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# **PHÁT TRIỂN CÁC TRUNG TÂM LOGISTICS TẠI VIỆT NAM DỰA TRÊN KINH NGHIỆM TỪ HÀN QUỐC VÀ NHẬT BẢN**

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**Tóm tắt**

Nhiều tác giả đã nghiên cứu về chủ đề ứng dụng logistics, đây cũng đang trở thành vấn đề được nhiều doanh nghiệp thương mại và doanh nghiệp trong lĩnh vực logistics quan tâm. Tuy nhiên, các chương trình nghiên cứu hiện có chưa đi sâu vào điều tra, đánh giá một mô hình trung tâm logistics thành công cụ thể; thay vào đó, họ chỉ thực hiện nghiên cứu giới thiệu về các dịch vụ hậu cần và các mô hình công ty khác nhau hoạt động trong ngành hậu cần. Tất cả các nhiệm vụ vận chuyển và phân phối liên quan đến hậu cần cho cả quá cảnh trong nước và quốc tế đều được thực hiện thương mại bởi nhiều nhà khai thác tại trung tâm hậu cần, hoạt động như trung tâm của một khu vực cụ thể. Nhiều dịch vụ tích hợp được bao gồm trong các hoạt động này, bao gồm tư vấn, sản xuất, xuất khẩu, nhập khẩu và vận chuyển, lưu trữ, xử lý, hợp nhất, phân hủy, thông quan, dịch vụ cơ sở hạ tầng, bảo hiểm và ngân hàng. Một trung tâm logistics phải có đầy đủ các tiện nghi cần thiết để thực hiện các chức năng nói trên. Các thuật ngữ trung tâm hậu cần, trung tâm hậu cần và vận chuyển hàng hóa hậu cần thường được sử dụng thay thế cho nhau. Một loại cấu trúc hệ thống hậu cần độc đáo được gọi là trung tâm hậu cần là rất quan trọng để nâng cao hiệu quả của các hoạt động hậu cần. Câu hỏi đặt ra là làm thế nào để thành lập trung tâm logistics một cách hiệu quả và phù hợp. Với việc tổ chức lại các khu vực cuộc sống đô thị, các trung tâm logistics trở thành một lựa chọn khả thi cho vận tải hàng hóa, ngày càng trở nên quan trọng cả trong nội đô và khu vực. Việc lựa chọn các địa điểm thích hợp cho các trung tâm này trung tâm cũng quan trọng như việc xác định nhu cầu cho các trung tâm hậu cần.

**Từ khóa:** logistics, trung tâm logistics, vị trí trung tâm logistics, phân tích sự phù hợp, quản lý logistics bền vững, hệ thống thông tin địa lý.

# **DEVELOP LOGISTICS CENTERS IN VIETNAM BASED ON EXPERIENCE FROM KOREA AND JAPAN**

# **Abstract**

Numerous writers have studied the subject of logistics application, which is also becoming an issue with which many commercial firms and businesses in the logistics sector are concerned. The existing research programs, however, do not go into investigating and evaluating a specific model of a successful logistics center; instead, they just do introductory research on logistics services and various corporate models that operate in the logistics industry. All logistics-related transport and distribution tasks for both domestic and international transit are performed commercially by multiple operators at the logistics center, which operates as the hub of a particular region. Numerous integrated services are included in these activities, including consultation, manufacturing, export, import, and transit operations, storage, handling, consolidation, decomposition, customs clearance, infrastructure services, insurance, and banking. A logistics center must have all the necessary amenities in order to perform the aforementioned functions. The terms logistics center, logistics hub, and logistics freight are generally used interchangeably. A unique kind of logistical system structure called a logistics center is vital to boosting the effectiveness of logistical operations. The question is how to establish the logistics center effectively and appropriately. With the reorganization of urban life regions, logistics centers become a viable option for freight transportation, which is becoming increasingly significant both intra-urbanely and regionally. The selection of appropriate locations for these centers is as important as the determination of the need for logistics centers.

**Keywords**: logistics, logistics center, logistics center location, suitability analysis, sustainable logistics management, geographic information system.

## **Introduction**

With advancements in business and industry, the logistics sector is developing more quickly. Due to this, it is essential to establish a strategy that is both internationally competitive and receptive to the demands of business and industry. An essential component of this approach is the use of logistics centers. If such a center is established in conjunction with combined and intermodal transport types, there are innumerable advantages to doing so, including lower prices, reduced traffic congestion, lower environmental pollution levels, etc. The term "logistics center" is never given a name or a meaning in the literature. According to Higgins and Ferguson (2011) and Rimiené and Grundey (2007), a number of terms imply a logistics center, including distribution center, freight village, dry port, inland port, load center, logistics node, gateway, central warehouse, freight/transport terminal, transport node, logistics platform, and logistics depot.

One of the key factors to help Vietnamese goods improve their competitiveness in the domestic market as well as in the international market is that we need to reduce the proportion of logistics costs in the final sales price. Logistics costs compared to Vietnam's GDP are at 16.80% compared to the world average of 10.70% (Vietnam freight and logistics market - growth, trends, covid-19 impact, and forecasts, 2022). In ASEAN, Vietnam is higher than Singapore at 8.50%, Malaysia at 13.00% and Thailand at 15.50%, while in developed countries such as Japan and the US, logistics costs only account for about 10-13% and in developing countries an average of about 15-20% (ASEAN Freight and Logistics Market - Growth, Trends, COVID-19 Impact, and Forecasts, 2022). The excessive logistics cost structure drains resources from the Vietnamese economy, lowers the competitiveness of Vietnamese goods on the global market, and places additional burdens on Vietnamese consumers. We must increase the effectiveness of the logistics system and optimize the logistics cycle in order to lower logistics expenses. Creating a logistics center system is one of the best alternatives.

Many nations have successfully used commercial logistics to improve overall process efficiency, reduce costs, lower product costs, and improve the competitiveness of goods and services in the market. South Korea, India, Japan, Hong Kong, and a number of other countries are considered to be typic examples. Commercial logistics is based on the integration of multiple processes in the process of serial production management, supply of products and services from the manufacturer to the end consumer. Therefore, Vietnam – a country with a transforming economy – also needs to quickly catch up with the world trend, towards the goal of becoming a link in the global value chain and directly promoting the domestic economy. In the world, there have been many countries that have successfully developed logistics centers such as the Netherlands, Germany, Japan, and Korea. We urgently need to study the experience of developing logistics centers of these countries combined with studying the development situation and development trends of Vietnam's logistics industry to find solutions to develop the most effective logistics center system that brings maximum benefits to Vietnam.

As a result, the research team boldly proposed the topic: "Develop logistics centers in Vietnam based on experience from Korea and Japan" with the aim of learning the formula for Korea and Japan's logistic centers' success as well as to find a solution to the issue of developing Vietnam's logistics service industry in the future.

### ***Research's goal***

Analyze the process of formation, development and operation of logistics centers in Korea and Japan, find out the success formulas and achievements of logistics centers, to give lessons, experiences learned to effectively serve the process of building and developing logistics services in Vietnam (the main focus is logistics centers).

