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ENHANCING TRADE FACILITATION TO BOOST MANUFACTURED GOODS TRADE IN VIETNAM: A CASE STUDY OF A TRANSITION ECONOMY[3]

This study examines the important role of trade facilitation in boosting the trade of manufactured goods in Vietnam, a transition economy, from 2016 to 2022. Through comprehensive policy reforms and the adoption of digitalization, Vietnam has significantly streamlined its trade processes, leading to substantial growth in both the export and import of manufactured goods, particularly in the electronics sector. Utilizing a partial equilibrium gravity model, the research analyzes the impact of trade facilitation on Vietnam's trade flows and finds a strong positive correlation between Vietnam's GDP, trade facilitation measures, and the overall trade of manufactured goods. Beyond aggregate trade data, the study also reveals sector-specific impacts, demonstrating that simplifying customs procedures has been particularly beneficial for the electronics sector due to its reliance on just-in-time supply chains. Four key groups of trade facilitation measures are identified, each showing distinct impacts: simplifying customs procedures ($EASY_{ij}$), enhancing the capacity of trade management agencies ($ENHANCE_{ij}$), improving dialogue and coordination ($DIALOG_{ij}$), and modernizing trade processes ($MODERNIZATION_{ij}$). The results provide valuable insights for other transition economies seeking to enhance trade performance in the manufacturing sector. By implementing sector-specific policy reforms, strengthening trade management capacity, embracing digital trade solutions, and promoting stakeholder collaboration, transition economies can leverage trade facilitation as a powerful driver of economic growth and development.
Keywords: Trade facilitation; Manufactured goods trade; Transition countries; Vietnam; Economic development
JEL: F13; F14; F15

1. Introduction

In an increasingly interconnected global economy, international trade serves as a vital engine of economic growth, particularly for countries transitioning from centrally planned systems

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to market-oriented economies. Some transition countries have adopted import substitution strategies to protect domestic industries, while others, such as China and Vietnam, have pursued export-led growth (Popov, 2019). Despite these different approaches, they commonly face challenges in adapting to market conditions, including the modernization of industries, improving infrastructure, and integrating into global value chains (Nazaj, 2022). For many post-Soviet nations, such as Russia and Ukraine, and Western Balkan countries like Serbia and North Macedonia, the transition has been marked by difficulties in importing essential machinery and equipment needed for industrial growth (Petrovskaya et al., 2023; Popović et al., 2020). In Central Asia, non-tariff barriers continue to be significant obstacles to trade and economic development (Djalilov, 2015). To improve trade engagement, these countries need to implement trade facilitation practices that simplify customs procedures, enhance cross-border infrastructure, and harmonize trade regulations. Such reforms are crucial for reducing trade costs and delays while increasing competitiveness, particularly in the manufacturing sector, which is essential for the long-term growth of transition economies (Wilson, Mann, Otsuki, 2004).

Vietnam, a nation that has experienced profound transformation since the launch of its Đổi Mới reforms in 1986, is a compelling case study for assessing the impact of trade facilitation in a transition economy. The country has achieved remarkable growth across various sectors, with manufacturing and trade leading the way. Additionally, Vietnam has emerged as an active player in the global market for parts and components. This trade allows the country to specialize in specific stages of production while embedding itself further into the global value chains of the manufacturing industry, particularly in electronics. By 2023, the electronics sector contributed to over 30% of the nation’s total trade turnover, with the outstanding achievements of becoming the second-largest global exporter of wireless phones and the fifth-largest exporter of computers (Nguyen Nga, 2024). These impressive trade outcomes have been driven by substantial foreign direct investment (FDI) inflows since the 1980s, propelling Vietnam into the ranks of the top 30 FDI-receiving countries globally (Trang Nhi, 2023). Despite these successes, Vietnam faces various challenges, including regulatory inconsistencies, resource limitations, and delays in customs processing. These obstacles highlight the necessity for further enhancements in trade facilitation to sustain and boost the trade of manufactured goods.

This study examines the impact of trade facilitation measures on the performance of Vietnam's manufacturing sector, with a specific focus on electronics. By combining quantitative trade data with qualitative insights, the research explores how reforms-such as the simplification of customs procedures, enhancements in cross-border infrastructure, and regulatory harmonization-have strengthened Vietnam's export competitiveness and deepened its integration into global value chains. By highlighting the sectoral impacts of these reforms, the study addresses a key gap in the literature on trade facilitation practices within transition economies.

The paper begins with an introduction and then examines theoretical considerations in the second part. In the third section, the paper analyzes trade performance in manufactured goods and trade facilitation in Vietnam. The methodology and data section presents the empirical approach and outlines the data sources utilized in the study. The empirical results section highlights how trade facilitation affects Vietnam's manufactured goods trade. Finally, the

paper ends with conclusions and recommendations, summarizing key insights and offering broader implications for other transition economies.

2. Theoretical Considerations

2.1. Definition and scale of trade facilitation

The simplification and harmonization of import and export procedures narrowly characterizes the concept of trade facilitation. This encompasses various activities such as customs permits, technical standards, safety regulations, and health requirements. The primary objective is to reduce transaction costs and streamline the execution, regulation, and administration of trade policies. This streamlining process aims to alleviate business expenses for all stakeholders by eliminating redundant administrative burdens while moving goods and services across international borders (Staples, 2002).

Table 1. Classification of Trade Facilitation Measures

Category	Trade facilitation measures	TFI
Simplify procedures, regulations and documents	• Implementing Trade Facilitation Measures (TFMs) in Part I of the Trade Facilitation Agreement (TFA) according to groups A, B, and C: • Customs procedures comply with the World Customs Organization (WCO) regulations. • Transparency of Non-Tariff Measures (NTMs). • Utilization of mechanisms such as ASEAN Single Window (ASW), ASEAN Transport Facilitation (ATR), ASEAN Customs Transit System (ACTS), ASEAN Solutions for Services, Investment, and Trade (ASSIST), ASEAN Trade Repository (TRS), and Application of Information (AO).	Availability of information (A); Streamline measures to control cross-border trade (H);
Dialogue, coordination, and integration of cross-border trade management agencies	• Enhancing institutional coordination related to Trade Facilitation. • Mutual Recognition Agreements (MRAs).	Consultation (B); Predefined (C); Complaint or grievance procedures (D); Cooperation between domestic cross-border trade management agencies (I); Cooperation between domestic and international cross-border trade regulators (J);
Strengthen the capacity of cross-border trade management agencies	• Enhancing the participation of the private sector, especially MSMEs, in Trade Facilitation issues within the ATF-JCC. • Implementing technical assistance initiatives in Trade Facilitation. • Conduct surveys on trade facilitation using ASTFI and provide training on trade facilitation indicators.	Fees and charges (E); Documentation procedures (F); Governance and Equity (K)
Modernizing cross-border trade management measures	Electronic document exchange.	Automating cross-border (G) trade management procedures;

Source: IEG Approach paper (2017) in Go (2018) và ATF-SAP 2017.

In Vietnam, the legal framework for trade facilitation is primarily centred around implementing commitments outlined in the Trade Facilitation Agreement (TFA) and within ASEAN. Consequently, Vietnam's approach to trade facilitation aligns with TFA and ASEAN, embracing a broader range of measures beyond just customs-related issues. These measures encompass addressing Non-Tariff Measures (NTMs), Non-Tariff Barriers (NTBs), customs integration, ASEAN Single Window, self-certification systems, harmonization of standards, appropriate assessments, and enhancing private sector involvement. This comprehensive strategy can be grouped into four categories: *simplifying customs procedures, regulations, and documentation for imports, exports, and transit; enhancing dialogue, coordination, and integration among cross-border trade management agencies; enhancing the capacities of these agencies; and modernizing cross-border trade management measures to promote seamless trade flows*. A comparison of TF measures under the WTO TFA and ASEAN is presented in Table 1.

