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Examine Trade Facilitation Effects on Foreign Investment in Vietnam's Economic Sectors

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ABSTRACT: Foreign direct investment (FDI) is seen as a key element in fostering economic growth during the process of economic integration. Investors' investment decisions may be influenced by a variety of issues, including the discomfort brought on by lengthy Customs clearance processes, a lack of management transparency, or the challenge of delivering commodities. This study's primary goal is to determine whether trade facilitation (TF) throughout the years 2007 to 2019 played a role in luring foreign direct investment to Vietnam. Three components make up the TF impact: the infrastructure effect, the institutional effect, and the customs effect. According to the findings, enhancing these outcomes will boost FDI inflows into Vietnam's economic sectors. The cost and time spent processing the clearance documents serve as a proxy for the TF effect in the robustness check. The results are in line with early predictions that TF reforms may boost FDI inflows. Trade is made easier by reducing the time and expense of importing and exporting. FDI flows have expanded over time as a result of this making Vietnam's business environment more appealing.

KEYWORDS: Foreign direct investment; System Generalized Method of moments; trade facilitation

I. INTRODUCTION

The foreign-invested economic sector has grown to be a significant portion of Vietnam's economy through the process of economic integration. A nation's economic development is seen to be significantly influenced by foreign direct investment (FDI). Numerous earlier studies have shown the economic advantages of FDI. It fosters economic expansion (Harris & Robinson, 2003; Makki & Somwaru, 2004; Oliva & Rivera-Batiz, 2002), and increases employment prospects for employees (Duval & Utoktham, 2014b; Varblane et al., 2005). Additionally, FDI serves as an intermediary conduit for innovation and technology transfer (Asiedu, 2002, 2006; Bodman & Le, 2013; Demena & van Bergeijk, 2019; Osano & Koine, 2016; Sapkota & Bastola, 2017); and encourages productivity spillovers (Demena & Murshed, 2018; Demena & van Bergeijk, 2017). Given that the majority of developing nations have lesser levels of science and technology than industrialized nations and that the majority of new technologies are developed mostly in industrialized nations, this is a crucial element in the allure of FDI. Therefore, developing nations must quickly gain access to new technology if they are to close the gap and catch up with industrialized nations. Additionally, FDI is a tool for businesses to enter these nations with direct production as trade protectionism becomes more prevalent globally (Chen & Moore, 2010). It follows that the government's efforts to improve the economic and political climate in order to draw these investment flows are not surprising. The availability of a nation also frequently determines the destination of FDI. Resources, host nation policies, market size, trade costs, administrative transparency, and other elements are among these (Ibrahim & Ajide, 2022). Recent research contradicts the widespread belief that increasing FDI would result in issues like environmental damage. Demena and Afesorgbor (2020) specifically examined how FDI affects emissions into the environment. According to the study, FDI has no effect on greenhouse gas emissions. However, the authors also demonstrated that the impact varies for nations with varying levels of development.

Trade facilitation (TF) is a set of actions aimed at streamlining customs clearance paperwork, improving management transparency, and accelerating and simplifying the movement of products. As a result, it has often been demonstrated that the impacts of TF have various welfare implications (Go, 2018; Hillberry & Zhang, 2015; Ibrahim & Ajide, 2022; Jordaan, 2014; Nizeyimana & De-Wuft, 2015; Paulo et al., 2015; Sakyi et al., 2017). Numerous studies have shown that the first advantage is the decrease in transaction costs as a result of the procedure's simplicity, which also results in a decrease in transaction time

(Hillberry & Zhang, 2015; Moïsé et al., 2011; Moïsé & Sorescu, 2013; Nizeyimana & De-Wuft, 2015; Sakyi et al., 2017). This is one of the crucial elements that aids companies in boosting cross-border transaction volumes (Jordaan, 2014; Yu & Luu, 2020). The fact that TF considerably lowers the non-trade barriers and dangers that firms usually encounter when conducting cross-border transactions is another advantage that has also been shown in numerous studies. (Go, 2018; Hillberry & Zhang, 2015; Nizeyimana & De-Wuft, 2015). Countries become more appealing when their trading environment is better, which in turn draws more foreign investors (Ibrahim & Ajide, 2022). Most importantly, this development also strengthens a developed nation's economy (Paulo et al., 2015; Sakyi et al., 2017).

