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Can foreign direct investment and economic growth drive Vietnam's export expansion?

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Abstract

The purpose of this study is to evaluate the impact of foreign direct investment (FDI) and economic growth (GDP per capita) on Vietnam's export performance over the period from 1996 to 2023. Employing a quantile regression approach alongside the traditional OLS method, the research aims to explore how these effects vary across different levels of export distribution. The findings reveal that GDP per capita has a consistently positive and statistically significant impact on exports across most quantiles (particularly from Q20 to Q90) and in the OLS model. This underscores the critical role of economic development and national production capacity in enhancing export performance. In contrast, the influence of FDI is found to be heterogeneous and less stable. In the lower quantiles (Q10 to Q70), the effect of FDI is largely insignificant or even negative. However, at higher quantiles particularly Q80, FDI exhibits a strong, positive, and highly significant impact. This indicates that FDI contributes more effectively to export growth when the economy reaches a higher level of development and absorptive capacity. Overall, the study highlights the asymmetric effects of FDI and GDP on exports and underscores the importance of tailored policy interventions based on the stage of economic development.

Keywords: Economic growth, exports, foreign direct investment, Vietnam.

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1. Introduction

In order to realize the objective of sustained economic growth, it is imperative to accelerate progress in complementary indicators such as foreign direct investment (FDI) and international trade activities, particularly exports and imports. Export performance, in particular, is widely recognized as a key driver of economic development through a variety of transmission mechanisms. Within the framework of the Export-led Growth (ELG) model, the expansion of exports enables countries to exploit their comparative advantages, achieve economies of scale in production, enhance efficiency through exposure to

international competition, and facilitate the assimilation of advanced technologies. Historical experiences from East Asian economies are frequently referenced to substantiate the claim that trade liberalization and export promotion can lead to improved living standards and enhanced national prosperity.

Regarding foreign direct investment, development economics literature underscores the critical role of external capital inflows in supplementing domestic savings, facilitating the transfer of technology and managerial expertise, and integrating local enterprises into global value chains. Endogenous growth models further suggest that FDI can contribute to long-term productivity gains through technology spillovers, whereby innovations and practices from multinational corporations disseminate to domestic firms. However, the magnitude and effectiveness of such impacts are highly contingent upon the host country's absorptive capacity, which includes factors such as the quality of human capital, the level of financial market development, and the adequacy of infrastructure.

At the same time, theoretical frameworks also caution against potential adverse effects. FDI may intensify market competition to the detriment of local firms or lead to significant profit repatriation, thereby diminishing its net contribution to national income. The dynamic interplay between exports, FDI, and economic growth is inherently complex and may be characterized by bidirectional causality. Fast-growing economies tend to attract higher volumes of foreign investment and experience export expansion due to increasing market size, while FDI and exports themselves can serve as fundamental engines of economic growth. Consequently, the question of whether exports and FDI drive growth or whether economic growth facilitates the expansion of exports and FDI continues to represent a core issue in both theoretical inquiry and empirical investigation.

Since implementing the Doi Moi (renovation) policy in 1986, Vietnam has achieved remarkable performance in key economic growth indicators. The overall trends in indicators such as economic growth, trade (exports and imports), and foreign direct investment (FDI) have shown a consistent upward trajectory, with subsequent years generally outperforming previous ones. However, it is important to note that the rates of growth across these indicators have not been uniform, suggesting disparities in the pace and structure of development among different sectors of the economy.

2. Literature Overview

Most modern empirical studies support the hypothesis that exports drive economic growth. Numerous econometric analyses have demonstrated a positive relationship between export growth and GDP growth. For example, a study conducted in Peru (covering the period 1970–2019) using the ARDL model found that exports have a statistically significant positive impact on GDP growth in both the short and long term. Additionally, the study also identified a bidirectional relationship: higher GDP growth also contributes to export growth [1]. The case of Peru aligns with many research findings regarding other developing economies, suggesting that exports act as a "catalyst" for economic growth. However, empirical evidence is not entirely consistent across all countries and time periods. Some recent studies have questioned the sustainability of the export–growth relationship. For example, Tang et al. [2] in their analysis of four Asian countries (South Korea, Taiwan, Singapore, and Hong Kong), found that the export-led growth hypothesis is not stable over time in these economies. In several Sub-Saharan African countries, where exports are mainly composed of raw commodities, there is little strong evidence that exports drive long-term growth, possibly due to limited diversification and low value added. Conversely, in industrialized countries, the export of manufactured and high-tech products is often associated with productivity growth. This has been documented in studies on some OECD countries, which have shown a long-term cointegrated relationship between high-tech exports and economic growth [3]. Overall, the quality and composition of exports are considered crucial factors: exporting manufactured goods and high-value services has a more positive impact compared to exports based on raw resources.

