Working Paper 2023.2.3.11

- Vol 2, No 3

HIỆN TRẠNG VÀ TIỀM NĂNG CỦA HOẠT ĐỘNG E-LOGISTICS CỦA SHOPEE TẠI VIỆT NAM

Nguyễn Minh Đức [1], Lê Thị Khánh Hòa, Phạm Quỳnh Anh, Lee Byung Hyuk, Trần Ngọc Châu

Sinh viên K60 CLC Kinh tế Đối ngoại – Viện Kinh tế và Kinh doanh quốc tế

Trường Đại học Ngoại thương, Hà Nội, Việt Nam

Nguyễn Thị Yến

Giảng viên Viện Kinh tế và Kinh doanh quốc tế

Trường Đại học Ngoại thương, Hà Nội, Việt Nam

Tóm tắt

Trong những năm gần đây, E-logistics đã trở thành một giải pháp phổ biến và không thể thiếu để đảm bảo sự liên tục và hiệu quả trong hoạt động kinh doanh, đặc biệt là trong lĩnh vực thương mại điện tử. Bài viết này tập trung chủ yếu vào việc phân tích chi tiết về tình hình hiện tại và tiềm năng phát triển của E-logistics tại thị trường Việt Nam, thông qua việc nghiên cứu một trường hợp cụ thể - Shopee. Quá trình phân tích đã chỉ ra sự thành công trong triển khai E-logisticscủa Shopee, tuy nhiên, cùng lúc phát hiện và đánh giá các hạn chế đang phải đối mặt. Đồng thời, nghiên cứu cũng tập trung vào việc thẩm định bối cảnh, khó khăn, và thuận lợi của thị trường Việt Nam đối với E-logistics, như chi phí vận hành, yêu cầu về công nghệ, và tác động của đại dịch COVID-19. Dựa trên những phát hiện chi tiết này, bài viết đưa ra một số khuyến nghị cụ thể và chiến lược để cải thiện hoạt động E-logistics của Shopee, nhằm đảm bảo sự linh hoạt và đáp ứng tối đa đối với nhu cầu ngày càng cao của thị trường.

Từ khóa: E-logistics, thương mại điện tử, Shopee, tối ưu hóa, thị trường Việt Nam

CURRENT STATUS AND POTENTIAL OF SHOPEE'S E-LOGISTICS ACTIVITIES IN VIETNAM

Abstract

In recent years, E-logistics has emerged as a prevalent and indispensable solution to ensure continuity and efficiency in business operations, particularly in the realm of e-commerce. This article primarily focuses on a detailed analysis of the current status and developmental potential of E-logistics in the Vietnamese market, conducted through a specific case study - Shopee. The analytical process has revealed the successful implementation of Shopee's E-logistics, while concurrently

[1] Tác giả liên hệ, Email: k60.2114110080@ftu.edu.vn

identifying and evaluating specific constraints they are facing. Simultaneously, the research delves into assessing the context, challenges, and opportunities of the Vietnamese market for E-logistics, such as operational costs, technological requirements, and the impact of the COVID-19 pandemic. Based on these detailed findings, the article provides specific recommendations and strategies to enhance Shopee's E-logistics operations, ensuring flexibility and maximum responsiveness to the ever-growing demands of the market.

Keyword: E-logistics, e-commerce, Shopee, optimization, VietNam market

Introduction

In recent years, the e-commerce landscape in Vietnam has witnessed a remarkable transformation, with online shopping becoming increasingly popular among consumers. As this digital shopping revolution continues to gain momentum, the efficient and reliable management of e-commerce logistics has become a critical factor for success. Among the key players in this dynamic market, Shopee has emerged as a prominent and influential e-commerce platform, not only for its diverse product offerings but also for its robust e-logistics activities.

E-logistics encompasses all activities that support the transportation of goods from the point of production to the point of consumption through electronic transactions. Vietnam is one of the potential markets with strong development of E-logistics companies, with Shopee being a prominent example, holding over 70% of the market share in Vietnam's e-commerce sector. The Vietnam Logistics Business Association (VLBA) states that the logistics sector in Vietnam accounts for 20 to 25% of the total GDP value of goods and services and is expected to grow by approximately 12% annually in the near future. The robust growth of the e-commerce industry presents more opportunities for logistics companies to harness the market's potential.

This research: "Current status and potential of Shopee’s E-logistics activities in Vietnam" will study how logistics operations work in e-commerce at Shopee, while also gaining a general overview of E-logistics in the Vietnamese market. Our teams use qualitative analysis to offer insights into the challenges and opportunities of E-logistics within Shopee in VietNam and propose solutions for further improvement.

