





Asymmetric effects of international trade and foreign direct investment on economic growth: Empirical evidence from Vietnam

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ABSTRACT

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The research focuses on analyzing the non-linear effects of international commerce and foreign direct investment (FDI) on the economic growth of Vietnam. This study utilizes the Nonlinear Autoregressive Distributed Lag (NARDL) model to examine the asymmetric impacts of international trade and foreign investment on the Vietnamese economic growth from the first quarter of 2008 to the fourth quarter of 2021. The findings suggest that a rise in foreign investment during the first phase has favorable outcomes for economic growth, with a reported impact of 53%. Nevertheless, it is important to note that FDI does not only contribute to the enhancement of economic development. According to reports, foreign investment has a negative impact of 13% on the rate of economic growth when it exceeds a certain threshold. However, the results of the research also indicate that Vietnam continues to face certain negative implications as a result of international commerce. The study highlights the importance for developing nations, such as Vietnam, to practice prudence in their trade endeavors and the influx of foreign investments to mitigate any negative repercussions on their economies. These insights underscore the significance of strategic economic planning and policy formulation in navigating the complexities of global economic interactions.

Contribution/Originality: Research results show that international commerce and foreign investment strongly impact economic growth. International trade has not only boosted Vietnam's gross domestic product, but it has also had a substantial influence on job creation, economic restructuring, state budget income, and the attraction of both local and foreign investment.

1. INTRODUCTION

A country's economic circumstances significantly impact its future trajectory (Nawaz, Azam, & Bhatti, 2019). A nation's economic framework is sustained by many crucial elements necessary for its sustenance and expansion, including Foreign Direct Investment (FDI), inflation, commerce, imports and exports, taxes, and other related aspects. The convergence of these elements determines whether an economy advances in a positive direction. Southeast and South Asia have faced difficulties in the last several decades due to inadequate use of international private capital inflows and negative international trade dynamics, exacerbated by the increasing integration of the global economy. The primary elements contributing to the issue are institutional bottlenecks, insufficient infrastructure, and domestic underinvestment (Crowley & Lee, 2003).

Foreign Direct Investment (FDI) and international trade indexes have a substantial role in fostering economic development. The inflow of investment capital between nations and establishing international trade links are key factors that lead to decreased production costs, improved product quality, and a shortening of production cycles. According to ideas on globalization, one of the primary consequences of engaging in international commerce and foreign direct investment (FDI) for any given nation is the enlargement of its economic magnitude, resulting in a reduction in production expenses (Siddique, Ansar, Naeem, & Yaqoob, 2017). This connection's fundamental essence is often favorable (Saidi & Hammami, 2015).

International trade's contribution to economic development, particularly regarding productivity improvement, has been the subject of continuous discussion for many decades. Extensive research regularly demonstrates that states involved in international operations tend to have greater levels of productivity in comparison to those that primarily concentrate on local markets. Due to liberalization and globalization, a nation's economy has become intricately interconnected with foreign influences, particularly regarding openness. Therefore, it is of utmost importance to research the impact of international commerce and foreign direct investment (FDI) on economic development in the current period of globalization. By identifying the sources of productivity enhancement via international trade and investment, this tool aids policymakers in developing relevant policies.

Vietnam's international commerce and Foreign Direct Investment (FDI) have seen significant development, supported by strong economic expansion. Vietnam has seen substantial development in its trade, foreign investment, and economy after implementing economic reforms and adopting an open-door policy. The process of Vietnam's incorporation into the global economy has played a significant role in fostering its long-term economic development. Vietnam saw notable economic development in terms of gross domestic product (GDP), foreign direct investment (FDI) inflows, and employment due to sectors with comparative advantages and a significant degree of specialization. In addition, Vietnam's involvement in global trade and investment has further enhanced local sectors' productivity and fostered technical progress. The productivity of industries saw an immediate effect due to the widespread importation of machinery and equipment during the early 1990s, primarily due to the adoption of advanced technologies. Furthermore, Vietnam has substantially enhanced its scientific and technical skills due to the "learn while doing" phenomenon. Hence, investigating the impact of international commerce and foreign direct investment (FDI) on Vietnam's economic development is a crucial scholarly pursuit, offering tangible proof for others to emulate in bolstering their engagement in the worldwide marketplace.