### ***Research Methodology***

In the topic, we use methods of investigation, survey, statistics, analysis and synthesis. In addition, applying theoretical foundations, implementing the policy guidelines of the Party and the State on socio-economic development.

### ***Object and Scope of research***

The subject of the study is the process of formation and development of logistics centers in Korea and Japan, and the current situation of Vietnam's logistics industry.

Scope of research: the topic is mainly limited to research on the experience of developing national-level logistics centers of Japan and Korea and solutions for developing the system of national-level logistics centers for Vietnam.

## **Overview about logistics center**

### ***2.1. Theoretical Basis for Logistics Center***

#### *2.1.1. Definition of logistics center*

Although the idea of a logistics center is still unpopular in Vietnam, it was first introduced in North America, Western Europe, Japan, and other nations with advanced logistics systems in the 1970s and 1980s. It is currently gaining popularity in developing nations like China, India, Russia, and Brazil.The terms logistics hubs, logistics clusters, logistics parks, logistics nodes, logistics zones, and cargo shipment centers are only a few examples of similar concepts and terminology that have been used in the past to describe logistics centers. Along with the evolution of the logistics and supply chain management principles, the concept of the logistics center has also changed. Listed below are some typical conceptions for the logistics center:

- J. W. Konings and D. A. Tsamboulas argued that the logistics center is a hub that combines diverse means of transportation, a key component in the multimodal transportation chain, and a type of network of nodes where activities related to transmission between modes of transportation occur. 107–109 (Ieva Meidute 2005).

- According to P. Baker, the logistics center is a type of outbound supply chain (after production) structure that includes finished product warehousing, distribution, storage for value-added services, etc (Peter Baker 2008, p.6).

- In the view of A. Langevin and D. Riopel, logistics is a form of logistics network system that is significant for supporting the flow of goods, handling shipments, generating SKU classification, re-collecting transported goods,...The two men said that the logistics center and warehouse are different because the goods stored in the logistics center are limited, the logistics center plays the role of goods flow.

- M. Krzyzanowski gave the definition: a logistics center is a multimedia transport terminal where activities take place to exploit cargo flows for different transport units, serving the regional, national and international markets. In M. Krzyzanowski's view, the main functions of the logistics center are: transportation, warehousing, warehousing, sorting and branding.

However, the widely recognized and fairly complete concept today is the definition of the European Association of Freight Villages), according to this Association: A logistics center is an area where activities related to transportation, logistics and distribution of goods are carried out domestically as well as internationally, carried out by various entities. The logistics center encourages collaboration and open competition among companies that employ transportation and logistics services, with the potential for scale-related cost reductions.

Although it goes by various names, the logistics center refers to a location where commodities movements are concentrated as well as to initiatives that support the growth of the economy by fostering commercial enterprise.The logistics center acts as a transport connection hub for the purpose of improving the quality of transportation. The infrastructure and resources are expected to bring value to those involved in doing business here. Cost advantages, quality advantages, and environmental advantages are aspects that are emphasized for integrated transportation in order to gain a lasting and significant competitive advantage. Companies can also improve economic performance and production through working together. In fact, there are also private logistics centers that have become very popular especially in France, the UK, and the United States. The organizational structure is also emphasized in the definition of the logistics center because "a legally neutral entity can act on behalf of the logistics center within the framework of transportation, and ensure the common interests of the companies at the center" (Bentzen et al. 2003). The operational side of the logistics center is primarily addressed by all of the aforementioned logistics concepts, with a focus on the facility's infrastructure, purposes, and services.

#### *2.1.2. Logistics Center Function*

Companies of all industries are looking for ways to reduce transit times, minimize uncertainty in delivery and logistics costs, so the demand for logistics centers is predicted to increase in the future (Kondratowicz, L. 2003). With regard to economies of scale, cutting-edge technological systems, the value of integration, and operational specialization, logistics centers promise to be beneficial to logistics networks. Several tasks that may be accomplished by logistics centers are briefly outlined below:

- *Warehousing:* by lowering inventory costs and gaining economies of scale while making purchases, warehousing at a logistics center may lessen supply chain expenses. However, the reality at logistics centers is often designed to minimize and even eliminate storage reserves. Modern logistics centers are designed with more emphasis on the flow of goods than stockpiles.

- *Transportation:* transaction costs and transit durations may be low or high based on the location and function of the logistics center and the trade-off between domestic and international shipping expenses. Different distribution techniques may be used by the center, and items kept there can be distributed at the perfect moment to guarantee the effectiveness of the subjects' commercial projects.

- *Distribution & Distribution Network Management:* by placing goods on transit and choosing the optimum route to transport, a logistics center may be established to address and optimize the distribution of commodities. Depending on the demands of the project, the vehicles can either follow one another or travel straight.

- *Cross-docking:* goods are shipped to the center from various suppliers, then combined to ship to different customers. Cross-docking is associated with sorting, dividing or mixing. In this case, the logistics center acts both as a storage point but also as a transfer point.

- *Consolidation:* small shipments are grouped into large shipments for transportation. Consolidation can be done by a logistics center service provider or a third party. The outstanding advantage of consolidation is the saving of transportation costs.

- *Break bulk:* this is the opposite of consolidation. This is the operation of dividing large shipments into smaller shipments.

- *Materials handling:* the management of goods also needs to be done effectively to minimize operations, rowing activities, effectively using both space and time. The basic objectives of the warehouse operation at the center (including: Minimizing space not used to store goods, Minimizing manual labor, Continuous fixed movement equipment, Reducing costs, Increasing the efficiency of logistics flow...).

- *Transshipment:* logistics center provides goods transfer services from one mode of transport to another. This service brings high efficiency to carriers and distributors, improving the efficiency of inventory and distribution activities with minimal costs until the time of bringing the highest efficiency to customers.

- *Some other functions:* the logistics center could have the capacity to quickly assemble goods and distribute them. Customized goods can be transported to logistics facilities to create assembly packages. Customs processes, customs clearance, commodities control inspection, as well as other state administrative tasks required for domestic logistics and foreign logistics operations, are performed at the logistics center.

#### *2.1.3. Factors affecting the location of logistics centers*

To set up and build a logistics center location, it is necessary to satisfy individuals and businesses using logistics center services as well as suppliers and operators of that service. It can be seen that there are many factors to take into account when deciding the location of logistics centers between organizations and enterprises operating logistics center services and enterprises using logistics center services. Although these factors appear to be similar, they actually come from the perspective of benefits. The goal and criteria for evaluating consideration are entirely different.

*In terms of businesses using logistics center services:*

- *Natural resources:* to reduce the cost of delivering such materials to the plant, firms frequently choose the placement of the logistics center close to where there are fundamental resources for manufacturing and assembly operations.

- *Population characteristics:* logistics centers are frequently seen to be situated close to or in areas that corporations regard to be significant marketplaces with large target audiences as well as proximate to prospective large target markets. These organizations also take into account the population structure shift, which has a significant impact on the trend of purchasing products, goods, and services, when deciding where to locate a logistics center.