2.2. Impacts of trade facilitation on trade flows

Trade facilitation helps reduce trade costs and facilitates enterprises's engagement in international trade by minimizing delays and administrative burdens in customs procedures and compliance with legal, safety, and national security requirements. Trade facilitation's importance in international trade is grounded in foundational economic theories. Ricardo's theory, which was born in 1817, suggests trade benefits arise from countries trading based on comparative advantages (Krugman, 2009). The Heckscher-Ohlin model expands this idea, indicating countries specialize according to abundant resources (Krugman, 2009). Nevertheless, cumbersome trade procedures create costs that reduce these benefits and can lead to reduced trade and welfare. In addition, trade costs again diminish the incentive for trade by aligning world prices with domestic prices. Samuelson's iceberg model (1954) further underscores the impact of trade costs, showing that unnecessary trade procedures increase the gap between producer and consumer prices, reducing trade efficiency. Overall, these theories highlight that reducing trade costs through facilitation is crucial for maintaining the benefits of international trade.

Studies by Wilson et al. (2005), Hertel and Keeney (2006), and Shepherd (2010) demonstrate the significant potential of trade facilitation in boosting overall trade volumes and reducing global trade costs. There is a clear positive correlation between the implementation of trade facilitation measures and the reduction of trade costs (ESCAP, 2024; OECD, 2022). Different measures have broad variable impacts. In the case of regional economic blocs and their free trade agreement like the ASEAN Free Trade Area (AFTA), the increase in trade volume partly stemmed from minimizing non-tariff barriers (Pomfret, Sourdin, 2009; Tran Van Hung, Le Thi Mai Huong, Nguyen Le Anh, 2015). Simplifying customs procedures and implementing single-window customs systems significantly reduce trade costs and improve trade flow (Iwanow, Kirkpatrick, 2009; Go, 2018; Sá Porto et al., 2015; Djankov et al., 2010; Maskus et al., 2013; Duval, Feyler, 2016). This is especially relevant in non-tariff trade costs and compliance with regulatory measures such as Sanitary and Phytosanitary (SPS) standards (Maskus et al., 2013; Fernandes et al., 2017). WTO (2015) and OECD (2012, 2017) acknowledge the substantial benefits that trade facilitation measures bring to developing

countries in increasing exports and enhancing overall economic welfare. Countries implementing the WTO Trade Facilitation Agreement (TFA) experience a reduction in trade costs ranging from 1% to 4%, while those participating in regional trade agreements (RTAs) with facilitation provisions see reductions of 2% to 10% (ESCAP, 2024).

Streamlining trade procedures through trade facilitation is essential for minimizing trade costs and enhancing participation in Global Value Chains (GVCs). In the current era of technological advancement, production processes are increasingly fragmented across different countries within GVCs, involving substantial trade in intermediate goods. This situation emphasizes the importance of reducing cumbersome import and export procedures to improve efficiency in GVCs. Such improvements are crucial for encouraging specialization and enabling effective integration of developing countries into the global supply chain (Yi, 2010). The impact of trade facilitation on GVCs is further highlighted by research demonstrating that simplified cross-border trade management procedures can significantly reduce compliance time and costs. This streamlining facilitates the import of intermediate goods, crucial for GVCs, and enhances the export of time-sensitive inputs (Shepherd, 2013; Hoekman, Shepherd, 2015; Carballo et al., 2016). These improvements are particularly vital for regions like ASEAN and East Asia, where the movement of intermediate goods plays a key role in inter-regional trade dynamics (Pellan, Wong, 2013). Empirical studies corroborate that simplifying trade management procedures leads to an increase in trade flow, especially for time-sensitive goods (Iwanow, Kirkpatrick, 2009; Djankov et al., 2010; Hoekman, Shepherd, 2015; Shepherd, 2013; Volpe Martincus et al., 2016). These findings underline the importance of trade facilitation measures in reducing barriers and costs associated with cross-border trade, thereby boosting global trade efficiency and participation in GVCs.

Trade facilitation plays a significant role in increasing export opportunities. Trade facilitation significantly enhances export opportunities by expanding market access and enabling economies of scale, as outlined in the New Trade Theory (Krugman, 1979; 1981). This is especially beneficial for businesses in developing countries, allowing them to reach productivity levels necessary for successful exporting (Bernard et al., 2007). Streamlined trade procedures reduce variable and fixed trade costs, including tariffs and market research expenses, broadening export potential.

Streamlined procedures, along with improved information availability, also reduce compliance time and complexity with regulations such as Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT), aiding exporters in developing countries (Go, 2018; Moïsé, Sorescu, 2013; Ferro et al., 2015; Chen et al., 2008; Portugal-Perez et al., 2010; Liu, Yue, 2012; Mangelsdorf et al., 2012; Shepherd, Wilson, 2008). Furthermore, trade facilitation helps expand trade margins, enabling the export of new goods or to new markets. Delays in exports can reduce export turnover to new customers (Martincus et al., 2016) while improving export procedure times enhances the diversity of exported goods and export markets for developing countries (Shepherd, 2010; Dennis, Shepherd, 2009; Persson, 2013). Fontagné et al. (2016) found that improvements in information availability and advance determination positively impact the diversity of goods exported by small businesses. Conversely, strict standards can negatively impact a company's export decisions, but aligning international standards can reduce information asymmetry and promote export diversity

(Fernandes et al., 2017; Shepherd, 2015). Thus, efficient trade facilitation is essential for increasing the depth and width of exports, particularly for developing countries.

Trade facilitation has been recognized as a critical factor in promoting economic growth and enhancing the manufacturing sector, especially in transition countries moving from centrally planned to market-oriented economies. Studies such as Rusinova (2010) demonstrate that trade facilitation positively impacts economic development in Central and Eastern Europe and the former Soviet Union by addressing factors such as foreign capital and institutional quality. Zaki (2014) further models trade facilitation within multi-regional and multi-sectoral frameworks, showing significant economic gains for developing and transition economies. Balistreri and Olekseyuk (2023) highlight the broader implications of investment facilitation agreements, indicating that such measures can exceed the gains from traditional trade facilitation by improving the investment climate. Cosgrove-Sacks and Apostolov (2003) emphasize the need for comprehensive trade facilitation policies to bridge the gap between developed and developing countries. Ijirshar (2022) finds that container port traffic and trade infrastructure improvements significantly influence economic growth in transition economies. These studies underscore the multifaceted benefits of trade facilitation, including reduced trade costs, enhanced market access, and improved regulatory compliance, which are vital for fostering economic integration and growth in transition countries.