The preceding discussions have generated practical inquiries on the impacts of international trade and foreign direct investment (FDI) on economic development. In order to expand the scope of this discussion, we want to examine the influence of international trade and foreign direct investment (FDI) on Vietnam's economic development. This analysis will be based on Vietnam-specific data from 2008 to 2021. Studies on international commerce and foreign direct investment (FDI) often use samples derived from industrialized nations or those characterized by well-established market-oriented economies. Vietnam was chosen as the study sample in order to address the existing research gap, which is characterized by a scarcity of experimental studies conducted in relation to Vietnam. Due to the presence of sizable informal economies, Vietnam's manufacturing sectors are currently performing at a lower level than the global average. Vietnam, being classified as an emerging market, has significant changes in both international trade and foreign investment activity, hence providing further empirical data. Furthermore, contemporary scholarly inquiry mostly examines the linear impacts of international commerce and foreign investment on the advancement of economic development. This study aims to investigate the differential effects of international trade and foreign investment on Vietnam's economic development, with a particular focus on the asymmetric consequences. This research contributes to the existing literature by examining a hitherto unexplored dimension of the relationship between these variables.

2. THEORETICAL FRAMEWORK

The academic and policy discourse on the influence of international trade and foreign direct investment (FDI) on economic development has attracted considerable attention. This is primarily due to international trade and investment's substantial role in stimulating economic growth. Previous scholarly research on international commerce and foreign direct investment (FDI) has successfully revealed many mechanisms by which these phenomena might effectively promote and enhance economic growth (Wooster, Banda, & Dube, 2008). The reciprocal relationship between international commerce and foreign direct investment facilitates the flow of knowledge, technical breakthroughs, and money between trading partners (Edwards, 1993). Furthermore, empirical studies have provided evidence supporting the notion that increased trade openness leads to heightened rivalry within domestic markets, resulting in improved production efficiency and overall economic development (Beaton, Cebotari, & Komaromi, 2017). According to Beaton et al. (2017) nations that could engage in international trade and investment and get access to broader markets are likely to experience more benefits compared to those that lack access to such expansive trade markets. This suggests that smaller local markets have more tremendous advantages from trade openness than more significant markets since trade openness allows governments to harness the potential gains associated with economies of scale.

Numerous empirical studies provide evidence of the beneficial effects of international commerce and foreign direct investment (FDI) on economic development. The General Agreement on Tariffs and Trade (GATT), established in 1947 and signed in Geneva by 23 countries, is a well-known illustration of such an agreement. The primary objective of this agreement was to substantially decrease tariffs and other trade barriers while removing preferential treatment based on reciprocal advantages. The establishment of the World Trade Organization (WTO) by 123 states through the Uruguay Round Agreements (UR) in April 1994 strengthened the significant international effort to promote global trade liberalization that was on display at this event.

Various estimating strategies have been used in empirical investigations. In their study, Önder and Yilmazkuday (2016) used threshold models to examine the influence of a nation's export connections on its income development. They used several indicators of trade partner diversification to assess the country's significance within the global trade network. In the study conducted by Ghoshal (2015) linear regression methods were used to examine the correlation between economic development and trade growth, with a specific focus on Regional Trade Agreements (RTAs). Kim, Lin, and Suen (2016) used panel data techniques to investigate the impact of trade on growth volatility. This methodology was chosen to account for the inherent heterogeneity and cross-dependencies in the impacts of trade.

Similarly, Zahanogo (2016) used panel data methodologies to examine the influence of trade on the economic development of Sub-Saharan Africa. In their study, Were (2015) used panel data methodologies to examine trade's impact on economic growth and investment among the least developed nations. The estimation strategies used by different researchers may be categorized as threshold models (Önder & Yilmazkuday, 2016) linear regression (Ghoshal, 2015) and panel data techniques (Kim et al., 2016; Zahanogo, 2016).

The link between international commerce, foreign direct investment (FDI), and economic development is a subject of ongoing debate, as scholars and researchers have differing perspectives on whether this relationship is characterized by a positive or negative correlation. According to a study by Marchant, Cornell, and Koo (2002) there is a positive correlation between trade, foreign direct investment (FDI), and economic development in East Asian emerging markets. According to Fontagné (1999) and Wilson and Cacho (2007) there exists a complementary link between trade, foreign direct investment (FDI), and economic development in nations belonging to the Organization for Economic Co-operation and Development (OECD). Aizenman and Noy (2006) emphasized the significance of absorptive capacity in countries and observed that the association between foreign direct investment and commerce exhibits greater strength in emerging nations than in industrialized nations. Notably, the correlation between trade, foreign direct investment (FDI), and economic development is contingent