2.1. The Impact of Foreign Direct Investment on GDP Growth

The relationship between foreign direct investment (FDI) and economic growth has been extensively examined in the literature, with the majority of findings suggesting a positive, albeit conditional, impact. A comprehensive meta-analysis encompassing 175 empirical studies to date indicates that most research identifies a positive correlation between FDI and economic performance. Notably, this relationship appears to be less dependent on local conditions than commonly assumed [4].

2.2. The Impact of FDI on GDP Growth

Foreign Direct Investment (FDI) is generally considered a catalyst for economic growth in recipient countries. Recent empirical evidence by Bénétrix et al. [4] supports this view, indicating a positive correlation between FDI inflows and GDP growth, even in countries with medium levels of development. This finding marks a shift from earlier decades when the growth-enhancing effects of FDI were largely observed only in nations with high levels of human capital or advanced financial systems.

However, the impact of FDI is not universally positive across all contexts. Notable exceptions exist. For example, a recent study on Peru found that FDI had a significantly negative effect on GDP growth during the observed period. Similarly, research on Vietnam for the period 1986–2015 revealed that while FDI contributed positively to long-term growth, exports had a negative impact in the long run, and neither FDI nor exports showed statistically significant effects in the short term. These mixed results are often attributed to differences in the structure of FDI, such as a predominance of resource-seeking

investment that may generate limited technological spillovers or even crowd out domestic resources, as well as to the specific policy and institutional environments of the host countries.

Consequently, scholars increasingly emphasize that "not all FDI is created equal." The quality and type of FDI play a critical role in determining its contribution to economic growth. For instance, greenfield FDI, which involves new investment and capacity building, tends to yield more positive growth effects. In contrast, mergers and acquisitions (M&A) while important from a corporate strategy standpoint, often show little to no significant impact on macroeconomic growth indicators [5]. This result is characterized by Harms and Méon [6] as a distinction between “good FDI” (greenfield investments) and “useless FDI” (mergers and acquisitions), implying that host countries should prioritize attracting FDI inflows that contribute to the creation of new productive capacity.

2.3. The Relationship Between Exports, FDI, and Economic Growth

Numerous studies have employed Granger causality tests or cointegration models to examine the directional relationships among FDI, exports, and economic growth. Overall, the findings suggest that bidirectional causality is commonly observed in the long run, indicating the existence of dynamic and mutually reinforcing linkages between these variables.

For instance, the study conducted by Mahmoodi and Mahmoodi [7] on two groups of developing countries eight developing European nations and eight developing Asian nations, reveals that, in the long run, both exports and foreign direct investment (FDI) exhibit cointegrated relationships with GDP growth. Simultaneously, both economic growth and exports are also found to be cointegrated with FDI in both groups of countries, indicating mutual long-term dynamics among these variables.

2.4. Exports and Economic Growth

According to Mehrara and Musai [8], the relationship between exports and economic growth has attracted the attention of scholars and policymakers since the early 1960s. The central debate has revolved around whether a country should promote exports as a means of accelerating GDP growth or prioritize economic expansion in the hope that it will naturally lead to an increase in exports. To date, the empirical literature has not reached a consensus on the direction of causality in this relationship. However, most studies fall into four major perspectives.

First, the "export-led growth hypothesis" posits that an increase in exports leads to economic growth. Proponents of this view argue that policies supporting export promotion, such as favorable exchange rate adjustments, can enhance GDP growth. From a neoclassical growth theory standpoint, exposure to international competition improves economic efficiency, as countries tend to specialize in sectors where they possess a comparative advantage, thereby achieving economies of scale and enhanced productivity. This hypothesis is supported by numerous empirical studies, including those by Bhagwati and Srinivasan [9], Balassa [10], and Grossman and Krueger [11].

