



Trade Complementarity and Compatibility in the Commodity Trade Structure between Vietnam and Brazil in the Post-COVID-19 Period

Complementariedad y Compatibilidad en la Estructura del Comercio de Mercancías entre Vietnam y Brasil en el Período Posterior a la COVID-19

Complémentarité et compatibilité des échanges de matières premières entre le Vietnam et le Brésil après la pandémie de COVID-19

Complementaridade e compatibilidade comercial na estrutura do comércio de commodities entre o Vietnã e o Brasil no período pós-COVID-19

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ABSTRACT This article analyzes the prospects for expansion of bilateral merchandise trade between Vietnam and Brazil in the post COVID 19 context and the increase in U.S. tariffs in 2025. The study adopts an interdisciplinary approach and uses the Trade Complementarity Index (TCI) and the Import Compatibility Index (ICI), calculated with Trade Map data (2019-2024), to assess the degree of fit between Vietnam's export structure and Brazil's import demand. The results indicate a moderately low level of complementarity (TCI between 31 and 38), albeit with an increasing trend. The compatibility analysis for Vietnam's main export products (machinery, electronics, footwear, etc.) reveals levels ranging from low to moderately high, highlighting industrial machinery (ICI=70.35). The main limiting factors identified are tariff and non tariff barriers, geographical distance, internal weaknesses of Vietnamese firms (SMEs, low technology), and the absence of an FTA. It is concluded that growth potential is significant and that, despite non tariff barriers and geographical distance, market diversification and trade agreement negotiations are vital strategies for both nations to strengthen their trade autonomy and achieve their exchange targets for 2030.

Keywords: Vietnam-Brazil trade, Trade Complementarity Index (TCI), U.S. tariff policy, Emerging economies, Trade compatibility.

RESUMEN Este artículo analiza las perspectivas de expansión del comercio bilateral de mercancías entre Vietnam y Brasil en el contexto posterior a la COVID-19 y ante el aumento de los aranceles estadounidenses previsto para 2025. El estudio adopta un enfoque interdisciplinario y utiliza el Índice de Complementariedad Comercial (TCI) y el Índice de Compatibilidad de Importaciones (ICI), calculados con datos de Trade Map (2019-2024), para evaluar el grado de ajuste entre la estructura exportadora de Vietnam y la demanda de importaciones de Brasil. Los resultados indican un nivel de complementariedad moderadamente bajo (TCI entre 31 y 38), aunque con una tendencia creciente. El análisis de compatibilidad para los principales productos de exportación de Vietnam (maquinaria, electrónica, calzado, etc.) revela niveles que oscilan entre bajos y moderadamente altos, destacando la maquinaria industrial (ICI=70,35). Los principales factores limitantes identificados son las barreras arancelarias y no arancelarias, la distancia geográfica, las debilidades internas de las empresas vietnamitas (pymes, baja tecnología) y la ausencia de un tratado de libre comercio (TLC). Se concluye que el potencial de crecimiento es significativo y que, a pesar de las barreras no arancelarias y la distancia geográfica, la diversificación de mercados y las negociaciones de acuerdos comerciales constituyen estrategias vitales para que ambas naciones fortalezcan su autonomía comercial y alcancen sus objetivos de intercambio para 2030.

Palabras clave: Comercio entre Vietnam y Brasil, Índice de Complementariedad Comercial (ICC), política arancelaria de EE. UU., economías emergentes, compatibilidad comercial

RÉSUMÉ Cet article analyse les perspectives d'expansion du commerce bilatéral de marchandises entre le Vietnam et le Brésil dans le contexte post-COVID-19 et face à la hausse des droits de douane américains en 2025. L'étude adopte une approche interdisciplinaire et utilise l'indice de complémentarité commerciale (ICC) et l'indice de compatibilité des importations (ICI), calculés à partir des données de Trade Map (2019-2024), afin d'évaluer l'adéquation entre la structure des exportations vietnamiennes et la demande d'importations brésilienne. Les résultats indiquent un niveau de complémentarité modérément faible (ICC entre 31 et 38), malgré une tendance à la hausse. L'analyse de compatibilité des principaux produits d'exportation vietnamiens (machines, électronique, chaussures, etc.) révèle des niveaux allant de faibles à modérément

