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Developing Logistics in Vietnam After Covid-19 Pandemic

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Abstract

The world context still has potential risks due to trade tensions and political conflicts that negatively impact trade, production and investment. The Covid-19 epidemic with an unprecedented speed of infection and scale has affected every aspect of the world economy. In particular, the regulations on social distancing, travel restrictions and transportation in effect in many countries and territories have disrupted supply chains, increased shipping costs, and directly affected the supply chain. Global logistics is seriously affected. Besides the negative impact, the Covid-19 epidemic also contributes to accelerating the industrial revolution and the digital transformation of businesses faster than ever, especially with technological breakthroughs such as artificial intelligence, robots and the internet of things. The explosion of e-commerce and the trend of online payment on a global scale with a number of leading enterprises such as Alibaba, Amazon and eBay, has allowed small businesses in markets to emerge and reach consumers worldwide. This article focuses on analyzing the current situation of logistics development in Vietnam during and after Covid-19, pointing out the achieved

results, limitations, causes and some recommendations to promote logistics development in Vietnam in the context of the pandemic post-Covid-19 pandemic.

Keywords: development, logistics, Vietnam, post-Covid-19

1. Introduction

In 2021, despite many difficulties due to the 4th outbreak of the Covid-19 epidemic, the country's imports and exports still reached a record number with a total turnover of 668.55 billion USD, in which, exports reached more than USD 668.55 billion. 336.3 billion USD, up 19% compared to 2020; imports reached 332.2 billion USD, up 26.5%; trade surplus of more than 4 billion USD. With this result, Vietnam has entered the top 20 economies in terms of international trade (Tran, 2022). The above positive results cannot be ignored by the contribution of the logistics service industry. With a special geographical position located in a dynamic development area of the world, where the flow of goods is concentrated and very strong, Vietnam is considered to have advantages in geo-economics, which is very convenient to promote production. export, import and logistics services. The Vietnamese government has identified logistics as an important service industry in the overall structure of the national economy, playing a role in supporting, connecting and promoting the socio-economic development of the whole country as well as each country. localities, contributing to improving the competitiveness of the economy.

Besides the achieved results, the logistics industry still has many limitations that need to be overcome. One of the major limitations is that logistics enterprises have not yet developed up to the potential of the industry. According to data from the Vietnam Logistics Business Association, currently, 90% of operating logistics enterprises are Vietnamese enterprises, but only account for about 30% of the market share, the rest belongs to foreign enterprises (Kim, 2011). The number of enterprises is large, but mainly small enterprises, with limited scale in terms of both capital and human resources as well as international operation experience, there is no link between stages in the logistics supply chain and between service enterprises. logistics services with import-export enterprises. Therefore, in both buying and selling directions, domestic logistics enterprises are limited in terms of playing field.

Facing that situation, promoting the development of logistics in Vietnam in the post-Covid-19 context is extremely necessary. Based on the above practice, the authors want to share their views, and propose some recommendations with a scientific and practical basis on this issue.

2. Literature Review

According to Kim (2022), logistics is a collection of all forwarding activities and jobs related to the process of supply, transportation, warehousing, customs procedures and the distribution of goods. Logistics refers to the movement of goods from Point A to Point B, including two functions: transportation and storage. An overall supply chain is a network of businesses and organizations that work through a series of processes, including logistics, to produce and distribute goods, ensure the life cycle of a product, and operate a business of enterprises with

the highest efficiency.

Author Le (2022) believes that logistics development contributes to the expansion of international business markets. The logistics system acts as a bridge to bring goods to new markets according to the required time and place. Therefore, with the support of the logistics system, the power of many companies has transcended the geographical borders of many countries. On the one hand, the business manufacturers can dominate the market for their products, on the other hand, the international business market is also expanded and developed. The essence of a business is the exchange of goods or services for money or trade. Logistics is the way goods and services take to complete transactions. Sometimes goods are shipped in bulk, such as raw goods, to manufacturers. And sometimes goods are moved as individual disbursements, one customer at a time. Whatever the specifics, logistics is the physical fulfillment of a transaction and as such is the life of the business. Where there is no movement of goods or services, no transactions—and no profits (Jenkins, 2022).

Van (2022) stated that in 2021, the Covid-19 pandemic will re-emerge strongly in countries, especially Asia, creating new bottlenecks for the global supply chain, making the supply chain difficult to cope with. disruption, disruption, leading to disruption of logistics activities. The supply chain of import and export goods, circulation and transportation of goods in the country has been suspended, especially during the time of social distancing, due to the inconsistency of anti-epidemic regulations among localities, causing many difficulties. for logistics activities. About 60% of logistics enterprises have their production downsized and their revenue sharply reduced when the epidemic breaks out. On the other hand, labor shortage; The health, morale and productivity of workers are also heavily affected in the context of unpredictable international and domestic trade. The study shows that the novel coronavirus pandemic has a more significant macroeconomic impact than the SARS epidemic in the short term, which inevitably leads to a contraction in consumption and investment demand in the short term and a reduction in activities. industrial production and services. But in the long run, China's underlying economies remain stable and improving, and the impact of the epidemic can be contained in the first quarter. We anticipate that this epidemic will become a catalyst for more aggressive monetary and fiscal policies; The central government has enacted a series of countercyclical adjustment policies. It inevitably leads to a narrowing of short-term consumption and investment demand and a decline in industrial and service production activities (Hongzhen and Hossain, 2021).

Grida, Mohamed and Zaied (2020) assert one of the most important and obvious obstacles is the decrease in market demand for goods and services in most countries due to the absolute or partial lockdown. This lockdown has also disrupted both domestic and foreign supply chains. As a result, this pandemic caused significant job losses, reduced demand, leading to a severe full-blown economic crisis. As the Covid-19 outbreak in China is gradually easing, we see five impacts on China's logistics industry, which are a sharp drop in logistics demand, lack of transportation capacity, disruptions to logistics. logistics network fragmentation, service modality changes, and increases in operating costs and loss-making businesses (Liu, 2020).

According to Rokicki (2022), it was found that the Covid-19 pandemic prompted changes in logistics practices. These changes include digitization, the development of the e-commerce market, omnichannel selling and the development of these services as well as the introduction of automation and artificial intelligence. Of all the activities, 2020 was the most challenging year, but overall revenue growth slowed and stalled less often. The post-Covid-19 period will push organizations to transform their production systems and supply chains towards more sustainability. Therefore, it is necessary to develop adequate institutional and operational policies to remedy the losses in production and improve consumption patterns, in order to further boost the economy.

