impact on host countries, prompting economies, particularly those in the developing world, to dedicate significant efforts to crafting policies conducive to attracting FDI inflows. Vietnam stands out as a top performer within the ASEAN region, and it is known for its appeal to FDI. This study seeks to shed light on Vietnam's successful FDI attraction strategies, offering insights for similar endeavours. Utilising the ARDL approach and monthly data from 2010 to 2019, this study examines the determinants of FDI inflows in Vietnam. The analysis reveals that market size is the sole significant factor in both short-term and long-term estimations. However, in the short run, market size, trade openness, and inflation notably influence FDI inflows. These findings underscore the importance of enhancing the host nation's competitive advantage to attract market-seeking and export-oriented FDI in the short term. However, the FDI landscape shifts towards market-seeking investments over time, particularly as the domestic market expands. This shift presents valuable guidance for policymakers in shaping long-term FDI-related strategies. By leveraging the benefits accrued from FDI, whether market-seeking or export-oriented, host nations can foster domestic market development, thereby sustaining FDI inflows in the long run. This development aligns with the growing global awareness of promoting societal equality, such as the SDGs. By fostering equality, purchasing power within the overall market is boosted, creating a more favorable environment for FDI.

1. Introduction

Foreign direct investment (FDI) refers to long-term investments made by a resident entity in one economy in an enterprise located in another economy (Mai & Nguyen, 2016). While investments can be domestic or foreign, many economies rely on FDI to address limited domestic resources (Shaari et al., 2023; Sijabat, 2023), bridging gaps in local savings (Rani & Ghosh, 2020). When properly managed, FDI can yield significant benefits, including enhanced employment, management capabilities, and infrastructure development (Grace, 2019), fostering healthy competition, stimulating research and development, and facilitating technology transfer (Chong et al., 2019; Gould et al., 2014; Haudi et al., 2020; Liu & Lee, 2020). Its stability relative to other investments, like portfolio investment, is especially vital during financial crises, helps stabilise

economies, and supports governments' efforts to combat economic challenges (Al-kasasbeh et al., 2022).

FDI has, therefore, become integral to the global economic development of many countries (Huyen, 2015). It is a key driver for economic growth, industrialisation, and restructuring (Al-kasasbeh et al., 2022). Particularly in developing economies, FDI often surpasses government development aid and portfolio investment flows to grow the economy. Since the 1980s, FDI has experienced significant growth globally, ranking among the major types of cross-border capital flows (Gould et al., 2014). With integrating global capital markets in the 1990s, FDI rapidly expanded further (Grace, 2019).

Given its positive impact on economic conditions, many regions, including the Association of Southeast Asian Nations (ASEAN), have actively sought to attract more significant FDI inflows (Grace, 2019). ASEAN, home to the world's fifth-largest economy as of 2021 (Sijabat, 2023), has implemented various agreements among member states to bolster economic strength, such as the ASEAN Free Trade Area (AFTA), the ASEAN Investment Area (AIA), and the ASEAN Comprehensive Investment Agreement (ACIA). These agreements have solidified ASEAN's position as the largest emerging market for foreign investment, even amid challenges like the COVID-19 pandemic. Despite a temporary decline in investment volume, ASEAN maintained robust investment inflows, receiving 13.7% of worldwide foreign investments in 2020, surpassing the 11.9% recorded in 2019 (Sijabat, 2023).

Vietnam is an enticing destination for FDI among ASEAN and CIVETS nations (Columbia, Indonesia, Vietnam, Egypt, Turkey, and South Africa), ranking among the top 20 countries globally for FDI in 2020 (Phi et al., 2024). Its impressive FDI inflows received a significant boost upon joining the WTO in 2007 (Minh, 2019; Phi et al., 2024). Additionally, Vietnam has reaped benefits from the US-China trade war since 2018, attracting numerous top global firms (Xuan, 2020). As depicted in Figure 1, Vietnam's FDI inflows have exhibited a notable upward trend, with its share among ASEAN countries increasing to approximately 10% of the region's total in the recent decade, a substantial rise from around 3% in 1991.
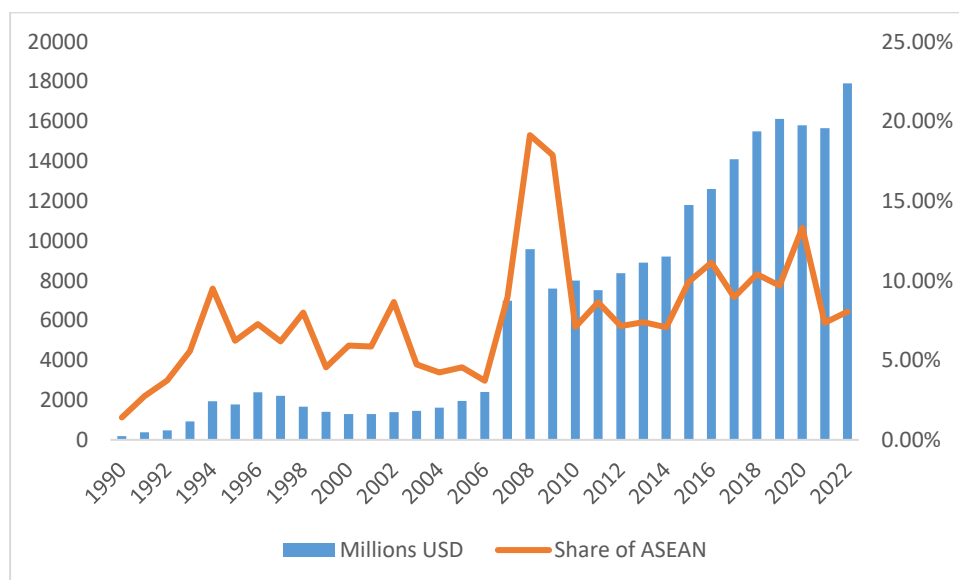