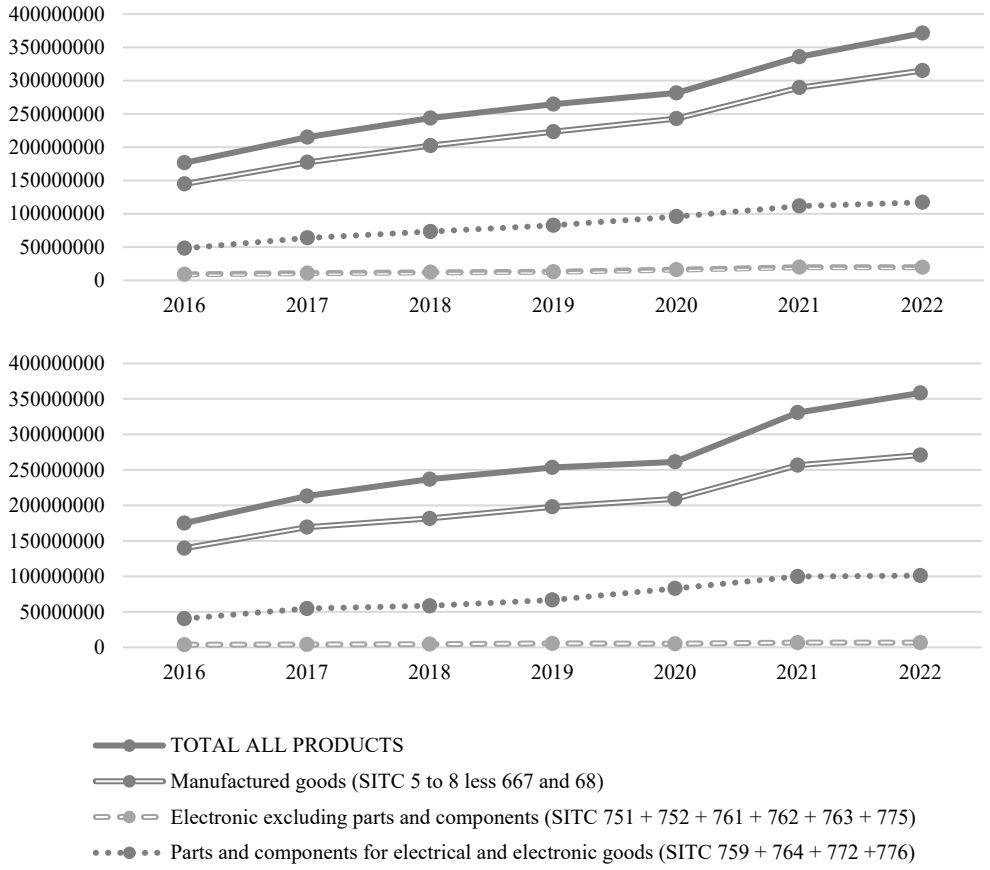
Despite a substantial body of literature demonstrating the positive effects of trade facilitation on trade flows and economic growth, comprehensive studies specifically examining the trade of manufactured goods in transition countries are limited. Existing research often focuses on developing countries, but transition economies face unique challenges and opportunities as they shift from centrally planned to market-oriented systems. Moreover, while the overall benefits of trade facilitation are well-documented, there is a need for more detailed analyses of how specific measures – such as customs simplification, infrastructure improvements, and regulatory compliance – affect the trade of manufactured goods. This paper addresses this gap by analyzing the breakdown of trade facilitation measures and their impact on the manufactured goods trade in Vietnam, a representative transition economy. By focusing on Vietnam, this study offers valuable insights for policymakers and businesses aiming to enhance competitiveness and stimulate economic growth in other transition economies.

3. Trade in Manufactured Goods and Trade Facilitation Performance of Vietnam

3.1. Trade in manufactured goods

From 2016 to 2022, Vietnam's economic landscape transformed significantly, marked by rapid growth in the export and import of manufactured goods, including parts and components. This period saw substantial escalation in trade activities, signifying Vietnam's deepening integration into global supply chains and its expanding presence in international trade. The nation's export data from this period indicates remarkable growth, with total exports soaring from $176.6 billion in 2016 to $371.2 billion in 2022. This surge, particularly in the manufacturing sector (SITC 5 to 8, excluding 667 and 68), underscores the critical role of manufactured goods in Vietnam's export portfolio.

Figure 1. Trade in manufactured goods from 2016-2022



Source: UNCTADstat.

The export of electronic goods, excluding parts and components, doubled from $9.1 billion in 2016 to $19.7 billion in 2021, showcasing Vietnam's strength in electronics manufacturing. The growth in exports of office machines, automatic data processing machines, television and radio receivers, sound recorders or reproducers, and household electrical equipment is noteworthy. Additionally, the export of parts and components for electrical and electronic goods expanded significantly, with values increasing from $48.2 billion in 2016 to $117.1 billion in 2022. This highlights Vietnam's pivotal role in global value chains.

Transnational corporations (TNCs), such as Samsung Electronics, Foxconn, and Pegatron, have established significant manufacturing operations in Vietnam, boosting electronic exports and contributing to economic development and global supply chain integration. Vietnam's robust export growth is mirrored by strong import performance, reflecting the country's growing economic activities and demand for essential goods and materials. Imports

of "manufactured goods" grew from approximately $139.67 billion in 2016 to about $270.89 billion in 2022, emphasizing Vietnam's industrialization and the role of efficient trade facilitation in enabling the swift importation of goods.

3.2. Trade facilitation performance

Vietnam's trade facilitation journey has been shaped by a series of comprehensive measures, underpinned by both regional and international agreements and bolstered by the benefits of its WTO membership. The foundation of Vietnam's commitment can be traced back to its accession to the World Customs Organization (WCO) in 1993, which played a pivotal role in its participation in key conventions, including the 1997 Kyoto Convention, the 1998 Harmonized System (HS) Convention, and the 2008 Kyoto Protocol Amending Convention. These agreements laid the groundwork for Vietnam's strategic focus on harmonizing international trade standards. This commitment culminated in 2018 with its participation in the WCO's Istanbul Convention on Temporary Admission of Goods, underscoring the country's dedication to fostering streamlined customs operations and aligning with global best practices.

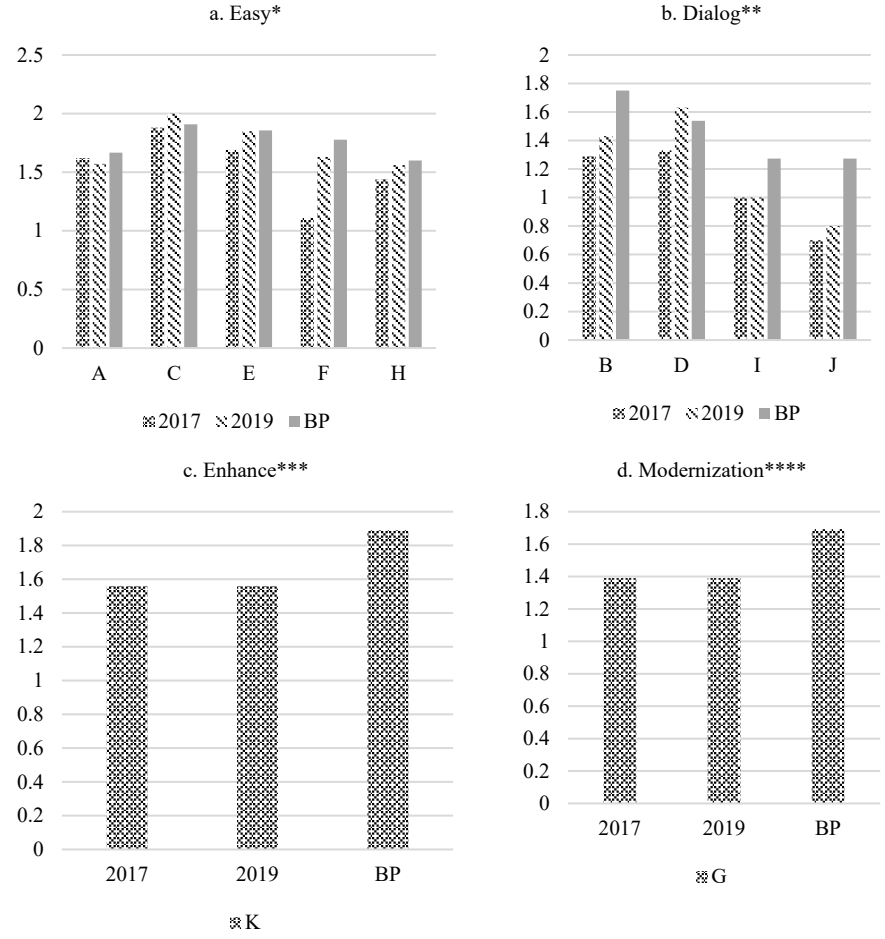
Central to Vietnam's approach is the modernization of customs procedures, emphasizing goods release, efficient clearance, and close collaboration between customs and related authorities. Vietnam's 2016 Decision No. 1969/QD-TTg, which aligns its policies with the core principles of the WTO's Trade Facilitation Agreement (TFA), has been instrumental in promoting this transformation. The establishment of the Vietnam National Trade Portal has further strengthened the dissemination of trade-related information, supported by a robust legislative framework including Circulars No. 274/2016/TT-BTC and Decrees No. 08/2015/ND-CP and No. 59/2018/ND-CP, which collectively facilitate more efficient customs procedures.

