

# Logistics and Transportation Service Operations in Vietnam

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**Abstract:** *As the economy continues to grow, the demand for goods circulation between regions, countries, and across the globe is increasing. This highlights the important role of logistics in carrying out service chains related to production, warehousing, and product distribution. Transportation is a key factor in this chain, and the quality of logistics services greatly depends on the quality of transportation services. When transportation activities are optimally organized and well-executed, they significantly contribute to improve the overall quality of logistics services. The study analyzes the current state of transport logistics services and summarizes the achievements in logistics operations in Vietnam. This includes an analysis of the strengths and weaknesses of each mode of transportation, accompanied by proposed solutions to enhance the quality of transport logistics services in Vietnam.*

**Keywords:** *Logistics, Transportation Service, Operation.*

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## I. Introduction

In recent years, both global and domestic trade have faced numerous challenges due to the impact of the Covid-19 pandemic, along with economic and political risks and instabilities on a global scale. The global supply chain has been disrupted and overturned, with logistics activities—considered the 'backbone' of the supply chain—also heavily affected. This reality has posed significant demands on the logistics service industry to address the issues that emerged during the Covid-19 outbreak, while also overcoming ongoing difficulties and challenges. At the same time, it presents an opportunity to transform traditional production organization methods, thereby affirming the industry's position in both domestic and international markets.

Located in the heart of the Asia-Pacific region and along key international maritime routes, Vietnam boasts a long coastline with numerous locations suitable for deep-water port construction. Coupled with increasingly deep international economic integration and the signing of multiple free trade agreements (FTAs), Vietnam is considered a highly promising market for the development of the logistics services industry.

According to the report “Detailed Planning for Groups of Seaports, Wharves, Docks, Buoys, Water Areas, and Maritime Zones for the 2021–2030 Period, with a Vision to 2050” by the Ministry of Transport, as of October 2022, Vietnam had 286 wharves across five seaport groups, with a total wharf length of approximately 95 km—more than 4.5 times that of the year 2000. With the development of gateway ports combined with international transshipment capabilities, Vietnam successfully received container ships of up to 132,000 tons at Lach Huyen Port (Hai Phong) and up to 214,000 tons at Cai Mep Port (Ba Ria - Vung Tau) [1]. The country has established 32 shipping routes, including 25 international and 7 domestic routes. In addition to intra-Asia routes, the northern region has launched two routes to North America, while the southern region has established 16 long-haul routes to North America and Europe—surpassing other Southeast Asian countries, second only to Malaysia and Singapore.

After over two years of being severely impacted by the Covid-19 pandemic, logistics activities began to normalize in 2022, gradually restoring transport and goods circulation connectivity. Not only in economic hubs and satellite areas, but also across various provinces and cities nationwide, greater attention has been paid to modernizing logistics operations, developing services and infrastructure, and enhancing connectivity among stakeholders in the supply chain. These efforts have been recognized as key factors in revitalizing production and trade activities, contributing to Vietnam's record-breaking import-export value as the country transitions into a “new normal” and seizes opportunities brought by FTAs.

According to the Vietnam Logistics Business Association, the logistics service sector in Vietnam has maintained a relatively high growth rate of around 14%–16%, with 60%–70% of businesses outsourcing logistics services, contributing approximately 4%–5% to the national GDP [2]. This has helped turn import-export activities into a bright spot in Vietnam's economic landscape. In 2022, Vietnam's total import-export turnover exceeded USD 723 billion, marking a 10% increase over 2021, a highly encouraging result amid ongoing global and domestic trade challenges caused by the Covid-19 pandemic and global economic and political uncertainties [3].

In 2022, the Agility Emerging Markets Logistics Index—published by Agility, one of the world's leading logistics and freight providers—Vietnam ranked 11th among the top 50 emerging logistics markets

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globally. Its compound annual growth rate (CAGR) for the 2022–2027 period is projected at 5.5%, reflecting strong economic recovery post-pandemic [4]. Vietnam currently leads ASEAN countries in the number of logistics service companies licensed by the U.S. Federal Maritime Commission (FMC). The logistics sector contributes 4%–5% to the country’s GDP annually. Moreover, e-logistics has played a key role in driving improvements in the quality and professionalism of logistics services in Vietnam.