Figure 1: *FDI inflows in Vietnam*
Source: UN Trade and Development Statistics (UNCTADstat)

Vietnam's ascent as a premier FDI destination can be attributed to several key factors, including its conducive investment climate, abundant natural resources, cost-effective labour pool, sizable and youthful consumer base, political stability, and scrutinised investment policies (Phi et al., 2024). In recent years, Vietnam has transitioned its FDI strategy from focusing solely on project quantity to prioritising quality, particularly in high-tech and eco-friendly sectors (Phi et al., 2024).

This shift underscores FDI's pivotal role in driving Vietnam's economic growth and development, facilitating government funding, promoting trade and integration, generating employment opportunities, enhancing human capital, and accelerating technology transfer (Nguyen et al., 2021; Phi et al., 2024). Moreover, Vietnam's top FDI partners are predominantly in the Asia Pacific region, highlighting the strategic importance of convenient shipping routes for bilateral trade and investment (Mai & Nguyen, 2016).

This study is inspired by Vietnam's effective strategies in attracting FDI to bolster its economic growth (Quang et al., 2022). Therefore, it aims to examine Vietnam's successful experiences by analysing the macroeconomic factors that significantly promoted FDI inflows over the past decade. This research provides valuable insights for policymakers to enhance their countries' competitiveness in attracting FDI and reaping its benefits, particularly for ASEAN nations in the same region, by examining monthly data from 2010 to 2019.

The remainder of the study is structured as follows: the next section reviews the related literature; Section 3 discusses the methodology, while the findings are reported and interpreted in Section 4. Finally, the summary and implications are provided in Section 5.

2. Literature review

FDI is well known for its positive impacts on the host country. Developing countries greatly benefit from the FDI inflows (Budiono & Purba, 2023). The ample advantages in large bodies of literature include the transfer of techniques, asset acquisition, and administrative and organisational capacities, providing the host country access to new financial and technological resources. They reduce the technological gap between industrialised and developing countries (Kumari & Sharma, 2017). In addition, they boost the productivity gains for FDI recipients and revive underutilised or dormant domestic economic sectors (Sweeney, 2010). The host country also develops its economic performance by keeping the balance of payments (BOP) account in good standing while improving research and development activities, creating more job opportunities, and enhancing per capita income (Kumari & Sharma, 2017). Besides, FDI brings positive externalities into the host country, including increased international trade, the creation of new products and services, higher labour standards, improved social welfare programmes, and mitigating market imperfections (Sweeney, 2010).

On top of that, the need for more financial capital, which is often undersupplied in emerging nations, is filled by FDI. As a result, many developing countries encourage FDI inflows and design related policies around them, such as export development zones, incentives for international trade, industrialisation of their superior products, and FDI promotion, among many others (Budiono & Purba, 2023). Therefore, host countries must know the factors they must emphasise in order to attract and benefit from the FDI inflows.

FDI determinants have been extensively studied, with various theoretical models and econometric analyses exploring factors such as Neoclassical Trade Theory, Aggregate Variables, OLI Paradigm, Horizontal FDI, Vertical FDI, Knowledge-Capital Model, Diversified FDI, Risk Diversification Model, and policy variables (Ta et al., 2021). Dunning's OLI paradigm (1979, 1980) is a highly favoured model explaining FDI and multinational enterprises (MNEs) location decisions. It integrates ownership, location, and internalisation advantages, key factors

influencing FDI (Lee et al., 2021; Mai & Nguyen, 2016; Ta et al., 2021). Ownership advantages stem from the MNE's control over technology, resources (natural or intangible like patents), and financial capital. Location advantages include infrastructure, resource availability, labour and material prices, and government regulations. Internalisation advantage refers to a company's ability to internalise operations and reduce transaction costs through manufacturing abroad.

According to the eclectic paradigm, OLI parameters can vary among companies, leading to four primary categories of FDI: resource-seeking, market-seeking, efficiency-seeking, and strategic-asset-seeking FDI (Ta et al., 2021). These categories align with the advantages mentioned earlier and form the foundation of determinant factors for FDI in literature.

For instance, a favourable connection exists between market size and FDI inflows (Shaari et al., 2023) as it reflects the purchasing power of citizens in the destination country. The size of the domestic market, often represented by GDP, significantly affects FDI inflows (Bakar et al., 2022; Delaunay & Torrisi, 2012) as higher GDP and steady growth are expected to boost consumer demand for services and products produced by investors (Maibetly & Idris, 2022), thereby encouraging investors to explore investment opportunities, particularly in consumer product manufacturing.

Besides, countries with sizable markets can attract more investors by efficiently utilising their resources, benefiting from economies of scale (Shaari et al., 2023), thus enabling foreign investors to realise significant profits. Larger markets may also influence higher FDI inflows into the manufacturing sector, with market-seeking foreign investors being more driven by past economic growth success and future potential than current emerging market economic activity (Delaunay & Torrisi, 2012). Lim's (1983) Growth Hypothesis also suggests that countries with rapid economic growth stand to benefit more from FDI inflows. A large market with rising purchasing power and room for development attracts foreign investors, especially with a favourable business environment (Hossain, 2019). This view is supported by Mai & Nguyen (2016), where Vietnam's GDP and GDP per capita positively impact FDI inflows. This trend is evident from 2003 to 2018 (Nguyen, 2019), indicating increased sales potential for goods and services, particularly for international businesses in Vietnam.