Vietnam's trade facilitation efforts also extend into the ASEAN framework, highlighted by initiatives like the ASEAN Economic Community (AEC) and the ASEAN Trade in Goods Agreement (ATIGA). Vietnam's active role in the ASEAN Single Window (ASW), ASEAN Customs Transit System (ACTS), and the Self-Certification of Origin has been crucial in harmonizing trade practices and reducing non-tariff barriers within the region. The establishment of the National Steering Committee on ASEAN Single Window and National Single Window further demonstrates Vietnam's proactive approach. By August 2020, Vietnam had successfully integrated over 200 administrative procedures across 13 ministries into its National Single Window, streamlining over 3.2 million records submitted by 40,000 businesses. The linkage to the ASEAN Single Window enabled the seamless exchange of electronic certificates of origin (eCOs) with ASEAN member states, reflecting Vietnam's commitment to enhancing cross-border trade efficiency.

These developments underscore Vietnam's proactive stance in strengthening its trade facilitation landscape. Vietnam has consistently worked to improve cross-border efficiency, fostering deeper integration within the ASEAN community. This progress is evident in the significant improvement of its trade facilitation index between 2017 and 2019. Vietnam's focus on simplifying customs procedures, regulations, and documentation led to an

impressive average score of 1.72 out of 2 in 2019, a notable 11.3% increase from 2017. Key areas of progress included advance rulings (C), fees and charges (E), and document procedures (F), all of which showed substantial growth. This steady improvement in trade facilitation highlights Vietnam's trajectory toward adopting global best practices and enhancing its role in international trade.

Figure 2. Vietnam's Trade Facilitation Performance Index in 2017, 2019



Notes: BP: best practice

** Group of measures to simplify customs procedures, regulations, and documents related to the export, import, and transit of goods (A, C, E, F, H); ** Group of measures for dialogue, coordination, and integration of cross-border trade management agencies (B, D, I, J); *** Group of measures to strengthen the capacity of cross-border trade management agencies (K) **** Group of efforts to modernize cross-border trade management measures (G).*

Indicator: (A) Information Availability; (B) Involvement of the Trade Community (Consultations); (C) Advance rulings; (D) Appeal procedures; (E) Fees and Charges; (F) Formalities – documents; (G) Formalities – automation; (H) Formalities – procedures; (I) Internal cooperation; (J) External cooperation; (K) Governance and impartiality.

Source: OECD TFI Database

Despite Vietnam's notable progress, disparities in performance scores have emerged, particularly in cross-border trade management, dialogue, coordination, and integration efforts. In 2019, the average score for these aspects reached 1.46, reflecting a 12.5% improvement from 2017. However, significant challenges persist, especially in aligning domestic and international trade management bodies (I and J). Incomplete digital systems linking import and export authorities, limited implementation of authorized economic operator (AEO) measures, mismatched working hours with neighbouring countries, and weak inter-agency cooperation at border crossings hinder seamless trade facilitation. The "Enhance" and "Modernization" categories also showed stagnant performance, with a gap of 0.33 and 0.3 from best practice, respectively, signalling the need for a 21.1% and 22% improvement to align with global standards.

Trade facilitation in transition countries, particularly in Central Asia and Southeast Asia, shows varying levels of success. Central Asian countries like Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan, part of the broader South and East Europe, Caucasus, and Central Asia region, had a 68% trade facilitation implementation rate in 2023 (ESCAP, 2024). Initiatives like the EU-funded Ready4Trade project, focusing on e-commerce and virtual border management, have driven progress in Kyrgyzstan, Tajikistan, and Uzbekistan, while Tajikistan and Turkmenistan's participation in cross-border paperless trade agreements show ongoing efforts (ESCAP, 2024). Southeast Asian nations like Cambodia, China and Laos have achieved a higher 77% implementation rate, reflecting deeper integration into global trade networks (ESCAP, 2024).

Vietnam and many other transition countries face similar challenges with internal and external border cooperation, which hinders further progress in trade facilitation (OECD, 2022). Additionally, both Vietnam and transition economies in South and East Europe, the Caucasus, and Central Asia need to address issues such as inter-agency coordination and fully operationalizing Authorized Economic Operator (AEO) measures to improve trade efficiency (ESCAP, 2024). As these nations continue to refine their trade systems, there is significant potential to enhance cross-border efficiency and strengthen global trade performance.

4. Methodology and Data

This study employs a partial equilibrium gravity model to quantitatively assess the impact of trade facilitation on Vietnam's trade flow. The gravity model, formulated initially to predict human migration, has been adapted for international trade research due to its precision (Young, 1924). Pioneered by researchers like Pöyhönen (1963) and Tinbergen (1962) (Pöyhönen, 1963; Tinbergen, 1962), this model provides insights into trade flows between countries based on various factors. It has since evolved into the structural gravity model, offering a versatile framework for analyzing trade policies in a multi-country environment (Linnemann, 1966).

The fundamental structure of the basic gravity model involves bilateral trade flows determined by the economic scale, demographics, and geographical location of countries (Pöyhönen, 1963; Tinbergen, 1962). Researchers have extended this model to include trade barriers and other factors, resulting in the augmented gravity model (Anderson, van Wincoop,

2003). This extended model considers factors like bilateral trade costs, internal multilateral resistance (P_j), and external multilateral resistance (Π_i) (Anderson and van Wincoop, 2003). The structural gravity model used in this study considers national scale (Y_i), nominal income (Y_i), trade costs (t_{ij}), and multilateral resistances (P_j and Π_i) (Anderson and van Wincoop, 2003). It provides insights into the scale term, which relates the national scale to bilateral trade flows, and the trade cost term, which accounts for trade frictions (Anderson and van Wincoop, 2003).

Estimating the gravity equation faces challenges related to variables P_j and Π_i, zero trade values, changing variances in trade data, customized trade cost specifications, and endogeneity of trade policies (Arvis et al., 2013; Fally, 2015; Head, 2003). To address these challenges, the study employs the Poisson Pseudo Maximum Likelihood (PPML) estimator, known for handling changing variances and biases in trade data (Silva and Tenreyro, 2006).

The impacts of trade facilitation are assessed through a structural gravity model, which includes various dependent variables such as total imports and exports of Vietnam, imports and exports of manufactured goods, electronic goods, and components and parts. Trade facilitation measures are represented by four scores related to customs procedures, dialogue and coordination, capacity enhancement, and modernization. Additional factors like common language, common language ethnicity, contiguity, colonial relationships, bilateral distance, and newly imported variables (REM_IMP and REM_EXP) are also considered (Anderson and van Wincoop, 2003).

The specific empirical equation is as follows:

$$T_{ijt} = a_{ij} + a_1 \ln DIST + a_2 \ln_GDP_i + a_3 Ln_GDP_j + a_4 Ln_TF_{ij} + a_5 Landlocked + a_6 colony + a_7 comlang + a_8 comcol_{ij} + a_9 Ln_REM_IMP + a_{10} Ln_REM_EXP + e_{ij}^t \quad (I)$$

Where:

(j) represents partner countries;

(i) represents Vietnam;

(t) represents time: years 2017 and 2019;

e_{ijt}: error term

The data sources and expected estimation results regarding the signs of the variables are described in Table 2.