In the 2023 Agility Emerging Markets Logistics Index, Vietnam broke into the top 10 emerging logistics markets globally and ranked 4th in Southeast Asia, following Malaysia, Indonesia, and Thailand. For domestic logistics opportunities, Vietnam was ranked 16th, up one spot from 2022, with a score of 5.02. For international logistics opportunities, Vietnam leads Southeast Asia and ranks 4th globally, with a score of 6.03. Regarding business conditions and technology readiness, Vietnam was ranked 19th and 15th, respectively.

Despite these positive developments, logistics costs in Vietnam remain high—estimated at around 20% of GDP—compared to just 7%–9% in developed countries. One of the main reasons for this is the lack of synchronized and integrated infrastructure for logistics operations. For instance, Cat Lai Port in Ho Chi Minh City, the largest international container port in Vietnam and a key hub in the Southeastern seaport system, has for many years been plagued by severe congestion. This has significantly hampered economic activities in the entire region. On average, approximately 19,000 to 20,000 vehicles enter and exit the port each day [5]. Due to inadequate traffic infrastructure and poor traffic planning, container trucks often experience several hours of delay during peak hours before accessing the port. This results in higher fuel consumption and delayed cargo transport times. As a consequence, goods produced in Phu My Town (Ba Ria - Vung Tau) must be transported to Binh Duong for containerization and then hauled back to Cat Lai Port for export—incurring additional costs for loading and unloading, and significantly reducing logistics efficiency.

The study analyzes the current state of transport logistics services and summarizes the achievements in logistics operations in Vietnam. This includes an analysis of the strengths and weaknesses of each mode of transportation, accompanied by proposed solutions to enhance the quality of transport logistics services in Vietnam.

## **II. Literature Review**

The management of transport services forms the foundation of the transport and logistics system. The efficiency of this system is largely influenced by the forecasting and planning of cargo flow correspondence and the effective allocation of resources. Organizing transport services involves the integration of cargo flows, ensuring the cohesive functioning of the transport and logistics system. However, under market-driven conditions, the system is influenced by various stakeholders, fluctuating demand for services, external environmental factors, and subjective interpretations of internal dynamics. These uncertainties often lead to disruptions in service rhythm, negatively affecting operational effectiveness. As a result, the forecasted loading plans frequently deviate from actual execution across several parameters, including the planned loading date, cargo type, number of wagons, rolling stock type and ownership, and the origin and destination stations of the loaded wagons or groups of wagons.

Furthermore, the challenge of optimal management is exacerbated by infrastructure limitations such as restricted throughput and processing capacities. These complexities make the process of optimal transport management inherently multi-criteria in nature. Each participant in the transportation process must therefore be capable of defining relevant efficiency criteria and identifying the best options for achieving them [6].

To ensure high-quality management of transport and logistics processes, systematic optimization is essential. Successful optimization requires the development of effective transport and logistics management methods. This involves addressing key tasks such as identifying the strategic objectives of the core transport and logistics processes and determining appropriate investment periods, as outlined by Kotzab [6] and Stjerne et al. [7].

The core transport and logistics process consists of the interaction between transport service management systems and their influence on the system’s available resources. This interaction supports both the functionality and resilience of the transport system. However, these interactions often fail to account for the efficiency criteria of all participants. Objectives between rolling stock operators (resource owners) and carriers are often misaligned, and there is currently no unified efficiency criterion that reflects the interests of both parties, regardless of their roles or ownership structures [7].

Planning of volumes of transport services, it is process of acceptance by the operating operator of a rolling stock of the optimum decision on qualitative use of carload park under the forthcoming transport service in loading of the declared volumes of cargoes which looks as the strategic plan of correspondence for the established period [8]. The final result of it is the plan of the rolling stock relocation, therefore the possible flight of empty and loaded cars (wagon-kilometers) is accepted as a meter [9].

