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Minh Thai Vu
Ho Chi Minh city University of
Transport, Ho Chi Minh city,
Vietnam

Dong Thi Minh Hao
Ho Chi Minh city University of
Transport, Ho Chi Minh city,
Vietnam

Huu Cuong Le
Ho Chi Minh city University of
Transport, Ho Chi Minh city,
Vietnam

Correspondence:
Minh Thai Vu
Ho Chi Minh city University of
Transport, Ho Chi Minh city,
Vietnam

Characteristics of the seaport system in Vietnam

Minh Thai Vu, Dong Thi Minh Hao, Huu Cuong Le

Abstract

With a number of 320 ports of all kinds, Vietnam's seaport system is absolutely not lacking in capacity, but the current major problem of Vietnam's port industry is a very fragmented market. In many places there is a situation where local governments and private enterprises compete with other partners in the same area in an area to build and finance the construction of ports. Currently Vietnam has about 800 - 900 businesses doing logistics services, but most of them only have capital from 1 to 1.5 billion. Therefore, logistics enterprises in Vietnam are mainly agents for large foreign transnational companies. Many Vietnamese ports and containerships are only serving as transshipment ports for international ports in Southeast Asia such as Singapore, even with Thailand, although the design capacity is in theory "responsive" transport ships with design tonnage "not inferior" to the other ports. Along with the process of international economic integration, the volume of goods transshipped through Vietnamese ports has increased by 10% / year. However, poorly equipped port facilities and inland transportation systems have hindered the increase in port clearance capacity and increased logistics costs. Clearance goods at the Vietnamese seaport system increased rapidly from 49 million tons in 1997 to 196.6 million tons in 2008 and 254 million tons in 2010. Of which, nearly 69.2% of the volume in 2008 was abroad goods, 21.8% was domestic, 9% was in transit. This impressive growth reflects the high economic growth that Vietnam has achieved since the implementation of the renovation.

Keywords: seaport, connectivity, port system

1. Introduction

Vietnam has shallow water levels, especially in the northern ports. Some ports without this restriction, such as Da Nang, are located far away from hubs, which require the use of small vessels, which are not economically viable for the rapidly increasing volume of transport throughout the country. Because of the poor handling facilities, large ships are difficult to access, and will instead dock at ports of Singapore, Malaysia or Taiwan. As a result, Vietnamese ports are only serving transshipment vessels, wasting geopolitical advantages. On the other hand, lack of connectivity is also a big problem of Vietnam's seaport system. Specifically, lack of connection between the seaport system and other technical infrastructure systems such as transportation, electricity, water ... Lack of connection with the national network connecting seaports and centers of logistics systems, between port development with industrial parks and urban areas. In addition, the role of each port in Vietnam's seaport system is not clearly defined, lacking in focus and focus, creating a feeling that Vietnam has too many high-quality seaports. Facing this situation, the Government of Vietnam has formulated a "Master plan for the development of Vietnam's seaport system by 2020, with a vision to 2030" to develop and modernize national seaports. However, the actual implementation of this plan faces many difficulties. One of them is due to the young economy of Vietnam facing the problem of ensuring large financial resources for port construction. The government does not have enough financial resources while attracting foreign investment and private investment is not easy because of low cargo flow. Meanwhile, specific strategies to mobilize foreign investment for seaport development have not been developed recently. However, the mobilization of investment capital for this field can be done through two main legal frameworks, namely the Law on Foreign Investment and the Regulation on Investment in the form of Public-Private Partnership. According to PPP regulations, the government budget for a PPP project must be less than 30% of the total

project investment. In the private sector capital, the equity of the investor must be greater or equal to 30%. The remaining 70% can be mobilized from commercial sources. Vietnam currently lacks modern seaports, while the planning vision in this area is too short, not consistent with the general trend of the world. In fact, many new plans have been built out of date. While maritime and aviation both make money, are commercial activities, can attract investment from the private sector, they do not have specific policies but instead just use budget money to invest wasteful and inefficient. Currently, connecting major ports in the world is using large modes of transport such as railways and highways. However, the Vietnamese seaport system only has Hai Phong port connected to the railway (Cai Lan port has invested but has not been able to operate due to lack of synchronous gauge), and there is no separate highway for transportation. Loading goods. Traffic connecting waterways is restricted by the static of bridges crossing the river. Therefore, the efficiency in transporting goods to the seaport has not been optimized in terms of