The independent variables are meticulously chosen for multiple dimensions of trade facilitation and trade-related characteristics. Trade facilitation is gauged through the TF_{ij} variable, which aggregates trade facilitation scores of both Vietnam and its partner country (j). These scores are further categorized into four groups: $Easy_{ij}$, Dialogij, $Enhance_{ij}$, and $Modernization_{ij}$, each capturing specific aspects of trade policy and logistics. Additionally, variables like Comlang_off, $COMLANG_{ETHNO}$, Contig, and Comcol account for shared language, geographical contiguity, and colonial history, which can influence manufactured goods trade patterns. Including REM_IMP and REM_EXP factors, measuring weighted average distances by production offers a nuanced understanding of how distance impacts

trade and helps the model properly consider both the exporter's and importer's perspectives (Head, 2003). These variables collectively provide a rich dataset to assess how trade facilitation and various economic and geographic factors influence Vietnam's trade in manufactured goods dynamics.

Table 2. Variable description

Variables	Description	Data source	Expected results
T_{ijt}	Bilateral trade between country (i) and country (j) in year (t). The study estimates specific dependent variables as follows: Ma_im: Imports of manufactured goods by Vietnam Ma_ex: Exports of manufactured goods by Vietnam El_im: Imports of electronic goods by Vietnam El_ex: Exports of electronic goods by Vietnam Pa_im: Imports of components and parts by Vietnam Pa_ex: Exports of components and parts by Vietnam	UNCTADstat	
GDP_{jt}	GDP_{jt} describes the GDP of the country (j) in year t	Worldbank	+
$DIST_{ij}$	Bilateral distance between the two largest cities of the two countries i and j	CEPII	–
$TF_{i,j}$	the trade facilitation variable. TF_{ij} is the square root of the product of the trade facilitation scores of Vietnam and its partners. In estimating equation (I), $TF_{i,j}$ belongs to one of the following four groups of measures: $EASY_{ij}$: score of the group of measures simplifying customs procedures, regulations, and documents related to the export, import, and transit of goods. $DIALOG_{ij}$: score of the group of measures for dialogue, coordination, and integration of cross-border trade management agencies. $ENHANCE_{ij}$: score of the group of measures enhancing the capacity of cross-border trade management agencies. $MODERNIZATION_{ij}$: score of the group of measures modernizing cross-border trade management measures.	WTO	+
Colony	The dummy variable is set to 1 if two countries have a colonial relationship.	CEPII	+
Conlang	The dummy variable is set to 1 if two countries are contiguous.	CEPII	+
Comcol	The dummy variable is set to 1 if two countries have colonial relations.	CEPII	+
Landlocked	The dummy variable is set to 1 if a country is landlocked	CEPII	-
$REM_IMP_{i,t}$	The new interaction term on the import side, calculated as the weighted average distance based on the output of exporter i $REM_EXP_{i,t}=jDIST_{ij}/Y_j$, tY_t	CEPII, UNCTADstat	
$REM_EXP_{j,t}$	The new interaction term on the export side, calculated as the weighted average distance based on the output of importer j $REM_IMP_{j,t}=jDIST_{ij}/Y_i$, tY_t	CEPII, UNCTADstat	

Source: Authors'compilation.

5. Empirical Results

Tables 3, 4, and 5 showcase the results from the PPML estimation of equation (I), elucidating the significant effects of GDP (GDP_i, GDP_j) and four trade facilitation variables ($EASY_{ij}$, $DIALOG_{ij}$, $ENHANCE_{ij}$, and $MODERNIZATION_{ij}$) on Vietnam's trade flows. This approach aligns with the methodologies used in similar studies (Wilson et al., 2003; Shepherd & Wilson, 2008) and provides a robust framework for understanding trade dynamics. Table 3 presents the PPML estimations of equation (I), where Ma_im (total imports of manufactured goods of Vietnam) is the dependent variable. The independent variables of trade facilitation-$EASY_{ij}$, $DIALOG_{ij}$, $ENHANCE_{ij}$, and $MODERNIZATION_{ij}$-are showcased in columns (1), (2), (3), and (4), respectively. Consistent with Helble et al. (2007) and Persson (2013), the GDP of trading partners positively correlates with Vietnam's total import turnover, highlighting the influence of partner countries' economic size on trade volumes.

Among the trade facilitation variables, $EASY_{ij}$ – denoting measures to simplify customs procedures, regulations, and documents related to cross-border trade – exerts the most significant impact on Vietnam's imports of manufactured goods. This finding resonates with the results of Iwanow and Kirkpatrick (2009), who emphasized the critical role of customs simplification in enhancing trade flow. A 1% improvement in $EASY_{ij}$ is associated with an approximate $0.084 billion increase in Vietnam's imports of manufactured goods. Similarly, $ENHANCE_{ij}$, representing measures to bolster the capacity of cross-border trade management agencies, markedly influences Vietnam's imports, echoing the observations made by Moïsé and Sorescu (2013). A 1% enhancement in $ENHANCE_{ij}$ correlates with a $0.074 billion increase in imports. Other variables, $DIALOG_{ij}$ and $MODERNIZATION_{ij}$, with coefficients of 5.338 and 4.399, respectively, also significantly affect imports. These findings support the work of Stone and Strutt (2009), who highlighted the benefits of dialogue and modernization in trade facilitation.

The export aspect of Vietnam's trade, as depicted in Table 2 (columns 5, 6, 7, and 8), highlights the critical role of GDP and trade facilitation in shaping trade dynamics. The positive correlation between partner countries' GDP and Vietnam's export of manufactured goods reflects the global economic reality where larger economies drive higher trade volumes, consistent with findings by Shepherd and Wilson (2008). The $EASY_{ij}$ group of measures, focusing on streamlining customs procedures and documentation, significantly impacts Vietnam's export of manufactured goods, with a 1% improvement resulting in a $0.036 billion increase in exports. This finding aligns with Moïsé and Sorescu (2013), who also emphasized the efficacy of such simplifications. The $DIALOG_{ij}$, $ENHANCE_{ij}$, and $MODERNIZATION_{ij}$ groups also show notable effects, with respective increases of $0.027, $0.036, and $0.016 billion per 1% improvement, echoing Dennis and Shepherd (2009).

Interestingly, trade facilitation impacts Vietnam's imports of manufactured goods more pronouncedly than exports. This is crucial for resource allocation, suggesting that the Vietnamese government may need to prioritize specific trade facilitation aspects to maximize export benefits, as Helble et al. (2007) suggested. The $EASY_{ij}$ group has the most significant influence on imports, followed by ENHANCEij and $MODERNIZATION_{ij}$, consistent with Shepherd's (2016) findings on APEC economies.