élevés, notamment pour les machines industrielles (ICI = 70,35). Les principaux facteurs limitants identifiés sont les barrières tarifaires et non tarifaires, la distance géographique, les faiblesses internes des entreprises vietnamiennes (PME, faible niveau technologique) et l'absence d'accord de libre-échange. Il ressort de cette étude que le potentiel de croissance est important et que, malgré les barrières non tarifaires et la distance géographique, la diversification des marchés et les négociations d'accords commerciaux sont des stratégies essentielles pour que les deux pays renforcent leur autonomie commerciale et atteignent leurs objectifs d'échanges commerciaux pour 2030.

Mots-clés : Commerce Vietnam-Brésil, Indice de complémentarité commerciale (ICC), Politique tarifaire américaine, Économies émergentes, Compatibilité commerciale

RESUMO *Este artigo analisa as perspectivas de expansão do comércio bilateral de mercadorias entre o Vietnã e o Brasil no contexto pós-COVID-19 e o aumento das tarifas americanas em 2025. O estudo adota uma abordagem interdisciplinar e utiliza o Índice de Complementaridade Comercial (ICC) e o Índice de Compatibilidade de Importações (ICI), calculados com dados do Trade Map (2019-2024), para avaliar o grau de adequação entre a estrutura de exportação do Vietnã e a demanda de importação do Brasil. Os resultados indicam um nível moderadamente baixo de complementaridade (ICC entre 31 e 38), embora com uma tendência crescente. A análise de compatibilidade para os principais produtos de exportação do Vietnã (máquinas, eletrônicos, calçados, etc.) revela níveis que variam de baixo a moderadamente alto, com destaque para máquinas industriais (ICI = 70,35). Os principais fatores limitantes identificados são as barreiras tarifárias e não tarifárias, a distância geográfica, as fragilidades internas das empresas vietnamitas (PMEs, baixa tecnologia) e a ausência de um acordo de livre comércio. Conclui-se que o potencial de crescimento é significativo e que, apesar das barreiras não tarifárias e da distância geográfica, a diversificação de mercado e as negociações de acordos comerciais são estratégias vitais para que ambas as nações fortaleçam sua autonomia comercial e alcancem suas metas de câmbio para 2030.*

Palavras-chave: Comércio entre Vietnã e Brasil, Índice de Complementaridade Comercial (ICC), Política tarifária dos EUA, Economias emergentes, Compatibilidade comercial

INTRODUCTION

President Donald Trump's second term has had a significant impact on global trade, characterized by a higher level of trade protectionism through the imposition of increased tariffs on imported goods.

For Vietnam, the United States initially proposed a reciprocal tariff of up to 46% on Vietnamese exports. Following bilateral negotiations, the U.S. government decided to impose a 20% tariff on most Vietnamese exports and a 40% tariff on goods transshipped through Vietnam from third countries. Consequently, the practice of using Vietnam as a

transshipment hub for exports from third countries to the U.S. market has become far less viable.

For Brazil, President Donald Trump signed an executive order imposing an additional 40% tariff on most Brazilian products, raising the total tariff on the majority of Brazilian exports to the United States to 50% (White House, 2025).

The imposition of high U.S. tariffs on exports from both Vietnam and Brazil has, to some extent, created new opportunities for strengthening bilateral trade relations between the two countries. In recent years, Brazil has imported goods worth

approximately USD 200 billion annually, of which around 30% originated from Asia (Santander Trade, 2025). Within Southeast Asia, Vietnam is Brazil's largest trading partner, while Brazil is Vietnam's largest trading partner in South America. According to the Observatory of Economic Complexity (OEC World, 2025), Vietnam ranks as Brazil's 18th largest trading partner among 223 trading partners, whereas Brazil ranks as Vietnam's 27th largest trading partner among 152 partners. Despite these rankings, Vietnamese exports account for only about 1.3% of Brazil's total imports and approximately 4.4% of Brazil's imports from Asia, suggesting considerable potential for further expansion of Vietnam's exports to the Brazilian market.