time and transportation costs. Therefore, a problem posed is the need to link the seaport with multimodal transport for the port system to develop sustainably, logistics costs are pulled down. The Vietnam Maritime Administration is continuing to research the development of a dry port system - the extended arm of a seaport to support port services and to contribute to the efficient organization of the transport network. The Department also noted that the planning must also set aside appropriate land fund behind the port to build a distribution center for goods and services after the port, conveniently connected to the national transportation network. In the coming time, the Vietnam Maritime Administration will propose to deploy new points in the port development plan, including the viewpoint: "Ship size as planned" as a basis for investment in construction of infrastructure. Public ports, only allow vessels with specifications suitable to the receiving capacity of the wharf, technical standards of the channel, ensuring safety and quality of exploitation at seaports.

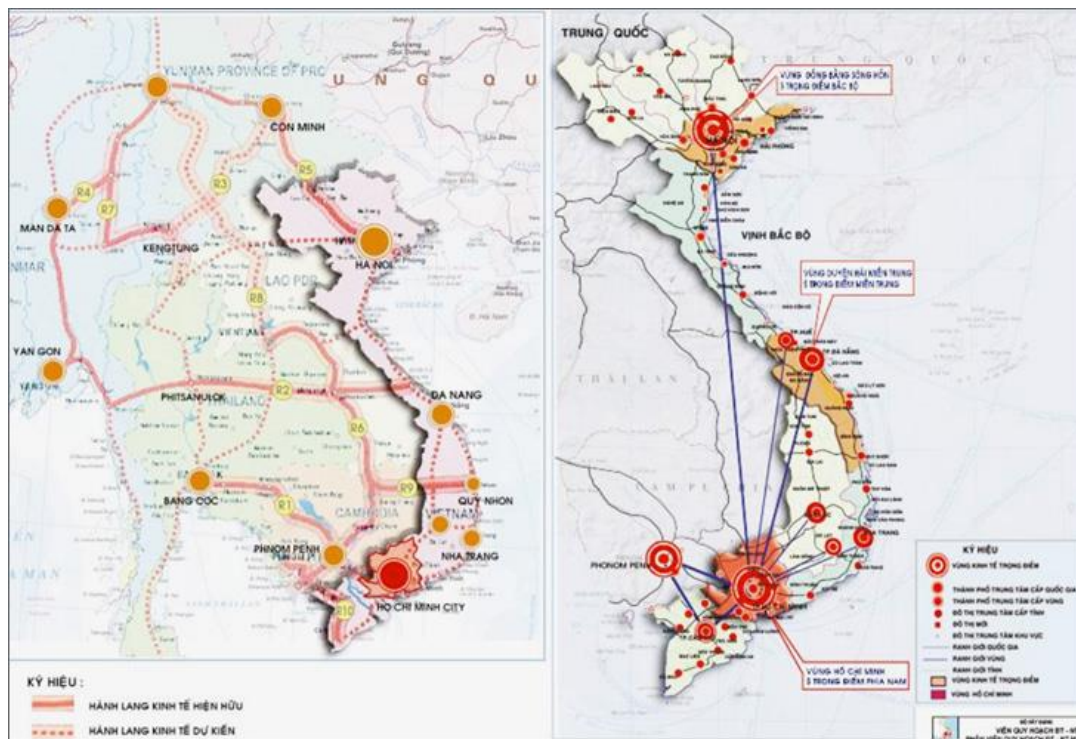


Fig. 1: Vietnamese port system

Most of the regional major ports: Hai Phong, Da Nang, Ba Ria - Vung Tau, Ho Chi Minh City ... have been upgraded to receive ships of up to 30,000DWT. Typically, Cai Mep - Thi Vai port receives vessels up to 18,300 TEU (194,000DWT) into weekly operation, directly connecting Vietnam's import and export goods to the Northern European market. In the central region, the seaport is also on the "flourishing" momentum, especially the Danang port. Before 2014, Da Nang port had a limited wharf length, container ships had to queue for 6-8 hours. After equitization, the port focused on upgrading the wharf infrastructure and developing container services. The total investment for the period of 2014 - 2018 is more than VND 1,900 billion, 4 times higher than the previous period of 5 years (2009 - 2013). The port continues to put into use 2 new wharves in the project of expanding Tien Sa port phase 2, with a total investment of nearly VND 900 billion.