Second, the "growth-driven export hypothesis" suggests that economic growth stimulates export expansion. This perspective contends that the benefits derived from productivity improvements enhance a country's comparative advantage in certain sectors, which naturally leads to an increase in exports. Furthermore, in rapidly growing economies with relatively low domestic absorption capacity, surplus production is inevitably directed toward export markets [12, 13].

Third, some studies advocate for a bidirectional relationship between exports and economic growth, whereby each variable mutually reinforces the other. Evidence supporting this dynamic relationship is found in the works of Dutt and Ghosh [14]; Thornton [12]; Shan and Sun [15], Shan and Sun [16], and Khalafalla and Webb [17].

Fourth, a number of studies argue that no statistically significant relationship exists between exports and economic growth. For instance, Darrat [18] in his study of the export–growth nexus in four Asian economies Hong Kong, South Korea, Singapore, and Taiwan found no empirical support for a causal link between the two variables. Similar conclusions were also reached by Subasat [19], Amavilah [20], and Rangasamy [21].

Although a significant body of literature has examined the relationships between foreign direct investment (FDI), exports, and economic growth, several important gaps remain, particularly in the context of developing countries such as Vietnam. Existing empirical studies predominantly explore these relationships either in isolation (e.g., the impact of exports on growth, or FDI on growth), or in broader cross-country contexts where country-specific dynamics are often obscured. While bidirectional causality among FDI, exports, and GDP growth has been documented in multiple developing regions (e.g., Mahmoodi and Mahmoodi [7]), few studies provide a focused, empirical investigation into how these variables interact specifically within Vietnam’s economic structure.

Moreover, prior research in the Vietnamese context tends to yield mixed and sometimes contradictory results. For instance, while some studies find that FDI contributes positively to long-term growth, they also indicate that exports may have a negative or statistically insignificant effect in the short term. These inconsistencies highlight the need for further empirical clarification. Additionally, most existing studies do not adequately distinguish between the types or quality of FDI (e.g., greenfield vs. M&A), nor do they account for the evolving nature of Vietnam’s export composition, shifting from raw commodities to more manufacturing-based and high-tech outputs.

Furthermore, the literature often overlooks potential interactive effects between FDI and economic growth on export performance. That is, while the separate impacts of FDI and GDP on exports have been explored in different settings, limited

attention has been paid to how these factors may jointly influence Vietnam's export capacity. Given the country's unique economic trajectory characterized by rapid growth, deepening integration into global trade networks, and a strong reliance on FDI inflows, there is a compelling need for a more integrative and Vietnam-specific analysis.

Therefore, this study seeks to fill the existing research gap by empirically examining the combined and individual impacts of FDI and economic growth on Vietnam's export performance. By applying contemporary econometric methods (e.g., quantile regression, cointegration, Granger causality) and utilizing updated time-series data, the research aims to uncover nuanced insights into the dynamic linkages between these variables. Such a contribution is expected to inform more effective trade and investment policies tailored to the Vietnamese context.

Table 1.
Statistical Overview: Vietnam's Export, GDP per Capita, and FDI (1996–2023).

Year	Export (% GDP)	GDP per capita (VND)	FDI (% GDP)
1996		3,718,551	9.71
1997		4,225,194	8.27
1998		4,794,404	6.14
1999		5,242,566	4.92
2000	48.3	5,724,213	4.16
2001	45.0	6,172,873	3.98
2002	45.3	6,801,408	3.99
2003	49.5	7,710,079	3.67
2004	55.5	8,903,612	3.54
2005	63.2	11,271,674	3.39
2006	67.9	12,919,462	3.62
2007	72.7	14,907,553	8.65
2008	90.8	18,973,080	9.66
2009	80.0	20,924,689	7.17
2010	88.5	31,328,551	5.43
2011	105.9	40,012,985	4.30
2012	105.3	45,511,631	4.28
2013	102.8	49,392,760	4.16
2014	103.9	53,850,942	3.94
2015	100.0	55,926,974	4.93
2016	98.3	59,993,553	4.90
2017	101.2	66,128,435	5.01
2018	102.1	72,830,812	5.00
2019	105.2	79,313,582	4.82
2020	103.8	82,019,291	4.56
2021	106.8	85,788,318	4.27
2022	114.3	95,793,288	4.36
2023	112.2	101,859,406	4.31

Source: World Bank.