The exchange rate is another macroeconomic factor commonly associated with FDI inflows in literature, with an inverse relationship noted (Delaunay & Torrisi, 2012). When the host country's currency depreciates, it attracts FDI inflows (Le, 2017) as goods become more affordable for investors, lowering production costs and facilitating higher earnings. A weaker national currency also reduces the relative cost of capital, encouraging foreign investors to inject more funds into the host country's economy (Nguyen, 2023). Typically, international investors invest in countries with weaker exchange rates to gain more local currency and vice versa. This scenario results in comparatively lower production costs compared to the amount of foreign currency investors spend, allowing foreign investors to achieve higher profits through increased exports and better recouping of investment money (Dadu & Payu, 2022). A common proxy for this factor is the country's currency value relative to the US dollar (Delaunay & Torrisi, 2012), which reflects relative inflation, overall economic instability, and foreign investor purchasing power. A decline in the host nation's currency value may attract foreign investors seeking to enhance export competitiveness by acquiring tangible and financial assets at a lower cost.

Vietnam's flexible, controlled exchange rate mechanism has a distinct impact on the appreciation of the Vietnamese Dong, affecting both the cost of non-tradable products and the nominal value of the local currency (Nguyen, 2023). Therefore, the exchange rate emerges as a significant factor in Vietnam's FDI study, with a negative relationship observed between 1990 and 2019 (Dadu & Payu, 2022).

Meanwhile, a host country's trade openness, defined as its willingness to engage in commerce, not only tracks its export-import balance but also significantly impacts FDI (Bakar et al., 2022; Maibetly & Idris, 2022). The relationship is underpinned by the synergies between FDI and trade

flows (Pham, 2012). As trade restrictions are gradually lifted for commodities produced in host nations, economic activity is boosted, guaranteeing more significant FDI inflows by facilitating more exports and imports (Shaari et al., 2023). Low trade barriers and high economic openness enable foreign investors to leverage the host nation's comparative advantage to boost exports to other regions while reselling to their home countries (Maibetly & Idris, 2022). In essence, trade openness encourages export-oriented FDI (Lee et al., 2021), serving as a key factor in the economy's rapid expansion, job creation, and poverty reduction in the host country (Pham, 2012). Despite a possible negative relationship between FDI and trade openness, where trade restrictions encourage "tariff jump" FDI aimed at exploiting the domestic market, trade openness significantly benefits FDI in long-term valuation trade.

Vietnam has been actively changing its policies since 1986 to promote commerce and liberalise international investment (Nguyen et al., 2022), aligning with this direction. Alongside enacting comprehensive plans to lower tariff rates and remove other non-tariff trade obstacles, Vietnam is also implementing reforms to join the ASEAN Free Trade Area (AFTA) (Pham, 2012). Consequently, significant trade restrictions within the region were removed in 1995 when Vietnam joined ASEAN and the AFTA (Delaunay & Torrisi, 2012). Moreover, Vietnam has pursued various bilateral and regional trade agreements recently. For instance, it partnered in ASEAN accords with China in 2005, Japan in 2008, India in 2010, and Korea in 2010. Additionally, free trade agreements were concluded in 2010 with Australia and New Zealand and in 2014 with Chile (Nguyen et al., 2022).

Inflation, characterised by a sustained increase in the average price level of goods and services over time (Maibetly & Idris, 2022), is recognised as another significant economic determinant affecting FDI inflows (Nguyen, 2024). Various factors contribute to inflation, including exchange rate devaluation, the influence of international inflation, particularly among trading partners, and government-mandated price hikes, all resulting in escalating production costs (Maibetly & Idris, 2022). Additionally, the inflation rate often serves as an indicator of economic instability and unpredictability. Consequently, it creates a less favourable environment for investments, as foreign investors must allocate more time, resources, and effort to adapt to the rising price levels (Trinh & Nguyen, 2015). Thus, inflation negatively impacts FDI inflows (Nguyen, 2024).

3. Methodology and data

This study utilised a quantitative research method to accomplish its objectives. The chosen approach was grounded in positivism, aiming to test applicable hypotheses by investigating specific samples, collecting data using research tools, and analysing both quantitative and statistical data (Dadu & Payu, 2022). A foundational model, informed by existing literature, was developed to investigate the determinants of FDI inflows in Vietnam. This model served as the starting point for the analysis and was outlined as follows:

$$FDI_t = \beta_0 + \beta_1 MS_t + \beta_2 ER_t + \beta_3 TO_t + \beta_4 INF_t \tag{1}$$

FDI represents the FDI inflows in Vietnam, MS represents the market size, ER represents the exchange rate, TO represents the trade openness, and INF represents inflation.

In line with Dunning's OLI framework, it was anticipated that MS would have a positive sign. This expectation stemmed from the premise that FDI inflows were attracted by the market size and purchasing power of the host nation (Mai & Nguyen, 2016). In the context of Vietnam, a large and growing domestic market provided foreign businesses with ample opportunities to sell goods and services, thereby fostering the potential for rapid economic growth (Mai & Nguyen, 2016; Maibetly & Idris, 2022).

