# E-Commerce Logistics in Vietnam: Research Overview

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*Abstract:*

*The article has an overview of logistics for e-commerce, the theoretical issues related to logistics for e-commerce. Based on that theoretical framework, we analyze the current situation of logistics enterprises in Vietnam, analyze opportunities and challenges for Vietnamese enterprises. Finally, we propose solutions to help save costs and improve efficiency for Vietnam's logistics businesses today.*

*Keywords: Logistics, e-commerce, Vietnamese businesses*

## 1. Introduction

Logistics is an important service industry in the overall structure of the national economy, playing a supporting role, connecting and promoting the socio-economic development of the country as well as each locality, contributing to improving the competitiveness of the economy.

Logistics is an important service industry in the overall structure of the national economy, playing a supporting role, connecting and promoting the socio-economic development of the country as well as each locality, contributing to improving the competitiveness of the economy. Logistics is a series of services from the pre-production stage until the goods reach the final consumers. This field is directly related to transportation, forwarding, warehousing, administrative service procedures, consulting (customs, tax, insurance), import-export-trade, distribution channels. , retail

Developing logistics services into a service industry will bring high added value, linking logistics services with the development of domestic goods production, import-export and trade, and development of transport and public infrastructure. information technology Developing a healthy logistics service market will create equal opportunities for businesses (enterprises) of all economic sectors, encouraging attracting domestic and foreign investment capital in compliance with the law. Vietnamese laws and international treaties to which Vietnam is a party.

According to the World Bank (2019), Vietnam currently ranks 64/160 countries in terms of logistics development and 4th in ASEAN after Singapore, Malaysia and Thailand. With an annual growth rate of 14-16%, this is one of the fastest-growing and most stable service industries in Vietnam in recent years.

It is forecasted that by the end of 2020, Vietnam's import-export turnover will reach USD 300 billion, containerized goods through Vietnam's seaport system will reach 67.7 million TEUs, thus, the potential of developing Vietnam logistics service. The male is very big. In the near future, logistics services will become an important economic sector, which can contribute up to 15% of the country's GDP.

In particular, there has been a boom in e-commerce and e-Logistics recently. According to the Department of Industry and Trade's E-Commerce and Digital Economy, e-commerce is growing by 35% per year; Vietnam's e-commerce retail sales in the period 2016-2020 is estimated to increase by 20% per year and the total E-commerce retail sales of Vietnam is expected to reach the US $ 10 billion by 2020. Changes in e-commerce in the world and in Vietnam has promoted Vietnam's logistics industry to improve the method of providing services more and more professionally and effectively.

## 2. Research overview

### 2.1. Logistics activities for e-commerce (e - logistics)

In e-commerce (e-commerce), Logistics is now simply understood as the order fulfillment process, including packaging, shipping, collecting money and after-sales customer care. Thus, with goods being tangible products, whether searching for products, signing contracts, making payments, can be made in an online environment, but the delivery from the manufacturer to person final consumption must be closely linked with logistics and delivery services.

E - logistics activities include: (1) Receiving goods from the seller; (2) Order management; (3) Logistic services (including arrangement and storage); (4) Handling when orders arise; (5) Packing of goods; (6) Transportation; (7) Collect money if required by the seller and (8) Deal with any post-purchase costs (return or exchange).

The storage operation aims to maintain a good amount of cargo at reasonable stockpiles to meet the order requirements as quickly as possible. However, due to the diverse needs of customers, the complexity of the reserve goods is also many times larger. The management and maintenance of reserves need to ensure accuracy, flexibility, high requirements in the application of automatic machinery, and the use of warehouse management software systems to support the maximum of activities. automatically receive goods, check goods, apply labels / barcodes, sort and set up a product list to ensure time and speed.

Order preparation activities include receiving, processing and preparing goods according to orders placed from different sales channels, including ordering by order, standard packing for delivery. The level of application of mechanization and automation in this stage is very important because it will allow us to increase supply productivity, improve accuracy, reduce customer waiting time, improve sales efficiency.

Delivery activities: including the dispatch of orders, delivery of goods from the warehouse to the customer or courier, and updating information to customers. B2C retailers can conduct delivery by themselves if there are sufficient cost and experience to build, train and manage the delivery team. But small businesses often lack this capacity, so they will have to hire forwarding services from third-party logistics companies. On delivery, B2C retailers often use a number of different delivery methods, which determine the number of logistics services and the extent of involvement of businesses in electronic transactions. There are three forms of e-commerce delivery:

Delivery at the warehouse of the seller or online shopping, customers pick up goods at the store. This way, customers come to the warehouse and shop for suppliers to pay and receive goods.This is the most primitive method of e-commerce and not convenient for customers.