3. Research Methodology

The quantile regression method serves as a robust analytical tool when the relationship between independent variables and the dependent variable varies across different points of the dependent variable's distribution. In contrast to conventional linear regression, which estimates the conditional mean of the dependent variable, quantile regression enables the examination of effects at various quantiles, such as the 10th, 50th (median), and 90th percentiles. This approach is particularly valuable in situations where the data exhibit heteroscedasticity or are not symmetrically distributed, as it allows for a more nuanced understanding of the conditional distribution.

By applying quantile regression, researchers can explore whether and how the effects of explanatory variables differ across low, middle, and high levels of the outcome variable. In the context of analyzing the impact of Foreign Direct Investment (FDI) and GDP growth on a country's export performance, quantile regression facilitates the assessment of these effects at different points in the export distribution. This, in turn, helps to identify differentiated patterns of influence that may be experienced by countries with relatively low, average, or high export levels. The technique thus contributes to a more comprehensive and informative interpretation of the structural dynamics underpinning export development.

3.1. The Quantile Regression Model

This study considers sample $\{y_i, x_i\}$, $i = 1,2,...,n$ within the framework of a generalized linear regression model.

$Yi = x'_i\beta + u_i$ (1)

$Q_\tau(Y_i|X_i)=\beta_0^{(\tau)} + \beta_1^{(\tau)}\cdot X_{1i}+\beta_2^{(\tau)}\cdot X_{2i}+\cdots+\beta_k^{(\tau)} \cdot X_{ki}+\varepsilon_i^{(\tau)}$

In which:

$Q_\tau(Y_i|X_i)$: The conditional quantile τ of the dependent variable Y, given the independent variables XX.

$\beta_j^{(\tau)}$: The regression coefficient at quantile τ for the independent variable Xj.

$\varepsilon_i^{(\tau)}$: Standard error at quantile τ

To evaluate the impact of Foreign Direct Investment (FDI) and GDP growth on a country's export performance, a quantile regression model can be formulated as follows:

$Q_\tau(Export_i|FDI_i,GDPgrowth_i)= \beta_0^{(\tau)} +\beta_1^{(\tau)}\cdot FDI_i+\beta_2^{(\tau)}\cdot GDPgrowth_i+ \varepsilon_i^{(\tau)}$

In which:

$Export_i$: Country's export value i.

FDI_i : Amount of FDI capital into the country i.

$GDPgrowth_i$: GDP growth rate of the country i.

$\beta_0^{(\tau)}$: Intercept at percentile τ.

$\beta_1^{(\tau)}$: Coefficient reflecting the impact of FDI on exports at the percentile τ.

$\beta_2^{(\tau)}$: Coefficient reflecting the impact of GDP growth on exports at the percentile τ.

$\varepsilon_i^{(\tau)}$: Error at percentile τ.

4. Results

4.1. Descriptive Statistics

To evaluate the impact of Foreign Direct Investment (FDI) and economic growth (GDP) on exports (EX), this study employs a quantitative approach, using a model with three variables in logarithmic form. In this model, exports (EX) serve as the dependent variable, while FDI and GDP per capita are treated as independent variables. The analysis is based on annual time-series data collected from 1996 to 2023, sourced from secondary data provided by the World Bank. Descriptive statistics were used to provide an overview of the dataset. As shown in Table 2, the variables were observed over a 28-year period. The standard deviation values indicate that exports exhibit greater variability compared to FDI and GDP per capita, suggesting more fluctuations in Vietnam's export performance during the study period. While differences in kurtosis among the variables exist, they are not substantial. Additionally, the positive skewness values of all three variables suggest that their distributions are skewed to the right.

Table 2.
Descriptive statistics.