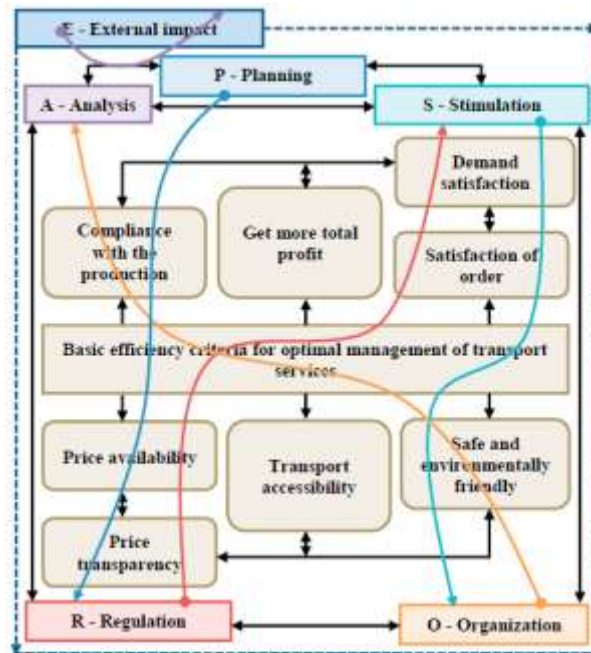


Figure 1. General model of interdependence of strategic functions and performance criteria [10]

### III. Results And Discussion

#### Road transport

Road transport currently plays an important role in Vietnam due to its flexibility, door-to-door service, and high mobility. It is the most widely used mode of transport and holds a dominant position in both passenger and freight transportation. In Vietnam, road transport handles over 77.4% of total freight volume, accounting for 40.22% of total freight transported by ton-kilometer in 2022, and 94% of passenger volume [11]. The Vietnam Road Freight Transport Market is projected to reach USD 26.27 billion in 2025 and grow to USD 35.83 billion by 2030, reflecting a compound annual growth rate (CAGR) of 6.40% over the forecast period.

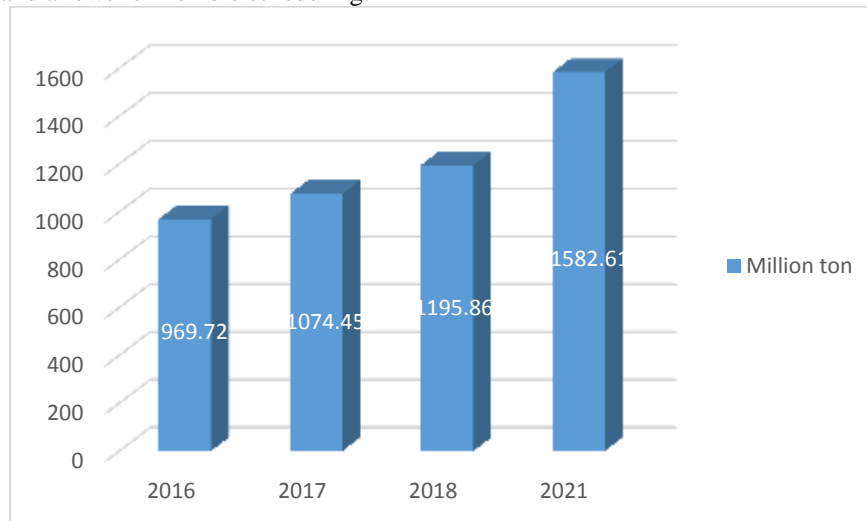
Road freight continues to play a central role in Vietnam's logistics landscape. The sector benefits from a broad and diverse vehicle fleet and widespread network coverage. Industrial growth also fuels demand, with the Industrial Production Index (IIP) rising 7.8% in 2022. Notable growth occurred in industries like beverages (32.3%), pharmaceutical chemistry (19.2%), and machinery (19.1%), further boosting the need for road freight services.

Vietnam's road transport sector is undergoing major transformation, driven by large-scale infrastructure development and modernization. As of 2022, the country's road network reached 648,984 km, with nearly 76% of it paved, greatly enhancing freight efficiency. In early 2023, construction began on 12 North-South expressway projects, with four completed by year-end, adding 475 km of expressways and bringing the total to 1,892 km. The Ministry of Transport's Road Network Development Plan (2021–2030) aims to expand expressways to over 5,000 km by 2030, underscoring the government's strong infrastructure commitment.