Secondary data is collected from a multitude of sources to ensure the quality and reliability of our analysis. Information is drawn from diverse references, including industry reports, academic literature, company disclosures, and assessments from international organizations.

The report comprises the main sections:

(1) Theoretical framework
(2) Current situation of E-logisticsat Shopee in VietNam
(3) Shopee’s E-logictics development solution in VietNam

1. Theoretical framework

1.1 Definition of E-logistics

Logistics refers to the effective planning, execution, and cost control of the movement and storage of raw materials, products, and associated information from production to customer delivery. This definition is widely acknowledged in contemporary discussions.

The term "E-logistics" has gained traction in both academic and practical circles, yet a precise definition remains elusive. Some define it as the facilitation of goods movement through online transactions. In contrast, others see it as the application of digital technology in various logistical operations, including software and tracking devices.

It is important to note that E-logistics transcends the realm of e-commerce. Despite its name resemblance, it encompasses a more comprehensive scope. Its distinctiveness from traditional logistics lies in its use of technology to manage both procurement and delivery processes. This capability allows for the handling of large orders, diverse product types, and swift, accurate deliveries within short timeframes, sometimes within a couple of hours.

Hence, E-logistics can be understood as a system that leverages technology to automate logistical operations, facilitate supply chain management, and ensure the seamless integration of all stakeholders involved in the process.

1.2 Characteristics of E-logistics

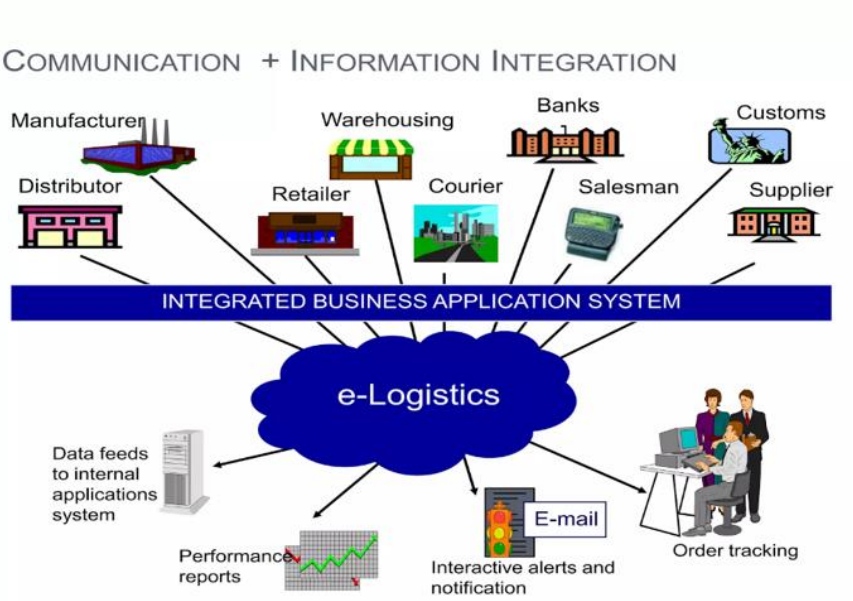


Figure 1. Some features of E-logistics

Source: *Tài liệu XNK (n.d.)*

- E-logistics entails the electronic execution of business activities through the Internet.
- It differs significantly from traditional logistics due to its handling of larger and more complex operations. However, poor organization can lead to inefficiencies in this system.
- Online distribution allows for unrestricted access to product information and transactions, enabling direct communication between retailers or manufacturers and customers. This leads to cost advantages in various aspects, including production, storage, and distribution.
- E-logistics faces several challenges in developing countries, such as high tariffs, intricate global trade regulations, and geographical obstacles.
- E-commerce logistics plays a critical role in ensuring timely and cost-effective product delivery to customers. Neglecting overall costs can contribute to the failure of online businesses.

1.3 Determinants of the E-logistics system

A robust and reliable IT infrastructure is essential for the efficient operation of an e-logistics system. This includes having the necessary hardware, software, and networks to support all aspects of logistics operations, such as order processing, inventory management, transportation tracking, and customer communication.

Supply chain integration

Seamless integration with suppliers, manufacturers, and distributors is another critical determinant of an effective e-logistics system. This enables real-time data exchange and collaboration across the supply chain, improving visibility and coordination, and reducing delays.