TO was also expected to have a positive sign, based on the idea that a higher level of trade openness signifies increased investment opportunities and improved connections between local and foreign markets (Maibetly & Idris, 2022). Consequently, lower trade barriers and enhanced bilateral trade were conducive to attracting FDI inflows (Mai & Nguyen, 2016).

Conversely, both ER and INF were expected to demonstrate a negative correlation. The anticipation regarding ER stemmed from the insights of Dadu and Payu (2022), indicating that a strengthened local currency was likely to deter FDI inflows, especially in cases where FDI was oriented towards export-oriented goods, as observed in Vietnam. Similarly, the expectation regarding INF is grounded in the notion that inflation tends to coincide with rising production costs and economic instability, thereby discouraging FDI inflows (Nguyen, 2024).

The data were transformed into natural logarithm form, following the recommendation by Feng et al. (2014). This transformation was applied to ensure that the log-transformed data approximated a normal distribution, mainly when the original data exhibited a log-normal distribution or a similar pattern. Using the natural logarithm transformation, any skewness present in the original data was eliminated or reduced. This study focused on monthly data from 2010 to 2019, comprising 120 observations to mitigate the potential influence of global economic events such as the Global Financial Crisis in the late 2000s and the early 2020s COVID pandemic. The specific measurements and data sources utilised are outlined in Table 1.

Table 1: Data sources

Variables	Description	Source
FDI	Foreign direct investment (in USD)	CEIC Data
MS	GDP per capita: Vietnam (in USD)	CEIC Data
ER	End of period: USD to local currency (in USD/VND)	International Monetary Fund
TO	The ratio of exports and imports to GDP per capita (in USD)	CEIC Data
INF	Change in Consumer Price Index (in percentage)	World Bank Data

The ARDL approach, pioneered by Pesaran et al. (2001), was employed in this study to analyse the short- and long-term relationships among the variables of interest (Lee et al., 2021; Nguyen et al., 2022). The bound test was utilised to assess the cointegration of the variables, enabling the determination of their long-term relationship. Subsequently, the ARDL model was applied with specified lags to examine the long-term correlation among the variables. The short-term effects of the variables were then evaluated using the ARDL-based error correction model (ECM) method, which helps identify the cointegration relationship among the observed variables (Lee et al., 2021; Nkoro & Uko, 2016).

This approach offers several advantages. Firstly, endogeneity is less problematic in the ARDL approach, as there is no residual correlation since each underlying variable is treated as a single equation, even if the variables are endogenous (Tee et al., 2021). Additionally, the ARDL approach can discern dependent and independent variables even when there is just one long-term relationship. The ARDL technique assumes only one relationship, expressed in reduced form, between the exogenous variables and the dependent variable (Nkoro & Uko, 2016).

The equation below defines the ARDL model used in this study.

$$\Delta FDI_i = \beta_0 + \lambda_1 FDI_{t-1} + \lambda_2 MS_{t-1} + \lambda_3 ER_{t-1} + \lambda_4 TO_{t-1} + \lambda_5 INF_{t-1} + \sum_{i=1}^{g} m_i \Delta FDI_{t-i} +$$

$$\sum_{i=1}^{h} p_i \Delta MS_{t-i} + \sum_{i=1}^{j} q_i \Delta ER_{t-i} + \sum_{i=1}^{k} r_i \Delta TO_{t-i} + \sum_{i=1}^{n} s_i \Delta INF_{t-i} + \epsilon_t \qquad (2)$$

where r m, p, q, r, and s are the short-run coefficient, β is the long-run coefficient, while Δ represents the first differences of the variables, and g, h, j, k, and n represent the variables' lags.

The F-statistic serves as the cornerstone of the bound test, which evaluates the cointegration of observable variables. If the value of the F-statistic exceeds the upper critical bounds value, the null hypothesis of no cointegration relationship between variables is rejected, and vice versa.

Subsequently, the Error Correction Model (ECM) was employed to ascertain the cointegration connection when the cointegration between these variables is uncertain (Lee et al., 2021). The significance of the estimated coefficient indicates sufficient evidence to conclude the existence of a cointegration relationship between the variables. Once it is established that there is a cointegration relationship between the variables, a long-term relationship emerges in the model.

The long-run ARDL model is represented as follows:

$$\Delta FDI_t = \alpha_1 + \sum_{i=1}^{n} r_1 \Delta FDI_{t-i} + \sum_{i=0}^{n} r_2 \Delta MS_{t-i} + \sum_{i=0}^{n} r_3 \Delta ER_{t-i} + \sum_{i=0}^{n} r_4 \Delta TO_{t-i} + \sum_{i=0}^{n} r_5 \Delta INF_{t-i} + c_i ECT_{t-i} + \epsilon_t \tag{3}$$

Besides, the short-term coefficients of the ARDL model are estimated by the ECM model with the chosen lag length. The ECM model is expressed as follows:

$$ECT_t = FDI_{t-1} - \frac{Y_2}{Y_1} MS_{t-1} - \frac{Y_3}{Y_1} ER_{t-1} - \frac{Y_4}{Y_1} TO_{t-1} - \frac{Y_5}{Y_1} INF_{t-1} \tag{4}$$

Before employing the ARDL approach, unit root tests were conducted to assess the stationary level of the data, ensuring that they met the assumptions of the ARDL model (Lee et al., 2021). The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests were utilised in this study. Dickey and Fuller (1981) advocate for the enhanced ADF test to scrutinise the time series properties of each research variable for unit roots, while the PP test served as a complementary tool to confirm the results obtained from the ADF test (Phillips & Perron, 1988).