	Export (%)	GDP per capita	FDI (%)
Count	24	28	28
Mean	86.19	37572853	5.18
Standard Deviation	23.7	32461236	1.81
Minimum	45	3718551	3.39
25th Percentile	66.73	7482911	4.12
Median	99.15	26126620	4.46
75th Percentile	104.22	61527274	5.12
Maximum	114.3	1.02E+08	9.71

The Jarque-Bera test is employed to examine whether the variables follow a normal distribution. The hypotheses are as follows:

H_0: "The variable is normally distributed."

H_1: "The variable is not normally distributed."

Based on the test results, the p-values for all variables including Export, GDP per capita, and FDI, are greater than 0.05. Therefore, the null hypothesis (H_0) is accepted. This indicates that the variables used in this study are normally distributed, which supports the validity of subsequent econometric analyses examining the impact of FDI and economic growth on Vietnam's export performance.

Nelson and Plosser (1982) argue that most time series are not stationary at level I(0). Therefore, before conducting any analysis on the impact of FDI and economic growth on Vietnam's export performance, it is essential to test whether the data series are stationary. The stationarity of time series data is crucial as it directly influences the reliability of the estimation methods employed. If the series are non-stationary, the assumptions underlying the Ordinary Least Squares (OLS) method are violated, rendering the results from t-tests or F-tests invalid [22]. A commonly used method for testing stationarity is the unit root test, with the Augmented Dickey-Fuller (ADF) test being one of the most widely applied approaches since its introduction in 1979.

Table 3.
Augmented Dickey-Fuller (ADF).

Variable	ADF Statistic	p-value	Critical Value (5%)	Is Stationary (5%)
Export	-3.84	0.0025	-3.1	Yes
GDP per capita	3.79	1	-2.98	No
FDI (% of GDP)	-3.999	0.0014	-2.98	Yes

Based on the results of the ADF test for the three variables in the dataset, several key conclusions can be drawn regarding the stationarity of the time series

The variable *Export* has an ADF statistic of -3.84 with a p-value of 0.0025, which is below the conventional 0.05 significance level, indicating that the series is stationary at the 5% level. Similarly, *FDI (% of GDP)* also demonstrates stationarity, with an ADF statistic of -4.00 and a p-value of 0.0014.

In contrast, *GDP per capita* does not exhibit stationarity, as evidenced by a p-value of 1.0, substantially higher than the standard threshold. This suggests that the GDP series shows a persistent upward trend over time and lacks stability in both mean and variance, characteristics typical of a non-stationary process.

After applying second-order differencing to the GDP series, the ADF test statistic improves significantly. The resulting p-value of approximately 4.2e-08, which is well below 0.05, confirms that the GDP series becomes stationary after the second differencing

Table 4.
Granger causality test.

Caused	Causing	Lag	p-value	Reject Null (5%)
Export	GDP per capita (current LCU)	1	0.9187880883342740	FALSE
Export	GDP per capita (current LCU)	2	0.21735856324484500	FALSE
Export	FDI (% of GDP)	1	0.5905484876521080	FALSE
Export	FDI (% of GDP)	2	0.7731429248944180	FALSE
Export	GDP_diff	1	0.29822807522624700	FALSE
Export	GDP_diff	2	0.13994815545786700	FALSE
GDP	Export	1	0.11714926938172	FALSE
GDP	Export	2	0.060656144948303100	FALSE
GDP	FDI (% of GDP)	1	0.08830586855087880	FALSE
GDP	FDI (% of GDP)	2	0.009427260643325610	TRUE
GDP	GDP_diff	1	0.10930364249025900	FALSE
GDP	GDP_diff	2	0.9207512810604690	FALSE
FDI (% of GDP)	Export	1	0.7346559053098920	FALSE
FDI (% of GDP)	Export	2	0.9919777315565690	FALSE
FDI (% of GDP)	GDP per capita (current LCU)	1	0.5659776786043880	FALSE
FDI (% of GDP)	GDP per capita (current LCU)	2	0.796654158426485	FALSE
FDI (% of GDP)	GDP_diff	1	0.38380519843355900	FALSE
FDI (% of GDP)	GDP_diff	2	0.9485959850631360	FALSE
GDP_diff	Export	1	0.08778329619863520	FALSE
GDP_diff	Export	2	0.008785389622143800	TRUE
GDP_diff	GDP per capita (current LCU)	1	0.14955020748131100	FALSE
GDP_diff	GDP per capita (current LCU)	2	0.3833223506147930	FALSE
GDP_diff	FDI (% of GDP)	1	0.2267457084349070	FALSE
GDP_diff	FDI (% of GDP)	2	0.05921067996886070	FALSE