According to the OECD (2020) governments can collect and share information about concentration and upstream bottlenecks in supply chains and can work with the private sector to address them. Trade and investment policymakers have a role in reviewing the network of trade agreements and investment mechanisms beyond direct partners to assess incentives and barriers to supplier diversification. This effort also involves investing in and promoting digital technologies that can improve information systems for managing risk, such as the Internet of Things. Supply Chain Management (SCM) data science' can be used by government and private sectors to solve SCM problems and forecast outcomes by implementing quantitative and qualitative approaches. attention to data quality and data availability (Waller and Fawcett, 2013). Therefore, there is a need to improve the availability and dissemination of data. Access to the correct data at the right time is critical to the efficient operation of the supply chain (Aday, 2020).

3. Method

The authors mainly use descriptive statistical methods, analyze the results and limit the situation of logistics development in Vietnam in the period of 2019-2021. Data is collected and aggregated from the Vietnam Statistical Yearbook 2021, Vietnam Logistics Report 2019, 2020 and 2021.

4. Analysis of the current situation of Vietnam's Logistics development during and after Covid-19

4.1 The Current State of the Economy's Supply of Goods

Due to the impact of the Covid-19 pandemic, the total retail sales of consumer goods and services in 2020 decreased by 0.91% compared to 2019; 2021 will decrease by 3.93% compared to 2020. However, the retail industry in 2020 will increase by 3.3% compared to 2019; 2021 will increase by 0.4% compared to 2020. The accommodation and food service industry in 2020 will decrease by 19.5% compared to 2019; in 2021 down from 2020 is 20.91%. The service and tourism industry in 2020 decreased by 8.11% compared to 2019; in 2021, a decrease of 19.13% compared to 2020 (Table 1)

Table 1. Total retail sales of consumer goods and services at actual prices by business sector (2019 – 2021)

Unit: Billion VND

Year	Total	Retail	Accommodation and Food Services	Services and Tourism
2019	4,892,114.4	3,694,559.9	595,936.9	601,617.6
2020	4,847,645.3	3,815,079.1	479,715.7	552,850.6
2021	4,657,066.3	3,830,559.8	379,390.6	447,115.8

Source: GSO

- The structure of total retail sales of consumer goods and services at actual prices by retail industry accounted for more than 82.3% of total retail sales of social consumer goods and services in 2021, increasing by 3.6% compared to 2020, an increase of 6.8% compared to 2019 (Table 2).

The goods supply network for the economy is expanded in all three areas: urban, rural and mountainous, with the participation of business entities. Organization and business methods, buying and selling methods are more and more innovative, richer and more flexible.

Table 2. Structure of total retail sales of consumer goods and services at actual prices by business sector (2019 – 2021)

Unit: %

Year	Total	Retail	Accommodation and Food Services	Services and Tourism
2019	100%	75.5	12.2	12.3
2020	100%	78.7	9.9	11.4
2021	100%	82.3	8.1	9.6

Source: GSO

4.2 Current Status of Logistics Service Supply System

4.2.1 Actual Situation of Providing Freight Services

Table 3. Volume of goods transported by mode of transport

Unit: thousand tons

Year	Total	Railway	Road	River Road	Seaway	Airline
2019	1,670,619.4	5,204.7	1,319,853.4	268,026.5	77,088.4	446.4
2020	1,621,536.0	5,216.3	1,282,119.6	257,841.5	76,086.2	272.4
2021	1,640,497.1	5,660.0	1,290,578.0	265,834.6	78,140.6	283.9

Source: Statistical Yearbook 2021

Freight services are a common logistics service provided in Vietnam with about 65% of enterprises organizing the supply. The main types of transport services are: sea transport services, road transport services, rail transport services, inland waterways transport services (riverways) and road transport services. air. The volume of transport through these modes of transport in Vietnam in the past is shown in Tables 3 and 4.

Table 4. Development Index Volume of goods transported by mode of transport (previous year=100) - %

Year	Total	Railway	Road	River Road	Seaway	Airline
2019	108.5	91.0	109.3	106.4	104.8	110.4
2020	97.1	100.2	97.1	96.2	98.7	61.0
2021	101.2	108.5	100.7	103.1	102.7	104.2

Source: GSO

a. Sea freight service

Regarding the volume of goods transported, the output in 2019 will reach 77,088.4 thousand tons, in 2020 it will reach 76,086.2 thousand tons, in 2021 it will reach 78,140.6 thousand tons; the average growth rate in the period of 2019 - 2021 will reach about 2.07%. Due to the small

size of ships, few types, and high transportation costs, Vietnam's competitiveness in providing sea transportation services is still low. According to the General Statistics Office, the volume of goods transported by sea only accounts for an average of 4.69% of the total volume of goods transported by all modes (Table 3).

High sea freight rates and a sharp increase in the volume of import and export goods cause the profits of many logistics companies dealing in shipping services to increase dramatically in 2021, but at the same time cause difficulties and cost burdens. very large for businesses that import and export goods. Besides, the strong growth in the volume of goods through the seaport also helps port operators achieve positive profits despite difficulties caused by the Covid-19 epidemic.

b. Road transport service

The Covid-19 epidemic is becoming more and more complicated than in 2020, breaking out in big cities and industrial zones in key economic regions in both the North and the South; In the North, it is mainly concentrated in the two provinces of Bac Ninh and Bac Giang, in the South, mainly in Ho Chi Minh City. Ho Chi Minh, Binh Duong, Dong Nai where there are many FDI enterprises, so when these localities became the epidemic centers, many transportation logistics enterprises faced difficulties, especially the situation of being affected by the pandemic infection of drivers and staff.

The Ministry of Transport has officially issued a plan to restore passenger transport activities in 5 areas (road, railway, inland waterway, maritime, and aviation) after localities ease the distant society.

In general, in 2020, road freight transport reached more than 1,282,119.6 thousand tons, down 12.2% over the same period in 2019. In 2021, road freight transport reached more than 1,290,578.0 thousand tons, up 3.6% over the same period in 2020 (Table 3).

c. Rail transport service

Hanoi and Saigon Railway Transport Joint Stock Company focuses on promoting freight transport, exploiting specialized freight trains, developing transport services from warehouse to warehouse and transporting luggage from home to house. home through online ordering. In particular, joining hands with farmers in consuming agricultural products, Vietnam Railways Corporation has supported farmers in Bac Giang, Bac Ninh, Vinh Phuc, Hai Duong and Hung Yen provinces to transport agricultural products. to central and southern provinces by train. These are provinces located in epidemic areas where people are facing many difficulties in transporting and circulating agricultural products. The result of good growth in freight transport, the volume of goods transported in 2021 is 5,660.0 thousand tons, equaling 108.5% compared to the same period in 2020 and increasing by 17.5% compared to 2019 when there was no Covid-19 epidemic (Tables 3 and 4).