There is limited academic research on Vietnam-Brazil trade relations; notable examples include the article by Tran Manh Tung (2023) published in the proceedings of a national conference organized by the Institute for the Americas, as well as studies on Brazilian trade issues - such as those by Fernando J. Ribeiro (2021), and reports by Luis Diaz (2024) regarding the suspension of tilapia imports from Vietnam to Brazil, and work by Minh Huy (2025). Meanwhile, TCI and ICI indices are frequently employed to assess bilateral trade, as seen in the study by Zhe Tao et al. (2025) on agricultural trade between China and Cambodia. Consequently, this article applies the TCI and ICI indices to quantify the structural compatibility of exports and imports and the depth of value chain integration between the two countries' goods.

The article combines an analysis of TCI and ICI indices with qualitative insights to provide a more detailed assessment of the prospects for Vietnamese goods exports to Brazil in the near future.

DEVELOPMENT

1. Research Methodology and Analytical Framework

This study adopts an interdisciplinary approach by integrating theories of international relations, in-

ternational trade, and the theory of tariff preferences and their implications for developing countries (Sundara Raja, 1966) as the theoretical foundation for qualitative analysis. The study draws upon both primary and secondary sources, supplemented by trade data obtained from Trade Map to support the analysis. In addition, conventional research methods, including statistical analysis, descriptive analysis, and data analysis, are employed to examine the current state of trade relations and to assess the degree of trade complementarity and compatibility between selected Vietnamese export products and Brazil during the post-COVID-19 period.

Based on these analyses, the study identifies the opportunities and challenges facing bilateral trade and evaluates the prospects for expanding trade relations between Vietnam and Brazil in the coming years.

To assess the degree of trade complementarity between Vietnam and Brazil, this study employs the Trade Complementarity Index (TCI), a widely used indicator for measuring the extent to which the export structure of one country matches the import structure of its trading partner. A higher TCI value indicates a greater degree of complementarity and, consequently, stronger potential for bilateral trade expansion. The TCI is calculated using the following formula:

$$TCI = 100 - \frac{1}{2} \sum |X_i - M_i|$$

Where:

- TCI: Trade Complementarity Index.
- X_i : The share of exports of product i in the total exports of the exporting country.
- M_i : The share of imports of product i in the total imports of the importing country.

TCI = 100: The export structure of one country and the import structure of the other country are perfectly complementary.

$TCI = 0$: There is no trade complementarity between the export structure of one country and the import structure of the trading partner.

To assess the compatibility of Vietnam's export products with Brazil's import structure, this study employs the Trade Compatibility Index (ICI), an indicator used to measure the degree of compatibility between the export structure of a product from the exporting country and the import structure of the same product in the importing country. The ICI is calculated using the following formula:

$$ICI = 100 * \left(1 - \frac{|Xi - Mi|}{Xi + Mi}\right)$$

Where:

ICI: Trade Compatibility Index.

X_i : The share of exports of product i in the total exports of the exporting country.

M_i : The share of imports of product i in the total imports of the importing country.

For the purposes of this study, the ICI values are classified into four categories: (1) 0–25: low compatibility; (2) 26–50: moderately low compatibility; (3) 51–75: moderately high compatibility; and (4) 76–100: high compatibility.

The data used to calculate the TCI and ICI in this study were obtained from the Trade Map database of the International Trade Centre (ITC).

