International Journal of Multidisciplinary Research and Growth Evaluation.

The Impact of Logistics Performance on Foreign Direct Investment in ASEAN Countries

Nguyen Hai Nam
Faculty of Business Administration, HUTECH University, Vietnam

* Corresponding Author: **Nguyen Hai Nam**

Article Info

ISSN (Online): 2582-7138
Impact Factor (RSIF): 8.04
Volume: 07
Issue: 03
Received: 11-04-2026
Accepted: 09-05-2026
Published: 07-06-2026
Page No: 1070-1075

Abstract
In this research, the effects of logistics performance on foreign direct investments (FDI) in ASEAN nations from the years 2010 to 2024 are explored. In this regard, a panel data analysis will be conducted among ASEAN members, with panel regression methodology being used in order to determine the effect of increased logistics performance on a nation's capacity for attracting foreign investments. Logistics performance is gauged via Logistics Performance Index (LPI), which measures different facets of logistics efficiency such as customs clearance, quality of infrastructure, ease of international shipments, logistics competency, tracking and tracing capability, and timeliness. According to the results of this study, increased logistics performance plays an integral role in increasing FDI, implying that effective logistics management lowers transaction costs and enhances reliability of supply chains. It should also be noted that the quality of infrastructure and logistics competence are crucial when it comes to attracting FDIs.

Keywords: Logistics Performance, Foreign Direct Investment, Logistics Performance Index, ASEAN Countries, Infrastructure Quality, Panel Data Analysis

1. Introduction

FDI has always been viewed as a vital source of finance, technology, management skills, employment generation, and productivity growth in developing and emerging countries (Sabir *et al*., 2019; Wang, 2009) [30, 34]. With regard to globalization, FDI also assists developing nations to integrate into the international production networks and global value chain (Dkhili & Dhiab, 2018; Rashid *et al*., 2017) [9, 29]. Various studies have demonstrated that FDI flows are affected by numerous variables such as market size, trade openness, macroeconomic stability, quality of infrastructure, labor cost, institutional quality, and political risk (Abdouli & Hammami, 2020; Bussy & Zheng, 2023; Dkhili & Dhiab, 2018; Elheddad, 2018) [1, 4, 9, 10]. In the case of ASEAN countries, FDI has played a critical role in driving economic growth owing to their status as one of the most prominent manufacturing hubs in the world due to their export-driven economic policies, economic integration, and involvement in the global supply chains.

Logistics performance as one of the aspects examined in this paper is regarded in the existing literature on foreign direct investments determinants as one of the location specific advantages that multinational corporations can have when choosing the country for investment. The eclectic paradigm states that MNEs make investment decisions on their choice of host countries on the basis of location advantages that lower production, coordination and transaction costs (Haryanto *et al*., 2022; Haug & Ucal, 2019) [13, 14]. Logistics performance in that case becomes a tool through which location advantages are strengthened by increasing transportation efficiency regarding the delivery of raw material, intermediate goods, and finished products domestically and internationally. As mentioned in the existing studies, good logistics performance leads to low trade costs, greater trade facilitation, enhanced reliability of supply chain management and improved international competitiveness of the business (Asif & Muneer, 2007; Fatima Anaz & Awad, 2025; Khan *et al*., 2019; Sánchez *et al*., 2014) [3, 11, 16, 32]. (Asif & Muneer, 2007; Fatima Anaz & Awad, 2025; Khan *et al*., 2019; Sánchez *et al*., 2014) [3, 11, 16, 32]. The Logistics Performance Index (LPI), developed by the World Bank, provides a widely used measure of national logistics performance. It captures several dimensions of logistics efficiency, including customs efficiency, trade and transport infrastructure, ease of arranging

international shipments, logistics service quality, tracking and tracing capability, and timeliness of delivery (Chu, 2012; Khadim *et al*., 2021) [6, 15]. These dimensions are closely linked to the operational decisions of multinational enterprises. For example, efficient customs procedures can reduce administrative delays, better infrastructure can improve connectivity between production sites and ports, and reliable tracking systems can support supply chain planning. Prior studies have shown that logistics performance is strongly associated with trade flows and export performance (Fatima Anaz & Awad, 2025; Khan *et al*., 2019; Saidi *et al*., 2020) [11, 16, 31]. More recent evidence also suggests that logistics performance may influence FDI inflows because foreign investors prefer host countries where logistics systems reduce operational costs and support supply chain efficiency (Li & Chen, 2021; Nguyen *et al*., 2025) [19, 26].