- *Transportation:* these businesses are interested in the development of transport modes, especially transport modes for the operation of logistics centers as well as the quantity and quality of service of transporters and transport service markets. If the transport system is underdeveloped, the unhealthy development of the transport service market will affect transportation costs as well as the quality of customer service. Usually businesses choose logistics centers near major transportation hubs.

- *Proximity to important suppliers:* businesses employing logistics center services have recently placed a high priority on selecting centers that are close to their primary suppliers. Being close to key suppliers guarantees JIT deliveries, a quick, predictable supply procedure, and lowers stocking costs.

*In terms of organizations and enterprises operating logistics center and services:*

Logistics centers must be situated close to important transportation hubs that connect several modes of freight transit as well as close to important commercial and economic centers. By utilizing economies of scale, the logistics center can carry out its duty of lowering transportation costs. The long-term socioeconomic development trend of the region as well as the long-term development flow of commodities that the logistics center will service must be taken into consideration while planning to create a logistics center.

Building a modern logistics center requires a huge amount of investment capital, it is necessary to mobilize capital from many different sources: the public and private financial sectors, as well as international financial institutions. Factors that organizations and businesses operating logistics center operations and services are interested in considering first when deciding on a location for a logistics center: Local policies, legal regulations, the ability to use large land areas for logistics centers; The level of political stability; Trends of economic-trade development; Competitors and the level of competition in terms of logistics center service business.

### ***2.2. Experiences in Developing Logistics Centers***

#### *2.1.1. The success of logistics centers in Korea*

The logistics industry in Korea is considered a sub-branch of the transportation industry. *Based on the LPI index (logistics performance from the world bank) in 2018, Korea ranked 25th in the world with a total score of 3.73/5. The industry's total sales hovered at 82 trillion won in 2007. In 2022, the logistics industry in Korea generated revenue in excess of one hundred trillion won.*

Korea has a great geographical advantage in terms of market. Korea is located in Northeast Asia, is a large market with a population of 1.7 billion people, 2.5 times that of Europe. The connection with the "world's factory" - China and economic powerhouse Japan, as well as Taiwan and Mongolia, has given Korea a certain geographical - economic advantage. It can be said that *Korea's current logistics development strategy is based on favorable factors in terms of: geography, accessibility to neighboring markets, infrastructure, and the ability to circulate goods.*

*Current situation of Korea’s logistics centers:*

Initially, the port of Busan was developed, managed and operated by the Korean government, however, later on, some stagnation problems in the state mechanism affected the management and operation efficiency. *Therefore, in order to promote port management, respond more quickly to customer needs, and improve the competitiveness of port operations compared to other ports in the region, the Busan Port Authority (BPA) has been established.* BPA is essentially a public company that operates on the principle of self-balancing. The port authority will conduct activities such as finding businesses wishing to invest in the FTZ, assisting them in carrying out procedures, leasing land and offices. BPA also conducts activities such as recruitment, simplifying customs clearance procedures, applying information technology to reduce the time of ships and goods at the port, and attracting other foreign companies to invest in the port area. This model has clearly shown its effectiveness, so far six FTZ free trade zones in Korea have all converted to the BPA model – each FTZ zone will have a corresponding BPA, operating according to the development strategy. national development and the objectives of that PTZ.

Incheon is designed as a cargo port and airport complex, a Free Trade Zone (FTZ). This FTZ is a tariff-free area, very suitable for the import and export of goods and value-added transshipment services. It serves as a freight hub for the Northeast Asia region for many companies by offering promotional services as well as other support services in a global business environment. *Incentives for a company based in the Incheon FTZ area are based on its investment there.* For example, one company that invests about $5 million to $10 million may receive a 50% discount on the rent over a five-year period, while another company that invests $50 million or more may waive the entire land rent for a period of 15 years. The leased land for the logistics complex at Incheon International Airport is not too expensive, only 12 USD/m2 annually for general logistics activities. *The maximum lease term for a company at an airport logistics complex is up to 50 years.* The basic term for a land lease is 30 years and can be extended for two additional periods of 10 years each so that companies in those economic zones are guaranteed stable development and continued activities. business action. 65% of the total land area was sold in lots when the airport logistics center was established.

The components of the ICD logistics center in Korea include transshipment stations, freight terminals, receiving and distribution centers, agricultural distribution equipment, and transshipment ports. integrated cargo terminals (IFTs), and inland ports of entry (ICD). This ICD dry dock is an extension of the pier at the port to the mainland. The rail transhipment from the docks to the customs offices at the ICDs is a simplified temporary storage transport system that performs the same functions as the handling of goods at specialized ports or at a customs office. ICDs or ICDs are built in a strategic transport area for road and rail, with the aim of reducing traffic problems at container yards outside of harbors and ports.

In conclusion, *lessons learned from the Korean model is to create a clear and adequate legal system as the foundation for the development of national logistics; establishing investment policies in a synchronous manner, accompanied by an effective management model and operating mechanism to keep up with future development trends.* Vietnam should also carefully study Korea's development model of logistics centers to develop a strategy for developing a logistics center system in accordance with the actual conditions in Vietnam.

#### *2.1.2. The success of logistics centers in Japan*

*The Japanese logistics industry has a strong prospect of recovery in 2021 and achieved a lot of success in all sectors of logistics, especially in building logistics centers.* Although the global pandemic has negatively affected other sectors of the Japanese economy, logistics still shows a sustainable development when the volume of container goods exported from Japan to China increased for 7 consecutive months.

*Japan has combined many potential factors to build logistics centers, which leads to the high position of this country in the development of logistics sectors.* Firstly, modern logistics facilities with enhanced automation and employee amenities could appeal to both workers, and high-end tenants are completed to be more common in the logistics sector. Secondly, sustainable development of roads is focused by the government . Industrial shipping companies and shippers are encouraged to work together to use low-emission vehicles, while ensuring the safety and efficiency of the road freight supply chain. Thirdly, the government also has long-term and advanced policies to support logistics. The Japanese government develops a plan to associate the development of logistics centers with urban development programs. In addition, they also encourage the forming of advanced logistics centers by incentives programs such as: investment of the Japanese government, reduction in the interest rate of businesses.

*As a result, Japan shows impressive success in building logistics centers.* In the early time, 4 logistics centers: Kasai, Hoping island, Oshima and Adachi held important positions in logistics sectors. In 2022, Japan has built more than 40 logistics centers in 22 cities.

*One of the most successful logistics centers in Japan is Yokohama International Port Cargo Center – YCC.* Daikoku Pier, the largest logistics center in Japan with a total area of up to 32 hectares. YCC is a business cooperation model between the Yokohama city government and Kanagawa prefecture,which is invested up to 60 billion Yen. The forming of YCC has opened a potential opportunity for Japan logistics. The YCC logistics center is open every day of the year, in any weather. Additionally, YCC is outfitted with cutting-edge specialized machinery that is crucial in cutting down on logistical expenses as well as the time required for loading and unloading for clients.

*In conclusion, with the adaptation of business, the timely policies of the government and the competitiveness in logistics in the international market, Japan has achieved success in building logistics centers,* which solve big problems about cost and efficiency in delivery of logistics. It is believed that from the case of Japan, it will bring many lessons for Vietnam.