3. Results and Discussion

3.1. The Current State of Bilateral Trade in the Post-COVID-19 Period

The COVID-19 pandemic had a significant impact on trade between Vietnam and Brazil, particularly on Vietnam's exports to Brazil, which declined by 15.1% in 2020 and by

Table 1. Vietnam–Brazil Merchandise Trade, 2019 – Present. Unit: USD million; %

Year	Vietnam's Exports to Brazil		Vietnam's Imports from Brazil	
	Value	Growth rate	Value	Growth rate
2019	2,147.86	-	2,037.60	-
2020	1,824.20	-15.1	2,264.22	11.1
2021	2,266.96	24.3	2,619.90	15.7
2022	2,237.28	-1.3	3,435.67	31.1
2023	2,437.59	9.0	3,722.44	8.3
2024	2,597.73	6.6	4,057.77	9.0
7/2025*	1,530.00	0.3	2,920.00	-4.7

■ Source: Compiled by the authors based on data from Trade Map and the General Department of Vietnam Customs.

1.3% in 2022. However, exports recovered strongly in 2021, recording a growth rate of 24.3% compared with 2020 and 5.58% compared with the pre-pandemic level in 2019. Positive export growth was also recorded in 2023, 2024, and the first seven months of 2025, indicating a sustained recovery in Vietnam's exports to the Brazilian market.

As shown in Table 1, bilateral merchandise trade has grown steadily since the COVID-19 pandemic, with particularly strong growth in Brazil's exports to Vietnam. Since 2020, the trade balance has consistently favored Brazil. Even during the pandemic, Brazilian exports to Vietnam continued to expand, whereas Vietnam's exports to Brazil were adversely affected by the lockdown measures implemented by the Vietnamese government to contain the spread of COVID-19, which disrupted both production and trade activities. A closer examination, however, reveals that most of Vietnam's imports from Brazil consist of intermediate inputs for domestic production, including soybeans for animal feed production and cotton for the textile and garment industry. During the first seven months of 2025, Vietnam's exports to Brazil reached more than USD 1.5 billion, an increase of approximately 0.3% compared with the same period of the previous year, while imports from Brazil exceeded USD 2.9 billion, representing a decline of 4.7%. These figures suggest a gradual narrowing of Vietnam's merchandise trade deficit with Brazil.

Regarding total bilateral trade turnover, the data indicate that, with the exception of a slight decline in 2020, trade between the two countries has expanded rapidly since the pandemic. Total bilateral trade increased by 19.5% in 2021 and by 16.1% in 2022. Nevertheless, the trade balance continued to favor Brazil, with Brazil's trade surplus widening considerably during the 2022–2024 period.

Regarding the dynamics of bilateral trade, Vietnam's exports to Brazil experienced temporary contractions during the COVID-19 pandemic, declining by 15.3% in 2020 before rebounding strongly with growth of 24.1% in 2021. Export growth moderated

thereafter, recording a slight decline in 2022, but returned to positive territory in both 2023 and 2024. In contrast, Vietnam's imports from Brazil remained relatively resilient throughout the pandemic and expanded rapidly from 2021 onward, reflecting Brazil's increasing role as a supplier of agricultural commodities and industrial raw materials to Vietnam. Consequently, the bilateral trade balance has consistently favored Brazil since 2020, with Vietnam's trade deficit widening as imports grew faster than exports.

Another notable feature of the bilateral trade structure is that Vietnam's exports to Brazil consist predominantly of consumer goods, including transport equipment and parts, computers, mobile phones, electronic products and components, footwear, seafood, and textiles and garments. Overall, these products have established a relatively strong position in the Brazilian market.

An examination of Brazil's recent import trends shows that pharmaceuticals, chemicals, machinery and equipment, fuels and lubricants, as well as parts and accessories for motor vehicles and tractors, have become the country's major import categories, accounting for approximately 89% of total imports. Imports of energy-related products have also increased in response to rising domestic energy demand from industrial and public utility sectors. Furthermore, Brazil's commitment to expanding renewable energy has stimulated imports of solar panels and wind turbines as part of its transition toward a more sustainable energy system (Tradeimex, 2025).