Table 3. PPML estimation results of Vietnam's manufactured goods imports and exports

	(1) Ma_im	(2) Ma_im	(3) Ma_im	(4) Ma_im	(5) Ma_e	(6) Ma_e	(7) Ma_e	(8) Ma_e
Ln_dist	-0,202 (-0,85)	-0,145 (-0,37)	-0,441* (-2,24)	-0,0598 (0,19)	-0,560** (-3,40)	-0,633** (-3,97)	-0,638** (-4,04)	-0,482* (-2,82)
Ln_GDP_j	0,959*** (11,11)	1,009*** (11,68)	1,027*** (11,78)	1,021*** (13,45)	0,908** (16,09)	0,919** (17,19)	0,904** (18,32)	0,928** (18,02)
Landlocked	0,178 (0,57)	0,249 (0,75)	0,462 (1,39)	0,109 (0,35)	-0,237 (-0,73)	-0,216 (-0,68)	-0,179 (-0,57)	-0,273 (-0,82)
Comlang	-2,581*** (-5,57)	-2,204*** (-6,84)	-3,215*** (-5,37)	-2,460*** (-8,84)	-0,977** (-4,35)	-0,943** (-4,11)	-1,396** (-5,05)	-1,019** (-4,28)
Colony	-1,053*** (-4,67)	-1,144*** (-5,35)	-0,933* (-4,52)	-1,011*** (-5,43)	-0,239* (-2,22)	-0,292* (-2,39)	-0,216* (-2,12)	-0,201 (-1,65)
Comcol	1,410*** (4,46)	1,371*** (4,31)	1,627*** (4,84)	1,440*** (4,91)	0,290 (1,63)	0,264 (1,43)	0,373* (2,15)	0,333 (1,94)
Ln_EASY_{ij}	**8,368**** **(2,82)**				**3,612*** **(3,20)**			
Ln_DIALOG_{ij}		**5,338*** **(2,44)**				**2,751*** **(3,18)**		
$Ln_ENHANCE_{ij}$			**7,396**** **(2,64)**				**3,575*** **(3,10)**	
$Ln_MODERNIZATION_{ij}$				**4,399***** **(3,45)**				**1,568*** **(2,14)**
REM_EXP	- 0,000310*** (-4,74)	- 0,000319*** (-3,67)	- 0,000303*** (-5,17)	- 0,000347*** (-4,85)	,0000138 (0,43)	,0000190 (0,62)	,0000110 (0,39)	,00000308 (0,09)
REM_IMP	-4,87e-17 (-1,83)	-3,25e-17 (-1,14)	-4,54e-18 (-0,26)	--1,60e-17 (-0,79)	-8,86e-1 (-0,72)	-3,56e-1 (-0,31)	7,97e-1 (0,90)	7,71e-1 (0,77)
Cons	1,461 (0,84)	2,747 (1,09)	2,815 (1,08)	0,725 (0,38)	5,389** (3,85)	6,763** (5,21)	6,143** (4,69)	5,545** (4,04)
N	148	148	148	148	148	148	148	148
t statistics in parentheses								
* p<0.05, ** p<0.01, ***P<0.001								

Source: Author's calculation.

Trade facilitation measures show different impacts for electronic goods than general and manufactured goods. A 1% improvement in the $EASY_{ij}$ group increases electronic goods imports by $0.081 billion, highlighting the critical role of simplified procedures in this sector. $DIALOG_{ij}$, $ENHANCE_{ij}$, and $MODERNIZATION_{ij}$ improvements also boost imports, albeit less significantly. The pronounced effect of $EASY_{ij}$ on electronic imports underscores the sector's sensitivity to delays, as efficient customs processes are essential for the electronics industry's just-in-time supply chains, a point emphasized by Dennis and Shepherd (2009).

Overall, the analysis of Vietnam's trade facilitation measures demonstrates their substantial impact on exports and imports, with a particularly notable effect on electronic goods. This underscores the importance of targeted trade facilitation efforts to enhance Vietnam's trade performance, aligning with the broader literature.

Table 4. PPML estimation results of Vietnam's electronic goods imports and exports

	(17) El_im	(18) El_im	(19) El_im	(20) El_im	(21) El_ex	(22) El_ex	(23) El_ex	(24) El_ex
Ln_dist	0,258 (0,72)	0,259 (0,44)	0,0993 (0,26)	0,393 (0,79)	-0,322 (-1,75)	-0,417* (-2,26)	-0,478* (-2,98)	-0,144 (-0,69)
Ln_GDP$_j$	0,790*** (7,51)	0,884*** (8,19)	0,929*** (8,37)	0,892*** (9,56)	0,747*** (14,87)	0,761*** (15,07)	0,735*** (15,57)	0,768*** (15,49)
Landlocked	0,162 (0,22)	0,152 (0,23)	0,143 (0,22)	0,154 (0,22)	-1,442* (-2,41)	-1,412* (-2,49)	-1,334* (-2,16)	-1,537* (-2,60)
Comlang	-3,274*** (-6,17)	-2,711*** (-4,95)	-2,848*** (-4,28)	-2,852*** (-5,50)	0,298 (0,87)	0,373 (1,13)	-0,413 (-1,30)	-0,214 (0,81)
Colony	-0,474 (-0,84)	-726 (-1,64)	-0,694 (-1,94)	-0,580 (-1,22)	-0,669*** (-4,95)	-0,745*** (-4,79)	-0,611*** (-5,37)	-0,631*** (-4,42)
Comcol	1,036* (2,57)	0,977* (2,40)	1,032** (2,67)	1,099** (2,66)	-0,157 (-0,55)	-0,167 (-0,57)	0,0294 (0,11)	-0,0883 (-0,34)
Ln_EASY$_{ij}$	**8,058***** **(3,47)**				**6,574**** **(3,49)**			
Ln_DIALOG$_{ij}$		**3,942** **(1,94)**				**4,589**** **(3,99)**		
Ln_ENHANCE$_{ij}$			**1,818** **(0,97)**				**6,227**** **(4,26)**	
Ln_MODERNIZATION$_{ij}$				**2,393**** **(2,60)**				**3,447**** **(3,41)**
REM_EXP	- 0,000583*** (-4,68)	- 0,000532*** (-4,07)	- 0,000462*** (-5,04)	- 0,000544*** (-4,72)	0,0000157 (-0,51)	- 0,0000076 (-0,25)	- 0,0000140 (-0,54)	- 0,0000442 (-1,25)
REM_IMP	-4,12e-17 (-1,79)	-1,68e-17 (-0,72)	1,27e-17 (0,79)	-2,95e-19 (-0,02)	-2,89e-17 (-1,91)	-1,68e-17 (-1,19)	-4,12e-20 (-0,00)	-1,19e-18 (-0,10)
Cons	-1,689 (-0,86)	-0,749 (-0,21)	-0,424 (-0,18)	-1,869 (-0,69)	1.820 (1,10)	4,202* (3,03)	3,464* (2,56)	1,869 (1,25)
N	148	148	148	148	148	148	148	148
t statistics in parentheses								
* p<0.05, ** p<0.01, ***P<0.001								

Source: Author's calculation.

Trade facilitation variables significantly impact the export of electronic goods in Vietnam. Specifically, improvements of 1% in the Easy, Enhance, Dialog, and Modernization groups of measures result in export turnover increases of $0.066 billion, $0.062 billion, $0.046 billion, and $0.034 billion, respectively. This indicates that trade facilitation improvements substantially affect electronic goods exports more than manufactured goods. Interestingly, the impact of Dialog, Enhancement and Modernization measures on electronic goods exports is even greater than their impact on electronic goods imports, highlighting the crucial role of trade facilitation in promoting Vietnam's key export industries, such as electronics.

For the import of components and parts, Vietnam is most sensitive to the Enhance group of measures, which includes activities such as training and technical support for relevant agencies. The impact coefficient for this group on imports is 13.66. When trade facilitation

measures in Easy, Dialog, Enhance, and Modernization are improved by 1%, import turnover increases by approximately $0.066 billion, $0.083 billion, $0.14 billion, and $0.075 billion, respectively. This demonstrates that trade facilitation measures significantly promote Vietnam's components imports compared to manufactured and electronic goods imports.

The impact of trade facilitation measures on the export flows of components, while not as great as on import flows, is still substantial. A 1% improvement in the Easy, Dialog, Enhance, and Modernization groups increases component exports by $0.049 billion, $0.028 billion, $0.036 billion, and $0.027 billion, respectively. Because parts and components are susceptible to trade costs due to the "just in time" strategy of value chain leaders, trade facilitation in this sector is particularly critical.