Output of goods through the port in the past 5 years has increased on average 10% / year. The receiving capacity has been raised from 1,800 TEU to 3,500 TEU, the situation of waiting ships is almost not available. In addition, the strength of this delta is the network of inland waterways but recently there are large port projects proposed to occupy a lot of lands and compete with the port group No. 5 (ie the group of ports in the Southeast region). and Ho Chi Minh City) [6]. Vietnam's seaport has shaped a port system of 45 seaports (32 inland ports and 13 offshore oil ports) with 281 ports, total length of nearly 87,550m wharves, the throughput capacity of about 550 million tons/year. Associated with centers, major economic regions of the country have formed large seaports with the role of a focal point for goods import and export and creating motivation for development of the whole region such as Quang Ninh seaport, Hai Phong is associated with the

northern key economic region; seaports of Thua Thien - Hue, Da Nang, Dung Quat and Quy Nhon in association with the Central key economic region; seaport TP. Ho Chi Minh City, Ba Ria - Vung Tau, Dong Nai associated with the Southeastern dynamic economic region; Can Tho and An Giang seaports in association with the Mekong River delta key economic region. Some seaports have been invested with modern scale of international stature such as Ba Ria - Vung Tau seaport and Hai Phong seaport. These ports have been performing the role of international gateway ports and assume the function of transshipment. Compared to the first year of planning implementation (2000), Vietnam's seaport system has increased 4.4 times in terms of port length. The port capacity is concerned, upgraded and improved to receive ships with larger and

larger tonnage. Most general ports and regional hubs, including: Quang Ninh, Hai Phong, Nghi Son, Ha Tinh, Thua Thien - Hue, Da Nang, Quang Ngai, Quy Nhon, Khanh Hoa, Ba Ria - Vung Tau, TP Ho Chi Minh City, Dong Nai and Long An have been newly invested and renovated to receive ships of up to 30,000 DWT and larger, in accordance with the development trend of the world shipping fleet. Many new investment ports with modern scale allow to receive large tonnage ships up to hundreds of thousands of tons such as the ports in Cai Mep - Thi Vai area in Ba Ria - Vung Tau province and the Lach Huyen - Hai Phong port. On February 20, 2017, CMIT port - Ba Ria - Vung Tau port has successfully received the world's largest container ship with a tonnage of 18,300 TEU (194,000 DWT).