upon minimal trade and financial barriers in emerging countries. In contrast, [Ponce \(2006\)](#) study found that there is heterogeneity in the relationship between trade, foreign direct investment (FDI), and economic development in the context of Latin America. Countries with a higher number of free trade agreements (FTAs) have an increased potential for attracting foreign direct investment (FDI) inflows, making a significant contribution to economic development. [Sokang \(2019\)](#) examined the impact of FDI on the Cambodian economy during the period 2006-2016 and found a positive influence on Cambodia's economic growth by promoting the transfer of modern technology. [Mohamed \(2019\)](#) and [Nantharath and Kang \(2019\)](#) assert that trade openness and FDI have a positive and statistically significant impact on GDP in the long run.

Empirical evidence suggests that countries with a strong emphasis on international trade and investment have seen notable improvements in prosperity over an extended period ([Tang, Lai, & Ozturk, 2015](#)). The positive outcomes linked to international trade and foreign direct investment (FDI) include poverty alleviation, job creation, knowledge diffusion, enhanced competitiveness, and economic expansion ([Sakyi & Egyir, 2017](#)). The interplay between international commerce, foreign direct investment (FDI), and economic development is often examined in the framework of the hypothesis positing that trade and investment are catalysts for economic expansion. [Fetahi-Vehapi, Sadiku, and Petkovski \(2015\)](#) make the case that foreign direct investment (FDI) and international trade play a positive role in economic development by facilitating the spread of knowledge, the transfer of technology, and the encouragement of competitiveness. Notably, the current body of empirical research investigating these hypotheses in developing countries has shown ambiguous results. In the context of China, the study by [Liu, Burridge, and Sinclair \(2002\)](#) provided empirical support for a bidirectional causal association between trade, foreign direct investment (FDI), and economic development. According to [Szkorupová \(2014\)](#) there is a claim about causal connections between trade, foreign direct investment (FDI), and the economic development seen in Slovakia. [Dritsaki and Stiakakis \(2014\)](#) conducted a study that revealed a substantial association between international commerce and economic development in Croatia.

Conversely, the influence of foreign direct investment (FDI) on economic growth was shown to be less significant. Similarly, [Belloumi \(2014\)](#) emphasized the absence of empirical support for a bidirectional causal association between trade, foreign direct investment (FDI), and economic development in Tunisia. In their study, [Hsiao and Hsiao \(2006\)](#) analyzed the interconnections among economic development, trade, and foreign direct investment (FDI) in several Asian nations. Their findings revealed notable variations in the causal links between these factors. In their study, [Goh, Sam, and McNown \(2017\)](#) highlighted the absence of enduring connections between trade, foreign direct investment (FDI), and economic development in Asian countries.

3. RESEARCH METHODOLOGY AND DATA

The study examines the asymmetric impact of international trade and foreign direct investment (FDI) on Vietnam's economic growth using the Nonlinear Autoregressive Distributed Lag (NARDL) regression model. [Shin, Yu, and Greenwood-Nimmo \(2014\)](#) introduced asymmetry in the short and long run by separating positive and negative coefficients of explanatory variables. This model possesses the advantage of a suitable application under real-world conditions and finds utility in economic analyses when testing the relationships of asymmetric time series. [Shin et al. \(2014\)](#) constructed the long-run Nonlinear Autoregressive Distributed Lag (NARDL) regression model. Equation serves as the fundamental component of the NARDL asymmetric regression model, illustrating the nonlinear impacts of the independent variable x_t on the dependent variable y_t within both the short- and long-term periods.

Unlike most linear models, which only look at the positive or negative effects of independent variables on dependent variables in one direction, the NARDL model uses both positive and negative coefficients in the regression equation to measure the dual positive and negative effects of independent variables on the dependent variable. The NARDL model is well-suited for analyzing the asymmetric impacts of economic factors. In practical

applications, it is possible to encounter situations in which one element positively influences another variable. However, it is important to note that when this component is raised over a particular threshold, it might lead to detrimental consequences.

3.1. Variables Description

The primary objective of this study is to examine the asymmetric impacts of international trade and foreign direct investment (FDI) on Vietnam's economic development. This research encompasses the variables of the overall balance of payments (BL), foreign direct investment (FDI), and economic growth (GDP). Although more variables may be considered appropriate for the current research, the author has chosen to use the NARDL model, which requires a sufficient amount of data. The exponential growth of variables inside the system might make the regression method ineffective. This research aims to examine the effects of service and commodity income, foreign direct investment, and the balance of payments on Vietnam's economic development subsequent to its entrance into the World Trade Organization (WTO).