Furthermore, regression diagnostics tests were conducted to evaluate the variables included in the chosen model, ensuring the reliability of the analysis findings. The Breusch-Pagan test was utilised to detect the presence of heteroskedasticity in this study, with the null hypothesis positing that the residual variance is homoscedastic. The Breusch-Godfrey test was also employed to assess serial correlation among the variables (Lee et al., 2021), with the null hypothesis indicating no serial correlation.

Subsequently, the Ramsay RESET test was conducted to evaluate whether the model specification was appropriate (Lee et al., 2021). This test aids in identifying linear or nonlinear relationships between the independent and dependent variables. Moreover, ensuring parameter stability was crucial as unstable values may lead to model misspecification, potentially biasing the outcomes (Pham, 2012).

Pesaran & Pesaran (1997) recommended using structural stability tests developed by Brown et al. (1975) and the CUSUM and CUSUMSQ tests. Following the ordinary least squares (OLS) models, residuals were subjected to the CUSUM and CUSUMSQ tests. Finally, a normality test assessed whether the dataset follows a normal distribution.

4. Results and interpretations

The descriptive statistics provided in Table 2 offer valuable insights into the dataset. One notable observation is the considerable fluctuation in the exchange rate throughout the sample period, as evidenced by its higher standard deviation. In contrast, trade openness exhibits a comparatively lower degree of variability, suggesting a more consistent policy framework in Vietnam. Moreover, the relatively small standard deviation of the money supply underscores the stability of the monetary policy stance within the economy.

Table 2: Descriptive Statistics

	FDI	MS	ER	TO	INF
Mean	2800.45	2582.09	21368.70	10.19	6.08
Standard deviation	880.83	531.52	1225.66	1.92	4.99
Max	4890.00	3464.90	23153.44	13.91	18.68
Min	1154.00	1689.60	18242.67	5.22	0.63

The unit root tests were initially conducted to ensure the data was suitable for ARDL estimation. As depicted in Table 3, the results indicate the stationarity of all variables after the first difference, meeting at least one of the two conditions (intercept, trend, and intercept) in either the ADF or PP test, confirming the adequacy of the data for ARDL estimation. Subsequently, the bound test results are presented in Table 4. The *F*-statistic value surpassed the upper critical bound, leading to the rejection of the null hypothesis. This statistic implies a long-run relationship among all variables, thereby allowing for estimating the long-run model, as depicted in Table 5.

Table 3: Unit Root tests

	ADF		PP	
	Intercept	Trend and Intercept	Intercept	Trend and Intercept
Level				
FDI	0.1757	-4.1340***	-1.4684	-3.9994**
MS	-0.5049	-2.6493	-1.4658	-3.1385
ER	-2.4576	-15.9873***	-3.4435 **	-3.7826**
TO	-0.5502	-1.4257	-3.7563 ***	-9.1743***
INF	-1.4526	-2.1289	-1.4749	-2.2226
First Difference				
FDI	-8.9817***	-9.0084 ***	-20.97946***	-21.7364***
MS	-2.2636	-1.9519	-14.99313***	-14.9789***
ER	-7.7360***	-7.8694 ***	-8.219964***	-8.2899***
TO	-12.7532***	-12.6903 ***	-44.23568***	-44.1137***
INF	-10.7881***	-10.7415 ***	-10.7881***	-10.7415***

Note: *FDI, MS, ER, TO, and INF* are foreign direct investment, market size, exchange rate, trade openness, and inflation, respectively. The numbers shown are t-statistics. *** and ** indicate significance at 1% and 5% levels.

Table 4: Bound test

	Critical Values		F-statistic
	Lower bound	Upper bound	
1% significance level	3.602	4.787	4.750
5% significance level	2.688	3.698	

The long-run estimation reveals that, while all four explanatory variables display expected signs, only market size and inflation significantly affect Vietnam's FDI inflows over the long term. Market size demonstrates a positive impact, whereas inflation exerts a negative influence. Furthermore, the model successfully passes all diagnostic tests, indicating the absence of autocorrelation and heteroskedasticity issues, and employs the correct functional form with normally distributed statistics. The stability of the model is further supported by the CUSUM and CUSUMSQ tests, as illustrated in Figure 2 and Figure 3, respectively.

Results of the short-run model estimation are presented in Table 6. The negative significance of the error correction term suggests a rapid adjustment in FDI inflows to achieve long-term equilibrium following fluctuations in FDI over the previous year. Additionally, three explanatory variables exhibit significance: market size, trade openness, and inflation.