Many road transport businesses have evolved from small family-run operations with just 2–3 trucks, gradually expanding their fleets and increasing competition—particularly in the general cargo segment. The import of refrigerated trucks into Vietnam has become easier as the country opens its market, enabling smaller-scale businesses to enter the industry more readily. It is expected that road transport companies will continue to account for the largest share of Vietnam's transport enterprises, as this sector remains more accessible compared to rail, air, or sea transport. Specialized segments such as oversized/overweight transport, hazardous goods (e.g., chemicals), and refrigerated cargo also show strong potential, especially to support infrastructure projects, factory construction, and industrial zones, which are expected to grow rapidly in the near future.

Despite this progress, the industry faces challenges, especially in operational costs and fleet modernization. In 2022, fuel expenses made up 32% of total trucking costs, followed by driver wages at 18%. Truck sales remained strong, with around 66,600 units sold, reflecting ongoing fleet expansion. Over 90% of the truck fleet is more than five years old, contributing to higher logistics costs and environmental concerns. The fastest-growing segment will likely be short-haul freight, particularly last-mile delivery in urban areas, driven by the booming e-commerce sector in Vietnam, which is seen as having high growth potential. Although road transport remains the dominant mode of freight transportation, it is still significantly more expensive than other

methods. For instance, transporting a 40-foot container from Hanoi to Ho Chi Minh City by road costs around VND 40 million—approximately 9.7 times more than sea transport and over 2.5 times more than rail. Despite the higher cost, many shippers still choose road transport due to its ability to connect directly with seaports, airports, and railway stations, offering greater convenience and flexibility. Road transport is highly adaptable to various terrains and allows for flexible scheduling.



**Figure 1. Road volume freight**

**Rail transport**

Vietnam’s national railway network had a total length of 3,315 km, including 2,646.9 km of mainline tracks and 515.46 km of station tracks and branch lines. Vietnam’s railway infrastructure is considered outdated, with many lines built between 50 and over 100 years ago, and most of them have not yet been upgraded to meet technical standards. The 1,000 mm gauge still accounts for over 80% of the total railway length, even though it is no longer widely used internationally. The 1,435 mm standard gauge represents only about 6%, while the rest consists of dual-gauge tracks (1,435 mm and 1,000 mm).

Since 2010, the volume of freight transported by rail has been declining. In 1990, rail freight transport reached 2.3 million tons, with a transport turnover of 847 million ton-kilometers. By 2010, these figures increased to 7.9 million tons and 3,960.9 million ton-kilometers, respectively. In 2022, rail freight transport volume stood at 5.7 million tons, 2.5 times higher than in 1990, while freight turnover reached 4.5 billion ton-kilometers, 5.4 times higher [12]. In contrast, road freight transport increased by nearly 50 times in volume and 55 times in turnover over the same period. Inland waterway transport rose by approximately 18 times in both volume and turnover. Maritime transport increased by 26 times in volume and 11 times in turnover. Similar to passenger transport, rail freight accounts for a very small proportion of the total freight volume across all transport modes.

Once a key player in national transportation, the railway sector is now almost forgotten. The railway system remains outdated in terms of infrastructure, signaling technology, and rolling stock. Meanwhile, the investment required for modernization is substantial and currently beyond reach. Operating and maintenance costs are high, yet capacity remains limited and efficiency is low. Despite over five years of restructuring, the railway sector has seen only modest improvements. This is largely because for many years, investment in modernization has been minimal—mostly allocated to basic maintenance and minor repairs—so changes have not been substantial. Infrastructure remains outdated, and service quality fails to compete with other modes of transport, resulting in declining volumes and a continuous loss of market share. In contrast, other transport sectors have received significant investments, supported by a wide range of funding sources including the state budget, Official Development Assistance (ODA), and private sector contributions. This imbalance has pushed the railway sector into increasing hardship, struggling just to survive. It can be said that the decline of the railway is a waste of national resources.