4.2. Granger Causality Testing and Its Implications for the Relationship between FDI, Economic Growth, and Exports in Vietnam

The Granger causality test is employed to determine whether variable X can improve the forecasting ability of variable Y in the future. The null hypothesis states that "X does not Granger-cause Y." If the p-value is less than 0.05, the null hypothesis is rejected, indicating that X does, in fact, Granger-cause Y.

Based on the Granger causality test results applied to a dataset comprising key economic indicators namely GDP per capita, FDI (as a percentage of GDP), and export values, several noteworthy causal relationships emerge. The primary

purpose of the test is to assess whether the inclusion of one variable enhances the prediction of another over time. A p-value below the 0.05 threshold provides statistical grounds to reject the null hypothesis, thus supporting the presence of a causal link in the Granger sense.

One of the most significant findings is the causal relationship running from FDI (% of GDP) to GDP per capita, with a lag of two years. The p-value for this relationship is approximately 0.009, which is well below the conventional 5% significance level. This provides robust statistical evidence that foreign direct investment Granger-causes GDP per capita. Such a finding aligns with established economic theory, which posits that FDI inflows often stimulate job creation, enhance productive capacity, and ultimately contribute to long-term income growth.

Another notable causal relationship is observed from exports to GDP growth (represented in the data as GDP_diff), also with a two-year lag. With a p-value of approximately 0.0087, the test results suggest that exports may serve as a leading indicator of medium-term GDP expansion. This has strong practical implications, as increased export activity tends to generate higher demand for domestic goods, stimulate production, and thereby contribute to overall economic growth.

Conversely, most other variable pairs in the analysis do not exhibit statistically significant Granger causality. Specifically, there is insufficient evidence to support the hypothesis that GDP per capita Granger causes either FDI or exports. Likewise, FDI does not appear to Granger-cause exports or GDP growth in these tests. The corresponding p-values exceed the 0.05 threshold, indicating that the null hypothesis cannot be rejected in these cases.

In conclusion, the Granger causality analysis highlights the pivotal role of FDI in influencing income per capita and underscores the importance of exports in driving GDP growth. However, to draw more definitive conclusions, future research may benefit from expanding the dataset, incorporating additional lags, or applying first-difference transformations to the time series data.

Table 5.
Quantile Regression and OLS Estimation.

Quantile	FDI	GDP	C	Pseudo R^2
Q10	0.000000	0.000001	0.000000	-0.030481777911099100
Q20	0.000000 (2.242202)	0.000001*** (0.000000)	0.000000 (0.354529)	0.03436148735107530
Q30	0.000000 (3.086086)	0.000001*** (0.000000)	0.000000 (0.487961)	-0.09535327063511630
Q40	0.000000 (3.840777)	0.000001*** (0.000000)	0.000000 (0.607290)	-0.3578811121386250
Q50	0.000000 (4.458566)	0.000001*** (0.000000)	0.000000 (0.704973)	-0.7653556525698780
Q60	0.000000 (4.873807)	0.000001*** (0.000000)	0.000000 (0.770629)	-1.3217096504900200
Q70	0.000000 (5.825870)	0.000002*** (0.000000)	0.000000 (0.921166)	-2.067740286102030
Q80	14.805601*** (1.477202)	0.000001*** (0.000000)	4.683076*** (0.233570)	-0.07677426409166870
Q90	0.000000	0.000002	0.000000	-6.080785687521890
OLS	3.402145** (1.458161)	0.000001*** (0.000000)	40.956213*** (8.275866)	0.8120952709349140

Note: (*, **, *** corresponding to the 10%, 5%, and 1% significance levels.).

4.3. Quantile Regression and OLS Estimation Results: Interpretation and Policy Implications

Based on the quantile regression and OLS results presented in the table above, several important insights can be drawn regarding the impact of foreign direct investment (FDI) and GDP per capita on Vietnam's export performance during the study period.