In 2021, the Vietnam Railways Corporation started operating intermodal train lines, transporting goods through China to Russia and some EU countries. In July 2021, the Vietnam

Railways Corporation organized the first container train from Yen Vien Station (Vietnam) to Liege (Belgium) via the hub in Ho Chi Minh City. Zhengzhou - Henan (China), then forward overland to the destination city of Rotterdam in the Netherlands. Route 2 via the hub in Chongqing (China) connects to Hamburg (Germany). As a result, the volume of international freight transportation by rail in 2021 will increase significantly.

d. Air freight service

The volume of air freight in 2021 is 283.9 thousand tons, equaling 104.2% over the same period in 2020 and down 57.24% compared to 2019 when there was no Covid-19 epidemic (Tables 3 and 4). Some airlines such as Vietnam Airlines, Vietjet Air, and Bamboo Airways have actively converted passenger aircraft to carry goods by removing seats in the passenger compartment to carry goods to meet the inevitable development of cross-border e-commerce. border.

During the epidemic period, only about 30 foreign airlines from Northeast Asia, Southeast Asia, the Middle East and France remained to operate cargo flights, diplomats, experts, investors, laborers, etc. skilled workers, foreign students, etc. going to/from Vietnam. In the condition that international passenger routes cannot be re-operated, Vietnamese airlines have used most of their fleet resources to exploit domestic routes with soaring capacity in both frequency and capacity. number of routes. Accordingly, the number of domestic routes of Vietnamese airlines at one time reached 62 routes (Vietnam logistics report 2021).

Vietnam also has the conditions to become the air freight center of the region and the world, but it has not been properly invested and developed, one of the reasons is the lack of development orientation and lack of development. Investment funds. Although air transport only accounts for a small part of the total volume of goods transported in Vietnam, it accounts for 25% of the total export value of the country. This is a feature that should be paid attention to when planning early development (Vietnam logistics report 2021).

e. Inland waterway transport service

The volume of goods transported by inland waterway in 2021 is 265,834.6 thousand tons, equaling 103.1 compared to the same period in 2020 and down 0.82% compared to 2019 when there was no Covid-19 epidemic (tables 3 and 4) .

The number of vehicles and the total volume of goods transported by inland waterway transport decreased sharply, and because some localities implemented social distancing, the production and business of many factories and enterprises slowed down or temporarily interrupted time. As a result, the demand for freight also declines. In addition to difficulties because of the epidemic, according to the Vietnam Inland Water Transport Association, currently, up to 98% of freight transport vehicles use old foreign engines, so the exploitation efficiency is not high. public (Vietnam logistics report 2021).

4.2.2 Actual Situation of Providing Warehousing Services

Warehousing services and cold supply chain

Currently, 53.7% of Vietnamese logistics service enterprises provide warehousing services (Vietnam logistics report 2021). Warehousing service continues to be one of the main services provided by Vietnamese logistics enterprises. The current concern is warehouse management technology and warehouse development investment capital to promptly meet the requirements of production and import and export, especially frozen storage and frozen goods supply chain.

In 2021, a series of cold supply chains will open more facilities in other countries, as well as pay more attention to safety and adaptability in the new context. This is an area that logistics businesses need to focus on developing with the support of the State.

For Vietnam, the seafood industry is being invested by most large regional companies in the cold supply chain. Vietnam's seafood export is the third largest sector in the world, the industry that occupies the largest area of cold storage. During the peak of the epidemic, 30 - 50% of seafood export orders were canceled, leading to an increase in inventories and cold storage to operate at maximum capacity (Vietnam logistics report 2021).

Most of the cold supply chain in Vietnam is currently operated by small and medium-sized suppliers, as well as not being centralized. Therefore, investment in cold storage centers is still an area with great potential. Moreover, the cold logistics segment (including cold storage) in Vietnam is a niche segment of the logistics industry, but is developing the "hottest". Before the Covid-19 epidemic, the annual growth rate in this segment was at 11%-12% (Vietnam Logistics Report 2019).

Bonded warehouse service

A bonded warehouse is a transshipment center, a bridgehead to access the market before putting goods on the official market. However, the role of bonded warehouses in Vietnam has not really been promoted. The number of bonded warehouses across the country is not small, but it has not really met the needs of import-export enterprises. Most of the bonded warehouses are outdated, warehouses upgraded from previous facilities are not warehouses.

In fact, at present, the demand for bonded warehouses invested with modern, in-depth and quality systems is increasing, most of which come from foreign customers. Taking advantage of 3PL service prices (except warehouse rent) which are still quite competitive in the Vietnamese market, foreign customers often rent bonded warehouses to serve as distribution centers for export goods thanks to their flexibility. of this warehouse. This is a good opportunity for bonded warehouse businesses with sustainable development policies, capable of satisfying customers' needs well. On the other hand, this is also a condition for warehouses to improve service quality, creating synchronization with the general trend to create a uniform and competitive bonded warehouse market in the region. Realizing the great development of the bonded warehouse business and the increasing market demand for this type, the customs industry has been focusing on improving many issues related to the management supervision

process. management, gradually applying information technology to simplify procedures. This contributes to improving the service value of the bonded warehouse type, and also creates a good impression of a positive change, as assessed by foreign customers.

Regarding the general situation, bonded warehouses operate well at routes and locations with high traffic volume such as seaports (Hai Phong, Ba Ria - Vung Tau and Ho Chi Minh City), and border gates (Quang Ninh, Lang Son, Cao Bang, Tay Ninh and Binh Phuoc) have a large volume of trade with bordering countries; a number of bonded warehouses in the country serving the storage of goods of export processing enterprises and industrial parks (Bac Ninh, Ninh Binh, Binh Duong and Dong Nai)

4.2.3 Actual Situation of Providing Customs Agency Services

Customs clearance agency service, also known as customs agent, is a type of service in the chain of services provided for import and export activities. This is the main type of logistics service that is currently provided by nearly 90% of Vietnam's logistics service businesses and the highest level of information technology application in all types of logistics services.