3.2. Research Data

The secondary data collection occurred every quarter, spanning from 2008 to 2021. The selected time range guarantees that the data series is adequately comprehensive for the purposes of the study. Concurrently, the dataset spans the time frame after Vietnam's entrance into the World Trade Organization (WTO), a period characterized by notable transformations in international commerce and foreign direct investment. As a result, the study's temporal scope makes it possible to gauge the extent to which international trade and foreign direct investment have an impact on economic development. Vietnam's Gross Domestic Product (GDP) is documented as a percentage in the international financial statistics provided by the Asian Development Bank (ADB). The International Monetary Fund (IMF) offers worldwide financial data, including revenue from services and commodities, the balance of payments, and foreign direct investment. The trend variables do not follow a normal distribution and show significant skewness. To satisfy the input data requirements of the model, the variables are converted into their natural logarithmic form. This transformation is performed to approximate a normal distribution and ensure that the input data meets the necessary constraints of the model.

4. RESEARCH RESULTS AND DISCUSSION

In recent years, even during difficult periods and the recession of the global economy, foreign investment activities in Vietnam have remained vibrant. Many multinational corporations and large enterprises with modern technology invest in our country; capital scale and project quality increase, contributing to creating jobs and income for workers; improve production level and capacity; increase state budget revenue; stabilize the macroeconomy; promote economic restructuring and innovating growth models; and enhance Vietnam's position and reputation in the international arena.

With the right opening policy, incentives, and attractive business environment, Vietnam has attracted a large number of projects and foreign direct investment (FDI). The 2022 Provincial Competitiveness Index Report, published by the Vietnam Confederation of Commerce and Industry (VCCI) in collaboration with the United States Agency for International Development (USAID) in April 2023, shows that, during the period from 1986 to 2022, Vietnam has attracted about 438.7 billion USD of FDI capital, of which 274 billion USD has been disbursed. In 2022 alone, the total registered FDI capital in Vietnam will reach nearly 27.72 billion USD, and the level of realized FDI capital will reach a record of 22.4 billion USD, an increase of 13.5% over the same period in 2021. This is the amount of capital realized in FDI, which is the highest in 5 years (2017-2022). [Table 1](#) summarizes the descriptive statistics of the variables used in the study, including GDP, BL, and FDI. GDP and FDI are usually distributed, while BL has a high standard deviation.

Table 1. Descriptive statistics of variables.

Value	BL	FDI	GDP
Mean	2.724	5.821	5.912
Median	3.251	5.669	6.060
Max.	21.989	12.734	7.650
Min.	-18.054	3.126	0.390
Standard deviation	7.808	1.776	1.320
Skewness	-0.207	1.563	-1.685
Kurtosis	3.426	6.738	7.299
Jarque-bera	0.825	55.413	69.638
Probability	0.661	0.000	0.000
Total	152.565	325.994	331.099
Total squared deviation	3353.614	173.668	95.909
Observation	56	56	56

Table 1 displays the summary statistics for the variables. The process of doing unit root testing serves as an essential and fundamental stage inside time series regression models. Therefore, the present research utilizes the Dickey-Fuller test to evaluate the series' stationarity.

The results of the initial unit root tests are shown in Table 2. The results suggest that the variables GDP, BL, and FDI exhibit stationarity when differenced once, as shown by the notation $I(0)$. In the NARDL model, unit root tests are necessary because this model is used for time series analysis that assumes stationarity at $I(0)$, $I(1)$, or a combination of the two. The application of the model is not feasible when any variables exhibit stationarity at the second difference, which is indicated as $I(2)$. When dealing with $I(2)$ variables, the F-statistic value of the cointegration test loses its validity. Hence, the NARDL architecture places importance on the conduct of unit root testing. The findings validate the lack of any second-order stationary series, enabling the use of the NARDL model in this investigation.

Various studies have been conducted regarding the estimation of NARDL (Shin et al., 2014). The main objective of this approach is to eliminate all significant lags in regression to avoid noise in the dynamic coefficients. The authors utilize a maximum of two lags for the regression sets and model variables.

Table 2. Unit root test.