## **The situation of developing logistics centers in Vietnam**

### ***3.1. The situation of logistics activities in Vietnam***

#### *3.1.1. Current situation of logistics activities in Vietnam*

*Infrastructure:*

- *Seaport system:* Vietnam currently has about 34 seaports and the total number of berths is 296, of which the majority are concentrated in some major seaports such as Hai Phong Port, Da Nang Port, etc. Vietnam's seaport system plays an important role in the country's trade and economic development. However, the scale of Vietnamese seaports is mainly small and medium, also the equipment of most Vietnamese seaports is generally outdated.

- *Airport system:* Vietnam currently has a total of 22 airports, including 10 international airports. Airports are divided into 3 groups corresponding to three regions: North, Central and South. In recent years, the volume of goods transported through Vietnam's airports has been constantly increasing.

- *Road system:* currently, Vietnam's road network has a total length of over 256,000km, including 17,385km of national highways, 22,783km of provincial roads and the remaining are local roads accounting for more than 80% of the total network.

- *Rail system:* Vietnam's railway network is distributed in 7 main axes with a total length of 3,162.9km, connecting residential areas, agricultural and industrial cultural centers, of which the main route Hanoi - Ho Chi Minh City is 1,730km long.

- *Information and Technological basis:* logistics businesses are increasingly focusing on investing in modernizing IT infrastructure to improve management efficiency as well as customer service quality. Most businesses in Vietnam's logistics industry effectively use Internet tools and websites for business activities. Many businesses, especially foreign-invested logistics enterprises, have invested in setting up modern IT tools to serve the customers such as track and trace order, e-booking, visibility, etc.

*Legal basis:*

In Vietnam, logistics has only been recognized as a Commercial Act. The current legal regulations most directly related to the logistics industry can be stated in the Commercial Law of 2005 and Decree 140/2007/ND-CP dated September 5, 2007. However, many legal regulations related to the logistics industry are incomplete, unclear, and contradictory. These have limited the development of a favorable legal basis for commercial activities of logistics enterprises as well as limiting the use of logistics services, causing difficulties for state management.

*Major logistics services and service fees:*

Currently, logistics services in Vietnam are mainly: import and export freight forwarding services, domestic freight forwarding and domestic distribution, warehousing, sorting and packaging of goods. However, these services have not yet developed strongly but are mainly small and unprofessional.

*Number of enterprises involved in the supply of logistics services:*

Vietnam currently has about 1500 enterprises operating in the field of logistics. However, the majority are small businesses, weak in capital, human resources, expertise, and services with limited competitiveness. In fact, most Vietnamese logistics enterprises currently only act as supporting service providers for foreign logistics enterprises such as: customs clearance, domestic transportation, warehouse rental, etc.

*Human resources:*

In Vietnam, currently there are about 1.5 million workers working in the logistics field. However, the supply of labor for the logistics industry only meets about 40% of the demand.

#### *3.1.2. Evaluation of Vietnam's logistics industry*

With a special geographical location - in the center of the Asia-Pacific region, on the international maritime route, Vietnam is considered to have geoeconomic advantages, which are favorable to promote production, export and development of logistics. According to the Competitiveness Assessment Report conducted by the Organization for Economic Cooperation and Development (OECD), Vietnam's logistics industry has an average growth rate of 12-14% per year. In addition, according to the World Bank (WB) report in 2021, Vietnam has an LPI (Logistics Performance Index) ranked 39th of 160 countries, and ranked 3rd among ASEAN countries.

However, Vietnam's logistics industry still has many limitations. The competitiveness of the industry is low, the infrastructure is still very limited, logistics costs are high, which reduces the competitiveness of goods and services in both domestic and international markets. Vietnamese logistics enterprises continue to face fierce competition with foreign enterprises.

### ***3.2. The situation of developing logistic centers in Vietnam***

#### *3.2.1. The current situation of Vietnam's logistics centers*

The growing commodity industry shows the importance of the logistics industry as well as logistics centers. Vietnam is a developing country with many policies of international cooperation, trade and trade; Besides, the demand for purchasing goods, import and export increases, so the formation of logistics centers is extremely important. According to the orientation, develop national and international Grade I logistics centers in Vietnam with the location and role of the original center in Hanoi, Da Nang and Northeast Ho Chi Minh City.From these root centers, develop grade II logistics centers at the regional, subregional and economic corridor levels.

Our country has formed and developed specialized logistics centers, in the short term, specialized aviation logistics centers associated with airports, connected to the system of grade I and grade II logistics centers to support and promote import and export activities or transshipment of goods through multimodal transport, serving the inputs and outputs of industrial production in industrial parks, high-tech centers, large-scale concentrated production areas. In particular, the North formed and developed 7 grade I, grade II logistics centers and 1 dedicated logistics center associated with airports in regions, subregions and economic corridors. The Central – Central Highlands formed and developed 6 grade I, grade II logistics centers and 1 specialized aviation logistics center in regions, subregions and economic corridors. The South formed and developed 05 grade I, grade II logistics centers and 01 specialized aviation logistics centers in the areas, subregions and economic corridors.

In 2021, a number of modern logistics centers, applying advanced and standardized technology, will come into operation, contributing to reducing the burden of logistics infrastructure. A number of new and modern chemical warehouses that meet the standards of fire safety, labor safety, etc. were built and put into operation, ensuring safety for storage. The explosive growth of e-commerce in recent years with big names such as Shopee, Lazada or Tiki, Sendo has created great demand for last-mile delivery and logistics centers specializing in the function of dividing and separating orders. According to SSI, in the past 5 years (2016 – 2020), the size of Vietnam's e-commerce market has recorded a compound annual growth rate (CAGR) of 25%, bringing this market size tripled to 12 billion USD in 2020 (SSI Sector Report, 2022).

However, many logistics centers in Vietnam are actually just ICDs expanding some functions to serve the previous operation. In today's context of economic growth, it is urgent to develop a logistics center that meets comprehensive needs.

*The importance of developing Vietnam logistics center:*

- *Improve trade competitiveness:* according to experts, in order to improve the competitiveness of Vietnamese goods as well as bring more benefits to Vietnamese consumers, reducing logistics costs to 16% by 2025 is a goal that must be achieved. To accomplish this goal, the cooperation of many industries and parties involved in logistics activities in Vietnam is highly needed. One of the most effective measures is to develop a logistics center system that will help in regulating logistics activities, significantly reducing logistics costs for logistics activities in Vietnam.

- *Attract foreign investment:* the development of Vietnam's logistics center system will attract foreign logistics enterprises to join the domestic market as well as attracting foreign commercial enterprises and manufacturing enterprises to invest. The logistics center system is considered one of the basic infrastructure components of the national logistics system. When Vietnam builds and develops a system of logistics centers with diverse services, it will significantly attract foreign logistics enterprises to come to do business. Foreign commercial enterprises and assembly enterprises when investing in Vietnam will be provided with efficient, diversified, fast and reliable commercial logistics and supply services at low cost. Products and goods produced by foreign-invested enterprises in Vietnam will be exported to foreign markets as well as consumed in the domestic market more quickly with lower costs and more competitive prices in the market.