Table 5: Long run coefficients

Variables	Coefficients	t-Statistics
C	-1.1253	-0.2572
MS	-2.2582***	-7.0482
ER	-1.3011	-0.9045
TO	0.0188	1.9545
INF	-0.0220***	-4.0489
Diagnostic tests		
Jacque-Bera		0.9755
Breusch-Godfrey Serial Correlation LM Test		0.0348
Breusch-Pagan-Godfrey Heteroskedasticity Test		0.5898
Ramsey RESET Test		2.2848

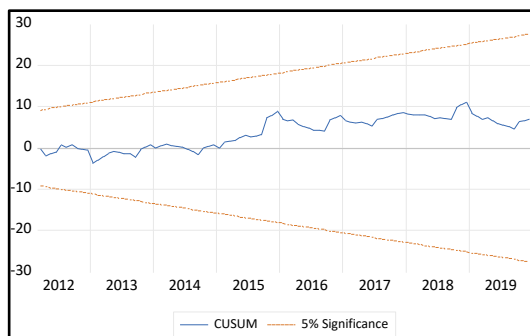Note:
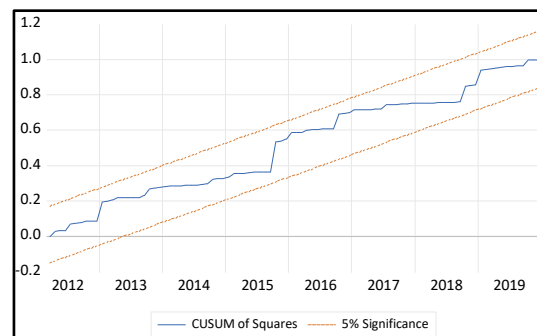***, ** indicates significant levels at 1% and 5% respectively.

Figure 2: CUSUM test

Figure 3: CUSUM of square test

Table 6: Short run coefficient

Variables	Coefficients	*t*-statistics
ECT(-1)	-0.2699***	-5.3147
Δ(MS)	-2.2582***	-7.6497
Δ(ER)	-1.3011	-1.0898
Δ(TO)	0.0188**	2.4576
Δ(INF)	-0.0220***	-4.4903

Note: *** and ** indicate significant levels at 1% and 5%, respectively.

The findings can be summarised as follows based on the estimations of both the long-run and short-run models as outlined above. Firstly, the exchange rate is less of a concern for FDI inflows in Vietnam. This result suggests that despite the high fluctuation of the exchange rate, evident from the standard deviation in Table 2, it is likely considered part of the operational costs for MNEs and is less likely to impact their investment decisions significantly. This finding may be attributed to the uncertain nature of exchange rates, making it challenging for businesses to base their planning solely on this factor.

In contrast, other macroeconomic factors, such as market size, trade openness, and inflation, which are relatively stable and form the foundation of an economy, are more critical for business planning. This effect is evident in the short-run model, where all these factors significantly affect FDI inflows in Vietnam. It suggests that MNEs are concerned about both the domestic market potential (indicated by market size) and external market opportunities (indicated by trade openness), as well as the overall economic stability (indicated by inflation). This situation

suggests that FDI in the nation is not solely export-oriented, as proposed in the literature, but also market-seeking, with market size playing a crucial role.

Moreover, when considering the long-run estimation, it is apparent that only market size significantly affects FDI inflows in the long term among all explanatory variables. This result suggests an important implication: while the economy may initially attract FDI inflows based on its competitive advantages in attracting export-oriented FDI, as indicated in the literature and observed in the short-run estimation in this study, the nature of FDI inflows may gradually shift towards market-seeking as the host economy grows. This effect may be due to the positive relationship between economic growth and FDI. This insight guides other economies in designing suitable policies to attract FDI inflows. While providing a conducive economic environment to attract export-oriented FDI or a robust domestic market demand are both crucial for short-term success, host economies need to plan to continuously benefit from FDI by enhancing the consumption power of the domestic market in the long run.

5. Conclusion

The FDI is widely recognised as a crucial catalyst for the economic development of host nations, contributing significantly to technological advancement, competition, job creation, and trade activities. As economies worldwide intensify their efforts to attract FDI, ASEAN emerges as one of the most appealing regions. Vietnam is positioned as a standout success story, witnessing a notable increase in its share of FDI inflows within the region. By examining Vietnam's successful FDI model, this study offers valuable insights to other economies seeking to design effective economic policies to attract FDI.

Utilising the ARDL approach and monthly data from 2010 to 2019, this study reveals that market size significantly attracts FDI inflows in both the short and long run. Moreover, market size, trade openness, and inflation emerge as key determinants in the short run. This finding suggests that Vietnam successfully attracts both market-seeking and export-oriented FDI in the short term, with market-seeking FDI playing a predominant role in the long run. These findings indicate a shift in the purpose of FDI towards market-seeking investments as the host nation develops and experiences a positive impact from FDI inflows.

These findings offer valuable insights to other economies, particularly those with similar characteristics to Vietnam, in strategic economic planning for long-term FDI attraction. While encouraging FDI inflows in the short run may involve providing an ideal export platform or ensuring sustainable domestic demand, host nations must seize opportunities to leverage FDI benefits for domestic market development. This approach enables host nations to sustainably attract FDI over the long run by cultivating a robust domestic market demand.

This imperative is intricately linked with addressing societal inequalities. Reducing inequality within society widens access to opportunities, increasing purchasing power among a broader population segment. This situation, in turn, stimulates domestic demand, making the market more attractive to foreign investors seeking growth opportunities. Coincidentally, this focus on reducing inequality aligns with the rising awareness of societal development seen in recent decades, exemplified by initiatives such as the Sustainable Development Goals (SDGs) by the United Nations. By promoting inclusive growth and ensuring equitable distribution of resources, countries foster societal well-being and create environments conducive to sustainable economic development, ultimately enhancing their attractiveness to FDI.

While this study aims to provide valuable insights for policy design regarding FDI inflows, several limitations exist. For instance, using more recent data would better reflect the changing global environment in recent years, including rising geopolitical tensions and climate changes, which

could impact FDI inflows. Additionally, studies have highlighted that without absorptive capacity in host countries, they might not benefit from FDI inflows (Sultana & Turkina, 2020). Therefore, it may be insufficient to study only FDI inflows without considering the ability of host countries to benefit from them for development. Future research could offer more comprehensive findings by including these factors in the analysis.