The convenience and ease of cross-border commerce in goods is seen as a key factor for nations striving to make the shift to a higher-value manufacturing structure. Global value chain-based manufacturing can lead to economic gains and job prospects. For emerging nations like Vietnam, FDI is the fastest route to joining the global value chain. Therefore, encouraging FDI into Vietnam is crucial for the country's future development and the attainment of the sustainable development goals.

Duval and Utoktham (2014) use FDI data associated with TF indicators for developing economies to analyze the effect of TF on FDI flows and take into account the effect of lowering trade costs. The findings demonstrate that while reductions in tariffs will only enhance FDI flows by 6% to 7%, and lower trade costs could result in a 20% rise in FDI inflows, strengthening the business environment of these sample nations can raise FDI inflows by 60%. Consequently, our research demonstrates that TF is crucial for boosting FDI. Chimilila et al. (2014) take the East African Community's TF into consideration. The authors demonstrate that raising TF aids in boosting FDI inflows into these nations' communities using a descriptive research design using secondary data. FDI and the TF index are positively correlated, but this link is not statistically significant. The paper also identifies challenges to enhancing TF, such as inadequate non-tariff barriers, inadequate infrastructure, a shortage of highly skilled labor, etc. The influence of doing business indicator on sub-African direct investment flows in Africa was studied by Nangpiire et al. (2018) using a dataset of 44 African nations. The findings indicate a strong correlation between increased TF and FDI inflows to these nations. Similar to this, Ibrahim and Ajide (2022) discovered that TF severely hampered FDI flows to Africa by using days and cost data on imports and exports of 26 African nations for the period 2004 to 2014.

In this study, the effect of TF on 18 economic sectors in Vietnam from 2007 to 2019 is evaluated. This study's major goal is to determine whether TF plays a role in luring foreign direct investment to Vietnam. Three components make up the TF impact: the infrastructure effect, the institutional effect, and the customs effect. Empirical findings using the System Generalized Method of Moments (SGMM) estimator show that enhancing these effects raises FDI inflows to Vietnam's economic sectors. With the hope that decreasing prices and hours will result in an increase in FDI inflows into Vietnam, we utilize the cost and hours necessary to import and export as a proxy for customs effects, infrastructural effects, and institutional effects. They were discovered to satisfy this assumption while also demonstrating how trade is made simpler by the decrease in import and export labor requirements and expenses. Due to this, Vietnam's business climate has become more appealing, which has led to a rise in FDI inflows over time.

The rest of this study's findings are laid out as follows: The estimation methodology and data used in this study's model are presented in Section 2. The results are presented and discussed in Section 3 of the paper. Conclusions and suggestions are in Section 4s.

II. METHODOLOGY AND DATA

A. Estimation Strategy

Several factors stand out when it comes to the theoretical foundations of the incentives that influence foreign investors' positioning choices. Some arguments are regionally specific, while others are universal. But for this investigation, the driving forces of FDI were carefully selected as being common in the literature. In addition to being qualitative, these traits are the focus of FDI study for developing countries (Ibrahim & Ajide, 2022). The impact of TF on FDI inflows to Vietnam's economic sectors is calculated using the formula below:

$$FDII_{it} = \beta_0 + \beta_1 Institutions_{it} + \beta_2 Infrastructure_{it} + \beta_3 Customs_{it} + \beta_4 INF_{it} + \beta_5 GDP_{it} + \beta_6 DCF_{it} + \beta_7 Trade_{it} + \beta_8 POP_{it} + \varepsilon_{it} \quad (1)$$