- *Promote economic development of the regions:* when Vietnam's logistics center system is fully completed and effectively operated, it will certainly attract a large number of both domestic and foreign enterprises to invest in services, taking advantage of the competitive advantages that logistics centers create, thereby creating a strong motivation to develop commercial production of the whole region. This will be an opportunity to make a breakthrough in economy and trade for a large economic region of Vietnam.

- *Create employment for Vietnamese labor:* Vietnam logistics centers will create more jobs for workers in service businesses at logistics centers. In addition, Vietnamese logistics centers will strongly attract many domestic and foreign enterprises to participate and invest in logistics centers, thus creating opportunities for domestic workers to practice their skills, gain more knowledge, experience and make technological transfer. These will significantly contribute to generating income for workers and lowering the unemployment rate.

#### *3.2.2. Orientations and policies for development of logistics centers*

In the current period, trade transactions, international trade, integration into the international market are economic activities that our country promotes. One of the important factors contributing to the development of international economic integration is logistics. Logistics centers are a core element in the national logistics system. Therefore, in recent years, the Vietnamese government has introduced orientations and policies to promote the development of logistics centers.

The establishment of a network of logistics centers is necessary to meet national production, circulation, import, and export demands. Utilizing the market for Vietnam's logistics services, with a focus on outsourced, fully integrated, and synchronized services, and organizing and operating under the 3PL model, will help to promote the growth of production and trade by lowering costs and increasing the added value of businesses' goods and services. Progressively incorporating other parties' logistics methods on the basis of e-commerce growth and current, efficient, and qualified supply chain management. Vietnam are Striving to 2020, growth rate of logistics services achieves 24% - 25%/year; proportion of logistic service contribution to total GDP of the economy is 10%, rate of outsourced logistics services by 40%, minimizing proportion of logistics costs to total GDP of the economy to around 20%. By 2030, these indicators are 34% - 35%/ year, 15%, 65%/year and 15% - 17%/year, respectively (General Statistics Office of Vietnam, 2022).

*Development of logistics centers based on the following orientations:*

- To develop logistics centers to become key service centers in circulation and distribution of goods, serving effectively for production and consumption of domestic goods, imports and exports, promoting nationwide socio economic development.

- To develop logistics centers towards synchronous, professional and modern; combining rationally with plans of development of trade, industry, road, waterways, railway, aviation, land-use plan and other plans on development of socio-economic infrastructure of regions in the wholly country; gradually integrating into logistics services market in the region and around the world.

- Development of logistics centers based on active mobilization of social resources, including resources from foreign investors. Ensuring mobilization and effective use of resources for construction and exploitation of nationwide logistics centers.

- Determining the number, size, and ideal location of logistics centers for each period must be the focus and main point of development.

*Typical government’s policies to promote and facilitate logistics centers:*

The government decides on policies to maximize domestic and foreign resources to develop a system of logistics centers; encourages and creates favorable conditions for businesses of all economic sectors to invest in building, managing, and utilizing logistics centers in various ways in accordance with laws; encourages investment and development of logistics services, including operation of dedicated logistics center associated with airports, extended aviation war. Additionally, they broaden and diversify investment avenues in order to foster socialization; they do this by adapting current supportive, preferential policies on credit, taxes, prices, charges, and fees, technology transfer, franchise, and other matters to the unique socioeconomic circumstances of each locality. The government allots suitable land for the construction of a logistics center system. Local governments should take the initiative and be adaptable when implementing land use regulations to facilitate the development of logistics hubs. Promoting the use of information technology and contemporary management techniques in the organization and management of logistics centers, along with increased investment in vehicles and cutting-edge technical equipment, will help to ensure that these facilities fulfill their functions over the long term with high productivity, competitiveness, and integration into regional and global logistics hubs.

By upgrading the performance of the current transportation system, prioritizing the mobilization of resources to build highway systems, high-speed railways with significant traffic density on corridors of North-South and East-West, modernizing railway station systems, ports, and warehouses, developing transport links with neighboring countries, and building trans-Asia roads, convenient connections between logistic centers and between logistic centers with production zones, consumption areas, and transit areas can be ensured.They promote the use of services provided by logistics centers by production and trade firms, particularly domestic commodity distribution and import-export firms, in order to lower costs, boost competitiveness, increase market share, and promote firms' trademarks, while also acting as a catalyst for the growth of logistics centers.

### ***3.3. General evaluation of logistics centers in Vietnam***

Along with the rapid development of Vietnam's economy and the process of world economic integration, Vietnam's logistics industry is increasingly developing following the general trends of the world logistics industry. Logistics is considered an industry with great potential for development and is one of the service industries that Vietnam has a competitive advantage, selected by the Vietnamese Government as a priority service industry to support development.

Vietnam currently has a total of 69 logistics centers throughout the country, distributed in a number of industrial zones. On July 3, 2015, the Prime Minister approved the master plan for the nationwide development of logistics centers with a 2030 orientation by signing Decision No. 1012/QD-TTg. The main goal is to create a network of logistics hubs to handle domestic and international trade flows. Vietnam's logistics center systems are gradually forming and increasingly proving their role for the national logistics system as well as for Vietnam's economic and trade development. In addition, in recent years, the transition from traditional logistics centers to new generation logistics centers, applying 4.0 technology is increasingly popular.

*However, logistics centers in Vietnam still have many inadequacies and limitations:*

- In terms of quantity and distribution, they are not much in number. The majority of them are newly developed only in recent years, and concentrated mainly in some southern industrial zones.

- In terms of scale and scope of services, centers are generally small and mainly serve some few enterprises in the industrial zones or a province, city, and not yet developed enough to the scale of serving a sector or a region. Meanwhile, most of the centers with investment scale are not synchronized, thus limiting the role and basic functions of a logistics center. Vietnam still lacks modern, large-scale logistics centers, especially logistics centers for preliminary processing, processing and preservation to minimize damage and ensure conditions for export. This can be clearly seen during the Covid-19 epidemic, when the global transport activities are severely affected, logistics costs are pushed up, affecting domestic production and business activities.

- Vietnam logistics centers also lack many specific services to create high added value for customers using the center's services. The number of customers that can serve is small, the scale and quality of services are also limited. Therefore, these centers are unable to serve as an attraction for domestic and international investment as well as playing a key role in promoting economic and trade development in an entire economic region.

- There is a lack of strong connectivity among different logistics centers. Each center is built and invested primarily to serve the interests of logistics enterprises without coordinating in the common orientation and policies to create the socio-economic benefits of the whole region, province or city.

## **Recommendations for developing logistics centers in Vietnam**

### ***4.1. Proposed solutions to build, develop, and improve the efficiency of logistics center system operation and management***

*4.1.1. Determine the “gold location” to build logistics centers*

*The factor defining the success of a logistics center is location. It is recommended that the location of logistics centers should optimize the strengths and reduce the weaknesses.* “A gold location” refers to a place that attracts domestic and foreign investors, reduce logistics costs. In the case of Japan we mentioned before, location should be carefully considered.