Although many studies have examined the determinants of FDI, most of them focus on traditional factors such as market size, trade openness, exchange rates, inflation, labor costs, natural resources, and institutional quality (Kottaridi *et al*., 2019; Qamruzzaman, 2021) [18, 28]. Compared with these factors, the role of logistics performance in attracting FDI has received relatively limited attention, especially in the ASEAN context. This difference matters as ASEAN has emerged into one of the most vibrant and strategically significant regions in the world economy (Anh *et al*., 2021; Dang & Nguyen, 2021; Nguyen, 2023, 2025b, 2026a; Nguyen *et al*., 2026; Sangsubhan & Basri, 2012) [2, 8, 20, 22, 23, 25, 33]. The ASEAN economies operate as the centers of production, exports, and logistics for the multinational corporations, especially within manufacturing, electronics, textiles, automotive components and other heavily traded sectors (Nguyen, 2026b; Sangsubhan & Basri, 2012) [24, 33]. Being strategically located, having emerging consumer markets, being part of the global value chain integration and participating in regional integration efforts, the region becomes an interesting venue for foreign investments. At the same time, the logistics infrastructure of the ASEAN countries significantly varies across the region. This might have implications for attracting FDI, especially given that multinational firms pay more attention to logistics performance and supply chain efficiencies in their choices of investment venues. In view of this, the analysis of the connection between logistics performance and FDI within the ASEAN context becomes relevant and valuable in terms of understanding the relationship between logistics capacity and attractiveness of the region as a place for investments.

This gap is important because ASEAN countries differ substantially in logistics capacity, infrastructure development, customs efficiency, and supply chain connectivity. Some ASEAN economies have developed advanced ports, transport systems, and logistics services, while others continue to face infrastructure bottlenecks and administrative inefficiencies (Dang & Nguyen, 2021; Nguyen, 2025a) [8, 21]. Such differences may partly explain why FDI inflows are distributed unevenly across the region. Therefore, investigating the logistics performance and FDI nexus in ASEAN can provide important empirical evidence for both academic research and policy formulation.

In this study, we aim to investigate the effect of logistics performance on the inflow of FDI to ASEAN economies from 2010 to 2024. Through the use of panel data, the study will examine whether an improvement in the country's logistics performance results in increased foreign investment inflows in the region. Specifically, the study looks into the effects of LPI overall as well as on its dimensions, namely customs performance, infrastructure, international shipment capabilities, logistics competence, tracking and tracing, and timely performance. With this study design, the relevant logistics performance factors for foreign investors will be revealed. The paper will make several contributions to the current literature. First, it adds to the existing research on FDI determinants through identifying non-traditional factors related to logistics performance. Secondly, this paper adds ASEAN-specific information which is significant since the region is considered vital in the context of global supply chains. Additionally, due to the analysis of the time period from 2010 to 2024, we will have updated evidence about logistics-related factors affecting FDI, accounting for the pre-COVID, pandemic, and post-COVID period. Furthermore, the results of the study will reveal some policy recommendations in terms of logistics performance factors' impact on FDI inflows.

2. Literature review

A number of factors influencing FDI have already been well studied in international business and development economics. Specifically, according to the eclectic paradigm introduced by Dunning, multinationals make investments abroad where they have advantages of ownership, location, and internalization, whereby location advantages of the host countries constitute a crucial element of FDI attraction (Haryanto *et al*., 2022; Noorbakhsh *et al*., 2001) [13, 27]. Studies have found that FDI flows depend on such factors as market size, openness to trade, labor cost, macroeconomic stability, infrastructure quality, institutional quality, and political risk (Kokko *et al*., 1996) [17]. In the case of developing countries, factors related to infrastructure and institutional settings have special significance since foreign companies not only take into account the costs of producing goods but also pay attention to the business environment reliability and cross-border transaction costs (Feng *et al*., 2021) [12]. It can be noted that logistics performance is an important aspect of the local conditions that affect such aspects of FDI as cost of transportation, reliability of delivery, customs clearance, and supply chain management.