Customs agency is one of the logistics services regulated by the Customs Law and many other by-laws. It can be said that this system of legal documents has initially created a legal basis for customs agents to develop, operate effectively and professionally. However, the rate of goods cleared through customs agency enterprises is still low. One of the reasons is:

- There is no difference when doing customs procedures through a customs agent. Import and export enterprises and enterprises through customs agents when performing customs clearance for import and export goods are the same, even the paperwork that needs to be presented to the customs office is more than that of export enterprises. Other normal imports: For example, additional documents must be presented in the customs dossier, including the customs agent contract, the customs agent's employee card, the decision on recognition of the customs agent.

- There is no special priority or preferential regime when enterprises clear import and export goods through customs agents.

- Specialized inspection units have not yet accepted digital signatures of customs agents to carry out specialized inspection procedures.

4.3 Status of Logistics Infrastructure

4.3.1.Actual Situation of Seaway Infrastructure

a. Seaport network

As of June 2021, the country has 286 ports with a length of about 95 km of wharfs (more than 4.5 times in 2000). Vietnam has established gateway ports with international transshipment in the northern and southern regions, successfully receiving container ships from 132,000 tons at Lach Huyen port area (Hai Phong) to 214,000 tons at Cai port area. Mep (Ba Ria - Vung Tau) and large-scale specialized wharfs associated with industrial zones, metallurgical complexes,

refineries and petrochemicals, thermal power center, receive ships up to 200,000 tons, liquid cargo up to 150,000 tons, crude oil up to 320,000 tons. Summary of current capacity of Vietnam's seaport system by 2021 table 5.

Table 5. Summary of current capacity of Vietnam's seaport system

No.	Parameter	Unit	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Total
1	Number of harbors	Harbor	68	20	25	29	107	37	286
2	Number of wharfs	Wharfs	127	58	55	61	218	69	588
a	Containers	Wharfs	72	27	30	30	91	37	287
b	Specialized	Berths bridge	55	31	25	31	127	32	301
3	Length	Metre	19,693	10,962	10,168	10,453	37,357	7,642	96,275

Source: Vietnam Maritime Administration (2021)

Regarding sea transport routes, Vietnam has established 32 routes, of which 25 international transport routes and 7 domestic transport routes, of which in addition to intra-Asia routes, the Northern region has operated 2 routes to the North. America; The South has formed 16 long-distance train routes to North America and Europe, outperforming Southeast Asian countries (only after Malaysia and Singapore). Vietnam has put into operation 44 public navigational channels, 34 specialized navigational channels, 94 lighthouses stretching from Quang Ninh to Kien Giang, 32 radio stations from Mong Cai to Ha Tien and a receiving and transmitting system. transmitting, providing identification and tracking information for ships and boats (LRIT) and VTS systems installed at major seaports to effectively support the management of ship position monitoring, monitoring and management maritime activities in seaport waters (Vietnam logistics report 2021).

Most of the ports attached to the centers and major economic regions of the country have formed large seaports with the role of a focal point serving import and export of goods and creating a driving force for the development of the whole region, at the same time. also continue to increase investment such as: Quang Ninh, Hai Phong associated with the northern key economic zone; Nghi Son, Ha Tinh, Thua Thien - Hue, Da Nang, Quang Ngai, Quy Nhon, associated with the central key economic region; Khanh Hoa, Ba Ria - Vung Tau, City. Ho Chi Minh City, Dong Nai are associated with the Southeast dynamic economic region; Can Tho,

Long An and An Giang are associated with the key economy of the Mekong Delta.

b. Fleet

By the end of June 2021, Vietnam's shipping fleet has more than 1,576 ships (the shipping fleet is 1,049 ships) with a total tonnage of about 12 million DWT and a total capacity of about 7.6 million GT. Of which, there are 764 bulk carriers, general cargo ships (accounting for 72%); oil and chemical tankers have 162 ships (accounting for 15%); special-use liquefied gas ships have 19 ships (accounting for 1.8%); passenger ships have 66 ships (accounting for 6.2%) and the container fleet is raised to 38 ships (accounting for 3.6%). The average age of the Vietnamese fleet is 16.5 years. The vessel with the highest average age is a liquefied gas ship of 24.6 years; container ship is 18.7 years; oil and chemical ships are 20 years (Vietnam logistics report 2021).

The fleet structure is also not developed properly when the trend of freight transport in the world is towards containerization, Vietnam's container fleet has only 38 ships, accounting for a small proportion (3.7%) in the fleet structure. transportation (the world's container fleet accounts for 13% of the total fleet structure). The world has developed container ships with a capacity of over 20,000 TEUs, but Vietnamese enterprises have only invested in ships with a capacity of 1,800 TEUs. Thus, the development of the Vietnamese fleet is increasingly separate from the development of the world fleet. Currently, 93% of Vietnam's import and export market share depends on 40 foreign shipping lines in Vietnam. Therefore, Vietnamese exporters do not have the opportunity to choose, forced to accept the conditions and costs offered by foreign shipping lines. The issue of sea freight rates and surcharges continuously increasing from 2021 creates more motivation for Vietnamese shipping lines to invest more heavily to proactively source containers, reduce dependence and regain market share from hands of foreign shipping lines (Vietnam logistics report 2021).

4.3.2 Status of Road Infrastructure

The road network covers the whole territory and plays the main connection role for the transport network between regions, airports, seas, border gates, and important traffic hubs. The whole country has a total road length of about 595,125 km (Vietnam logistics report 2021), of which the national road (national highway, expressway) is 25,484 km (table 6). In parallel with the improved infrastructure quality, the quality of road transport is improved, significantly reducing travel time. Means of transport are rejuvenated, modern, fuel-efficient and environmentally friendly.

Table 6. Density statistics of current state of highways and national highways in Vietnam

Region	Area (kilometer)	Population (1,000 people)	High length speed (kilometer)	Highway length (kilometer)
Northern Midlands and Mountains	95,200	12,569	392	7,256
Red River Delta	21,259	22,620	468	2,133
North Central and Central Coast	95,653	20,220	193	8,366
Highlands	54,508	5,861	19	3,059
South East	23,519	17,930	51	855
Mekong Delta	40,816	17,283	40	2,652
Total	330,955	96,483	1,163	24,321

Source: Directorate for Roads of Vietnam (2021)

By 2021, the expressway network has put into operation about 21 sections, equivalent to 1,163 km; currently under construction about 17 routes and sections, equivalent to 916 km (Vietnam logistics report 2021). In addition, a number of other routes have also been invested and built in phase 1 in the direction of highway planning routes such as some sections of Ho Chi Minh road from Co Tiet to Phu Tho, Cho Ben to Ha Tinh; The section runs parallel to the North-South Expressway to the East such as the Deo Con bypass, the section from Bung to Cam Lo, Lo Te - Rach Soi. The results of investment in the construction of the expressway system are relatively good in the current difficult situation of resources.