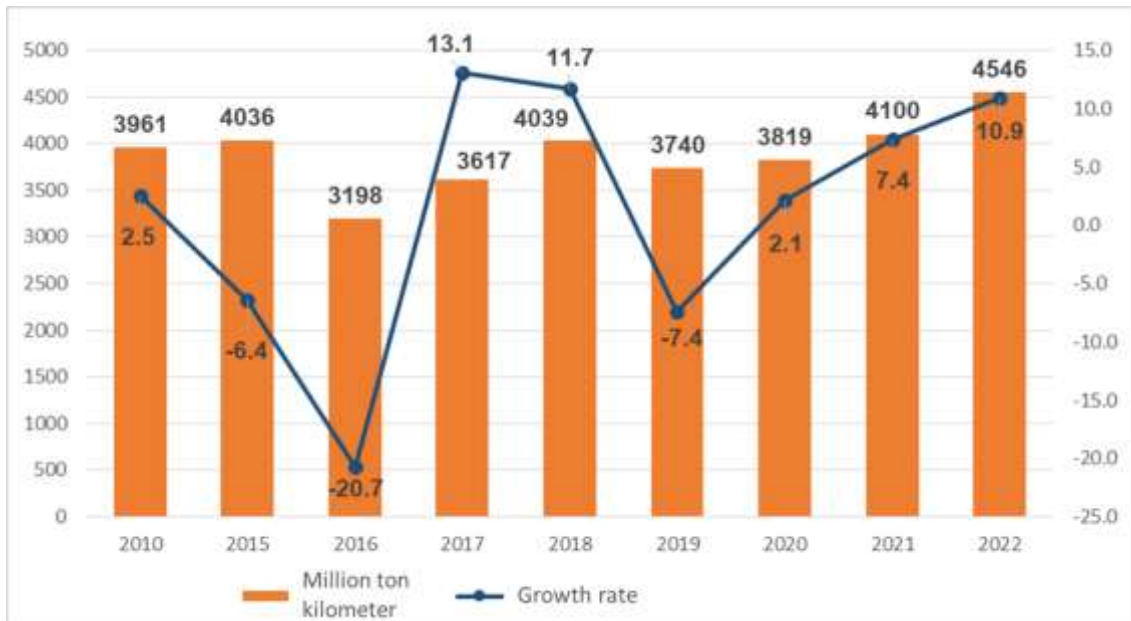


Figure 2. Rail freight transport turnover

**Maritime transport**

Vietnam currently possesses a modern and comprehensive seaport system, capable of meeting the import and export demands of the national economy. The Vietnamese seaport portfolio includes 34 seaports. Notably, the cargo handling capacity has steadily increased, with more ports now able to accommodate larger vessels. Major Vietnamese ports such as Hai Phong, Ho Chi Minh City, and Ba Ria – Vung Tau have been ranked among the top 50 busiest ports in the world by cargo throughput. Gateway ports like Lach Huyen (Hai Phong) and Cai Mep (Ba Ria – Vung Tau) can handle the world’s largest container vessels, with capacities of over 200,000 DWT. Vietnam’s seaport system has been comprehensively invested in, with synchronized infrastructure including wharves, anchor buoys, and cargo handling equipment. These facilities are fully functional, of appropriate scale, and geographically distributed across the country, effectively meeting the demands of maritime cargo transportation.

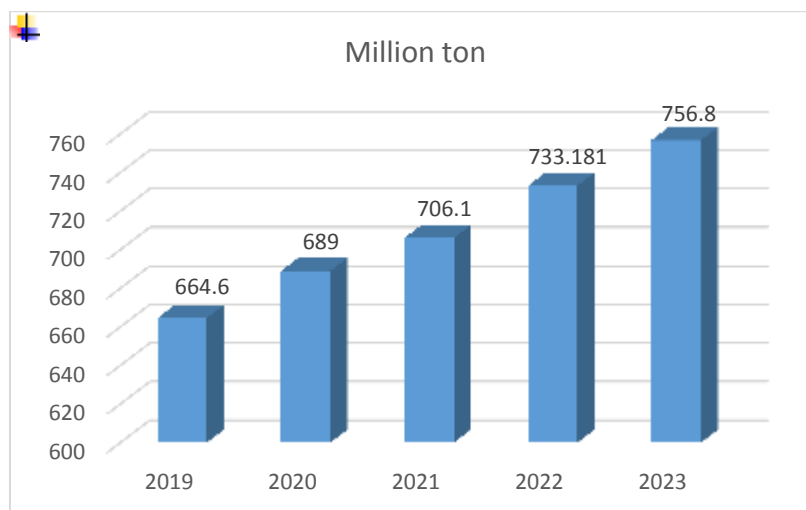


Figure 3. Cargo volume

In 2022, the total cargo volume handled by Vietnamese seaports was estimated at 733.18 million tons, up 4% compared to 2021. Breakdown of the cargo: Export cargo: 179.07 million tons, down 3%, Import cargo: 209.26 million tons, down 2%, Domestic cargo: 342.79 million tons, up 12% from 2021 [13]. Container throughput in 2022 was estimated at 25.09 million TEUs, an increase of 5% over 2021. In the first two months of 2023, the upward trend continued: Cargo volume reached 17.9 million tons, up 17.2% year-over-year.