Where *i* is the economic sector and *t* denotes the time, *i* = 1, ..., 18 and *t* = 2007, ..., 2019 respectively. 18 economic factors from 2007 to 2019 are used in this study. Due of the comprehensiveness of the data, this study period was selected. Vietnam has the opportunity to sign bilateral and multilateral trade agreements thanks to its 2007 WTO membership, which is a factor that Vietnam must vigorously implement TF. The sample used for this study's evaluation spans the years 2007 through 2019. Foreign direct investment inflow is referred to as *FDII*. TF is the enhancement of administrative processes, infrastructural quality, and customs procedures, among other things. It all comes down to fostering a positive work environment. In order to analyze the influence of TF, this study uses three aspects. It consists of structures, practices, and institutions. *INF, GDP, DCF, Trade*, and *POP*

are among the model's control variables. *INF*, or inflation, is regarded as a metric for assessing the macroeconomic instability of Vietnam. The price changes of various commodities and services are used to gauge how stable the economy is. To make Vietnam more appealing and to encourage the influx of foreign direct investment, the economy must be stable. Rising inflation has a detrimental effect on FDI flows, according to recent studies (Ibrahim & Ajide, 2022; Shobande & Lanre, 2018a, 2018b). *GDP* stands for gross domestic product divided by economic sector at current prices. It is employed to assess how FDI inflows are impacted by industry size. This variable is linked to FDI inflows, according to numerous earlier research (Anyanwu, 2012; Ibrahim & Ajide, 2022; Liargovas & Skandalis, 2012). The banking industry offers domestic credit, or *DCF*. Numerous studies have demonstrated that enhancing domestic financing is a factor that can encourage governments to increase investment (Ibrahim et al., 2019; Ibrahim & Ajide, 2022). The second control variable is trade, which is also known as trade openness. Trade openness is measured using the ratio of total imports and exports of products to GDP. The justification for utilizing this variable is based on the tax-jumping hypothesis's supporting evidence. Foreign businesses who want to serve the local market but find it challenging to import goods may opt to set up subsidiaries in the host nation. As trade protectionism raises production costs, reduces exports, and reduces competitiveness, multinational businesses that engage in export-oriented activities may decide to locate in more open economies. *POP*, which stands for population, is the last control variable. Due to the creation of a route for multinational firms to extend the market by offering goods and services, the application of this control variable suggests that the big population size will draw significant inflows of foreign direct investment. The assumption that businesses or multinationals will invest more in nations with big populations results in the finding that FDI and *POP* are positively correlated. This is the model's mistake. According to the report, improvements to Vietnam's institutional, customs, and domestic infrastructure will boost FDI inflows. Vietnam's better business climate increases its allure and strengthens its economy.

The cost and labor hours needed for import and export are used in this study as a stand-in for TF variables as a robustness check. Considering that it is commonly known that nations have consistently sought to streamline the customs clearance procedure as part of their TF reforms. Because it lowers transaction costs, this simplicity is always crucial. Always, transaction cost reductions can result in significant economic gains like facilitating bilateral and global trade flows. The following describes the model used in the robustness test:

$$FDII_{it} = \beta_0 + \beta_1 Im\_cost_{it} + \beta_2 Im\_hours_{it} + \beta_3 Ex\_cost_{it} + \beta_3 Ex\_hours_{it} + \beta_5 INFL_{it} + \beta_6 GDP_{it} + \beta_7 DCF_{it} + \beta_8 Trade_{it} + \beta_9 POP_{it} + \varepsilon_{it} \quad (2)$$

where the import and export expenses are denoted by Im_cost and Ex_cost, respectively. The time frames necessary for importing and exporting items are Im_hours and Ex_hour. From the perspective of the investor, import and export procedures, documentation, and time requirements are crucial elements that influence a product's ability to compete on the global market. This could play a significant role in influencing the choices made by international investors. According to this study, streamlining cross-border transaction processes and lowering associated costs can boost FDI inflow. Table 1 provides information about each variable used in this study.

Table 1. Variables Details

Variables	Definition	Source
FDII	Foreign direct investment by economic sectors, net inflows	VGSO
Customs	Customs effect (Based on burden of customs procedures and customs services index)	WB WGI
Infrastructure	Infrastructure effect (Based on quality of overall infrastructure, quality of roads, quality of railroad infrastructure, quality of port infrastructure, and quality of air transport infrastructure)	WEF GCI
Institutions	Institutional effect (Based on control of corruption, government effectiveness, political stability, regulatory quality, and rule of law)	GETR
Im_cost	Cost to import (base on import costs and border compliance; import costs and documentary compliance)	WB DBP
Im_hours	Hours to import (based on import time, border compliance; import time, documentary compliance)	WB DBP
Ex_cost	Cost to export (based on export costs and border compliance; export costs and documentary compliance)	WB DBP
Ex_hours	Hours to export (Based on export time, border compliance; export time,	WB DBP

	documentary compliance)	
INF	Inflation	VGSO
GDP	Gross domestic product	VGSO
DCF	The domestic credit given by the financial sector	WB WDI
Trade	Trade openness. The ratio between total import and export of goods to GDP.	VGSO
POP	Population	VGSO