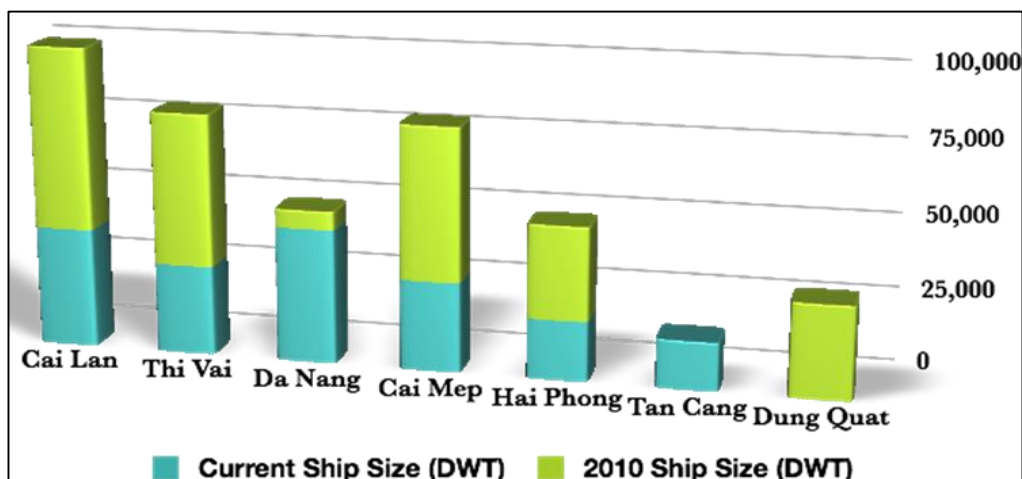


Fig. 2: Seaport in Vietnam

This is an important basis, confirming Vietnam's seaport capacity, creating a premise for shipping lines to use Vietnamese seaports as a link in the global maritime chain. From open investment policies, over the past time, we have attracted many investors who are professional port operators and large shipping lines of the world. participate in investment and construction of seaports in Vietnam such as DP World Group - UAE (the world's No.5 port operator) participates in investing and exploiting the SPCT port - TP. Ho Chi Minh; SSA Marine Group - USA (the world's ninth port operator) invests in investing in the operation of CICT port in Quang Ninh province and SSIT port in Ba Ria - Vung Tau province; PSA - Singapore Group (the world's No. 3 port operator) invests in and operates SP-PSA port in Ba Ria - Vung Tau province; APMT Group - Denmark (the world's No. 2 port operator) invests in CMIT Port investment in Ba Ria - Vung Tau province; Hutchison Port Holding - Hong Kong (the world's No. 1 port operator) invests in SITV port in Ba Ria - Vung Tau province. The lines of Mitsui O.S.K line (Japan), Wanhai Lines (Taiwan) - the company in the top 20 of the world involved in investing and exploiting the international container port of Tan Cang - Cai Mep; MOL, NYK shipping lines (in the top 20 in the world) invested in Lach Huyen harbor ... Professional port operators in the world, shipping lines and a number of domestic port operators such as Saigon Newport Corporation, Vietnam Maritime Corporation have brought the best seaport services, contribute to improving service quality and competitiveness of Vietnamese seaports.

2. Characteristics of port system in vietnam

The role of a seaport is very important, but there is no technical infrastructure behind. Not only the Central but also other seaports in the region such as Cai Mep - Thi Vai and Lach Huyen port groups currently do not have railway connections. We have just made Lach Huyen port, a very majestic port, borrowed from Japan, with Japanese advice, but finally there is no connecting rail, these are the issues that are being raised. . In the presentation at the Central Economic Development Conference, it is necessary to build a transport system in association with seaports and international airports to form the region's logistics system. Therefore, the demand for cargo transport of these economic zones and industrial parks is very high, requiring urgent transportation infrastructure to connect with seaports to avoid the situation of "wharf is more than port" construction of a seaport but lack of connected infrastructure. The seaport is one of the five transport infrastructures, the gateway of import and export goods and the hub for converting modes of transport from sea transport to transport. load rail, road, inland waterways. Therefore, the seaport system and logistics services associated with port operation always play a particularly important role. Currently, Vietnam has 44 seaports and 263 ports. In particular, deep-sea ports, gateway ports combined with international transshipment ports can accommodate ships of 100,000 - 200,000 tons which have been invested and constructed in the North and the South and are continuing to research and invest in the region. With the capacity of about 550-570 million tons / year, the Vietnamese port system annually approves up to 90% of

import and export goods, contributing to create a driving force for the country's economic development. Regarding the structure of Vietnam's seaport is still inadequate, with small ports, lack of large ports, inadequate and focused investment, Mr. Nguyen Xuan Sang said that the Vietnam Maritime Administration is directing the implementation of ship procedures via electronic network, at the same time, to build software of electronic statistical declaration to minimize administrative procedures, support maritime activities to improve the efficiency of seaport exploitation Inland ports are considered an important link in multimodal transport, contributing to reducing transportation costs and reducing the time of storage at seaports. Statistics of the Ministry of Transport and Transport (MOT) show that there are currently 20 ICDs and domestic clearance points like ICD, concentrated in the North and the South. In particular, in the North, there are 10 ICDs connected to Hai Phong seaport, mainly ICDs with road connections, only one ICD Lao Cai has a railway connection. In the South, there are 10 ICDs connected to Vung Tau and Ho Chi Minh City ports with 7 ICDs connected to inland waterways. ICD is a part of the transport infrastructure associated with the operation of the seaport and other infrastructure systems, the development of the ICD must be consistent with the port system development plan, the development plans. developing the transport network and socio-economic development planning of regions and localities. Therefore, it is necessary to develop the ICD system to meet the import and export needs of each region and economic corridor, especially for goods transported by containers. In order to gradually establish and develop the ICD system to meet the needs of transporting import and export goods, increasing the clearance capacity for seaports; rationally organize container transportation, reduce transportation costs, storage time at seaports and ensure goods safety; contribute to reducing traffic congestion, especially in big cities. However, according to the Ministry of Transport, the current development plan of the ICD system has revealed many inadequacies, in each region of North, Central, and South, the number of ICDs was too small, not suitable with actual capacity and conditions. (ICD investment and