Turnover hit 34.3 billion ton-kilometers, up 13.7%. Although maritime transport accounts for a relatively small share of the total cargo volume, it holds a significantly higher share of the total transport turnover. In 2022, maritime freight transport represented only 5.4% of the total cargo volume, but accounted for 53.4% of the total cargo turnover. Maritime transport routes to China, Japan, South Korea, Southeast Asia, and certain European destinations saw strong growth. In addition, high freight rates in 2022 contributed to significant revenue and profit increases for many Vietnamese shipping companies.

Vietnam's maritime are facing several challenges [14]. First, Vietnam's maritime fleet is currently facing significant technological challenges. Many vessels still rely on outdated engineering technologies, resulting in low operational efficiency and high maintenance and operating costs. According to statistics from the Ministry of Transport, as of 2023, about 70% of Vietnam's seagoing vessels are over 15 years old and were built in the 1990s or early 2000s (Bảo Ngân, 2024). Most of these ships continue to operate with outdated technologies, lacking modern automation systems, advanced maritime safety standards, and green, fuel-efficient technologies. The continued use of old engines and machinery systems negatively impacts the business performance of Vietnamese shipping companies, maritime safety, the marine environment, and ultimately weakens the national fleet's competitiveness. If shipborne transport management, navigation, and communication systems do not meet modern standards, and lack automation and effective information connectivity, operating costs will rise, profitability will decline, and the competitiveness of Vietnam's fleet will be further diminished compared to modern fleets in the region. Cargo handling equipment on board mainly includes crane systems, lifting devices, conveyors, and container handling systems. According to the Ministry of Transport, most cargo handling equipment on Vietnamese seagoing vessels has not seen significant upgrades in recent years. Around 70% of Vietnam's container ships still use traditional mechanical cranes, while only about 30% are equipped with semi-automated or automated cranes (Bảo Ngân, 2024). As a result, cargo loading and unloading on these ships tends to be more time-consuming, poses greater safety risks, and reduces overall operational efficiency. Third, the communication systems on board the national fleet must meet the requirements set out in the National Technical Regulations on Marine Safety Equipment. The level of modernization and completeness of communication systems varies among vessels. According to the Vietnam Maritime Administration (Ministry of Transport), as of 2023, around 60% of Vietnam's fleet has been equipped with advanced communication technologies such as Global Positioning System (GPS), satellite communication devices, and Automatic Identification Systems (AIS).

Second, Vietnam's maritime fleet operates primarily on domestic shipping routes, accounting for over 90% of the market share. On international routes, the fleet mainly serves short-haul routes within Southeast and Northeast Asia, capturing only around 12% of the market share in these areas. Despite holding a dominant share in domestic transport, the sector still faces challenges such as low freight rates, limited cargo availability, and an imbalance between northbound and southbound transport volumes—cargo from the North to the South accounts for only about 60% of the volume moved from the South to the North.

Third, bulk carriers in Vietnam's fleet mainly transport agricultural products (such as rice and sugar), steel, iron ore, fertilizers, coal, and cement on domestic routes and short international routes within Southeast Asia and China. A limited number of vessels also operate on long-distance routes to West Africa, South America, and Eastern Europe. Currently, bulk carriers with a capacity under 10,000 DWT make up the largest portion by number, but only account for 13% of the total tonnage. Vessels in the 20,000–30,000 DWT range represent 47% of the total bulk carrier tonnage. Although ships over 40,000 DWT are few in number, they contribute to 21% of Vietnam's total bulk carrier tonnage. The operation of bulk carriers by Vietnamese shipping companies remains largely inefficient. On average, the proportion of time that bulk carriers operate with cargo onboard is only about 30–35%. Empty running time remains high, averaging around 13–15% annually, while vessels often spend 20–25% of their time waiting at anchorage for loading or unloading. It is common for ships to carry cargo in one direction and return with little or no cargo.