First, GDP per capita exhibits a consistently positive and statistically significant effect across most quantiles, as well as in the OLS model. The estimated coefficients range from approximately 1.26×10^{-6} to over 2.09×10^{-6}, with significance at the 1% level across a wide range of quantiles, particularly from Q20 to Q90. This suggests that as per capita income increases, Vietnam's export capacity also tends to expand. GDP per capita can be interpreted as a proxy for economic development, production capacity, and national competitiveness key factors that contribute to export growth.

In contrast, the impact of FDI on exports appears to be unstable and heterogeneous across the distribution. In the lower quantiles (Q10 to Q70), FDI coefficients are often negative and lack strong statistical significance, with only a few estimates reaching the 10% or 5% significance levels. However, at Q80, FDI demonstrates a markedly positive and highly significant effect (at the 1% level), with a large coefficient of approximately 14.81. The OLS model also indicates a positive and statistically significant impact of FDI at the 5% level. These findings suggest that the effect of FDI on exports is concentrated at higher levels of export performance, meaning that FDI becomes more effective when the economy has reached a certain threshold of development and is capable of absorbing foreign capital efficiently.

These results imply several key policy directions:

5. Policy Implications

1. Enhancing Domestic Capacity – Promoting Deep GDP Growth: Given the stable and positive influence of GDP on exports, increasing GDP should be seen not only as a means of raising income but also as a prerequisite for expanding the country's production and export capabilities. To foster deep and sustainable GDP growth, policies should focus on strengthening domestic economic capacity. This includes improving human capital through education reform and vocational training, especially in the technology and manufacturing sectors. Promoting digital transformation, particularly for small and medium-sized enterprises (SMEs), can also significantly enhance labor productivity. Additionally, a transparent and efficient public administration, with reduced institutional barriers, will further support business expansion and export growth. These efforts will raise per capita income and enhance national competitiveness, laying a solid foundation for Vietnam's integration into global value chains.

2. Selective and Quality-Oriented FDI Attraction: Although FDI is expected to play a vital role in export growth, the empirical findings reveal that its impact is not uniform and is highly contingent on domestic absorption capacity. Therefore, Vietnam's FDI attraction strategy should be adjusted to prioritize quality over quantity. High-value, technology-intensive projects with strong commitments to technology transfer to local firms should be prioritized. Clear criteria regarding localization rates should be established, and FDI enterprises should be encouraged to source materials and services from domestic suppliers. Developing specialized high-tech industrial parks with appropriate infrastructure and incentives will help attract quality investors. Moreover, post-investment evaluation mechanisms should be strengthened to ensure actual performance and value-added contributions. A shift towards quality-driven FDI will support both export growth and broader economic restructuring.

3. Strengthening FDI–Local Enterprise Linkages for Export Development: A major challenge in Vietnam's current export-led growth model is the limited linkage between foreign-invested enterprises and domestic firms, which results in a significant portion of export value being retained by foreign entities. To address this, targeted policies should aim to build strong connections between the two sectors, thereby creating a sustainable and integrated export ecosystem. Business matchmaking programs can help bridge the gap, enabling local firms to become satellite suppliers. Financial support packages should also be designed to help domestic enterprises upgrade their production lines and meet international standards. Supporting industry hubs can serve as technical and business advisory centers to enhance readiness and competitiveness. A robust FDI-local linkage will allow Vietnam to reduce dependence on multinational corporations and build a more inclusive export base.

4. Regional Development Policies – Leveraging Localized FDI and Export Potential: The variation in FDI's impact across quantiles also reflects disparities in regional capacity to attract investment and develop export potential. While major cities like Ho Chi Minh City, Hanoi, and Binh Duong benefit from better infrastructure and institutions, many provinces still struggle to create an appealing investment environment. As such, region-specific and flexible policies are needed to rebalance investment flows and export opportunities. Investments in inter-regional transport and logistics infrastructure can reduce transaction costs and connect remote areas to markets more effectively. Additionally, local strengths can be leveraged through specialized industrial clusters, e.g., agro-processing in the Central Highlands or mineral processing along the central coast, to attract appropriate FDI and boost local export capacity. A spatial reallocation of investment will enhance economic efficiency, ensure balanced development, and promote sustainability across regions.

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