These findings align well with existing literature. The significant role of simplifying customs procedures, regulations, and documentation (Easy) in boosting Vietnam's electronic goods exports supports the conclusions of Shepherd and Wilson (2008) and Moïsé and Sorescu (2013), who emphasize the importance of efficient cross-border trade management in globally integrated, technologically advanced sectors. Additionally, the sensitivity of component imports to trade facilitation measures mirrors insights from Bernard et al. (2007) and Hoekman and Shepherd (2015), which highlight the necessity of streamlined trade procedures for supply chains following "just in time" strategies. The differential impacts of various trade facilitation measures on imports versus exports, as shown in this research, are consistent with studies by Volpe Martincus et al. (2016) and Fernandes et al. (2017), suggesting that the effectiveness of these measures can vary based on the nature of goods and supply chain configurations.

The empirical results confirm that trade facilitation plays a crucial role in enhancing Vietnam's trade in manufactured goods, particularly from 2016 to 2022. The analysis shows a significant positive relationship between trade facilitation measures and both imports and exports, with a more pronounced effect on imports, particularly in the electronics sector. This underscores the importance of efficient import processes for industries reliant on just-in-time supply chains. Among the four key groups of trade facilitation measures, simplifying customs procedures ($EASY_{ij}$) has the most substantial impact on trade flows, followed closely by measures aimed at enhancing the capacity of trade management agencies ($ENHANCE_{ij}$), which influence both imports and exports, especially for parts and components. While $DIALOG_{ij}$ and $MODERNIZATION_{ij}$ measures also contribute to improved trade performance, their impact is less pronounced than $EASY_{ij}$ and $ENHANCE_{ij}$. These findings highlight the sector-specific nature of trade facilitation's impact and suggest that tailored policy measures targeting key sectors, particularly those with high trade sensitivity like electronics, are essential for maximizing the benefits of trade facilitation in transition economies like Vietnam.

Table 5. PPML estimation results of Vietnam's part and component imports and exports

	(25) Pa_im	(26) Pa_im	(27) Pa_im	(28) Pa_im	(29) Pa_ex	(30) Pa_ex	(31) Pa_ex	(32) Pa_ex
Ln_dist	-0,260 (-0,80)	0,0378 (0,05)	-0,729** (-2,67)	0,285 (0,39)	-0,304 (-1,68)	-0,299 (1,57)	-0,368* (-2,12)	-0,150 (-0,75)
Ln_GDP_j	0,966*** (7,07)	1,015*** (6,97)	1,109*** (8,73)	1,071*** (8,23)	0,851*** (14,00)	0,875*** (14,48)	0,862*** (14,52)	0,871*** (14,71)
Landlocked	-0,591 (-1,08)	-0,578 (-1,02)	-0,0449 (-0,08)	-0,738 (-1,37)	-0,832 (-1,36)	-0,814 (-1,36)	-0,762 (-1,21)	-0,915 (-1,51)
Comlang	-4,266*** (-4,33)	-3,307*** (-6,53)	-5,288*** (-6,27)	-3,668*** (-6,96)	-1,063*** (-5,81)	-0,975*** (-5,01)	-1,487*** (-4,64)	-1,124*** (-6,52)
Colony	-2,822*** (-4,93)	-2,976*** (-6,06)	-2,537*** (-4,66)	-2,801*** (-6,08)	-0,0647 (-0,46)	-0,0929 (-0,54)	-0,00665 (-0,05)	-0,0471 (-0,30)
Comcol	-1,766*** (3,71)	1,716*** (3,78)	2,200*** (4,34)	1,769*** (4,03)	0,00336 (0,01)	-0,00282 (-0,01)	0,108 (0,37)	0,0353 (0,12)
Ln_EASY_{ij}	**6,574***** **(3,49)**				**4,926***** **(3,49)**			
Ln_DIALOG_{ij}		**8,289*** **(2,46)**				**2,808*** **(2,46)**		
$Ln_ENHANCE_{ij}$			**13,66***** **(3,88)**				**3,647*** **(2,33)**	
$Ln_MODERNIZATION_{ij}$				**7,514**** **(2,97)**				**2,650*** **(3,13)**
REM_EXP	- 0,000368* (-2,53)	-0,000396 (-1,93)	- 0,000354** (-3,24)	- 0,000424* (-2,58)	- 0,0000545 (-1,55)	- 0,0000536 (-1,46)	- 0,0000542 (-1,64)	- 0,0000793* (-2,58)
REM_IMP	-8,64e-17 (-1,87)	-4,60e-17 (-1,03)	-1,12e-17 (-0,43)	-2,05e-17 (-0,63)	-1,44e-17 (-0,94)	-2,06e-18 (-0,14)	1,07e-17 (0,93)	5,89e-18 (0,46)
Cons	-2,423 (-0,96)	-0,456 (-0,10)	0,143 (0,08)	-3,978 (-0,82)	2,956* (2,25)	4,075** (3,19)	3,902** (3,25)	2,773* (2,25)
N	148	148	148	148	148	148	148	148
t statistics in parentheses								
* p<0.05, ** p<0.01, ***P<0.001								

Source: Author's calculation.

6. Conclusions and Implications

This study highlights the pivotal role trade facilitation plays in boosting Vietnam's trade in manufactured goods, with particular emphasis on the electronics sector. The empirical analysis shows that while trade facilitation positively affects both imports and exports, the impact is more substantial on imports, especially for electronic goods and components, underlining the importance of efficient import procedures for GVC engagement. Simplifying customs procedures emerged as the most impactful measure, particularly in time-sensitive sectors. Additionally, enhancing the capacity of trade management agencies and improving inter-agency coordination contributed positively to trade flows. However, challenges persist, particularly in regulatory consistency and coordination across agencies. Vietnam's progress

underscores the need for continuous improvements and targeted policy interventions to sustain the gains achieved through trade facilitation, ensuring long-term competitiveness and integration into global value chains.

The findings of this study have broader implications for other transition economies seeking to enhance their trade performance, particularly in the manufacturing sector. First, the research underscores the importance of tailoring trade facilitation measures to the specific needs of different sectors. In industries such as electronics, where speed and efficiency are paramount, targeted measures like customs simplification and streamlined logistics processes are essential to improving competitiveness. Transition economies should prioritize reforms that address the unique requirements of high-growth sectors to maximize the benefits of trade facilitation.

Second, digitalization emerges as a crucial tool for improving trade efficiency. Vietnam's successful implementation of the National Single Window and e-customs platforms demonstrates the potential for digital tools to reduce processing times, increase transparency, and lower trade costs. Transition economies should focus on adopting similar digital solutions to streamline trade processes and facilitate better integration into global value chains.

Finally, the study emphasizes that proactive policy reforms, supported by robust institutional frameworks, are vital for sustaining the benefits of trade facilitation. Transition economies can learn from Vietnam’s approach by engaging in regional trade agreements, building institutional capacity, and adopting phased reforms to overcome regulatory and logistical barriers. By focusing on sector-specific trade facilitation, embracing digitalization, and fostering stakeholder coordination, transition economies can enhance their global trade competitiveness and drive sustainable long-term economic growth.

References

Balistreri, E. J., Olekseyuk, Z. (2023). Economic Impacts of Investment Facilitation. Retrieved from https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1025&context=econfacpub.

Bernard, A. B., Jensen, J. B., Redding, S. J., Schott, P. K. (2007). Firms in international trade. – Journal of Economic Perspectives, 21(3), pp. 105-130.

Carballo, J., Graziano, A., Schaur, G. (2016). The Heterogeneous Effects of Trade Facilitation: Theory and Evidence. – SSRN Electronic Journal.

Cerovic, B., Nojkovic, A., Uvalic, M. (2014). Growth and industrial policy during transition. – Economic Annals, 59(201), pp. 7-34.

Chen, M. X., Otsuki, T., Wilson, J. S. (2008). Standards and Export Decisions: Firm-Level Evidence from Developing Countries. – Journal of International Trade & Economic Development, 17(4), pp. 501-523.