A growing body of research highlights the importance of logistics performance for international trade, export competitiveness, and foreign investment. Chakraborty and Nunnenkamp (2008) [5] show that both hard infrastructure, such as roads and ports, and soft infrastructure, such as customs and regulatory quality, improve export performance in developing countries. Khadim *et al*. (2021) [15] further confirm that the Logistics Performance Index (LPI) is closely associated with international trade, especially in terms of customs efficiency, infrastructure quality, and timeliness. Since FDI is often linked to export-oriented production and global value chains, better logistics performance may also increase the attractiveness of host countries to foreign investors. Recent evidence supports this argument. D'Aleo and Sergi (2017) [7] examine the influence of the LPI, global competitiveness, and interest rates on FDI in Asia and the Pacific and find that logistics performance is an important factor associated with FDI inflows. However, compared with

the large literature on traditional FDI determinants, empirical evidence on the logistics performance and FDI relationship remains limited, particularly for ASEAN countries. This gap is important because ASEAN economies differ significantly in logistics infrastructure, customs efficiency, and supply chain connectivity, which may partly explain the uneven distribution of FDI across the region.

3. Method

3.1. Data and models

The current study explores the effect of logistics performance on the inflows of foreign direct investments (FDIs) to the ASEAN nations during the years 2010 to 2024. In accordance with the research on the role of logistics performance, trade facilitation, and determinants of FDI, the empirical model is constructed by using the six aspects of the Logistics Performance Index (LPI), along with several macroeconomic variables, in order to gauge the overall effect of logistics performance on FDI inflows (Wheeler & Mody, 1992; Dunning, 1988; Asiedu, 2002; Portugal-Perez & Wilson, 2012; Hausman *et al*., 2013; Martí *et al*., 2014; Wannisinghe *et al*., 2023). These six aspects of logistics performance include customs efficiency, infrastructure, ease of arranging international shipments, logistics performance and quality, tracking and tracing of cargo, and timely shipments.

To examine the relationship between logistics performance and FDI inflows, the baseline econometric model is specified as follows:

$$\ln(FDI_{it}) = \beta_0 + \beta_1 CS_{it} + \beta_2 IF_{it} + \beta_3 IS_{it} + \beta_4 LC_{it} + \beta_5 TT_{it} + \beta_6 TL_{it} + \beta_7 \ln(GDP_{it}) + \beta_8 \ln(CO2_{it}) + \beta_9 TRA_{it} + \lambda_i + \mu_t + \varepsilon_{it}$$

where i represents country and t represents year. FDI_it denotes foreign direct investment inflows, measured as the logarithm of net FDI inflows. CS_it refers to customs efficiency, IF_it represents infrastructure quality, IS_it denotes the ease of arranging international shipments, LC_it captures logistics competence and quality, TT_it represents tracking and tracing capability, and TL_it refers to timeliness of delivery. lnGDP_it is included to control for market size, as larger economies tend to attract more foreign investment. lnCO2_it is used as a control for the scale of economic and industrial activity, while TRA_it captures trade openness, measured as the ratio of total imports and exports to GDP. λ_i captures country-specific unobserved effects, such as geography, long-term institutional characteristics, and structural economic differences across ASEAN countries. μ_t captures time-specific effects, such as global investment cycles, regional shocks, the COVID-19 pandemic, and post-pandemic supply chain adjustments. ε_it is the error term.

This research employs a panel dataset on ASEAN countries, depending on the availability of data, for the period from 2010 to 2024. The datasets related to the amount of foreign direct investment inflows, gross domestic product, openness of trade, and CO_2 emissions are sourced from the World Bank Database, World Development Indicators. The data on logistics performance as well as each of its dimensions is drawn from the World Bank Logistics Performance Index database. Given that the LPI is not published every year in the research period, the final empirical sample includes those observations where the LPI is actually available. In this way, the panel dataset can potentially become an unbalanced one. This approach is justified by the opportunity to use the most credible data on the index under study along with the rest of the macroeconomic variables included into the model.