However, a number of important expressways with great demand (parallel national highways are overloaded and often congested), high efficiency and solving socio-economic problems have not yet been invested. such as: North-South Expressway, Bien Hoa - Vung Tau Expressway, City. Ho Chi Minh City - Moc Bai, highways in the Mekong Delta region, ring roads of Hanoi capital, Ho Chi Minh City. Ho Chi Minh.

4.3.3 Current Status of Inland Waterway Infrastructure (Riverway)

According to a report of the Ministry of Transport, by the end of September 2021, the total length of inland waterways under management and exploitation in the whole country is 17,253 km, accounting for 41.2% of the total length of rivers and canals nationwide. . In which, the Northern region has formed 4 main inland waterway routes. The Central region has formed 10 main transport routes on rivers. Most are short routes (length from 19.5 km to 101 km), of which only the Gianh river route in Quang Binh province has an inland waterway port system serving the region's cement factories. . Other river routes in the central region are mainly small

inland wharves, water transport activities are not large. The southern region has more than 6,500 km of rivers and canals with 6 waterway transport routes being exploited and operated on two main river systems, namely the Dong Nai river system and the Mekong river system (Vietnam logistics report 2021).

As of September 2021, there are 298 inland waterway ports nationwide, including 192 cargo ports, 9 passenger ports, 97 specialized ports; 6,899 inland wharves, of which 5,449 are licensed wharfs, 1,450 unlicensed berths; 2,526 passenger berths across the river, of which the licensed berth is 2,058 (reaching 85%) (Vietnam logistics report 2021). Inland waterway transport mainly handles most of the traditional goods with large volume and low value, but there have been some significant breakthroughs in the past year such as the development of coastal shipping routes and fleets. The VR-SB river and sea phase has reduced pressure on North-South road transport, effectively participating in container transport activities in the Southern region.

4.3.4 Status of Railway Infrastructure

Currently, the national railway network includes 7 routes passing through 34 provinces and cities, including 1 north-south axis and 6 routes in the north. The national railway network has a total length of 3,143 km, including 2,703 km of the main line and 277 stations, including 3 types of 1,000 mm gauge, accounting for 85%; 1,435 mm accounts for 6% and the cage gauge of 1,000 mm and 1,435 mm accounts for 9% (Vietnam logistics report 2021).

The current railway density is 9.5 km/1000 km2, reaching the average level of ASEAN and the world, ranking 58/141 in terms of network density. In 2021, there are 4 important and urgent railway projects to be completed (total investment of VND 7,000 billion) including: Project to renovate and upgrade essential works in the Hanoi - Vinh section; Strengthening weak tunnels in combination with opening new stations and renovating the upper floor architecture of Vinh - Nha Trang section; Renovating and upgrading essential works in the Nha Trang - Saigon section and the project on renovating and upgrading weak bridges and reinforcing anti-collision pillars on the Hanoi - Ho Chi Minh railway line. Ho Chi Minh. Investment projects to improve railway infrastructure that have been completed and put into use have gradually improved the quality of infrastructure (Vietnam logistics report 2021).

4.3.5 Current Status of Airport Infrastructure

As of 2021, the whole country has 22 airports and airfields with a total area of about 12,409 hectares; in which there are 9 international airports and 13 domestic airports and airports divided by region. Most ports are capable of receiving A320/A321, some other ports such as Dien Bien, Rach Gia, Con Dao and Ca Mau can only operate ATR72 or equivalent (Vietnam logistics report 2021).

In the two years 2020 - 2021, due to the impact of the Covid-19 pandemic, the entire economy including the aviation industry suffered heavy damage. Passenger transport volume in 2020 decreased by 54.1% compared to 2019 (international decreased by 82.7%; domestic decreased by 22.3%) and decreased by 39% in the volume of transported goods. Passenger transport

volume in the first 6 months of 2021 decreased by 32.2% over the same period in 2020 (international decreased by 97.9% and domestic increased by 1.4%). This also leads to a slowdown in investment in aviation infrastructure in 2021, partly because of the Covid-19 epidemic, but mostly due to limited investment capital (Vietnam logistics report 2021).

Currently, only Noi Bai International Airport and Tan Son Nhat International Airport have specialized cargo terminals. complete a separate cargo handling area separate from the passenger transport chain in order to create favorable conditions for loading and unloading cargo. This can be seen as a short-term solution to solve the demand for goods transported by air, bringing efficiency in exploitation in the condition that the output scale is not high. Therefore, in the long term, the investment in completing and developing specialized aviation logistics centers at ports with large cargo demand as well as growth potential in the near future such as Long Thanh International Airport, Da Nang, Cam Ranh, Chu Lai, Can Tho, Cat Bi, Lien Khuong, Phu Quoc are absolutely necessary.

4.4 The Current Status of the Legal System, Logistics Development Policies

a) Decision No. 221/QD-TTg of the Prime Minister dated February 22, 2021 on amendments and supplements to a number of Articles in Decision No. 200/QD-TTg dated February 14, 2017 of the Prime Minister on the approval of the Action Plan to improve competitiveness and develop Vietnam's logistics services by 2025 (referred to as the Action Plan for short). Accordingly, there are some notable adjustments and additions as follows:

Regarding objectives: To amend Clause 1, Section II, Article 1 as follows: “1. By 2025, the proportion of logistics services' contribution to GDP will reach 5%-6%, the growth rate of logistics services will reach 15%-20%, the rate of outsourcing logistics services will reach 50%-60%. logistics costs are reduced to 16%-20% of GDP, ranked by the world LPI index 50th or higher.”

About the implementation schedule:

- Year 2020 - 2021: Reviewing the implementation situation and continuing to implement tasks to improve competitiveness and develop logistics services in Vietnam.

- 2022: Continue to implement the tasks of improving competitiveness and development

logistics services in Vietnam.

- 2023: Preliminary review and assessment of the results of the implementation of the Action Plan, prepare theoretical and practical bases to research and develop a strategy for developing Vietnam logistics services in the period of 2025 - 2035, with a vision to 2045.

- 2024: Continue to implement tasks to improve competitiveness and development

logistics services in Vietnam. Organization to develop a strategy for development of logistics services in Vietnam in the period of 2025 - 2035, with a vision to 2045.

- 2025: Summarize and evaluate the results of the implementation of the Action Plan.