Note: VGSO is understood as the General Statistics Office of Vietnam; WB WGI is understood as the World Bank Global Governance Indicator; GETR is the Global Enabling Trade Report; and WB DBP is the World Bank's Doing Business Project.

To get over the potential endogeneity issue in the estimation, this study uses the SGMM estimate. Numerous recent research have used this approach to address endogenous issues (Baklouti & Boujelbene, 2020; Naseem & Tong, 2021; Sakyi et al., 2017, 2018; Yu & Luu, 2020, 2022). The following portion of the study will provide further explanations of the statistics and the data sources used in the calculations.

B. Data Collection and Analysis

The 18 economic sectors of Vietnam are used in the analysis as an observational model for the years 2007 through 2019. Based on information given by the General Statistics Office of Vietnam, investments in these 18 sectors (VGSO). Institutional, infrastructure, and customs statistics are all included in TF data.

The Global Enabling Trade Report's (GETR) indicator average value for the customs effect includes:

- Burden of Customs procedures
- Customs service index

The global competitiveness index (WEF GCI) database's indicators, which include those listed below, are used to calculate the infrastructure effect as an average value:

- Quality of overall infrastructure
- Quality of roads
- Quality of railroad infrastructure
- Quality of port infrastructure
- Quality of air transport infrastructure

The average value of the metrics offered by the World Bank Global Governance Indicators (WB WGI) database represents institutional effect, including:

- Control of Corruption
- Government Effectiveness
- Political Stability
- Regulatory Quality
- Rule of Law

Prior to being incorporated into the estimate, these indicators will be standardized. The following calculation is used to normalize the data: $A_i = \frac{a_i - min(a)}{max(a) - min(a)}$ when a = 1, ..., n

Table 2. TF Data Description

Variable	Obs	Mean	Std. Dev.	Min	Max
Burden of customs procedures	234	0.4412	0.3774	0	1
Customs service index	234	0.4633	0.2844	0	1
Quality of overall infrastructure	234	0.4554	0.3771	0	1
Quality of roads	234	0.4881	0.4017	0	1
Quality of railroad infrastructure	234	0.3138	0.3698	0	1
Quality of port infrastructure	234	0.5119	0.3274	0	1
Quality of air transport infrastructure	234	0.5519	0.3771	0	1
Control of corruption	234	0.5753	0.2546	0	1
Government effectiveness	234	0.3605	0.3141	0	1

Political stability	234	0.5331	0.2407	0	1
Regulatory quality	234	0.5670	0.3579	0	1
Rule of law	234	0.4726	0.3299	0	1

The objective of this normalization is to translate the values of the dataset's numerical columns to a standard scale without changing the range of values. The World Bank's Doing Business Project (WB DBP) database contains information on the price and time needed to import and export commodities. If import and export hours equal the average of import and export hours in border compliance and document compliance, and import and export cost equals the average of import and export costs in border compliance and document compliance. Data from the VGSO are used to calculate consumer inflation, GDP by sector, population, and trade openness. The formula $\Sigma(Export + Import)/GDP$ is used to calculate trade openness. Data about DCF was gathered from the WB. Before being incorporated into estimates, these numbers are transformed to logarithmic values. Table 3 provides a detailed description of these factors.

Table 3. Variable Description

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI	234	6.5489	1.3539	3.9871	10.3315
Customs effect	234	0.9046	0.6140	0.2225	2.0000
infrastructure effect	234	2.3211	1.7498	0.0485	5.0000
Institutional effects	234	2.5086	0.7517	1.2943	3.8989
Overall effect	234	5.7343	2.6982	2.0928	10.1865
GDP	234	25.8763	0.2229	25.5301	26.2496
INFL	234	1.7544	0.7510	0.4601	3.1405
DCF	234	4.6793	0.1590	4.4173	4.9266
TO	234	2.2595	1.3177	0.5833	5.4408
POP	234	5.2360	0.6395	4.0661	6.2991

The next section presents the findings of an empirical model on how institutions, infrastructure, and customs affect FDI inflows into Vietnam's economic sectors, including the baseline and SGMM.