Value	Unit root level $I(0)$
GDP	-4.323 (0.001)
BL	-4.957 (0.000)
FDI	-3.207 (0.024)

Before proceeding with NARDL estimation, different tests are carried out, such as the Ramsey RESET test for functional form issues, the Jarque-Bera test for residual normality, and the Breusch-Pagan test for heteroskedasticity. The NARDL model is presented in Table 3. The results confirm the absence of any issues among the mentioned concerns; thus, this study can proceed with NARDL estimation.

Table 4 shows the results of the nonlinear cointegration analysis between the variables. Banerjee, Capozzoli, McSweeney, and Sinha (1999) described Pesaran's F-statistic and t-BDW, which were both used in this. The null hypothesis, denoted as H_0 , which states the absence of cointegration, is subjected to testing. The F-statistic value above the t_BDM threshold provides evidence of a sustained correlation between trade, foreign direct investment, and economic development. Hence, examining nonlinear cointegration may provide a more comprehensive understanding of the enduring association between variables.

Table 3. The NARDL model.

Dependent variable: GDP				
Sample (Adjusted): 2008Q4 2021Q4				
Included observations: 53 after adjustments				
Maximum dependent lags: 2 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (2 lags, automatic): BL_POS BL_NEG FDI_POS				
FDI_NEG				
Fixed regressors: C				
Number of models evaluated: 162				
Selected model: ARDL (2, 0, 0, 1, 2)				
Variable	Coefficient	Std. error	t-statistic	Prob.*
GDP(-1)	0.931	0.130	7.154	0.000
GDP(-2)	-0.418	0.137	-3.039	0.004
BL_POS	-0.036	0.025	-1.435	0.158
BL_NEG	-0.013	0.022	-0.583	0.562
FDI_POS	-0.111	0.298	-0.374	0.709
FDI_POS(-1)	0.373	0.266	1.403	0.167
FDI_NEG	0.099	0.225	0.440	0.662
FDI_NEG(-1)	0.325	0.237	1.374	0.176
FDI_NEG(-2)	-0.360	0.196	-1.830	0.074
C	2.635	1.205	2.185	0.034
R-squared	0.590	Mean dependent var		5.873
Adjusted R-squared	0.504	S.D. dependent var		1.336
S.E. of regression	0.940	Akaike info criterion		2.884
Sum squared resid	38.071	Schwarz criterion		3.256
Log-likelihood	-66.436	Hannan-Quinn criteria.		3.027
F-statistic	6.883	Durbin-Watson stat.		1.852
Prob(F-statistic)	0.000			
*Note: p-values and any subsequent tests do not account for model				
F- 3.949				
Ramsey test RESET - P value = 0.006"				
Breusch/Pagan test heteroskedasticity - P value =0.034				

Note: "***" and "**" denotes significance at the 1% and 5% level, respectively

Table 4. Co-integration test.

Co-integration test statistic:	F: 3.949
	t_BDM: 3.09

Table 5 illustrates the positive and negative aspects of foreign investment on short-term economic performance.

Table 5. Impact of international investment on GDP in the short run.

ECM regression				
Variable	Coefficient	Std. error	t-statistic	Prob.
D(GDP(-1))	0.418	0.124	3.359	0.001
D(FDI_POS)	-0.111	0.199	-0.559	0.578
D(FDI_NEG)	0.099	0.131	0.752	0.455
D(FDI_NEG(-1))	0.360	0.159	2.261	0.028
CointEq(-1)*	-0.486	0.094	-5.143	0.000
R-squared	0.456	"Mean dependent var		-0.024
Adjusted R-squared	0.411	S.D. dependent var		1.161
S.E. of regression	0.890	Akaike info criterion		2.695
Sum squared resid	38.071	Schwarz criterion"		2.881
Log-likelihood	-66.436	Hannan-Quinn criteria.		2.767
Durbin-Watson stat"	1.852			

Note: "***" and "**" denotes significance at the 1% and 5% level, respectively.

Table 6. Asymmetric impact of international investment on GDP in the long run.

ARDL long run form and bounds test
 Dependent variable: D(GDP)
 Selected model: ARDL (2, 0, 0, 1, 2)
 Case 2: Restricted constant and no trend
 Date: 08/14/23 Time: 17:09
 Sample: 2008Q1 2021Q4
 Included observations: 53

Conditional error correction regression

Variable	Coefficient	Std. error	t-statistic	Prob.
C	2.635	1.205	2.185	0.034
GDP(-1)*	-0.486	0.113	-4.266	0.000
BL_POS**	-0.036	0.025	-1.435	0.158
BL_NEG**	-0.013	0.022	-0.583	0.562
FDI_POS(-1)	0.261	0.257	1.016	0.315
FDI_NEG(-1)	0.064	0.126	0.513	0.610
D(GDP(-1))	0.418	0.137	3.039	0.004
D(FDI_POS)	-0.111	0.298	-0.374	0.709
D(FDI_NEG)	0.099	0.225	0.440	0.662
D(FDI_NEG(-1))	0.360	0.196	1.830	0.074

* p-value incompatible with t-bounds distribution.
 ** Variable interpreted as $Z = Z(-1) + D(Z)$.