Although Vietnam is a net importer of petroleum products and natural gas, it also exports mineral fuels and petroleum products, machinery and electrical equipment, and plastics and plastic products (Ngoc Ngan, 2024). Among these product groups, machinery and electrical equipment rank among Brazil's most important import categories, while plastics and plastic products rank eighth. Vietnam exported plastics and plastic products

worth more than USD 5.4 billion to the United States in 2024; however, this product group has yet to become one of Vietnam's major exports to Brazil. In 2023, plastics and plastic products ranked eighth among Vietnam's leading export categories to the Brazilian market (Trading Economics, 2025). At present, machinery and electrical equipment remain the only major Vietnamese export category that has secured a strong and stable position in Brazil.

With a population of approximately 200 million and an upper-middle-income economy, Brazil represents a promising market for Vietnamese exports. Currently, Vietnam's exports account for only about 1% of Brazil's total imports, while even Vietnam's leading export products generally represent only 5–7% of Brazil's imports within their respective categories. Moreover, as Brazil is one of the largest markets in the Americas, the higher U.S. tariffs imposed on exports from both Vietnam and Brazil have created favorable conditions for the two countries to further strengthen bilateral merchandise trade.

Table 2. Trade Complementarity Index of the Merchandise Trade Structure between Vietnam and Brazil, 2019–2024

Year	TCI
2019	31,02
2020	34,39
2021	34,26
2022	32,76
2023	36,42
2024	38,23

■ *Source: Authors' calculations based on Trade Map data.*

3.2. Trade Complementarity and Compatibility in the Trade Structure between Vietnam and Brazil

According to the authors' calculations based on data from Trade Map, the Trade Complementarity Index (TCI) between Vietnam and Brazil has generally ranged from 31 to 38.

As shown in Table 2, the merchandise trade structure between Vietnam and Brazil exhibits a moderate-low level of trade complementarity. This finding suggests that there remains considerable potential for further expanding bilateral merchandise trade in the coming years. Moreover, the upward trend in the Trade Complementarity Index (TCI), which increased from 31.02 in 2019 to 38.23 in 2024, indicates that the growing volume of bilateral trade has been accompanied by an increasing degree of complementarity between the export structure of one country and the import structure of the other.

Table 3 shows that the six product categories with export values exceeding USD 100 million from Vietnam to Brazil exhibit Trade Compatibility Index (ICI) values ranging from low to moderately high. Among them, only industrial machinery and mechanical equipment recorded an ICI of 70.35, placing it in the moderately high compatibility category. This result indicates a relatively good match between Vietnam's export structure and Brazil's import demand for this product group. Vietnamese industrial machinery products are increasingly meeting Brazil's growing import demand, particularly as the country has accelerated its post-COVID-19 industrialization process. Brazil's National Council for Industrial Development (CNDI) has promoted industrial modernization programs by encouraging imports of machinery, components, and advanced technologies (Gov.br, 2024). In addition, data from the International Trade Centre (ITC) indicate that Brazil's imports of this product category grew at an average annual rate of approximately 6% during 2020–2024, reflecting stable and sustained market demand.

Table 3. Trade Compatibility Index (ICI) between Vietnam and Brazil by Product, 2024

HS Code	Product Category	Vietnam's Exports to Brazil (USD million)		Brazil's Imports from the World (USD million)		ICI
	Total	2.598	Export percentage %	262,870	Import percentage %	
85	Electrical Machinery, Equipment and Components	1,030	39.65	30,995	11.79	45.85
40	Rubber and Rubber Products	328	12.64	4,502	1.71	23.87
84	Industrial Machinery and Mechanical Equipment	220	8.49	41,121	15.64	70.35
72	Iron, Steel and Articles of Iron and Steel	198	7.62	4,780	1.82	38.52
64	Footwear	181	6.98	513	0.20	5.44
03	Fish and Other Seafood	129	4.97	1,520	0.58	20.85

■ Source: Authors' calculations based on Trade Map data.