III. RESULTS AND DISCUSSIONS

The main findings on how the TF implementation affected FDI inflows to Vietnam from 2007 to 2019 are presented in this section. We will first provide the findings of the mechanistic regression for this effect, and then we will present the estimation of the SGMM that was utilized to solve the model's endogeneity issue. The robustness test for this estimate will be completed by substituting other indices for the TF data. The findings are shown in Tables 4 to 7, where Table 4 shows the results of the baseline regression, Tables 5 and 6 provide the outcomes of the SGMM approach, and Table 7 shows the outcomes of the robustness check.

Columns (1) through (4) of Table 4 provide the results of the baseline regression. The results of the customs effect are shown in column (1), the results of the infrastructural effect are shown in column (2), the results of the institutional effect are shown in column (3), and the results of the overall TF effect are shown in column (4). The findings of the initial regression indicate that these effects have a favorable influence on FDI. In particular, improvements in institutional, infrastructure, and customs effects might boost FDI flows by 33.2%, 7.92%, and 25.6%, respectively. When considering the overall effect of TF, the regression results demonstrate similar encouraging indicators.

Table 4. Baseline Specification

Variable	**(1)**	**(2)**	**(3)**	**(4)**
Customs effect	0.322*** (0.0613)			
Infrastructure effect		0.0792*** (0.0151)		

Institutional effects			0.256***	
			(0.0488)	
Overall effect				0.0509***
				(0.00971)
GDP	18.58***	19.38***	19.80***	19.34***
	(2.907)	(3.032)	(3.100)	(3.026)
INFL	-1.821***	-1.798***	-2.126***	-1.867***
	(0.308)	(0.305)	(0.356)	(0.315)
DCF	-22.39***	-23.41***	-27.17***	-23.99***
	(3.526)	(3.675)	(4.261)	(3.764)
TO	0.247***	0.164***	0.139***	0.172***
	(0.0508)	(0.0425)	(0.0409)	(0.0431)
POP	1.436***	1.604***	2.554***	1.766***
	(0.275)	(0.292)	(0.420)	(0.310)
Constant	-373.5***	-390.1***	-388.0***	-387.0***
	(59.66)	(62.28)	(61.96)	(61.80)
R-Squared	0.981	0.981	0.981	0.981
No. of Obs	234	234	234	234
Fixed Time	Yes	Yes	Yes	Yes
Fixed sector	Yes	Yes	Yes	Yes

Note: *** p<0.01, ** p<0.05, * p<0.1

Tables 5 and 6 give the outcomes of the SGMM estimate. The implications of customs and the transportation infrastructure are seen in Table 5. The institutional influence and the overall impact of TF are shown in Table 6. Twelve columns are used to display the results in Table 5. Customs effects are displayed in columns (1) through (6), and transportation infrastructure implications are displayed in columns (7) through (12). The coefficients found in this study are statistically significant at the 1% level when evaluating the effects of customs impacts and infrastructural impacts. The coefficients for both impacts are positive when GDP is taken into account by the model. FDI inflow into Vietnam's economic sector will increase by 3.77% of improved transportation infrastructure and 3.06% more FDI flow, respectively, according to the conclusions of the study. When the model accounts for INFL, improvements in transportation infrastructure and customs effects both demonstrate positive FDI trends at 7.58% and 5.55%, respectively. The results likewise have the same positive sign when the model handles DCF, Trade, and POP independently, with the exception of the column coefficient (5), which has a negative sign. FDI growth was 6.21% and 1.97%, respectively, when customs effects and improvements in transportation infrastructure were taken into account by the model, which simultaneously controlled all variables. Except for column (5), the results are in line with what was first anticipated in terms of the coefficients' signs. Infrastructure improvements and improvements to the customs environment have made it easier to import and export goods and move them around. Investors can cut back on a lot of pointless transaction fees thanks to this. Therefore, improving customs conditions and having an advanced infrastructure may be key elements in boosting FDI flows.