Variable	Coefficient	Std. error	t-statistic	Prob.
BL_POS	-0.076	0.055	-1.379	0.174
BL_NEG	-0.026	0.047	-0.572	0.570
FDI_POS	0.538	0.518	1.037	0.305
FDI_NEG"	0.133	0.254	0.522	0.604
C	5.420	2.082	2.602	0.012

Note: *** and ** denotes significance at the 1% and 5% level, respectively.

To assess the importance of the research, the statistical data of the Nonlinear Autoregressive Distributed Lag (NARDL) model are shown in Table 6. The use of Cusum and Cusumsq, as shown in Figures 1 and 2, assessed the stability of the calculated parameters. The findings demonstrate that both Cusum and Cusumsq fall under the critical thresholds at a significance level of 5%. This suggests the model remains stable and is not susceptible to abrupt disruptions or changes in its underlying structure.

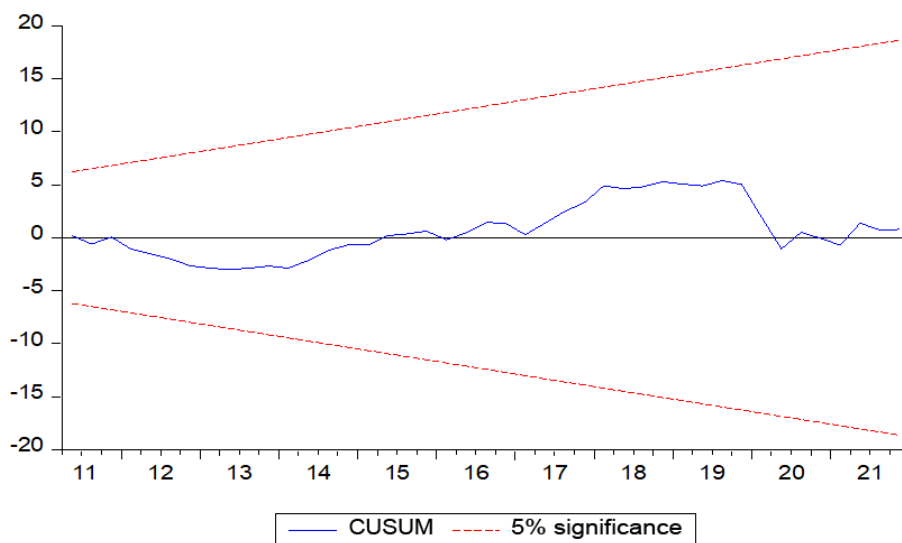


Figure 1. CUSUM cumulative residual chart.

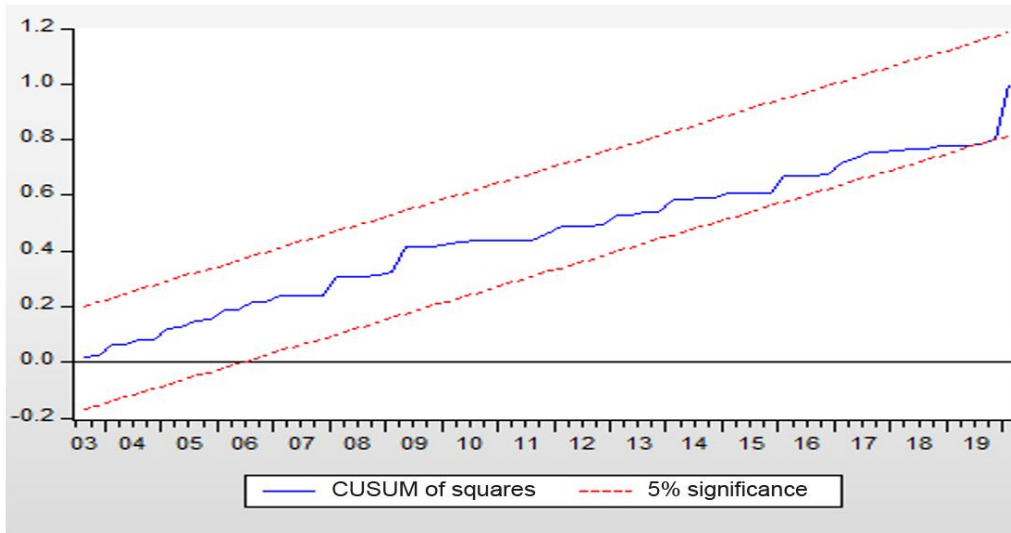


Figure 2. CUSUMsq cumulative adjusted residual chart.