Delivering at the address of the buyer allows the goods to be delivered to the customer's requested location, facilitating the customer, but greatly increasing the cost and logistics resources. transportation and delivery costs, in the absence of capital and freight forwarding capacity, are difficult to implement.

Dropshipping or shipping bypass shipping is a very optimal model, allowing businesses to buy individual products from wholesalers and deliver them directly to customers. Instead of buying large quantities of inventory, B2C Retailers are simply partnering with a supplier capable of shipping and listing their inventory of goods for sale. After that, when an order is received, it will be forwarded to the supplier for fulfillment. Suppliers will ship the product directly from their warehouse to the customer's business, and the business will only pay shipping fees for the order.

### 2.2. The difference between traditional Logistic and e – logistics

Logistics for e-commerce is also quite complicated due to shipping hundreds of thousands of orders and changing addresses every day. E-commerce logistics will actively support the activities of businesses with the basic goal of delivering the right products to the right quantity at the right place and time to the right customers, helping to achieve the final goal. This is a competitive advantage.

In the peak season, the implementation of logistics E-commerce is very complex, the volume of goods varies greatly every day, the problem is how to be flexible to handle and ensure growth but must be optimal. good running costs.

Logistics activities are responsible for effectively connecting members of the supply chain, thereby bringing the highest value to customers and members. The logistics task of logistics is demonstrated by the smooth and smooth operation of the following 3 lines:

- Product line: the path of movement of goods and services from suppliers to customers ensures true and sufficient quantity and quality.

- Information flow: delivery and receipt of orders, tracking the movement and documents between sender and receiver.

- Cash flow: represents the payment of customers to suppliers, showing business performance

## 3. The actual situation of developing e-logistics activities for e-commerce enterprises

E-commerce is in the beginning stage, completing orders with an average of 1-2 packages per year per person, this rate is much lower than the rate of 5-10 packages / year, the threshold called the development market (McKinsey, 2018). Currently, there are two main groups in the market involved in implementing E-logistic services: Internal transport division of E-commerce exchanges and third-party service providers.

The current E-logistics market is mainly dominated by 3PLs (Ken Research, 2018) .In recent years, e-commerce exchanges have tended to outsource delivery services via 3PLs rather than organizing a team themselves. sleep. Currently, Lazada has an E-Logistics Express established on the market, while other e-commerce companies use the services of shipping companies such as giaohangtietkiem, giaohangnhanh and DHL e-Commerce, VN Post or EMS, Viettel Post.

According to statistics, the number of businesses using third-party services in 2017 increased more than in 2016. The number of e-commerce businesses that self-implemented e-commerce logistics services also decreased significantly. , more than 50% of businesses compared to 2016.

The country has about 50 units of fast delivery, large and small. However, only a few businesses have a large market share and are mentioned a lot in the domestic freight forwarding market such as VNPost, Viettel Post, Fast Delivery and Savings Delivery (from SEA Group from Singapore). in particular, these 4 units alone account for about 60-65% of the market share for small packages shipped in Vietnam. In which, there are 3 domestic enterprises. Domestic enterprises are occupying the majority of market share because they have been established before. Meanwhile, foreign businesses that have not been to Vietnam before may be due to the small market size, underdeveloped e-commerce

In recent years, many foreign businesses have actively invested in logistics services for e-commerce, such as Lalamove (Hong Kong), Lazada Express, Grab, DHL e commerce VN, Ninja Van Vietnam, VNC Post invested by BEST Inc , Scommerce, DHL eCommerce, FedEx, TNT, Boxme Global, EMS, economical delivery, fast ship

## 4. The trend of technology development and application in logistics activities for e-commerce enterprises

The changing trend of E - logistics services in the world market Since the development of E-commerce, e - logistics activities have been developed to promote the development of this industry. The trend of e - logistics changes as follows:

The method of single order shipping (LCL) is developed. The reason is that e-commerce is booming; e-commerce limits working capital, narrow inventories and optimizes supply chains, resulting in smaller shipment sizes and more frequent ordering. Consignees are always aware of their assets and inventories; These assets must be as streamlined and as low as possible. On the other hand, many small retailers cannot afford to buy large volumes of goods from developed economies. This demand has led shippers to use small orders and ship them to diverse geographic locations. This trend is of great significance for 3rd party forwarders (3PLs) and forwarders, requiring them to build an optimal consolidation network, reducing inventory, inventory costs, pay attention to consolidation solutions, improve advantages for electronic orders and last-minute delivery service.