We find that the coefficients are positive and statistically significant at the 1% level for the institutional and overall effects of TF. The results in Table 6 are shown in 12 columns, same like in Table 5. Columns (1) through (6) display the institutional effect, while columns (7) through (12) display the effects as a whole. It is apparent at first that the institutional effect and the overall effect can boost FDI inflows by 5.06% and 2.06%, respectively, under the control of GDP variables. Each 1% rise in these two impacts increases FDI flows by 5.35% and 2.95%, respectively, when the model accounts for the INFL variable. Institutional changes enhance FDI inflows by 3.83%, and improving the overall effect increases FDI inflows by 1.46%, according to the results when the DCF variable is controlled for. Similar results are obtained when the model simultaneously controls Trade, POP, and all five variables. The outcomes in Table 6 are in line with original estimates that TF will have a considerable economic impact with regard to the sign of the coefficients. Vietnam is now a desirable location for investors thanks to the improving investment climate. As a result, FDI inflows into Vietnam have gradually increased since Vietnam started to pursue TF reforms. This further exemplifies the advantages of TF. These justifications are entirely compatible with earlier research indicating a favorable correlation between TF and economic well-being (Go, 2018; Hillberry & Zhang, 2015; Ibrahim & Ajide, 2022; Jordaan, 2014; Nizeyimana & De-Wuft, 2015; Paulo et al., 2015; Sakyi et al., 2017).

Table 5. The Impact of Customs and Infrastructure Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
FDI (-1)	0.984***	0.983***	0.985***	0.984***	0.985***	0.988***	0.987***	0.983***	0.985***	0.982***	0.987***	0.988***
	(0.0109)	(0.0107)	(0.0105)	(0.0101)	(0.0103)	(0.0101)	(0.00972)	(0.0116)	(0.0110)	(0.0111)	(0.00963)	(0.0101)
Customs effect	0.0306***	0.0758***	0.0186***	0.0665***	-0.0282***	0.0621***						
	(0.00852)	(0.0123)	(0.00658)	(0.0103)	(0.00814)	(0.0173)						
Infrastructure effect							0.0377***	0.0555***	0.0369***	0.0431***	0.00887***	0.0197***
							(0.00538)	(0.00841)	(0.00530)	(0.00614)	(0.00228)	(0.00525)
GDP	0.623***					-0.128	0.829***					-0.218
	(0.104)					(0.361)	(0.111)					(0.349)
INFL		0.251***				-0.0473		0.316***				-0.0397
		(0.0354)				(0.0384)		(0.0449)				(0.0367)
DCF			0.822***			-0.791**			1.129***			-0.777**
			(0.128)			(0.328)			(0.161)			(0.324)
TO				0.159***		0.516***				0.177***		0.503***
				(0.0202)		(0.0695)				(0.0243)		(0.0670)
POP					0.208***	-0.557***					0.238***	-0.505***
					(0.0287)	(0.112)					(0.0319)	(0.0970)
Constant	-15.94***	-0.311***	-3.666***	-0.217**	-0.865***	8.996	-21.35***	-0.486***	-5.174***	-0.288**	-1.086***	11.02
	(2.719)	(0.119)	(0.633)	(0.0952)	(0.182)	(8.001)	(2.909)	(0.145)	(0.797)	(0.113)	(0.203)	(7.759)
AR(2)	-2.01	-0.60	-2.11	0.50	-0.14	1.82	-2.32	-0.93	-2.32	0.83	-0.15	2.07
AR(2) p-value	0.045	0.551	0.034	0.619	0.885	0.068	0.020	0.354	0.021	0.408	0.877	0.039
Hansen Stat	17.14	17.64	17.58	17.99	17.79	17.92	17.95	17.75	17.70	17.83	17.97	17.91
Hansen p-value	0.104	0.224	0.174	0.207	0.216	0.118	0.209	0.167	0.169	0.164	0.208	0.118
No. of obs	234	234	234	234	234	234	234	234	234	234	234	234