Three product groups—rubber and rubber products (HS 40), footwear (HS 64), and fish and other seafood (HS 03)—recorded ICI values of 23.87, 5.44, and 20.85, respectively, placing them in the low compatibility category. These results suggest that these products have relatively limited market penetration in Brazil.

Rubber and rubber products (HS 40), consisting mainly of natural rubber and synthetic rubber used as industrial inputs for tires, conveyor belts, and other engineering products, recorded an ICI of 23.87. Although this product group ranked second in Vietnam's exports to Brazil by export value, it accounted for only about 7.3% of Brazil's total imports of rubber and rubber products in 2024. Moreover, Brazil itself has a relatively well-developed rubber industry. The Brazilian rubber market is also

characterized by stringent technical standards, close control over production chains, and government support policies for domestic rubber producers, all of which constrain the expansion of Vietnamese exports.

Footwear, one of Vietnam's leading export industries worldwide, recorded a relatively low ICI. This is largely because Brazil possesses a strong domestic footwear industry with well-established production capacity, internationally recognized brands, and an integrated domestic value chain. For example, Havaianas, produced by Alpargatas, dominates Brazil's mass-market footwear segment, with annual production exceeding 200 million pairs distributed across more than 100 countries (Alpargatas, 2023). Consequently, although Vietnam is the world's second-largest footwear exporter after China (Vân,

2024), its exports remain concentrated in higher-income markets such as the United States, the European Union, and Japan rather than Brazil.

Fish and other seafood (HS 03) generated exports of USD 129 million to Brazil in 2024, accounting for approximately 8.5% of Brazil's total imports of this product category and recording an ICI of 20.85. Brazil's seafood market is characterized by strict sanitary and phytosanitary requirements, language barriers, and measures protecting domestic producers, all of which have constrained Vietnam's export performance. Nevertheless, several Vietnamese seafood products possess competitive price advantages and could gradually strengthen their market position through improved branding and marketing strategies. The growing presence of Vietnamese seafood enterprises in Brazil also indicates increasing market orientation toward this destination.

The remaining two product groups—electrical machinery, equipment and components (HS 85), and iron, steel and articles thereof (HS 72)—recorded moderately low compatibility levels. Electrical machinery and equipment has consistently generated exports exceeding USD 1 billion annually, accounting for approximately 3.3% of Brazil's total imports in this category. Its ICI of 45.85 indicates a moderate degree of compatibility between Vietnam's export structure and Brazil's import demand. Brazil imports approximately USD 30 billion worth of electrical machinery and equipment each year, with China, the United States, and Germany serving as its principal suppliers due to their technological advantages, strong brands, well-developed marketing strategies, and established local distribution networks. Although Vietnam has developed a competitive electronics manufacturing industry, much of its production remains concentrated in assembly activities with relatively low domestic value added and heavy dependence on multinational corporations within global value chains. Vietnamese enterprises should therefore focus on market segments where they possess stronger competitive advantages, such as semiconductor components, power

transmission equipment, and household electrical appliances, while targeting product niches that demonstrate higher complementarity with Brazil's import demand.

Iron, steel and articles thereof (HS 72) recorded an ICI of 38.52, with exports approaching USD 200 million and accounting for approximately 4.14% of Brazil's total imports in this category. These figures indicate considerable growth potential if supported by appropriate industrial and trade policies. The relatively modest compatibility level is partly attributable to intense competition from major steel-exporting countries such as China, South Korea, and Türkiye (World Steel Association, 2024). Differences in technical standards, environmental regulations, and traceability requirements also pose challenges for Vietnamese steel exporters. At the same time, Brazil's demand for steel products has increased as a result of infrastructure investment under the Investment Partnerships Program (PPI). To improve competitiveness, Vietnamese enterprises should invest in technological upgrading, enhance product quality, and strengthen market research in order to meet Brazilian technical standards and international production requirements.