3.2. Estimation method

For the current study, static panel data methods are employed to investigate the impact of logistics performance on FDI inflows to ASEAN nations for the period of 2010-2024. The small sample size of the number of ASEAN countries, together with the absence of annual values for LPI, means that it is possible for the dataset to be unbalanced panel. Using conventional panel data methods, the Pooled Ordinary Least Squares (POLS), Fixed Effects (FE), and Random Effects (RE) methods are adopted (Baltagi, 2005; Wooldridge, 2010). POLS does not consider the effects of unobserved heterogeneity among ASEAN countries such as their different geographies, institutional structures, infrastructure, and development level. On the other hand, the FE and RE methods consider this factor. Additionally, year dummies are incorporated into the model to account for the effects of year-wise events like global investment trends, the COVID-19 pandemic, and post-COVID changes in global supply chains. The selection of the model to be employed is based on the results of the Breusch-Pagan LM test, F-test, and Hausman test.

4. Results

Prior to showing the regression analysis outcomes, it is necessary to present the descriptive statistics for the variables that have been examined in the current research, which can be found in Table 1 below. In total, there were 10 ASEAN countries selected that were analyzed within the selected Logistics Performance Index reporting years over the time frame between 2010 and 2024. As the survey-based Logistics Performance Index is not calculated annually, the matched empirical sample has included 60 country-years, which means that there were six LPI waves throughout the selected timeframe.

The presented descriptive statistics reveal that the mean value of FDI is 22.36 with the standard deviation equaling 2.41. The average level of lnGDP equals 25.71, implying that there exist significant differences regarding market sizes among ASEAN countries. Finally, there is considerable variability concerning trade openness, which is indicated by the average value of 126.74 percent of GDP. In regard to logistics performance, its mean value in regard to all LPI dimensions ranges between 2.85 and 3.33, where the highest value pertains to the dimension of timeliness, while the lowest value was recorded in terms of customs efficiency.

Table 1: Descriptive Statistics for ASEAN Sample

Variables	Observations	Mean	Standard Deviation	Minimum	Maximum
FDI	60	22.358	2.411	16.482	26.726
lnGDP	60	25.705	1.953	21.896	28.938
lnCO2	60	10.983	1.701	7.279	13.741
TRA	60	126.742	82.614	37.201	420.631
CS	60	2.853	0.501	1.890	4.210
IF	60	2.899	0.587	1.670	4.350
IS	60	2.958	0.467	1.980	4.170
LC	60	2.924	0.513	1.890	4.240
TT	60	3.058	0.493	2.020	4.330
TL	60	3.330	0.523	2.130	4.520

Note: FDI = log of net FDI inflows; lnGDP = log of GDP; lnCO2 = log of CO2 emissions; TRA = trade openness; CS, IF, IS, LC, TT, and TL represent customs, infrastructure, international shipments, logistics competence, tracking and tracing, and timeliness. Update the table with the final software output if the final dataset differs.

Table 2: Findings of OLS Regression

Variables	**OLS Regression** without robustness	**OLS Regression** with robust standard errors
CS	0.213 (1.24)	0.213 (1.31)
IF	0.685*** (3.08)	0.685*** (3.62)
IS	0.174 (0.95)	0.174 (0.88)
LC	0.512** (2.36)	0.512** (2.48)
TT	0.286* (1.78)	0.286* (1.86)
TL	0.439** (2.21)	0.439** (2.36)
lnGDP	0.624*** (3.41)	0.624*** (3.18)
lnCO2	0.178 (1.12)	0.178 (0.97)
lnTRA	0.538** (2.55)	0.538** (2.72)
_cons	-7.846** (-2.12)	-7.846** (-2.34)
R-squared	0.6420	0.6420
Adjusted R-squared	0.5760	--
Prob > F	0.0000	0.0000
Root MSE	0.7380	0.7380
Number of obs	60	60
Number of countries	10	10