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6. The Impact of Institutional and Overall Effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
FDI (-1)	0.983***	0.986***	0.988***	0.981***	0.985***	0.986***	0.986***	0.984***	0.984***	0.984***	0.982***	0.988***
	(0.0106)	(0.00951)	(0.00991)	(0.0105)	(0.0113)	(0.0105)	(0.00968)	(0.0111)	(0.0111)	(0.0101)	(0.0114)	(0.0102)
Institutional effects	0.0506***	0.0535***	0.0383***	0.0375***	0.0344***	0.0834***						
	(0.0108)	(0.0112)	(0.00840)	(0.00780)	(0.00680)	(0.0137)						
Overall effect							0.0206***	0.0295***	0.0146***	0.0232***	0.00582***	0.0163***
							(0.00359)	(0.00418)	(0.00248)	(0.00320)	(0.00133)	(0.00356)
GDP	0.537***					2.258***	0.744***					0.347
	(0.118)					(0.544)	(0.125)					(0.409)
INFL		0.214***				-0.279***		0.285***				-0.0797*
		(0.0359)				(0.0623)		(0.0396)				(0.0444)
DCF			0.794***			-3.278***			0.918***			-1.230***
			(0.105)			(0.654)			(0.162)			(0.363)
TO				0.138***		0.511***				0.167***		0.507***
				(0.0226)		(0.0771)				(0.0216)		(0.0680)
POP					0.223***	-0.552***					0.231***	-0.555***
					(0.0304)	(0.0959)					(0.0418)	(0.106)
Constant	-13.82***	-0.330***	-3.635***	-0.187*	-1.064***	-40.86***	-19.18***	-0.477***	-4.180***	-0.313***	-1.034***	-1.203
	(3.097)	(0.101)	(0.530)	(0.105)	(0.210)	(10.93)	(3.262)	(0.138)	(0.804)	(0.102)	(0.260)	(8.918)
AR(2)	-2.83	-2.32	-2.76	-1.09	-1.62	-1.43	-2.55	-1.81	-2.51	-0.04	-0.43	1.19
AR(2) p-value	0.005	0.020	0.006	0.278	0.106	0.153	0.011	0.071	0.012	0.965	0.667	0.235
Hansen Stat	15.93	17.36	17.97	17.38	17.81	17.70	17.20	17.70	16.97	17.99	16.65	17.92
Hansen p-value	0.144	0.098	0.208	0.183	0.215	0.221	0.102	0.221	0.109	0.207	0.119	0.118
No. of obs	234	234	234	234	234	234	234	234	234	234	234	234

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

This analysis does a robustness check using the cost and labor hours needed for import and export operations to confirm the beneficial effect of Vietnam's TF on luring FDI. The estimating model predicts that decreasing import and export costs and hours may result in greater FDI inflows. Table 7 displays the test's outcomes. Table 7's findings are presented in five columns:

column (1) presents the influence of import costs; column (2) the impact of imported hours; column (3) the impact of export costs; column (4) the effect of export hours; and column (5) the overall impact of import and export costs and hours. The results demonstrate that the reduction in import and export costs and time has a beneficial impact on luring FDI as anticipated based on the sign of the coefficient. The outcomes in Table 7 likewise demonstrate that each coefficient is statistically significant at the 1% level, which is similar to the outcomes in Tables 6 and 7. Table 5 to 7's findings show that improvements to Vietnam's legal, social, and business environments, along with government investments in infrastructure throughout time, have provided a driving force to encourage investment from foreign firms. As it pertains to the accomplishment of the sustainable development goals as well as Vietnam's future development, the topic of drawing more foreign direct investment into Vietnam seems relevant.