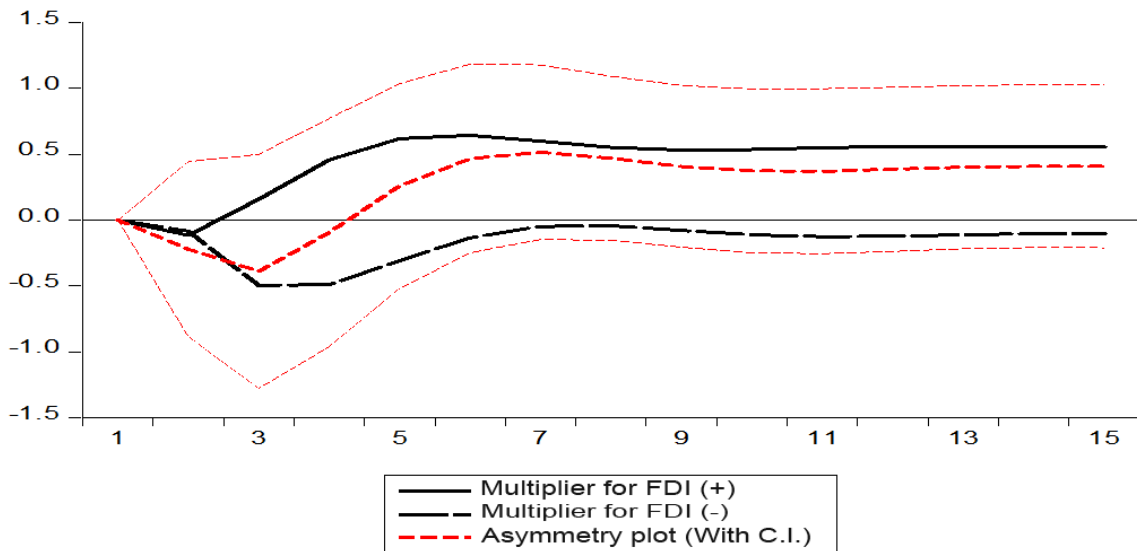


Figure 3. Asymmetric dynamic multiplier chart of international investment on economic growth.

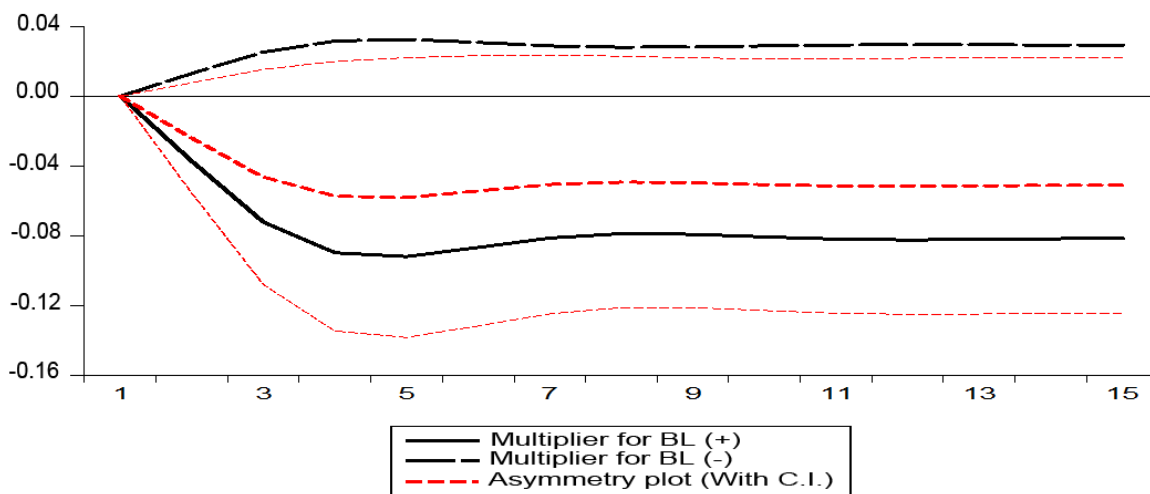


Figure 4. Asymmetric dynamic multiplier chart of international trade on economic growth.