In addition, the size of logistics centers should be calculated before deciding to build. The business should adjust the suitable size of the logistics center to adapt with the location. Because if the size is not big enough, it can turn into a negative result, which is called “bottlenecks” of the economic regions. The efficiency of those logistics centers will be reduced and create a limitation for customers served.

*Therefore, the enterprises should build a combination of many factors to choose the “gold location”.* It is suggested that enterprises could hire reputable research organizations on locating logistics centers before deciding the position. To be more specific, logistics centers must be built on major economic corridors of the region with links with major traffic hubs of the region and commercial zones.

*4.1.2. Raise investment effectively on “logistics centers” projects*

*Each logistics center besides related factors to nature, capital is also a challenge with the enterprises.* In Vietnam, it requires a long time to recall the fund, only based on the fund of enterprises is not enough so calling for the fund plays an important role in building logistics centers. It is recommended that the enterprises should mobilize the funds in a variety of ways. Firstly, they can choose a fund of the nation supported by the government or the local organization, which can help them to enjoy the incentives and priority for businesses. Secondly, the capital from international logistics organizations is one of the best choices. The enterprises could take advantage of the positive relation of Vietnam with other nations in Asia such as Japan, China,... to cooperate with bigger companies in different nations. It leads to the time-saving, risk reductions and new cooperators finding. Thirdly, the union of Vietnamese logistics companies that have the same objects, reasons and missions could be chosen. With the capital share, experience contribution and capital contribution, they could deal with problems, achieve profit.

*4.1.3. Focus on appropriate management models*

*Logistics centers should refer to building a compact, flexible and efficient organizational structure model, which promotes the potential of those logistics centers.*

*The first choice advised is the logistics centers model managed by the Vietnamese government.* In this model, the government allows the use of facilities, while that private corporation may manage and exploit the entire commercial activity for a period of 20 to 30 years, or even longer. The advantages are the priority from government, protection of government and there is no need for choosing the location of logistics centers.

*The enterprises can choose to be a member of a National Association of Logistics Centers or the Association of International Logistics Centers of ASEAN countries or GMS sub-region, or of Asia.* As a result, they could be supported by both national and international resources. In addition, the logistics centers from Vietnam could receive advice from other organizations having advanced experience.

### ***4.1. Recommend solutions for Vietnamese government***

*4.2.1. Build and modernize the infrastructure of logistics centers*

The State should attach importance to investment in the development of national logistics infrastructure, focusing on connecting with infrastructure in other countries in the ASEAN and Asia-Pacific region... to keep up with the pace. development of your countries. Because, infrastructure is a decisive influence on the speed of goods circulation in a country or region. Vietnam should prioritize mobilizing various resources for infrastructure development projects, as well as preferential policies for businesses investing and exploiting infrastructure such as roads, bridges, warehouses, information technology systems. In particular, to achieve high efficiency, the Vietnamese government should learn from Korea's experience to achieve the best investment efficiency and quality supervision.

According to the policy of Korea, the development of the port system can be done through two ways: building new ports or expanding, renovating and upgrading old ports. The policy of building new ports is expected by Korea to help attract large volumes of goods in the region, with strategically located new ports that can link the Eurasian continent and the economies of the rim. Pacific belt. The policy of building a new port was first implemented in Busan. Here a new port area was formed separate from the city center area in order to reduce traffic congestion and air pollution, and especially improve the efficiency of logistics operations.

Vietnam should build large international-standard logistics centers like Busan. The development of a new logistics center can provide professional services in a modern way with high quality, ensuring the fastest and cheapest flow of goods from production to consumption, etc. Planning to develop the logistics center system is very necessary and important.

A synchronous and complete construction infrastructure is one of the decisive factors to help logistics centers really operate effectively. Every year, Vietnam exports tens of millions of tons of agricultural products to the world, bringing in nearly 5 billion USD. However, because infrastructure costs have not been synchronized, logistics costs for agricultural export on average account for about 20-25%, too high compared to other countries in the region. While in Thailand, the logistics cost of export agricultural products only accounts for about 10-15%. Processing plants in the Mekong Delta need to transport about 2-3 million tons of seafood, 6-7 million tons of rice, 2.5-3 million tons of fruit to cold storage systems and ports in Ho Chi Minh City. .HCM and Ba Ria - Vung Tau. However, 70% of export goods each year must be transported to Ho Chi Minh City or Cai Mep port by road, causing product prices to be inflated; Traffic is difficult and time consuming. Logistics services have only been developed in big cities while key agricultural production areas such as the Mekong Delta have not had many.

Developing a project to develop logistics infrastructure for agricultural products, the Department of Agricultural Product Processing and Market Development proposed to focus on supporting logistics hard and soft infrastructure at border corridors to gather and transact. directly to the import market. Along with that is investing in the formation of community logistics points in the countryside associated with concentrated raw material areas to provide warehousing services, cold storage and packaging. At all logistics points, there must be an electronic trading floor, cold storage to preserve fresh agricultural products, dry warehouses, storage yards, loading and unloading containers, inspection points, quality control of output and input goods. retail kiosks and community product promotion space.

*4.2.2. Develop mechanisms and policies to attract investment in logistics centers*

The Vietnamese government can refer to the investment attraction policy of the model of a free trade center or a non-tariff area, including a logistics center. In developed countries, these centers all offer investment incentives for domestic and foreign enterprises to invest in different types, including building logistics centers or supply enterprises. service. These areas will be prioritized for development as large industrial parks or large commercial zones. The source of goods supplied and served for that area will become a sustainable foundation for businesses to rest assured to invest there. Only if the government has attractive incentive policies and mechanisms, attracting domestic and foreign investment in the logistics industry such as incentives in terms of technical and technological capital, as well as available advantages in terms of natural conditions. However, it will ensure to maintain the attractiveness of Vietnam with large corporations in the world.

Currently, most of the world's seaports are making the most of private financial resources in the development of seaports to make up for the shortfall in the budget. They are trying to promote private investment in port facilities by prioritizing ownership or operating rights of port terminals with the intention of enhancing the need and creativity of the private sector. Meanwhile, state agencies, represented by port authorities, will directly support the construction of infrastructure, provide the necessary equipment and customs procedures to ensure The operation is quick and convenient. The rest, which is the investment in perfecting the production, processing and trading facilities in each factory, will be returned to the private company.

Besides the port development fund model, there are also many methods to attract investment funds, such as BOT, BTO, BTL, and so on. The main reason for the government to use these methods is to take full advantage of the investment. Utilizing private sector creativity and efficiency in initiatives, design, construction structures and securing investment funds. In particular, SPC (Special Purpose Corporation) was established to improve the efficiency and impact of the appropriate use of funds in the development of seaports and inland ports in domestic and foreign markets.

*4.2.3. Build a specific legal mechanism for the logistics centers and complete the legal corridor for the logistics industry*

The problem Vietnam's logistics center faced is shortage of specific legal mechanisms and the conflict in adjustment. In the long term, it has become an obstacle to the operation and development of logistics centers as well as the logistics industry in Vietnam. Moreover, business enterprises using logistics services will not have effective legal tools in harmony with international trade practices to be protected in business.