connected infrastructure that do not meet ICD criteria must be connected to at least 2 modes of transport to facilitate multimodal transportation, prioritizing ICD location associated with mode have high transport capacity). Some localities have seaports but due to the wide area, the distance from some areas to the seaport is quite far, there is demand for ICD development, basic criteria to meet requirements but not yet planned for ICD development. At present, seaports have narrow storage areas, there is a need to create ICDs right at the back yards, at industrial parks adjacent to seaports to support capacity through goods but have not been oriented to develop. at the current planning. Specifically, the establishment and development of 13 ICD locations covering an area of 70 to 400 hectares nationwide are not reasonable, although it can meet the service needs it will not be appropriate. In some areas and main container transport corridors, especially in Hanoi, Ho Chi Minh City, Binh Duong and Dong Nai, many industrial parks, export processing zones and ICD system development needs Support for seaports is huge. Transportation development should be associated with environmental protection in order to protect the living environment of people. Economic development causes huge losses for Vietnam in the environment. Therefore, urban development associated with environmental protection is a very important issue. However, the development of transport is a field with high social sensitivity, mainly using petroleum products and a large amount of consumption, means of transport, especially privately owned road traffic. The use of administrative measures is extremely difficult; The implementation and implementation of measures to improve energy efficiency in the transport sector's activities also face many obstacles, that is the process affecting all aspects of social life; want to succeed, requires high awareness of the people. Therefore, the implementation of the task must be taken step by step to gradually change the habits of road users. Therefore, the immediate task still requires strengthening the propaganda to raise awareness of all levels and the community to join hands in the transport industry to build a green transportation system.

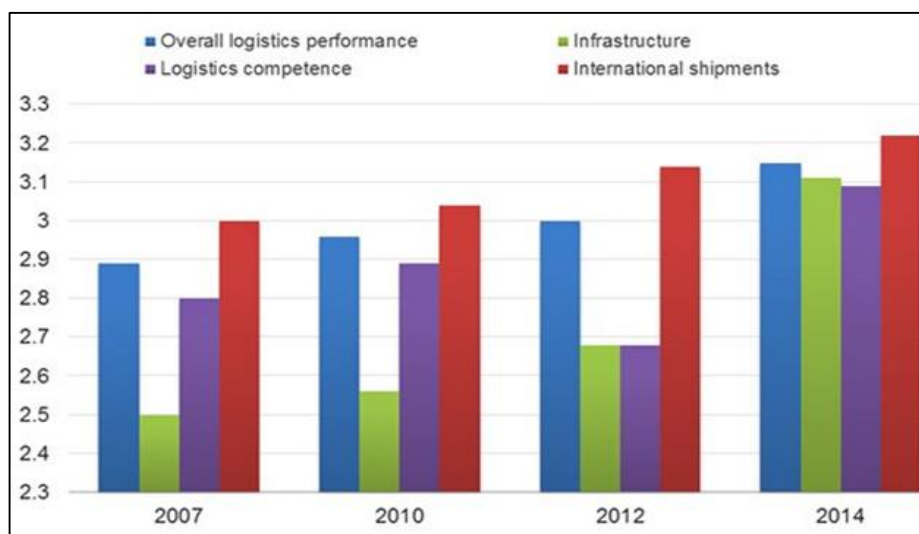


Fig. 3: Vietnam's Logistics Market

The largest port in the region, Cai Cui port group, Can Tho city can only accommodate ships of 20,000 DWT, but due

to the limitation of Hau river flow, it has not been able to fully exploit the designed capacity. The remaining ports in

the region are mostly small-scale, lack of storage systems, yards, loading and unloading technology, management and exploitation are quite backward. Not to mention the import demand for coal for thermal power centers in the Mekong Delta is very large. Currently, up to 70% of the region's cargo must be transported by road to ports in Ho Chi Minh City and the Southeast (belonging to the port group No. 5), resulting in a 10% increase in freight costs. Up to 40% / shipment. Therefore, logistics costs also come from here. This is not commensurate with the expectations set for the Vietnamese port system when it wants to reduce logistics costs. The fragmented and unsynchronized development among ports has led to unhealthy competition, weakening and mutual damage among investors and port operators. The railway is a type of transport that can transport super-sized and super-heavy goods in large quantities but the

freight is cheap. However, the fact that the railway has not developed in recent years has caused difficulties for seaports. In fact, the railway is suitable for long-distance transport on land, if the railway lines can be directly connected with major seaports, it will help reduce costs, reduce pollution, reduce environmental emissions and ensure traffic safety. Thereby reducing logistics costs. If there is no direct railway, cars will be used for transshipment, the cost will be high, major environmental pollution will indirectly reduce the competitiveness of seaports with international ports of surrounding countries. Despite great potential, the existing railway infrastructure is of poor quality, backward, and low speed. The ability of the railway to connect with other modes of transport is still very poor, although these connection points are still very few.