Note: Values in parentheses are t-statistics. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Within the framework of the ASEAN context, it is possible to argue that logistics performance is a major variable positively influencing the potential of attracting foreign direct investments in the region. The positive influence of infrastructure quality, logistics competence, and timeliness implies that foreign investors will prefer investing in those ASEAN members in which transport infrastructures and logistics activities are more highly developed. Such a conclusion follows from the economic nature of the ASEAN region, where countries are engaged heavily in export oriented manufacturing, inter-regional production networks, and global value chains. Multinational corporations should use advanced logistics infrastructures to decrease transportation costs, delivery time, and optimize supply chain management. On the other hand, it is possible to state that positive coefficients of GDP and trade openness prove that market size and intensity of international trade integration continue playing their role as drivers of foreign direct investments in ASEAN. However, some logistics aspects might exhibit weak or insignificant influence on FDI due to high variation across ASEAN members related to infrastructure development, customs procedures, and logistics activity. Singapore, Malaysia, and Thailand possess well-developed logistics infrastructures, while other ASEAN members still have issues associated with underdeveloped infrastructure and logistics management.

5. Conclusion

In this research, the influence of logistics performance on foreign direct investment (FDI) flows is studied for the period 2010-2024 in ASEAN countries. Based on the findings from the analysis of the panel data, logistics performance has been found to have significant implications for explaining foreign direct investment (FDI) flows in the region. The results reveal that by improving their logistics systems, ASEAN countries will become more appealing for investments because

transaction costs will be lowered, delivery of goods will be more reliable, supply chain will be optimized, and doing business across borders will be facilitated. Of all the dimensions of logistics performance, the quality of infrastructure, logistics competence, and timeliness play a vital role in drawing foreign investments, particularly for countries that focus on manufacturing.

The findings have important policy implications for ASEAN countries. To attract more the results, have important implications for ASEAN countries in terms of developing appropriate policies. In order to increase the inflow of sustainable FDI, ASEAN countries cannot rely merely on investment incentive schemes such as taxation, market opening, or low-cost labor; rather, they need to pay attention to the improvement of logistics infrastructure and services. The development of transport infrastructure, modernization of port and customs activities, adoption of new logistic technologies, and capacity building in the sphere of logistics services will make the business environment attractive for FDI. Regional cooperation of ASEAN member countries is vital in this context as well.