Cosgrove-Sacks, C., Apostolov, M. (2003). Trade facilitation: the challenges for growth and development. UNECE.

Dennis, A., Shepherd, B. (2009). Trade facilitation and export diversification. – The World Economy, 34(1), pp. 101-122.

Djalilov, K. (2015). Business Constraints in Low Income Transition Countries of Central Asia. – Palgrave Dictionary of Emerging Markets and Transition Economics, pp. 212-220.

Djankov, S., Freund, C., Pham, C. (2010). Trading on time. – Review of Economics and Statistics, 92(1), pp. 166-173.

Duval, Y., Feyler, R. (2016). Trade Facilitation for Global Value Chains: A Regional Perspective. – ADB Economics Working Paper Series, 494.

ESCAP. UN. (2024). Digital and Sustainable Trade Facilitation: Global Report 2023. https://unece.org/sites/default/files/2024-06/AgendaItem3_report-digital-sustainable-2023-global.pdf

Fernandes, A. M., Hillberry, R. H., Berg, C. N. (2017). Export Dynamics and Trade Costs in Developing Countries: Evidence from a Trade Facilitation Reform in Colombia. – World Bank Policy Research Working Paper, 8204.

Ferro, E., Otsuki, T., Wilson, J. S. (2015). The Effects of Product Standards on Agricultural Exports from Developing Countries. – World Development, 50, pp. 42-61.

Fontagné, L., Guillin, A., Mitaritonna, C. (2016). Estimations of Tariff Equivalents for the Services Sectors. – World Trade Review, 15(4), pp. 639-655.

Go, D. S., Sever, C., Mevel, S. (2018). Assessing the Impact of Trade Facilitation on Trade by Air. – Journal of Air Transport Management, 73, pp. 43-54.

Hertel, T. W., Keeney, R. (2006). What is at stake: The relative importance of import barriers, export subsidies, and domestic support. – Review of International Economics, 14(4), pp. 357-373.

Hoekman, B., Shepherd, B. (2015). Who Profits from Trade Facilitation Initiatives? Implications for African Countries. – Journal of African Trade, 2(1-2), pp. 51-70.

Hu, Y., Jiang, M., Sun, S., Dai, Y. (2020). Does Trade Facilitation Promote Export Technological Sophistication? Evidence from the European Transition Countries. – SAGE Open. doi:10.1177/2158244020902077

Ijirshar, V. U. (2022). Trade Facilitation and Economic Growth Among MERCOSUR Countries.

Iwanow, T., Kirkpatrick, C. (2009). Trade facilitation and manufactured exports: Is Africa different?. – World Development, 37(6), pp. 1039-1050.

Krugman, P. (1979). Increasing returns, monopolistic competition, and international trade. – Journal of International Economics, 9(4), pp. 469-479.

Krugman, P. (1981). Intra-industry Specialization and the Gains from Trade. – Journal of Political Economy, 89(5), pp. 959-973.

Krugman, P. R. (2009). International economics: Theory and policy. New York: Prentice Hall.

Liu, X., Yue, C. (2012). The Impact of Sanitary and Phytosanitary Measures on China's Agricultural Exports. – Agricultural Economics, 43(1), pp. 1-12.

Mangelsdorf, A., Portugal-Perez, A., Wilson, J. S. (2012). Food Standards and Exports: Evidence for China. – World Trade Review, 11(3), pp. 507-526.

Maskus, K. E., Wilson, J. S., Otsuki, T. (2003). Quantifying the Impact of Technical Barriers to Trade: A Framework for Analysis. – World Bank Policy Research Working Paper, 2512.

Moïsé, E., Sorescu, S. (2013). Trade Facilitation Indicators: The Potential Impact of Trade Facilitation on Developing Countries' Trade. – OECD Trade Policy Papers.

NAZAJ, D. (2022). Problems of economic development of countries in transition. – Buletini shkencor "reald", Vol. 7, N 137.

Nguyen Nga. (2024). Vietnam has become a 'major player' in the export of phones and computers. https://thanhnien.vn/viet-nam-tro-thanh-ong-lon-xuat-khau-dien-thoai-may-tinh-18524062722285593.htm.

OECD. (2022). Trade facilitation reforms worldwide: The state of play in 2022. https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/07/trade-facilitation-reforms-worldwide_9aad911e/ce7af2ce-en.pdf.

Organization for Economic Co-operation and Development (OECD). (2012). Trade Facilitation Indicators: The Potential Impact of Trade Facilitation on Developing Countries' Trade. – OECD Trade Policy Papers.

Organization for Economic Co-operation and Development (OECD). (2017). The economic impact of trade facilitation. – OECD Trade Policy Papers N 118.

Persson, M. (2013). Trade Facilitation and the Extensive Margin. – The World Economy, 36(11), pp. 1393-1407.

Petrovskaya, M. V., Tsypin, A. P., Sharykina, E. A. (2023). Comparative statistical analysis of industrial development in post-Soviet countries for the period 1990-2021. – Izvestiya of Saratov University. New Series. Series: Economics. Management. Law, 23(4), pp. 411-419.

Pomfret, R., Sourdin, P. (2009). Have Asian Trade Agreements Reduced Trade Costs?. – Journal of Asian Economics, 20(3), pp. 255-268.

Popov, V. (2019). Strong institutions are more important than the speed of reforms. – In: Institutional change in transition economies, Routledge, pp. 55-71.

Portugal-Perez, A., Wilson, J. S. (2012). Export performance and trade facilitation reform: Hard and soft infrastructure. – World Development, 40(7), pp. 1295-1307.

Ricardo, D. (1817). On the Principles of Political Economy and Taxation. London: John Murray.

Rusinova, D. T. (2010). Economic development and growth in transition countries. Retrieved from https://pure.uva.nl/ws/files/2247699/77946_the_countries_of_Central_and_Eastern_Europe_and_the_former_Soviet_Union_have_made_significant_progress_in_their_transition_to_market.pdf.

Sá Porto, P. C., Canuto, O., Morini, C. (2015). The Impacts of Trade Facilitation Measures on International Trade Flows. – Journal of International Commerce and Economics, 7(2), pp. 183-207.
Samuelson, P. A. (1954). The Transfer Problem and Transport Costs II: Analysis of Effects of Trade Impediments. – The Economic Journal, 64(254), pp. 264-289.
Shepherd, B. (2010). Trade facilitation and global trade. – World Trade Review, 9(3), pp. 419-435.
Shepherd, B. (2013). Aid for Trade and Value Chains in Transport and Logistics. – OECD Trade Policy Papers, 142.
Shepherd, B., Wilson, J. S. (2008). Trade Facilitation in ASEAN Member Countries: Measuring Progress and Assessing Priorities. – World Bank Policy Research Working Paper Series, 4615.
Tran Van Hung, Le Thi Mai Huong, & Nguyen Le Anh. (2015). The Impact of ASEAN Free Trade Area (AFTA) on Trade Flows. – International Economics and Economic Policy.
Trang Nhi. (2023). Vietnam's FDI attraction has skyrocketed, jumping over 100 places in the global rankings. Cong Ly. https://congly.vn/thu-hut-fdi-cua-viet-nam-nhay-vot-hon-100-bac-tren-bxh-the-gioi-391892.html
Volpe Martincus, C., Carballo, J., Graziano, A. (2016). Customs. – Journal of International Economics.
Wilson, J. S., Mann, C. L., Otsuki, T. (2005). Assessing the Benefits of Trade Facilitation: A Global Perspective. – World Economy.
World Trade Organization (WTO). (2015). Trade Facilitation Agreement Facility.
Yi, K. M. (2010). Can Multistage Production Explain the Home Bias in Trade?. – American Economic Review.