Therefore, to attract investment and boost the effectiveness of state management as well as business for functional state and local management agencies, Vietnam has to build a specific legal framework for logistics centers. The purpose of this legal mechanism should be to stimulate, facilitate, and safeguard the interests of businesses. At the same time, this legal mechanism must also be an effective tool for the management of a very specific type of business activity.

Vietnam should also implement a tax-free or free-trade area model for a special trade area, including a logistics center. A free trade area or a preferential tariff area will attract domestic and foreign businesses to invest in different types of businesses, including investment in building logistics centers as well as business investments. This free trade area will be prioritized for development as a large industrial park or a large commercial area. In addition, it also forms a big market for the middle and high market, which creates the factors for logistics centers to achieve quick and sustainable development.

### ***4.3. Develop a global Logistics Center***

In a report published in 2015, CBRE defines centers with strategic locations and large scale that can reach the level of global logistics hubs, moving goods by connecting transport flows. between different modes, including maritime, air, rail, road and inland waterways, optimizing the distribution of goods and minimizing transaction costs between suppliers and consumers. final use. In the report, CBRE selected 30 cities as global logistics hubs and 20 cities as regional logistics hubs, and despite noting that the port of Ho Chi Minh City is on the list of the top 25 seaports in the world, CBRE did not include a single name from Vietnam in these two lists. But by the end of the report, when it comes to cities that are likely to develop into global logistics centers in the future, Ho Chi Minh City is the only name in the Asia-Pacific region that the report believes has the potential to become a global logistics hub. reach this position by 2050.

*4.3.1. Opportunities to develop a global logistics center*

Ho Chi Minh City has a favorable geographical position, infrastructure and human resources to promote the role of connecting activities related to transportation, organization, coordination and distribution of goods for national transportation and transportation. Manufacturing and logistics activities have continuously developed in Ho Chi Minh City and neighboring provinces over the past half-decade, in addition, the US-China trade war and the Covid-19 pandemic have further exacerbated the trend of shifting supply chains. The response from China was faster.



**Figure 1.** Comparison of the capacity of Ho Chi Minh ports with global ports in the regions

**Source:** World Shipping Council

If we compare ports in the South of Vietnam with Singapore or Hong Kong, our current output is not equal, but we have the potential to become a global logistics center because we also have a large domestic production capacity in the future. world supply chain. In terms of total import and export value, in 2021, Vietnam is only behind Singapore. As the first industrial development center, the South concentrated a large number of traditional industries such as rubber, plastic, textiles, etc and made outstanding contributions to the country's trade in recent years.

In terms of the actual development of logistics infrastructure, Ho Chi Minh City is gathering both the largest seaport cluster and the largest inland port cluster (the ICD Truong Tho area) of the country. In terms of seaports, Cat Lai port cluster and SP-ITC international container port are also the largest feeder ports in the world, with nearly 90 weekly service routes. Cai Mep Port, ranked 11th in the world in the World Bank's container port performance ranking in 2021.

Regarding road infrastructure in the South, General Director of Cushman & Wakefield VN said that the southern provinces have a road network that has covered the whole territory and plays a key role in connecting the transport network between the public regions: industries, airports, seaports, border gates, and important traffic hubs. Only the Southeastern provinces and the Mekong Delta have a total length of national highways of 3,507 km and two highways Ho Chi Minh City - Long Thanh - Dau Giay 51 km long and Ho Chi Minh City - Trung Luong 62 km. The highways are invested and built on the backbone traffic axes of the region, connecting the industrial centers to the transit points of the South.

*4.3.2. Challenges to develop a logistics center*

However, there are still some limitations in the process of developing Ho Chi Minh City into a global logistics center. Many investors are still delaying investment decisions because of the unconnected infrastructure system in the South, high transportation costs, lengthy approval procedures or lack of skilled human resources. Some important highways have great demand, parallel national highways are overloaded and often congested, making it take more than 2 hours to transport containers to the main seaport. Besides, the length of the expressway is still low compared to developed countries, the density is not evenly distributed among regions, some roads with large transport demand have not yet been formed such as Bien Hoa Expressway - Vung Tau, HCMC - Moc Bai, highways in the Mekong Delta, ring roads 3 and 4.

*4.3.3. Recommend solutions for Vietnam*

In conclusion, to develop Ho Chi Minh City into a major logistics center in the region and the world, we need to re-plan the system of seaports, river ports, and infrastructure; enhancing traffic connectivity, integrating package logistics services. In addition, the state needs to have clear policies, streamlining the legal process to support logistics development. As for logistics human resources, we need to continue to implement a plan to train and foster human resources in the logistics industry in Ho Chi Minh City for small and medium enterprises. Transfer of training programs in the logistics industry, cooperate in training according to international programs. Building, transferring and annually updating the logistics online training platform for training institutions in Ho Chi Minh City to contribute to improving the quality of human resources. To form and develop a logistics human resource training center for the region towards regional connectivity and human resource sharing.

## **Conclusion**

Logistics center is a special element of the logistics system, playing an important role in coordinating logistics activities. Logistics center is a basic component of the logistics infrastructure system, providing a variety of logistics services, creating added value, reducing logistics costs, improving efficiency and competitiveness for businesses. In particular, logistics centers are considered a model for effective implementation of economic linkages of industries, localities and territories. For these reasons, developing logistics centers is considered an important policy to improve logistics infrastructure, reduce logistics costs in economic and trade activities, and improve the competitiveness of the national logistics system.

In Vietnam, the development and improvement of the logistics centers system has also gradually been paid attention to. However, the development of logistics centers in the country is still inadequate and limited in many aspects. In order to improve the logistics infrastructure and the competitiveness of the national logistics industry, it is necessary to build and develop a logistics centers system which is in accordance with the country's socio-economic development orientation, Vietnam's socio-economic integration policy as well as taking into account the interests of logistics firms and parties using logistics center services. In order for the whole Vietnam's logistics center system to develop sustainably, it is essential to have cooperative efforts from both logistics enterprises and the government. If the solutions are persistently and synchronously applied, it is certain that the logistics center system in Vietnam will quickly form and develop sustainably, contributing to improving the infrastructure of Vietnam's logistics system, improving the competitiveness of Vietnam's logistics industry, and promoting Vietnam's economic and trade development.

Within the scope of a research paper and with the limitations of research conditions, the content of the topic inevitably has shortcomings. Therefore, our group is looking forward to receiving the evaluation as well as the comments of lecturers to get a more comprehensive and in-depth view of the issues presented.

**References**

Bhatla, S (2020), “Vietnam’s Logistics Industry: How Vietnam’s Expanding Economy is Boosting Growth”, *Vietnam Briefing*, Available at https://www.vietnam-briefing.com/news/vietnams-logistics-industry-how-vietnams-expanding-economy-boosting-growth.html/ (Accessed: 15 Nov 2022).

Bui, V.D., Nguyen, H.P. (2021), “A Systematized Review on Rationale and Experience to Develop Advanced Logistics Center System in Vietnam”, Available at https://webology.org/data-cms/articles/20211101114340amWEB18116.pdf (Accessed: 15 Nov 2022).