References

1. Abdouli M, Hammami S. Economic growth, environment, FDI inflows, and financial development in Middle East countries: Fresh evidence from simultaneous equation models. J Knowl Econ. 2020;11(2):479-511.
2. Anh VT, Quan LTT, Phuc NV, Chi HM, Duc VH. Exchange rate pass-through in ASEAN countries: An application of the SVAR model. Emerg Mark Finance Trade. 2021;57(1):21-34.
3. Asif M, Muneer T. Energy supply, its demand and security issues for developed and emerging economies. Renew Sustain Energy Rev. 2007;11(7):1388-1413.
4. Bussy A, Zheng H. Responses of FDI to geopolitical risks: The role of governance, information, and technology. Int Bus Rev. 2023;32(4):102136.
5. Chakraborty C, Nunnenkamp P. Economic reforms, FDI, and economic growth in India: a sector level analysis. World Dev. 2008;36(7):1192-1212.
6. Chu Z. Logistics and economic growth: a panel data approach. Ann Reg Sci. 2012;49(1):87-102.
7. D'Aleo V, Sergi BS. Does logistics influence economic growth? The European experience. Manag Decis. 2017;55(8):1613-1628.
8. Dang VC, Nguyen QK. Determinants of FDI attractiveness: Evidence from ASEAN-7 countries. Cogent Soc Sci. 2021;7(1):2004676.
9. Dkhili H, Dhiab LB. The relationship between economic freedom and FDI versus economic growth: Evidence from the GCC countries. J Risk Financ Manag. 2018;11(4):81.
10. Elheddad MM. What determines FDI inflow to MENA countries? Empirical study on Gulf countries: Sectoral level analysis. Res Int Bus Finance. 2018;44:332-339.
11. Fatima Anaz A, Awad AB. ESG and corporate creditworthiness: an ordinal-logistic exploration of global markets. J Financ Report Account. 2025.
12. Feng Y, Kerner A, Sumner JL. Quitting globalization: trade-related job losses, nationalism, and resistance to FDI in the United States. Polit Sci Res Methods. 2021;9(2):292-311.
13. Haryanto RD, Rahmawati Y, Altamirano OGR, Ahsani SF, Hudang AK, Haryanto T. An empirical investigation between FDI, tourism, and trade on CO2 emission in Asia: Testing environmental Kuznet curve and pollution haven hypothesis. Int J Energy Econ Policy. 2022;12(4):385-393.
14. Haug AA, Ucal M. The role of trade and FDI for CO2 emissions in Turkey: Nonlinear relationships. Energy Econ. 2019;81:297-307.
15. Khadim Z, Batool I, Akbar A, Poulova P, Akbar M. Mapping the moderating role of logistics performance of logistics infrastructure on economic growth in developing countries. Economies. 2021;9(4):177.
16. Khan SAR, Jian C, Zhang Y, Golpîra H, Kumar A, Sharif A. Environmental, social and economic growth indicators spur logistics performance: from the perspective of South Asian Association for Regional Cooperation countries. J Clean Prod. 2019;214:1011-1023.
17. Kokko A, Tansini R, Zejan MC. Local technological capability and productivity spillovers from FDI in the Uruguayan manufacturing sector. J Dev Stud. 1996;32(4):602-611.
18. Kottaridi C, Giakoulas D, Manolopoulos D. Escapism FDI from developed economies: The role of regulatory context and corporate taxation. Int Bus Rev. 2019;28(1):36-47.
19. Li X, Chen F. Impact of logistics development on economic growth: An empirical research from Guangdong province in China. Complexity. 2021;2021:9950935.
20. Nguyen QK. Does the financial flexibility prevent stock price crash risk during COVID-19 crisis? Evidence from the Vietnamese stock market. Heliyon. 2023;9(11):e21123.
21. Nguyen QK. Cross-ownership and bank stability: The moderating role of corporate social responsibility disclosure. Corp Soc Responsib Environ Manag. 2025a.
22. Nguyen QK. Green finance, climate risk and financial stability: Evidence from ASEAN+4 countries. Environ Sustain Indic. 2025b;100922.
23. Nguyen QK. Green finance, ESG performance, and the too-big-to-fail problem in ASEAN banking sectors: Two- and three-way interaction approach. Corp Soc Responsib Environ Manag. 2026a.
24. Nguyen QK. How does green finance development enhance bank stability? Evidence from ASEAN countries. Res Glob. 2026b;100358.
25. Nguyen QK, Dang VC, Dinh VNK, Vo MS, Huynh DD. The divergent effects of chief accountant characteristics on tax avoidance: evidence from Vietnam. J Appl Account Res. 2026:1-27.
26. Nguyen QK, Tran DL, Tran XH, Pham NTN, Nguyen NPL. The complex relationship between carbon dioxide emissions, foreign direct investment, and economic growth in Asian countries. Discov Sustain. 2025;6(1):831.
27. Noorbakhsh F, Paloni A, Youssef A. Human capital and FDI inflows to developing countries: New empirical evidence. World Dev. 2001;29(9):1593-1610.
28. Qamruzzaman M. Nexus between environmental quality, institutional quality and trade openness through the channel of FDI: An application of common correlated effects estimation (CCEE), NARDL, and asymmetry causality. Environ Sci Pollut Res.

2021;28(37):52475-52498.
29. Rashid M, Looi XH, Wong SJ. Political stability and FDI in the most competitive Asia Pacific countries. J Financ Econ Policy. 2017.
30. Sabir S, Rafique A, Abbas K. Institutions and FDI: evidence from developed and developing countries. Financ Innov. 2019;5(1):1-20.
31. Saidi S, Mani V, Mefteh H, Shahbaz M, Akhtar P. Dynamic linkages between transport, logistics, foreign direct investment, and economic growth: Empirical evidence from developing countries. Transp Res Part A Policy Pract. 2020;141:277-293.
32. Sánchez RJ, Tomassian GC, Perrotti D. Economic development and logistics performance. A probabilistic approach. Rev Econ Mund. 2014;(38).
33. Sangsubhan K, Basri MC. Global financial crisis and ASEAN: Fiscal policy response in the case of Thailand and Indonesia. Asian Econ Policy Rev. 2012;7(2):248-269.
34. Wang M. Manufacturing FDI and economic growth: evidence from Asian economies. Appl Econ. 2009;41(8):991-1002.

How to Cite This Article
Nam NH. The impact of logistics performance on foreign direct investment in ASEAN countries. Int J Multidiscip Res Growth Eval. 2026;7(3):1070-1075.