To examine the differential impacts of variations in global investment on immediate and prolonged economic development, the researcher investigated the asymmetric dynamic multipliers obtained from the NARDL model.

Figure 3 illustrates the effects of positive and negative alterations in overseas investment on overall economic development.

The results in Table 6 demonstrate that coefficient C has a value of 2.635205 and a P-value of 0.0344. This P-value signifies statistical significance at the 5% level. This implies that the economy can adapt and stabilize over time, reaching a state of equilibrium after temporary disruptions caused by global trade and investment. The results indicate that a rise in foreign investment at the first stage has favorable outcomes for economic development, with a documented impact of 53%. Nevertheless, it is essential to acknowledge that foreign investment does not exclusively provide advantages for enhancing economic development. According to reports, foreign investment has a negative impact of 13% when it reaches a certain threshold, which is detrimental to economic growth. Furthermore, Figure 4 illustrates the asymmetric effects of international trade on Vietnam's economic growth. Positive changes in trade, like increased exports or reduced imports, positively impact GDP both in the short and long term. Conversely, negative changes, such as decreased exports or increased imports, negatively affect GDP in both timeframes. The figure also reveals a persistent influence on GDP, with multiplier effects lasting beyond 20 quarters, showcasing the prolonged impact of trade on Vietnam's economic performance.

The study findings are consistent with several previous studies, underscoring the significance of international commerce and foreign investment in the context of emerging nations such as Vietnam (Mohamed, 2019; Nantharath & Kang, 2019; Sokang, 2019). However, it is crucial to remember that trade and foreign investment may not always result in positive outcomes for countries with limited resources and advantages, as the example of Vietnam demonstrates (Beaton et al., 2017).

5. CONCLUSION

This research investigates the influence of foreign investment and trade on Vietnam's economic development from 2008 to 2021. The examination of the study period uncovers both advantageous and disadvantageous impacts of foreign investment activities on the development of the economy, explicitly concerning Vietnam's economic liberalization and its accession to the World Trade Organization in 2007. The primary results of our research suggest that, in the early stages, Foreign Direct Investment (FDI) has a favorable effect on economic development. This may be attributed to Vietnam's status as a growing country and its substantial need for capital. Nevertheless, over time, the escalation of global investment might result in detrimental consequences and unfavorable economic impacts if investments are indiscriminately accepted without adequate measures and efficient management capability. This study examines and exemplifies this captivating feature. Moreover, trade endeavors persistently encounter obstacles and drawbacks in global integration compared to other economic systems.

According to the study findings, a deficiency in capital is projected to have immediate adverse consequences for the trajectory of economic growth. The report suggests that authorities should prioritize the implementation of strategies aimed at rewarding and attracting foreign investment inflows. This approach is proposed as a means to mitigate the issue of overdependence on Vietnam's existing banking system for financial purposes. Nevertheless, it is important to acknowledge that international investments may not always provide favorable outcomes for Vietnam. Consequently, it becomes crucial to implement suitable policies that can successfully attract and regulate foreign capital. The findings of the research indicate that the economy of Vietnam may be subject to negative consequences as a result of international commerce. Hence, it is essential that the procedures of financial liberalization and trade negotiation be in accordance with the distinct phases of Vietnam's growth. In order to address the adverse consequences of trade, it is necessary for the government to adopt protective measures pertaining to tariffs, taking into account the potential risks and drawbacks connected with trade agreements. The trade negotiation process needs to comprehensively assess national interests in order to protect domestic industry.

One fundamental attribute of time-series models is that the inclusion of excessive variables might have an impact on the dependability of the model. One of the limitations of this research is the lack of full inclusion of all

pertinent factors related to financial liberalization. In further studies, the authors will contemplate broadening the scope of their study to include the subject of financial liberalization, specifically focusing on capital and foreign currency transactions, and delving into its ramifications on overall economic growth.

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Institutional Review Board Statement: The Ethical Committee of the Department of Science and Technology of Ho Chi Minh City, Vietnam has granted approval for this study on 30 December 2022 (Ref. No. 105-QĐ/KHCNT-VU).

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Data Availability Statement: The corresponding author can provide the supporting data of this study upon a reasonable request.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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