Overall, bilateral merchandise trade between Vietnam and Brazil has recovered steadily in the post-COVID-19 period, making the bilateral trade targets of USD 10 billion by 2025 and USD 30 billion by 2030 increasingly achievable. Although the Trade Complementarity Index remains at a moderately low level, it has shown a clear upward trend, indicating that the trade structures of the two countries are becoming increasingly complementary. At present, only six Vietnamese product groups record export values exceeding USD 100 million in the Brazilian market, and most of them exhibit low or moderately low compatibility levels. While these compatibility indicators suggest that Vietnam's current market position in Brazil remains limited, they also point to substantial untapped potential for expanding Vietnamese exports in the years ahead.

3.3. Challenges and Constraints

Despite being the world's tenth-largest economy, Brazil continues to face a number of structural challenges, including unstable economic growth, political fragmentation, relatively high unemployment, elevated production costs, and persistent inflation. The absence of a free trade agreement (FTA) between Vietnam and Brazil also places exporters from both countries at a competitive disadvantage. Vietnamese products typically face import tariffs ranging from 15% to 25%, while additional federal and state taxes and surcharges may increase the overall import tax burden to between 20% and 35%, particularly for textile and footwear products (Vũ Khuê, 2024a). These costs reduce the price competitiveness of Vietnamese goods in the Brazilian market. In addition, Vietnam's exports encounter various non-tariff barriers, including tariff-rate quotas, sanitary and phytosanitary measures, technical standards, customs inspections, and packaging requirements. Import procedures in Brazil are generally regarded as complex and time-consuming. Furthermore, the long geographical distance between the two countries increases logistics costs, while Portuguese—the official language of Brazil—remains an additional barrier for Vietnamese enterprises seeking to enter the Brazilian market.

At the same time, Vietnamese enterprises also face several internal constraints that limit their ability to expand exports to Brazil.

First, Vietnam's business sector is dominated by small and medium-sized enterprises (SMEs), which account for approximately 98.7% of all enterprises, including 69.3% micro-enterprises, 24.5% small enterprises, and 3.5% medium-sized enterprises (Hoàng Thị Hồng, 2025). Their limited financial resources and production capacity constrain their ability to penetrate distant markets such as Brazil.

Second, Vietnamese enterprises remain weakly integrated into global value chains. Of the approximately one million enterprises currently operating in

Vietnam, only around 0.5% participate directly in global supply chains, and only about 100 firms serve as first-tier suppliers for multinational corporations (Vũ Khuê, 2024b). This limits opportunities to expand exports through international production networks.

Third, the technological capabilities of Vietnamese enterprises remain relatively low. Only about 6% of enterprises employ technologies originating from Europe and the United States, while between 30% and 45% rely on technologies imported from China. Nearly 65% of production technologies currently in use are more than 20 years old, with most classified as medium or below-average in terms of technological sophistication. Only around 15% of enterprises have adopted recently developed production technologies (Phan Thị Ngọc Hoa, 2023). These technological limitations reduce productivity and make it more difficult for firms to meet the technical and quality standards required in the Brazilian market.

Fourth, labor productivity remains relatively low compared with regional competitors. During the 2011–2020 period, Vietnam's average annual labor productivity growth reached 5.29%. Nevertheless, Vietnam's labor productivity was equivalent to only 11.3% of Singapore's level, 33.1% of Malaysia's, 59.1% of Thailand's, 77% of Indonesia's, and 86% of the Philippines' (Quế Chi, 2024). Lower productivity continues to constrain the competitiveness of Vietnamese exports.

Fifth, Vietnamese enterprises continue to face difficulties in building internationally recognized brands. Although 190 enterprises had been awarded the Vietnam National Brand designation by 2024 (An Chi, 2024), this number remains very small relative to the total number of enterprises nationwide. Limited brand recognition reduces the competitiveness of Vietnamese products in overseas markets, including Brazil.