Acknowledgement

REFERENCES

Al-kasasbeh, O., Alzghoul, A., & Alghraibeh, K. (2022). Global FDI inflows and outflows in emerging economies post-COVID-19 era. *Future Business Journal*, *8*(1), 53. https://doi.org/https://doi.org/10.1186/s43093-022-00167-z

Bakar, A.H.A., Sinnappan, P., Salim, F.A.A., & Teo, P.C. (2022). Factors influencing Foreign Direct Investment (FDI) location selection: A review of the literature. *International Journal of Academic Research in Business & Social Sciences*, *12*(7), 1271-1291. https://doi.org/10.6007/IJARBSS/v12-i7/14103

Brown, R. L., Durbin, J., & Evans, J. M. (1975). Techniques for testing the constancy of regression relationships over time. *Journal of the Royal Statistical Society: Series B (Methodological), 37*(2)*, 149–92. https://doi.org/10.1111/j.2517-6161.1975.tb01532.x

Budiono, S., & Purba, J.T. (2023). Factors of foreign direct investment flows to Indonesia in the era of COVID-19 pandemic. *Heliyon*, *9*(4), e15429. https://doi.org/10.1016/j.heliyon.2023.e15429

Chong, F.Y., Idris, S., & Lily, J. (2019). Determinants of foreign direct investment (FDI) in Asean-5 countries: A review. *Malaysian Journal of Business and Economics*, *6*(2), 77–90.

Dadu, E.S.A., & Payu, B.R. (2022). Driving factors Foreign Direct Investment in 5 ASEAN countries (Malaysia, Thailand, Singapore, Indonesia and Vietnam). *European Journal of Research Development and Sustainability*, *3*(2), 46–52.

Delaunay, C., & Torrisi, C.R. (2012). FDI in Vietnam: An empirical study of an economy in transition. *Journal of Emerging Knowledge on Emerging Markets*, *4*(1), article 4. https://doi.org/10.7885/1946-651X.1089

Dickey, D.A., & Fuller, W.A. (1981). Likelihood ratio statistics for autoregressive time series with a unit root. *Econometrica: Journal of the Econometric Society, 49*(4)*, 1057–72. https://doi.org/10.2307/1912517

Dunning, J.H. (1979) Explaining Changing Patterns of International Production: In Defence of the Eclectic Theory. Oxford Bulletin of Economics and Statistics, 41, 269–295.
http://dx.doi.org/10.1111/j.1468-0084.1979.mp41004003.x

Dunning, J.H. (1980). Toward an eclectic theory of international production: Some empirical tests. Journal of International Business Studies, 11(1), 9–31. https://doi.org/10.1057/palgrave.jibs.8490593

Feng, C., Wang, H., Lu, N., Chen, T., He, H., Lu, Y., & Tu, X.M. (2014). Log-transformation and its implications for data analysis. *Shanghai Arch Psychiatry, 26*(2), 105–109. doi: 10.3969/j.issn.1002-0829.2014.02.009

Gould, D.M., Tan, C., & Emamgholi, A. S. S. (2014). Attracting foreign direct investment: What can South Asia's lack of success teach other developing countries? *South Asia Economic Journal*, *15*(2), 133–174. https://doi.org/10.1177/1391561414548939

Grace, G. (2019). Factors affecting inward foreign direct investment: Case of Asean countries. *Jurnal Info Artha*, *3*(2), 119-132. https://doi.org/10.31092/jia.v3i2.588

Haudi, W.H., & Cahyono, Y. (2020). Analysis of most influential factors to attract foreign direct investment. *Journal of Critical Reviews*, *7*(13), 4128–4135.

Hossain, M. J. (2019). Factors influencing FDI inflows in South-Asian countries: A panel data analysis. *KTH Industrial Engineering and Management.*

Huyen, L.H.B. (2015). Determinant of the factors affecting Foreign Direct Investment (FDI) flow to Thanh Hoa province in Vietnam. *Procedia - Social and Behavioral Sciences*, *172*, 26–33. https://doi.org/https://doi.org/10.1016/j.sbspro.2015.01.331

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. https://doi.org/10.1108/IJoEM-10-2014-0169

Le, T.H. (2017). Does economic distance affect the flows of trade and Foreign Direct Investment? Evidence from Vietnam. *Cogent Economics & Finance*, *5*(1). 1403108. https://doi.org/https://doi.org/10.1080/23322039.2017.1403108

Lee, J.Y., Hsiao, Y.C., Bui, N., & Nguyen, T.T. (2021). Inward foreign direct investment and trade openness in Vietnam: A nonlinear autoregressive distributed lag approach. *Economies*, *9*(3), 120.