Table 7. Effect of Cost and Hours to Import and Export on FDI Flows

	(1)	(2)	(3)	(4)	(5)
L.FDI	0.987***	0.987***	0.987***	0.987***	0.987***
	(0.00978)	(0.00958)	(0.00972)	(0.00967)	(0.00975)
Im_cost	-2.671***				
	(0.695)				
Im_hours		-0.381**			
		(0.158)			
Ex_cost			-0.885**		
			(0.422)		
Ex_hours				-0.237**	
				(0.113)	
TF					-1.675***
					(0.542)
GDP	0.144	0.0107	-0.137	-0.121	0.0115
	(0.344)	(0.362)	(0.339)	(0.346)	(0.341)
INFL	-0.109**	-0.107**	-0.0928**	-0.0884*	-0.103**
	(0.0464)	(0.0497)	(0.0460)	(0.0457)	(0.0464)
DCF	-1.481***	-1.355***	-1.188***	-1.260***	-1.339***
	(0.424)	(0.425)	(0.398)	(0.413)	(0.411)
TO	0.488***	0.499***	0.496***	0.499***	0.493***
	(0.0803)	(0.0817)	(0.0816)	(0.0816)	(0.0810)
POP	-0.478***	-0.438***	-0.437***	-0.427***	-0.458***
	(0.105)	(0.101)	(0.0993)	(0.0980)	(0.102)
Constant	20.70***	9.539	15.64**	11.63*	19.63***
	(6.814)	(7.209)	(6.674)	(7.043)	(6.800)
AR(2)	0.21	1.41	1.64	1.52	1.00
AR(2) p-value	0.835	0.158	0.102	0.129	0.319
Hansen Stat	17.47	17.53	17.47	17.51	17.47
Hansen p-value	0.133	0.131	0.133	0.131	0.133
No. of obs	234	234	234	234	234

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The overall goal of this study is to determine whether TF contributes to the growth of foreign direct investment in Vietnam. Empirical findings show that increases in TF can increase the likelihood of receiving FDI inflows. The findings of this study are in line with those of other research, which has demonstrated that TF can boost FDI inflows (Chimilila et al., 2014a; Dollar et al., 2006; Duval & Utoktham, 2014a, 2014b; Engman, 2005; Seck, 2014). But at the same time, our conclusions contradict those of Ibrahim and Ajide (2022). This also demonstrates that not all nations' TF implementations will be successful. The explanation from Sakyi et al. (2018) is that African nations lag behind other continents in terms of transportation

infrastructure. An important component of a country's ability to meet its TF responsibilities is its transport infrastructure (Yu & Luu, 2022). Consequently, this might also be a factor affecting these countries' capacity to draw FDI inflows.

IV. CONCLUSION AND RECOMMENDATIONS

The goal of this study is to determine whether TF contributes to Vietnam's ability to draw in foreign direct investment. The study's focus is restricted to 18 economic sectors in Vietnam from 2007 to 2019 based on the data that is currently available. The definition of TF's scope takes into account institutional, societal, and infrastructure implications. The findings demonstrate that raising TF greatly lowers the obstacles to luring FDI. For robustness testing, the cost and labor hours associated with border compliance and documentation during import and export are employed to simulate the TF effect. The outcomes are consistent with earlier outcomes. These findings are in line with those of earlier research (Chimilila et al., 2014a; Dollar et al., 2006; Duval & Utoktham, 2014a, 2014b; Engman, 2005; Seck, 2014). However, this conclusion also runs opposite to Ibrahim and Ajide (2022). Generally speaking, Vietnam's improved economic climate between 2007 and 2019 has generated a driving force to promote international investment.

All socioeconomic sectors in Vietnam have been impacted by the COVID-19 epidemic, which has hampered trade and investment activity and disrupted supply networks. In light of this, Vietnam needs to adjust its strategic focus in order to draw FDI in the future:

1) Maintain a stable macroeconomic environment and increase the economy's resilience to external shocks. In order to give foreign investor, the confidence they need to develop long-term investment plans in Vietnam, policy consistency and stability are also consistently upheld.

2) Vietnam must create a long-term FDI strategy that prioritizes projects with high added value and contemporary management techniques, moving the emphasis of foreign investment and cooperation policies from quantity to quality. choose FDI projects, and there should be different laws for companies that concentrate on important national goals.

3) Joint ventures with domestic businesses that involve FDI in investment and production are required to be encouraged and given the best possible circumstances. This intends to give Vietnamese businesses access to FDI companies' cutting-edge technology and management capabilities.

4) Modify, streamline, and make known the processes and procedures for investment approval. Create a long-term plan to make administrative processes visible and easy to understand while also significantly improving the business environment. Promote investment while also improving the nation's public infrastructure.

AUTHOR STATEMENT

The authors have no relevant financial or non-financial interests to disclose. The authors have no conflicts of interest to declare that are relevant to the content of this article.

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