Finally, corporate governance capacity remains relatively weak. Large enterprises account for less than 3% of all Vietnamese firms, and their average scale

is considerably smaller than that of enterprises in other ASEAN countries. According to the Vietnam Chamber of Commerce and Industry (VCCI, 2022), Vietnam's corporate governance performance remains substantially below regional standards, reaching only about half the level observed in Singapore, Malaysia, Thailand, Indonesia, and the Philippines. This limits firms' ability to formulate long-term market strategies and compete effectively in demanding international markets (VCCI, 2022).

CONCLUSIONS

Prospects for Bilateral Trade

Based on the above analysis, bilateral merchandise trade between Vietnam and Brazil is expected to continue expanding in the coming years. The commitment demonstrated by the leaders of both countries to deepen economic cooperation and improve market access provides a favorable foundation for negotiating the first bilateral Free Trade Agreement (FTA). A gradual reduction in tariff and non-tariff barriers would further facilitate trade and strengthen bilateral economic relations.

In addition to pursuing a bilateral FTA, Vietnam and Brazil can further promote trade through cooperation within multilateral frameworks such as BRICS and the ASEAN–Community of Latin American and Caribbean States (CELAC) partnership, as well as by taking advantage of the rapid development of cross-border e-commerce. Digital platforms such as Mercado Livre in Brazil and Shopee in Vietnam offer new opportunities for enterprises to expand market access while reducing transaction and distribution costs.

In early 2025, Brazil lifted its import ban on Vietnamese tilapia and simultaneously opened negotiations to allow Vietnamese pangasius to enter the Brazilian market. As a result, Vietnam's pangasius exports to Brazil reached USD 55 million in the first quarter of 2025, representing a 67% increase compared with the same period of the previous year. Brazil consequently became the third-largest export

market for Vietnamese pangasius, after China and the United States (Minh Huy, 2025).

Total bilateral merchandise trade reached nearly USD 6.7 billion in 2024 and almost USD 4.5 billion during the first seven months of 2025, indicating that the bilateral trade target of USD 10 billion is well within reach. If the challenges and constraints identified above are effectively addressed, increasing bilateral trade to approximately USD 15 billion by 2030 would also be a realistic objective. Brazil's large domestic market, diversified consumer preferences, and growing demand provide favorable conditions for further expanding Vietnamese exports as economic ties between the two countries continue to deepen.

General conclusion

Global trade experienced unprecedented disruptions following the outbreak of the COVID-19 pandemic. Measures adopted worldwide to contain the spread of the virus interrupted production activities, disrupted global supply chains, and accelerated the restructuring of international production and trade networks. More recently, the United States' adoption of higher import tariffs has created additional challenges for the recovery of global trade. Vietnam is currently subject to U.S. tariffs of approximately 20%, roughly double the previous rate, while Brazilian exports face tariffs of around 50%, significantly reducing the competitiveness of products from both countries in the U.S. market. Under these circumstances, diversifying export destinations beyond the United States has become an increasingly important strategy not only for Vietnam and Brazil but also for many other exporting countries.

Among alternative markets, Brazil has emerged as one of the most promising destinations for Vietnamese exports. As the largest economy in Latin America, Brazil offers substantial market opportunities and also serves as a strategic gateway to the broader Mercosur market. The findings of this study indicate that although the complementarity

and compatibility of the merchandise trade structure between Vietnam and Brazil remain at moderate levels, both indicators have shown a positive upward trend, suggesting considerable potential for expanding bilateral trade. To fully realize this potential, however, Vietnamese enterprises need not only to address their internal constraints but also to accelerate technological upgrading, improve product quality, strengthen international branding, and enhance competitiveness. Such efforts will be essential for achieving sustainable export growth and deepening Vietnam's long-term trade relationship with Brazil.

This study has certain limitations; it is confined to the partnership between the two nations and has not yet expanded to include an in-depth analysis of competitors. Furthermore, the scope is restricted to trade in goods, excluding services, investment, and intra-industry trade. The research team intends to address these aspects in a separate study.

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