Implement the Strategy for development of logistics services in Vietnam in the period of 2025 - 2035, with a vision to 2045."

Regarding the coordination mechanism for implementation: Ministries, ministerial-level agencies, agencies attached to the Government and People's Committees of provinces and centrally run cities are responsible for sending periodic reports on the implementation of the Plan. action plan to the Ministry of Industry and Trade in the 3rd week of June and December every year to summarize and report to the National Steering Committee on ASEAN Single Window, National Single Window and Trade Facilitation.

b) Decision No. 531/QD-TTg of the Prime Minister dated April 1, 2021 approving the overall strategy for development of Vietnam's service sector for the period of 2021 - 2030, with a vision to 2050, in which There are contents related to logistics services as follows:

Regarding the general goals and orientations:

To focus on developing a number of industries, products and services with high knowledge and technology content, with competitive advantages, including logistics;

Regarding specific orientations with logistics and transportation services:

+ Strengthening the role of State management in the direction of actively removing difficulties and barriers, creating a healthy competitive environment as a driving force to encourage all economic sectors to participate in the transport market;

+ Effectively use and invest in the development of transport infrastructure and organize propaganda

encourage enterprises to improve the capacity and quality of logistics services. Establishing a network of multi-level distribution centers (inland ports, warehouses, cargo yards) and freight collection and collection routes in major cities and key economic regions;

+ Focus on developing high-quality human resources for transportation and logistics services to meet domestic and international needs.

4.5 General Assessment of the Current Situation of Logistics Development in Vietnam During and After Covid-19

4.5.1. Results Achieved

Firstly, Vietnam's economy has just gone through a difficult and challenging period due to the Covid-19 outbreaks with the great cooperation, consensus and determination of the entire Politico-Economic apparatus society.

Throughout the last anti-epidemic period, as well as the upcoming economic recovery, it is impossible not to mention the important role of the logistics industry - the lifeblood of the economy. Enterprises in the industry have made constant efforts to help smooth the flow of goods, minimize the impact of disruptions in the global supply chain, and raise the

competitiveness of the country and Vietnamese enterprises in the regional arena. and international. Agility's 2021 Emerging Market Logistics Index report shows that Vietnam has increased 3 ranks compared to 2020, ranked 8th in the top 10 countries (Quang, 2021).

Second, major e-commerce companies are gradually building their own ecosystems, in which e-logistics is an important pillar.

The market is becoming more dynamic, the competitive environment is also fiercer. Startups, backed by venture capital, are trying to break into the logistics market with high-tech, asset-free platforms designed to fully exploit energy. force available in the market. Traditional businesses are continuing to consolidate their strength through expanding supply chains and investing efforts in digital transformation, thereby contributing to "changing the skin" of Vietnam's logistics industry.

Third, the growth driver of the logistics industry also comes from the digital transformation process

This is the process of changing the traditional model to a digital model by applying technologies such as cloud computing (Cloud Computing) and big data (Big Data). The trend of digital transformation has been around for a long time, but in the context of Covid-19, under mandatory changes such as social distancing or working from home, many businesses are forced to find solutions to transform themselves into digital transformation. change numbers to maintain their activities. A survey by Vietnam Report shows that 100% of logistics enterprises have increased their investment in digital transformation in the past year, of which, 86% of enterprises expect the application of technology, digitization and transformation. Digital transformation will bring significant benefits in terms of productivity and business performance in the future; 36% of businesses believe that bringing technology into the logistics journey will enhance the global customer experience. About 68% of logistics enterprises have applied technological advances of the industrial revolution 4.0 into business activities such as Internet of Things - IoT (86%), cloud computing - Cloud Computing (82%).), artificial intelligence – AI (45%), big data – Big Data and blockchain – Blockchain (42%) (Minh, 2021).

Fourth, the measures prioritized by enterprises in the logistics industry in recent years

Enterprises focus on 4 main groups of solutions: (1) Developing core business activities; (2) Expanding the value chain; (3) Scale expansion (through mergers and acquisitions – M&A); and (4) Moving to neighboring industries. In which, nearly 40% of businesses are continuing to follow the strategic direction they set before Covid-19 appeared, which is to invest more deeply in their core business areas by improving productivity. existing resources, improve operational efficiency and develop technology platforms. This will help businesses strengthen their existing competitive advantage, improve economies of scale or expand their network of operations. The development of digital platforms also improves relationships with customers, thereby creating innovation-driven growth. Businesses also restructure their operations, focusing on their most productive areas or shifting their portfolios to services with higher margins and higher growth.

Fifth, Legal - Policy on logistics.

Circular No. 12/2021/TT-BKHĐT of the Ministry of Planning and Investment on "Regulations on the system of logistics statistical indicators of Vietnam" has officially taken effect. For the first time, Vietnam has a legal document providing complete guidance on logistics statistics. Thereby, contributing to transparency and supporting planning, research, investment and development; as well as, manage related logistics activities.

4.5.2 Some Limitations

Firstly, Logistics service providers

The capacity of logistics service providers is reflected in the process capacity, management, human resources and technology, and the difficulties and challenges of enterprises will also come from these intrinsic factors. Weak technological capacity, untrained personnel, weak process execution, and limited administrative capacity are the difficulties that logistics enterprises are facing. Only when the four factors are identified: management, process, human resources, and information technology, that enterprise will have the prerequisite factors to take the lead, creating a platform to link export enterprises and logistics enterprises.

Second, Infrastructure

The underdeveloped infrastructure is also a major limitation for the development of Logistics. Traffic infrastructure, warehouse infrastructure, technology infrastructure are all information that is repeated over and over in documents, regulations, policies, and Logistics reports over the years, but it is really improving to the present. improvement is very slow.

The structure of seaport infrastructure is still unreasonable, most of the ports are general wharfs and container terminals account for a very small number. Because of this irrationality, the situation of excess and shortage still occurs. In addition, among Vietnam's ports, most are small ports, the number of international ports accounts for a very small number with 20 ports (Vietnam logistics report 2021).

Road transport infrastructure also has similar problems, according to function, the ratio between national highways and provincial roads does not have much difference. This causes too many local cars to travel on the national highway, which has caused many traffic jams and accidents, and at the same time, the quality of the road is rapidly degraded due to the rapid and high increase in traffic.

Railway infrastructure is still backward and weak compared to other countries in the region and the world. Transport capacity is still low due to its small scale and not yet modernized.