Fourth, maritime container transport in Vietnam began developing in the 1990s. The Vietnamese container fleet is generally small in tonnage, with older vessels and slower speeds compared to foreign fleets. Only two Vietnamese shipping lines—Bien Dong and Vinalines—are ranked among the top 100 global container carriers, and both are positioned relatively low on the list.

Fifth, most Vietnamese container ships operate only on domestic routes such as Hai Phong-Da Nang–Ho Chi Minh City, under government protection. Only a few companies operate vessels to transshipment hubs like Singapore and Hong Kong, and even then, the service frequency is very limited. Meanwhile, competition on international routes continues to intensify. As of 2023, more than 40 international container shipping lines were operating in Vietnam, handling about 85% of the country's import-export container volume. These companies operate mainly through three forms: as agents for Vietnamese firms, joint ventures, or wholly foreign-owned enterprises.

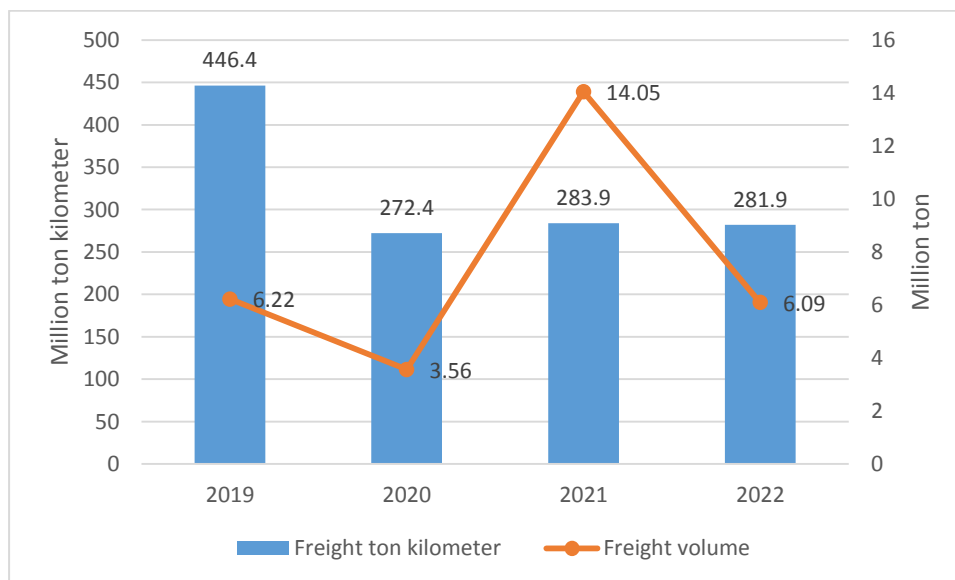
These analyses highlight the ongoing limitations of Vietnam's maritime fleet in terms of transport volume, fleet structure, ownership, and route network. To develop maritime cargo transport in line with

Vietnam’s potential and geographic advantages, beyond port system planning, port infrastructure investment, and administrative reforms, the government and Vietnamese shipping enterprises must view fleet development as a critical and urgent solution.

**Aviation transport**

Vietnam’s air freight industry plays a vital role in the nation’s economic growth, serving as a crucial channel for international trade. Recent legislative reforms reflect the government’s commitment to fostering a more investment-friendly environment, positioning the country for robust expansion and making it an attractive destination for both foreign and domestic investors—particularly in the aviation sector. New investment laws and regulatory directives, especially those targeting the aviation industry, aim to enhance transparency and streamline business operations. The sector’s modernization is further supported by initiatives like the adoption of the ONE Record standard by the Cargo Services Conference, which enhances efficiency and data transparency across the supply chain. With these advancements, Vietnam’s air freight industry is on a strong trajectory for sustained and dynamic growth.

Vietnam’s air freight sector has shown remarkable resilience and adaptability, with cargo volumes—both domestic and international—recovering steadily in line with the global economic rebound. Strategically located in Southeast Asia, Vietnam is increasingly recognized as a key logistics hub in the region. The industry’s proactive adoption of technology has significantly enhanced operational efficiency. Advances in cargo tracking, automation, and digitalization have improved supply chain transparency and streamlined processes. In the first quarter of 2022, the sector maintained its upward momentum. Domestic cargo volumes reached approximately 98,000 tons, while international volumes climbed to around 292,000 tons—a 21.1% increase compared to the same period in 2021.