Table 1: Container cargo throughput

Major ports by region	Throughput (million TEUs)	Share of total (%)
North	2.23	26%
Haiphong Port	1.04	12%
Dinh Vu Port	0.52	6%
Others	0.68	8%
Central	0.26	3%
Danang Port	0.17	2%
Others	0.10	1%
South	5.96	71%
Saigon New Port (Cat Lai)	3.26	39%
Tan Cang-Cai Mep International Terminal (TCIT)	0.64	8%
Cai Mep International Terminal (CMIT)	0.61	7%
Vietnam International Container Terminals (VICT)	0.44	5%
Others	1.01	12%
Total	8.45	100%

Source: Vietnam Seaports Association

Deteriorated warehouse system, cargo yards almost unqualified for loading and unloading containers (mainly bulk handling). Loading and unloading goods at the station on the railway line are mainly manual unloading, not applying mechanization, the organization of multimodal transport business is very limited, not able to access logistics services in freight transport. Chemical, leading to large storage time, storage, increase freight rates, reduce competitiveness compared to other modes of transport. Moreover, the current initiative in finding sources of goods that need to be transported by rail is not high, mainly because the owners of the goods find the railway by themselves. Especially, it has not developed and synchronously connected transport modes on the same transport corridor to form multi-modal transportation, make the best use of each type of transport, minimize costs. The community-based connectivity of several groups of transport businesses operating on the same route, line, or transport service is not high. While the connection between the railway and other types of transport should be central to improving national transportation capacity, the railway should be the backbone of the transport axis, thereby reducing Transportation costs, shared for businesses. Approving capacity of the routes is low but basically the

current routes are only exploited from 23% - 61% of the existing capacity and much lower than planned when the plan is from 79% - 100%. Currently, the biggest difficulty of Vietnam's seaport system is the lack of connected infrastructure. For example, the port of Cat Lai (Ho Chi Minh City), the port has a large volume of cargo but is located in the urban center, so the ability to develop is limited. While other major port areas have no goods to exploit. With the current growth rate of 17% / year, only 3 years from now, the volume of goods passing Cai Mep - Thi Vai deep-water port can double, to 5 - 6 million TEU / year. The problem of Cai Mep - Thi Vai port now is the need to clarify the exploitation market and the shortcomings and shortcomings in the management and development of infrastructure. The capacity of 7 million TEU / year of Cai Mep - Thi Vai port is based on the assumption of perfect traffic connection (road and rail) according to international standards, but in reality, it is not currently eligible to collect. Attracting international transshipment goods compared with neighboring ports in the region. This is also a common limitation of Vietnam's seaport system. In addition to the potential to attract international transshipment goods, Vietnam also has the opportunity to attract the development of hubs for regional

and international cargo distribution of large corporations and shipping lines. To exploit this potential, Vietnam's seaport development needs a broader strategic vision. In addition, the port system in Cuu Long River Delta region has not been properly invested and paid attention to. Currently, there are 7 seaports in Tien Giang, Dong Thap, Can Tho, An Giang, Vinh Long, Nam Can and Kien Giang. In particular, there are 31 ports (14 general ports and 17 specialized ports), with a total capacity of 20.7 million tons/year. However, there is no port in the whole Mekong Delta region capable of receiving full-tonnage ships with a tonnage of 20,000 DWT.

Conclusion

The traditional centre of manufacturing and trade, the south is home to Vietnam's major container ports. Over the past decade, however, the northern region has increasingly become a popular destination for foreign manufacturers looking to diversify their production bases amid the rising costs of operating in China. The China-plus-one strategy adopted by a number of Japanese companies has also contributed to this development. Their close proximity to China has seen the container throughput of the northern ports growing fast, a development fuelled by a surge in foreign-invested manufacturing activities in the region. From 2000 to 2013, throughput at the northern ports grew at compound annual growth rate (CAGR) of 20%, faster than that of the southern ports (17%) and the central ports (15%). In recent years, Vietnam's northern centres - notably Hanoi, Haiphong and the Bac Ninh province - have become popular production bases for several Japanese and South Korean manufacturers, including Samsung, Panasonic and Bridgestone. A combination of a variety of tax incentives and lower labour costs than in the south have made the northern provinces more attractive to foreign manufacturers, as well as their associated suppliers and supporting industries. In turn, this has boosted the export of finished products and the import of parts and components.

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