Lim, D. (1983). Another look at growth and defense in less developed countries. *Economic development and cultural change, 31*(2), 377–384. https://repository.vtc.edu.hk/thei-adm-others-sp/28/

Liu, P., & Lee, H.S. (2020). Foreign direct investment (FDI) and economic growth in China: vector autoregressive (VAR) analysis. *SHS Web of Conferences*, *8*. https://doi.org/https://doi.org/10.1051/shsconf/20208001002

Mai, T.H., & Nguyen, N.B. (2016). Determinants of foreign direct investment in Vietnam. *Journal of International Economics and Management, 83*, 15-26. https://jiem.ftu.edu.vn/index.php/jiem/article/view/144

Maibetly, F., & Idris, I. (2022). Analysis of factors affecting foreign direct investment (FDI) in ASEAN (lower middle income) plus three: Market seeking, resource seeking or efficiency seeking? *Proceedings of the Eighth Padang International Conference on Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA-8 2021)*, Atlantis Press, 441–450. https://doi.org/10.2991/aebmr.k.220702.067

Minh, C. H. (2019). Institutional quality and foreign direct investment inflows: The case of Vietnam. *Asian Economic and Financial Review*, *9*(5), 630–641. https://doi.org/10.18488/journal.aefr.2019.95.630.641

Nguyen, A.T., Anwar, S., Alexander, W.R.J., & Lu, S.H. (2022). Openness to trade, foreign direct investment, and economic growth in Vietnam. *Applied Economics*, *54*(29), 3373–3391. https://doi.org/https://doi.org/10.1080/00036846.2021.2009112

Nguyen, C.D.T. (2023). The link between foreign exchange rate and Foreign Direct Investment: Case from Vietnam. *Review of Economics and Finance*, *21*(1), 1109–1115. https://doi.org/10.55365/1923.x2023.21.123

Nguyen, C.H. (2021). Labor force and Foreign Direct Investment: Empirical evidence from Vietnam. *Journal of Asian Financem Econnomics and Business*, *8*(1), 103–112. https://doi.org/10.13106/jafeb.2021.vol8.no1.103

Nguyen, T.B. (2024). Political risk impacts on foreign direct investment in Vietnam. *Economics and Business Quarterly Reviews*, *7*(1), 14–26. https://doi.org/10.31014/aior.1992.07.01.556

Nkoro, E., & Uko, A.K. (2016). Autoregressive distributed lag (ARDL) cointegration technique: application and interpretation. *Journal of Statistical and Econometric Methods*, *5*(4), 63–91.

Pesaran, M.H., & Pesaran, B. (1997). *Working with microfit 4.0: Interactive econometric analysis.* Oxford: Oxford University Press.

Pesaran, M.H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics, 16*(3)*,* 289-326. https://doi.org/10.1002/jae/616

Pham, T.H.H. (2012). Temporal causality and the dynamics of foreign direct investment and trade in Vietnam. *The Journal of International Trade & Economic Development*, *21*(1), 83–113. https://doi.org/https://doi.org/10.1080/09638190903365922

Phi, V.T., Tran, K.H., Hoang, V.H., & Dong, V.-C. (2024). The role of foreign direct investment in technology development in Vietnam. *Cogent Social Sciences*, *10*(1), 2300514. https://doi.org/https://doi.org/10.1080/23311886.2023.2300514

Phillips, P.C.B., & Perron, P. (1988). Testing for a unit root in time series regression. *Biometrika, 75*(2)*,* 335-46. https://doi.org/10.1093/biomet/75.2.335

Quang, P.T., Rasoulinezhad, E., Linh, N.N., & Thao, D.P. (2022). Investigating the determining factors of sustainable FDI in Vietnam. *China Finance Review International*, *12*(2), 334–350. https://doi.org/10.1108/CFRI-10-2021-0207

Rani, D.P.S., & Ghosh, S.K. (2020). A study on foreign direct investment in India. *PalArch's Journal of Archaeology of Egypt / Egyptology*, *17*(7). 15968–15977.

Shaari, M.S., Asbullah, M.H., Abidin, N.Z., Karim, Z.A., & Nangle, B. (2023). Determinants of foreign direct investment in ASEAN+3 countries: The role of environmental degradation. *International Journal of Environmental Research and Public Health*, *20*(3), 1720. https://doi.org/https://doi.org/10.3390/ijerph20031720

Sijabat, R. (2023). The association between foreign investment and gross domestic product in ten ASEAN countries. *Economies*, *11*, 188. https://doi.org/https://doi.org/10.3390/economies11070188

Sultana, N., & Turkina, E. (2020). Foreign direct investment, technological advancement, and absorptive capacity: A network analysis. International Business Review, 29(2), 101668. https://doi.org/10.1016/j.ibusrev.2020.101668

Sweeney, M. (2010). Foreign direct investment in India and China: The creation of a balanced regime in a globalized economy. *Cornell International Law Journal*, *43*(1), 207–248.

Ta, V.L., Do, A.D., Phan, T.U., Nguyen, Q.H., Nguyen, T.T.H., Le, T.D., & Nguyen, T. P. (2021). Factors affecting FDI intentions of investors: Empirical evidence from provincial-level data in Vietnam. *Journal of Asian Finance, Economics and Business*, *8*(4), 125–134. https://doi.org/10.13106/jafeb.2021.vol8.no4.0125

Tee, C.L., Ng, K.Y., & Law, C.H. (2021). The Impact of China FDI on Malaysia Export Performance. *International Journal of China Studies*, *12*(1), 115–132.

Trinh, N.H., & Nguyen, Q. A. M. (2015). Determinants of inward foreign direct investment in Vietnam. *Journal of Global Studies*, *6*(4), 51–71.

Xuan, V.N. (2020). Factors affecting foreign direct investment: Evidence at foreign technology enterprises in Vietnam. *International Journal of Advanced and Applied Sciences*, *7*(4), 21–28. https://doi.org/https://doi.org/10.21833/ijaas.2020.04.004