[Cho, G](http://doi.or.kr/10.PSN/ADPER0000258851).S. (2018), “A Study on Establishment of Smart Logistics Center based on Logistics 4.0”, Available at https://koreascience.kr/article/JAKO201809456575779.page (Accessed 15 Nov 2022).

# Chung, T.H. (2021), “LẮNG NGHE NGƯỜI DÂN HIẾN KẾ: Xây dựng trung tâm logistics khu vực và quốc tế”, *Người lao động*, Available at https://nld.com.vn/ban-doc/lang-nghe-nguoi-dan-hien-ke-xay-dung-trung-tam-logistics-khu-vuc-va-quoc-te-20211007213452759.htm (Accessed 15 Nov 2022).

CI&T. (2022), “Logistics Market Trends - Japan 2022”, *CI&T*, Available at https://ciandt.com/jp/en/article/logistics-market-trends-japan-2022 (Accessed: 15 Nov 2022).

# C.P. (2022), “Tập trung nguồn lực xây dựng các trung tâm logistics phục vụ nông nghiệp”, *VnEconomy*, Available at https://vneconomy.vn/tap-trung-nguon-luc-xay-dung-cac-trung-tam-logistics-phuc-vu-nong-nghiep.htm (Accessed 15 Nov 2022).

# Đặng, D., “Thành phố phía Đông: Chưa thấy nói đến vai trò của logistics”, *Hiệp hội doanh nghiệp dịch vụ Logistics Việt Nam*, Available at https://www.vla.com.vn/thanh-pho-phia-dong-chua-thay-noi-den-vai-tro-cua-logistics.html (Accessed 15 Nov 2022).

H.T. (2022), “Logistics Hàn Quốc sử dụng robot khi khan hiếm lao động”, *Vnexpress*, Available at https://vnexpress.net/logistics-han-quoc-su-dung-robot-khi-khan-hiem-lao-dong-4502374.html (Accessed 15 Nov 2022).

Jang, S.Y. (2022), “Logistics industry in South Korea - statistics and facts”, *Statista*, Available at https://www.statista.com/topics/9192/logistics-industry-in-south-korea/#topicHeader\_\_wrapper (Accessed 15 Nov 2022).

[Kang, D](http://doi.or.kr/10.PSN/ADPER0000007162).W. (2018), “ The Evaluation of Location Competitiveness for International Logistics Center: Case of Northeast Asia”, Available at https://koreascience.kr/article/JAKO201534168451463.page (Accessed 15 Nov 2022).

# L.A. (2022), “Thế mạnh của miền Nam so với các trung tâm logistics khác là sự tăng trưởng của sản xuất nội địa, do đó có thể trở thành mắt xích quan trọng trong chuỗi cung ứng toàn cầu.”, *BSC*, Available at https://www.bsc.com.vn/tin-tuc/tin-chi-tiet/934866-the-manh-cua-mien-nam-so-voi-cac-trung-tam-logistics-khac-la-su-tang-truong-cua-san-xuat-noi-dia-do-do-co-the-tro-thanh-mat-xich-quan-trong-trong-chuoi-cung-ung-toan-cau (Accessed 15 Nov 2022).

Le, V.T. (2020), “A Study on the Selection of the Logistics Centre Location - Vietnam-Based Logistics Sector”, Available at http://davidpublisher.com/Public/uploads/Contribute/5f36424280b8a.pdf (Accessed 15 Nov 2022).

Le, T (2022), “Shortage of key logistics centers in the Mekong Delta”, *Customs News*, Available at https://english.haiquanonline.com.vn/shortage-of-key-logistics-centers-in-the-mekong-delta-22023.html (Accessed 15 Nov 2022).

# Lê, T. (2021), “TPHCM phát triển 8 trung tâm logistics quy mô lớn”, *Hải quan online*, Available at https://haiquanonline.com.vn/tphcm-phat-trien-8-trung-tam-logistics-quy-mo-lon-153906.html (Accessed 15 Nov 2022).

Lng, T (2022), “Key Trends In Vietnam’s Freight And Logistics Market”, *Viettonkin*, Available at https://www.viettonkinconsulting.com/general/key-trends-in-vietnams-freight-and-logistics-market/ (Accessed 15 Nov 2022).

Logistics Center: Case of Northeast Asia”, Available at https://koreascience.kr/article/JAKO201534168451463.page (Accessed 15 Nov 2022).

# Mordor Intelligence. (2022), “Japan freight and logistics market-growth, trends, covid 19 impact, and forecasts (2022-2027)”, *Mordor Intelligence*, Available at https://www.mordorintelligence.com/industry-reports/japan-freight-logistics-market-study (Accessed 15 Nov 2022).

Nguyen, K (2022), “Savills: Việt Nam có tiềm năng trở thành trung tâm logistics của vùng”, *Báo Xây Dựng*, Available at https://baoxaydung.com.vn/savills-viet-nam-co-tiem-nang-tro-thanh-trung-tam-logistics-cua-vung-337905.html (Accessed 15 Nov 2022).

N.T. (2020), “Hanoi targets to have 10 logistics centers”, *HanoiTimes*, Available at <https://hanoitimes.vn/hanoi-targets-to-have-10-logistics-centers-315023.html>(Accessed 15 Nov 2022).

Pham, T.Y. (2017), “Application of Fuzzy Delphi TOPSIS to Locate Logistics Centers in Vietnam: The Logisticians’ Perspective”, Available at https://www.sciencedirect.com/science/article/pii/S2092521217300603 (Accessed 15 Nov 2022).

Savills Research (2022), “Confidence high but slowdown in growth likely”, *Savills Research*, Available at https://pdf.savills.asia/asia-pacific-research/japan-research/japan-industrial/jp-logistics-09-2022.pdf (Accessed 15 Nov 2022).

T.H. (2022), “Ngành logistics Việt Nam 2022: Cần cơ chế hỗ trợ phát triển doanh nghiệp logistics 4PL-5PL”, *Diễn đàn doanh nghiệp*, Available at https://diendandoanhnghiep.vn/nganh-logistics-viet-nam-2022-can-co-che-ho-tro-phat-trien-doanh-nghiep-logistics-4pl-5pl-215094.html (Accessed: 15 Nov 2022).

Tran, N.H.C., Luong, V.D. (2021), “Some recommendations to reduce national logistics costs in Vietnam”, Available at https://hvnh.edu.vn/medias/tapchi/vi/06.2021/system/archivedate/ebff39c5\_Bài%20của%20Trần%20Nguyễn%20Hợp%20Châu,%20Lương%20Văn%20Đạt.pdf (Accessed 15 Nov 2022).

Van, A (2022), “Weak Vietnam's infrastructure for logistics - barrier to industry's potential”, *SGGP*, 20 October, Available at https://www.sggpnews.org.vn/business/weak-vietnams-infrastructure-for-logistics-barrier-to-industrys-potential-102773.html (Accessed 15 Nov 2022).

# Vũ, H. (2022), “Miền Nam với giấc mơ trung tâm logistics khu vực”, *Pháp luật thành phố Hồ Chí Minh*, Available at https://plo.vn/mien-nam-voi-giac-mo-trung-tam-logistics-khu-vuc-post688621.html (Accessed 15 Nov 2022).

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