Commercial companies turn to omnichannel operations to enable them to be available anytime and anywhere on the devices consumers are using. The boundary between traditional commerce and e-commerce is blurred. When multichannel business became a new way of trading, day-to-day delivery became the criterion for service quality of retail companies, regardless of whether they were e-commerce or e-commerce. This promotes the adaptation of logistics systems.

Technology trends in the field of e - logistics

A modern logistics system in the e-commerce environment is necessary and indispensable for the present era. Modern logistics system includes the ability to communicate in multidimensional and connect with internal actors. and outside the enterprise performing its functions. Logistic activities are closely associated with warehousing, manufacturing, distribution, receipt, loading and unloading activities, so the parts related to the above processes interact with each other so that the process takes place. profane and smooth.

The ability to collaborate Logistics is a tool to link economic activities in a country and globally through the supply of raw materials, production, distribution, market expansion and other value-added services. The modern logistics system has helped firms master their entire supply capacity through the cooperation and coordination between the activities of supply, production, circulation and timely distribution. Technology applications in logistics activities include:

Firstly, Website development should have the utility tools that customers need such as order tracking, train schedule, e-booking, document tracking The visibility and order control function (visibility) is a Factor that is highly appreciated by shippers when they choose their logisitics service provider. Visibility tool - at any time, wherever company employees use the service, it is possible to capture and pull out any type of reports related to their orders, is and it will be implemented. The system records 100% of electronic bills of lading. Customers can easily access information and track the shipping status of orders to the level of each product, with just a few operations right on the phone, 24/7 anytime anywhere. This helps the company calculate good forecasts, control inventories, timely meet customer requirements at the most optimal cost.

Second, using the Digital forwarding platform - the cross-border shipping platform for e-commerce and retail (LCL). Thereby connecting between individuals and organizations wishing to transport goods across borders and transport service units.

Thirdly, Building an automatic sorting system by robots with a split parcel takes only about 4-5 seconds.

Fourth, the vehicle management application displays information about each driver, on which axis, where to go, how much package, and camera display on each vehicle. All data are synchronized to relevant locations in the company. In order to optimize transport capacity, all shipping data must be digitized in order to operate effectively.

Fifthly, the technology updates the status of instant delivery via smartphone.When the delivery staff delivers the goods to you, instead of signing the paper bill of lading, you can sign directly on the employee's smartphone.

Sixth, Virtual Reality (VR) Technology & Augmented Reality (AR). AR is rapidly becoming an important technology to help connect the real and virtual worlds. In logistics, this technology can help workers

quickly identify shipment information, thereby speeding up the time to process goods. For example, DHL has tested AR in Europe and the United States by equipping AR glass warehouse workers to identify items in real time, showing the optimal route for collection. orders, which helps reduce inventory time. In addition, workers do not need to scan packages, glasses can do for them.

Seventh, the Internet of Things (IoT)

According to Gartner, it is estimated that by 2020, there will be more than 50 billion items connected to the Internet, providing a great opportunity worth $ 1.9 trillion for logistics. Thus, IoT will solve many problems applied in various stages of the logistics process. IoT can be integrated into warehouses through sensors installed on shelves and goods. Location information, order status, the volume will be updated in real time from pallets (inventory sheets), sent to the warehouse management system (WMS), which helps to reduce the costly tasks. as much time as tallying. Gate-mounted cameras can be used to detect failures and track faults.IoT also offers a better solution for managing fleet delivery by optimizing vehicle free time or delivering generate automatic vehicle maintenance forecasts based on updates from vehicle-mounted sensors.

In parallel with IoT, technologies that are increasingly influential in logistics also include big data (Big Data) and AI because of the huge amount of data generated in the supply chain. Big data helps optimize capacity, enhance the user experience, minimize risks and create new business models. In addition, big data helps optimize resource utilization, process quality, and performance to increase speed and transparency in decision making, thereby improving business performance. , the correlation between data streams such as delivery information, weather, traffic can be utilized for real-time planning, optimizing load sequences and predicting arrival times. real time.

## 5. Potential development of logistics activities for e-commerce businesses in Vietnam

Currently, Vietnam is assessed to have many opportunities to promote the development of Logistics services. Specifically, the system of road transport infrastructure, airports, seaports, warehouses, trade infrastructure, logistics centers is constantly expanding with a large and large scale. Along with that, the accompanying services have been promptly meeting the very diverse requirements of the market. Customs clearance procedures for exports have also improved significantly.