The level of technology application of Vietnamese logistics enterprises is at a low level, especially in the field of road transport - currently accounting for nearly 80% of the domestic transport market share. This is one of the factors that make it difficult for Vietnamese businesses to operate effectively, optimize costs and improve service quality (Vietnam logistics report 2021).

Third, Legal - Policy

Up to now, the Government has issued Resolution No. 136/NQ-CP dated September 25, 2020 to promote the implementation of sustainable development goals in sectors, levels and localities from now to 2030. and also raised a number of contents related to transportation and logistics such as: Implement a project to develop Logistics services to optimize transport time and costs, reduce fuel consumption; developing activities of transport exchanges in order to connect the transport network; approach, apply smart traffic technology, green transport technology, reduce greenhouse gas emissions in circulation and transport of goods.

However, the legal basis is still not enough. Accordingly, it is still necessary to complete a transparent logistics legal framework, in line with current development trends, to facilitate trade and promote the development of Vietnam's logistics service industry.

4.5.3 The Causes of the Limitations

- The imbalance of supply and demand between the production area (China and Asia) and the consumption area (USA and European countries). This situation occurs due to the overwhelming demand for goods from leading markets, which exceeds the capacity of the current supply chain. On the demand side, many countries such as the US and Europe have launched economic stimulus packages worth trillions of dollars, thus fueling demand for goods and international trade. On the supply side, goods have difficulties in the consumption process. The focal point for receiving and handling goods when entering the consumer market is the port, however, in the US and European countries, the capacity of port and post-port operations is due to the impact of social distancing measures. society, thus leading to congestion of goods at major seaports.

- The imbalance between supply and demand also leads to a shortage of containers. The global container count is calculated and provided on economic growth and container turnover figures based on historical data (before the pandemic took place). Meanwhile, the increased demand for freight due to the Government's recent consumer stimulus packages has put pressure on container shipping as the industry suffers less than other shipping institutions. detention as in the passenger transport industry. This pressure is large enough to cause delays in shipping, changing schedules in the direction of prolonging the turnaround time of container ships, leading to shortages and serious imbalances in the weight of container equipment supply as well as loading capacity. important in the world.

- Labor shortage is also one of the top challenges of nearly 54% of logistics enterprises today, according to a survey by Vietnam Report (Vietnam Report, 2021). The Covid-19 pandemic, especially the fourth outbreak with periods of social distancing and strict blockade, has made labor shortages even more serious.

In addition, the confusion in management, inconsistency in the issuance and implementation of documents and policies related to disease prevention among localities in recent times also caused obstacles. certain operating conditions of logistics enterprises.

- Changing business models or operating methods is not easy. Over 55% of enterprises participating in the survey by Vietnam Report admit that the level of automation application in their businesses is still limited, only average and lower than the general level of the logistics industry. Nearly a quarter of businesses said that the biggest barrier when implementing digital transformation is cost. In fact, the budget for digital transformation of most logistics enterprises only ranges from 1-5% of total revenue (Vietnam Report, 2021).

5. Proposing Some Solutions to Promote the Development of Logistics in Vietnam after Covid-19

5.1 Solutions to Develop the Economy's Supply of Goods

Firstly, reorganizing supply chains for industrial production, creating sustainability and flexibility to develop new supply chains. To step by step promote the restructuring of industrial production activities, especially supporting industries, in order to be self-sufficient in domestic raw materials, auxiliary materials, and materials for industrial sustainable development.

Second, restructuring import-export products, import-export markets, diversifying foreign markets, avoiding dependence on some markets in the new situation. Focus on developing export and import markets according to groups of industries where Vietnam has advantages, especially markets where Vietnam has signed a free trade agreement (FTA).

Third, develop domestic goods supply chains. Continue to develop the supply chains of essential agricultural products and food in the domestic market, promote chain linkages, strengthen linkages between manufacturers and distribution and retail businesses, and promote linkages. throughout the supply chain, associated with regulations on quality, food safety, and traceability of goods.

Fourth, take advantage to expand the source of materials and output for agricultural products. In order to overcome the shortage of input materials for production, it is necessary to support businesses to find alternative sources through strengthening linkages and making the most of newly opened markets from FTAs. With 15 FTAs allowing Vietnamese exports to enjoy preferential tax rates when accessing markets in over 50 countries, including most of the largest trading partners, accounting for over 70% of total export turnover. Vietnam is currently one of the world's most open economies, creating great opportunities for new supply chain development.

5.2 Solution to Develop Logistics Service Supply System

First, focus on investing in the resources of logistics enterprises.

Logistics enterprises need to pay attention to the investment of resources, this is the basic factor to form the capacity of each business. For large enterprises, having a network of assets owned by them needs to have a connection with resources outside the business to best meet customer needs. Small and medium enterprises with few physical resources should focus more on human resources and information. In which, clearly defining the importance of key resources, having a strategy for integrating and deploying resources to form the core competence of the enterprise.

Focusing on developing core competencies is an important factor for businesses to gain competitive advantage and maintain sustainable development.

Second, innovate and enhance technological solutions in business activities.

In the field of logistics, technology applications on the market today are quite diverse and rich. These applications tend to penetrate deeper into the supply process and create connections in the logistics service chain. Vietnamese logistics enterprises are considered to have advantages in the ability to provide services, such as transportation and warehousing. Therefore, businesses should look for software solution providers related to the types of services that are their strengths. Specifically: using transportation software to improve the efficiency of loading goods on vehicles and using warehouse software to improve the efficiency of preservation, stocking of goods as well as optimizing warehouse space. To be able to balance between automation and mechanization in logistics, replacing human labor in some operational processes, domestic logistics enterprises need to learn about 4.0 logistics applications developed mainly by logistics companies. weakly based on the Internet of Things (Internet of Things); big data (Big data); blockchain technology (Block Chain); Robotics and autonomous vehicles; virtual and augmented reality (VA & AR).

Third, improve organizational level and business management capacity.

In order to improve the management level, enterprises need to modernize their management in the direction of fundamentally innovating the traditional model, flexibly applying the modern management organization model such as the network and matrix organizational model. Choosing which model is suitable for the characteristics of each enterprise, however, it must ensure the effective promotion of functional departments, create cohesion in the enterprise, and expand cooperation opportunities with partners. work. In addition, there should be positive measures to train and improve the management level for this object, which should be carried out regularly, continuously and with a clear orientation.

Fourth, develop the ability to share information with partners.

The effectiveness of the service delivery process between logistics enterprises and customers and partners depends greatly on the level of information sharing between the parties involved. Therefore, it is necessary for logistics businesses to establish closer cooperation and networks with their partners to not only enhance business confidence but also reduce investment risks.