**Figure 4. Air freight ton kilometer and air freight volume**

However, Vietnam still lacks a dedicated cargo airline. During the pandemic, national carrier Vietnam Airlines demonstrated remarkable resourcefulness by repurposing a dozen wide-body aircraft for cargo, utilizing both passenger cabins and belly holds. The airline even removed seats from narrow-body jets to increase cargo capacity—an inventive response that underscores the sector’s determination and flexibility.

One of the primary challenges facing Vietnam’s air freight sector is inadequate infrastructure and logistical services, which contribute to high transportation costs. Rapid airline expansion has outpaced the development of supporting infrastructure and technology, raising concerns around safety and airport congestion. To keep pace with demand, substantial investment in modern equipment and upgraded infrastructure is essential. Additionally, underdeveloped road networks hinder connectivity between remote communities and airports, reducing the efficiency and quality of goods transported over long distances. Another pressing issue is the shortage of skilled labor in the sector, which presents an opportunity to implement targeted training programs to cultivate a more capable workforce for air cargo operations [15]. The Covid-19 pandemic also dealt a significant blow to Vietnam’s air freight industry. Global supply chain disruptions and travel restrictions led to a sharp decline in air cargo demand. With fewer passenger flights operating, air freight capacity became limited, driving up costs and tightening supply chains.

Despite these setbacks, the sector demonstrated notable resilience and adaptability. Remarkably, Vietnam's international air freight market rebounded strongly, recording significant year-on-year growth—a testament to its capacity to navigate and thrive amid global uncertainties.

#### **IV. Conclusion**

As road infrastructure improves, ports are emerging as critical bottlenecks in Vietnam's transport system. Enhancing the efficiency, safety, and service quality of maritime transport requires urgent attention to these bottlenecks—particularly through boosting port productivity and encouraging the use of modern, efficient vessels. Immediate infrastructure upgrades are needed in Vietnam's three main gateway ports, which are vital to international trade. However, investment is also required in regional and industrial ports, as well as along key access channels and heavily trafficked sea lanes. Improving maritime safety is equally important to meet international standards—this includes investments in seafarer training, navigational aids, and other safety-related initiatives. Short-term investment priorities should focus on maximizing productivity per unit of investment at strategic ports and enhancing maritime safety systems and capabilities.

The aviation sector faces a dual challenge: accommodating continued rapid growth in both domestic and international markets, while also meeting increasingly stringent technical and safety standards. To keep investment needs manageable, careful planning is essential. Immediate priorities include: Upgrading the three gateway airports to handle increasing demand and meet international obligations (especially by implementing a new air traffic management system). Targeted improvements at key secondary airports to strengthen the national air network. Although defining precise short-term investment priorities is complex, the focus should remain on maximizing efficiency and safety, while strategically expanding capacity where it's most needed. The application of information technology is being promoted, with efforts to develop and connect digital platforms for passenger and freight transport. There are also initiatives to encourage the use of freight exchange platforms to reduce the number of empty return trips. Moreover, the government is studying the development of an integrated transport exchange platform that connects all modes of transportation, laying the groundwork for the growth of the logistics services sector.

To maximize road transport effectiveness, efficient use of capital sources and a gradual shift toward socializing investments to develop a national expressway network and dedicated roads is a must. These investments aim to ensure efficient connectivity between industrial zones, key economic centers, major border gates, and vital transportation hubs such as seaports, inland ports, and railway stations. There is a strong emphasis on effective project management, with a focus on constructing the North–South Expressway. Additionally, the government is developing plans and timelines to accelerate the implementation of non-stop electronic toll collection systems, ensuring transparency and accountability in toll collection.

To successfully implement the overall short-term transport plan, broader policy and institutional reforms are essential. These include: (a) Coordinating regulatory reforms across all transport modes to ensure consistency and effectiveness, (b) strengthening institutions, particularly the Ministry of Transport (MOT) and its agencies at both national and local levels, to enhance their capacity for planning and policy implementation, (c) securing high-level government support to address the financing challenges facing all transport modes, (d) advancing the government's equitization program, which involves privatizing state-owned transport enterprises to improve competitiveness and efficiency.

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