According to a Nielsen report, Vietnam is rated as one of the fastest e-commerce growth countries in the world, achieving an average annual growth rate of 35%. billion USD, reaching a growth rate of up to 50% by 2020 (VECOM, 2019)

The above-mentioned e-commerce race also entails a chain of logistics operators, investing in warehousing systems, transport centers, technology to meet the needs of customers in the fastest way. Currently, the demand for logistics in the e-commerce ecosystem (e-logistics) in Vietnam is huge.

In addition, according to a survey by the Department of E-commerce and Digital Economy, up to 47% of online shoppers are interested in e-commerce shipping and delivery companies and up to 31% of shoppers. Online goods think that shipping and forwarding services are weak.

As such, the need to develop logistics services for e-commerce development in Vietnam is really necessary and invested in development.

## 6. Proposing solutions to develop e -logistics activities for e-commerce enterprises

In order to propose e-logistics development solutions for e-commerce enterprises, the author leads together with the remaining points of this field. Therefore, the problems and proposed solutions for these problems are given as follows:

Firstly, the logistics of human resources for e-commerce

The Logictics workforce for e-commerce is not available, the team working in this field mainly moves from traditional logistics field and does not have a school for specialized training. After hiring employees, they must equip themselves with professional knowledge by self-opening courses within the company for new employees with teaching staff who are in-service officers. These forces are business people, so they have a lot of practical experience, but pedagogical skills and methods of communication are not guaranteed, which leads to a limp, a difference in professional skills and qualifications. the foreign language between employees between companies. This shortage needs to be solved quickly by the industry and businesses because the common trend in international freight forwarding, especially in the integration period, now requires that employees have a high level of foreign language skills. In-depth knowledge, extensive knowledge of geography, knowledge of laws relating to import and export, domestic and international customs laws and regulations, good knowledge of national and international laws. , knowledgeable about banking, insurance and aviation, aircraft, ships .

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Second, requirements for delivery schedules such as same-day, next-day delivery, and in two days are becoming more common even for packages. Logistics costs for e-commerce in Vietnam are accounting for about 30% of revenue. This is a very high rate compared to traditional trade industries and compared to some other countries, such as India accounting for only 5-15% (2017), the US 11.7% and China 12%. To solve this problem, companies involved in logistics activities such as transportation, warehousing should discuss and come up with a total solution from warehousing, freight movement and standard, closed processes. help reduce the cost of this service.

Thirdly, e-commerce has grown strongly, but the land fund has been devoted to commercial centers, office buildings, not to logistics. For many years, big cities have focused on developing real estate to support the birth of new urban areas, sprouting of many apartments and commercial centers, industrial parks, office buildings, hotels, and planning of land fund for logistics is not much. Therefore, it is necessary to develop logistics centers or air cargo service complexes. The next suggestion is to separately plan (supplement) the system of e-commerce order fulfillment centers for big cities like Hanoi and Ho Chi Minh City to have a belt of properly distributed centers. Around the city, to help the process of moving and storing goods faster and cheaper.

Fourthly, according to a survey by the Department of E-commerce and Digital Economy, in Vietnam, only 10% of Vietnamese logistics enterprises have implemented resource management software (ERP), 17% use electronic data transmission (EDI). ), 17% use a transportation management system (TMS), 17% use a bar code system / warehouse management software (Barcodes / WMS), 29% install a global positioning system. e-logistics service providers should quickly deploy technology applications (ERP, digital forwarding platform, AI, IoTs, automated goods classification system in the warehouse ... to enhance transparency and timely updates. In terms of the status of completing orders in each stage for partners and customers, the cost of implementing these technologies may be quite high, but the current e-commerce sector is also Many investors are interested in pouring capital, so companies can deploy in the direction of seeking capital from these investors.

Fifth, although trading on e-commerce platforms, up to 90% of orders are due to be paid after receipt of goods, causing risks, especially when the number of money logistics enterprises has to collect on behalf of businesses. e-commerce enterprises are too high, or the rate of unsuccessful delivery is quite high, about 8-10%. This not only increases the cost for the seller, but also causes the logistics businesses to incur a lot of costs, from storage costs, human costs to the many complex processes behind to complete the application. Therefore,

a popular online payment platform will also be a good opportunity to solve this problem for the e-commerce industry.

Finally, transport and road infrastructure in major cities, where e-commerce activities will take place more actively, is also a major barrier for businesses. Upgrading transport infrastructure is also a major solution that requires the contribution of the government to contribute to promoting social development in general, including e-commerce trade.

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