Fifth, linking logistics enterprises through the form of cooperation and merger.

In order to be able to compete with foreign logistics enterprises, besides solutions to improve the capacity of enterprises such as investment in facilities and equipment, expansion of business areas, diversification of products, etc. service model, Vietnamese logistics enterprises need to grasp the current trend. Inheriting the lessons learned from foreign logistics enterprises as well as for the above solutions to be effective, the fact that domestic enterprises shake hands with each other through the form of mergers and acquisitions is something that businesses need to do. the industry must take this into account. The merger and acquisition will help businesses

make the most of each other's resources, take advantage of available strengths and have a basis to expand markets and improve business efficiency.

5.3 Solutions t Develop Logistics Infrastructure

Firstly, it is necessary to urgently review the plannings and plans, ensure the synchronization of the connection of the infrastructure system with the goal of developing the logistics service industry, and prioritize the maximum resources to complete the connection. infrastructure, promoting logistics development.

Second, to adjust the market share of various modes of transport, in order to enhance the efficient and environmentally friendly waterways and railways. Invest in developing North-South high-speed railway and improve inland waterways, focusing on ports and loading and unloading vehicles. Using these two modes supports the transformation of modes of transport, moving from road transport. Promoting the effect of rail transport, transporting fresh fruits and vegetables for export through China instead of by road, reducing border procedures and freight charges compared to road.

Thirdly, develop logistics service centers for economic development and regional import and export in localities, especially in the Mekong Delta, and Ho Chi Minh City. Ho Chi Minh and Hai Phong. Along with the development of regional logistics centers is the construction of large-scale inland ports (ICDs) of the region.

5.4 Solutions to Improve the Legal System and Logistics Development Policies

Firstly, the Government needs to review the system of legal documents regulating logistics service business in order to have a complete and synchronous legal document system as a framework for state management of this type of business. this service form.

Secondly, there should be an agency that has the function of chaining all logistics activities as well as the factors related to the supply process of these elements for effective state management. This body may be called the National Logistics Committee, which performs tasks related to state management and policy making for this sector.

Third, the Government should soon develop a comprehensive and long-term national logistics development strategy. The right national logistics development strategy will help the state and businesses rationally use resources, avoid scattered and inefficient investments and fragmented and spontaneous activities. The strategy also helps the state take appropriate steps in perfecting the legal framework and infrastructure development policies; as well as helping businesses make the right decisions in their business operations.

5.5 Solutions to Develop Logistics Human Resources

Solutions for logistics human resource training institutions

- Logistics is a field with a very high degree of integration, so logistics human resources must be trained to not only meet the requirements of domestic enterprises but also work in the

international environment, especially in the community. ASEAN Economic Council. Therefore, logistics human resource training institutions in Vietnam need to innovate training programs and content according to the standards of international training programs (such as FIATA training program, AFFTA - ASEAN program, etc.) Vocational training program Au4 Skills Australia - Vietnam).

- Develop appropriate training programs for each target group of learners, including learners who are officials in state management agencies, local departments involved in policy making and management. directly in the field of logistics in the area; officers in charge of work at the office and officers working in the field; corporate management leaders. At the same time, develop logistics training programs for different industries (leather, footwear, textiles and electronics).

- Strengthen cooperation between schools and schools, schools and businesses; promote the connection between universities and vocational colleges with short-term training; encourage joint training and mutual recognition of credits. Closely cooperate with enterprises in the training process by inviting enterprises to contribute ideas to develop and modify training programs, participate in teaching practical practical modules in training programs, participate in participating in the research and evaluation of the university's research works; implementing consulting packages on logistics activities for enterprises; call to support actual locations, internships for students.

Solutions for businesses using logistics human resources

- To improve efficiency in logistics human resource recruitment, businesses need to regularly forecast development trends of the logistics service industry in order to identify recruitment needs and develop appropriate human resource development strategies. These forecasts, if shared with logistics human resource training institutions, will also help training institutions with important factual bases in recruiting and building training programs that meet the labor market.

- Enterprises strengthen the signing of official and long-term cooperation programs with universities and colleges in logistics, human resource training and recruitment. Provide financial and non-financial support for students with excellent academic results to attract good personnel after graduation to work in enterprises.

- Enterprises need to develop clear and appropriate recruitment and remuneration policies to attract existing workers in the industry to work at the enterprise in order to increase personnel with professional qualifications and practical experience, supplementing the enterprise's existing workforce; reduce the cost and time of training new personnel.

5.6 Digital Transformation Solution for Vietnam Logistics Industry

Solutions on the side of state management agencies

- With the industry's biggest difficulty being the lack and limitation of IT infrastructure in colleges, the Government needs to have action programs to apply modern science and technology, catch up with international standards, and form the electric logistics industry. death

in the context of industry 4.0.

- Research and application of new technologies, technical advances in management, operation, training in supply chain and logistics services. Encourage and guide enterprises in a number of industries to apply advanced supply chain management models in production and business, focusing on logistics activities on the basis of IT application and new technology.

- Continue to improve the legal framework on logistics and community services, especially security issues, cooperation in vandalism prevention, digital governance issues. Integrating functions of network monitoring, ensuring network safety and security right from the time of design and construction. Research, amend, and promulgate new policies and laws governing logistics services, multimodal transport, and cross-border transport in e-commerce.

- Issuing preferential policies on tax, land rent and loan interest to support logistics enterprises with conditions to invest in warehouse network, goods classification system, automation equipment with high productivity. There are policies to encourage shareholders, support loans and preferential interest rates for startups in digital technology solutions, in order to help logistics businesses buy or rent solutions from software providers. when there is not enough financial capacity.

5.6.1 On The Business Side

- Logistics enterprises need to raise awareness of the urgency of trade unions, considering trade unions indispensable if they do not want to be eliminated from the market.

- The selection of a digital transformation model needs to be studied carefully and thoroughly. Closely linking within the Logistics industry, as well as seeking advice from digital transformation service providers to help businesses determine the right direction. Enterprises should pay special attention to improving financial capacity through cooperation and merger with businesses with good financial potential or looking for strong investors to have stable financial resources for development. develop technology and high-quality human resources.

6. Conclusion

The overall implementation of solutions: development of the economy's supply of goods, development of logistics service supply systems, development of logistics infrastructure, improvement of the legal system, logistics development policies, developing logistics human resources, digital transformation for Vietnam's logistics industry will contribute to promoting the development of Vietnam's logistics in the post-Covid-19 context.

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