Data management and analytics

Effective data management and analytics are essential for identifying trends, patterns, and potential inefficiencies in the logistics system. This information can then be used to make informed decisions and implement improvements, such as optimizing inventory levels, streamlining transportation routes, and improving warehouse efficiency.

Inventory management

Efficient inventory management is essential for reducing costs and ensuring timely order fulfillment. This includes having accurate demand forecasting and using inventory optimization tools to ensure that the right products are in the right place at the right time.

Transportation and fleet management

Optimal transportation and fleet management is critical for delivering goods on time and within budget. This includes using efficient routing algorithms, selecting the right modes of transport, and scheduling vehicles effectively.

Warehouse management

Streamlined warehouse operations, such as efficient layout design, inventory organization, and automation, can contribute significantly to the efficiency of the e-logistics system. This can help to reduce costs, improve order fulfillment rates, and minimize errors.

Customer relationship management

Focusing on customer satisfaction through effective communication, order tracking, and after-sales support is essential for building a strong customer base. This can be achieved by providing customers with real-time updates on their orders, tracking their shipments, and resolving any issues quickly and efficiently.

Security and risk management

Implementing robust security protocols and risk management strategies is essential for protecting the e-logistics system from potential threats and disruptions. This includes securing sensitive data, such as customer information and order details, and developing contingency plans to mitigate the impact of disruptions.

Scalability and flexibility

A scalable and flexible e-logistics system is essential for adapting to changing market demands, business expansions, and technological advancements. This means having the ability to add new features and capabilities easily and to scale the system up or down as needed.

By considering these determinants, businesses can optimize their e-logistics systems, enhancing operational efficiency, reducing costs, and improving overall customer satisfaction.

1.4 How the Determinants of e-logistics affect performance

Digital technologies can have a significant impact on supply chain performance, leading to reduced costs, improved efficiency, and increased customer satisfaction.

Key Findings:

- **Digital supply chain integration** can reduce logistics costs by an average of 15%, increase on-time delivery performance by 50%, and reduce inventory costs by 10%. (Supply Chain 4.0, 2016)
- **Data management and analytics** can increase on-time delivery performance by 50%, reduce inventory costs by 5%, and improve customer satisfaction by 10%. (Gatner, 2021)
- **Digital inventory management** can reduce inventory costs by 5-10%, improve customer satisfaction by 10-15%, and increase sales by 5-10%. (Dassault Systèmes, 2021)
- **Digital transportation and fleet management** can reduce fuel costs by 10%, improve vehicle utilization by 5%, and improve customer satisfaction by 5-10%. (Ericsson, 2021)
- **Digital warehouse management** can reduce order fulfillment costs by 30%, improve pick accuracy by 99%, and improve ship accuracy by 99.9%. (ShipBob, 2021)
- **Customer relationship management (CRM) systems** can increase sales by an average of 20%, reduce customer churn by 10%, and improve customer satisfaction by 15%. (Salesforce, 2021)
- **Digital security and risk management technologies** can reduce cyberattack costs by 50%, improve compliance with regulations by 90%, and increase customer confidence by 10%. (IBM, 2021)
- **Digital technologies** can reduce the time to scale a supply chain up or down by 50%, improve the ability to meet changing demand by 10% and improve the ability to adapt to new market conditions by 15%. (Deloitte. 2018)

Case Examples:

1. Walmart used digital supply chain integration to improve inventory visibility and forecasting, reducing out-of-stock rates by 50%. (Walmart, 2023)
2. Amazon used data management and analytics to optimize its supply chain, reducing inventory costs and improving efficiency. (Amazon Web Services, 2021)
3. Nike used digital inventory management to improve accuracy, efficiency, and visibility, reducing inventory costs and improving customer satisfaction. (Supply Chain Digital, 2023)
4. FedEx used digital transportation and fleet management to optimize routes, schedules, and maintenance schedules, reducing fuel costs and improving vehicle utilization. (FedEx, 2021)
5. Maersk used digital supply chain management to improve visibility and efficiency, identifying and resolving potential problems early on and automating back-office processes to reduce costs and improve efficiency. (Maersk, 2020)

Overall, the examples show how digital technologies can be used to improve supply chain performance in a variety of ways, across different industries and company sizes.

1.5 The Role of E-logistics

E-logistics is the backbone of e-commerce. It connects all activities within the global value chain, streamlines the circulation and distribution process, and ensures swift and timely delivery of goods. E-logistics also actively supports business activities by striving to deliver the right products, in the right conditions, quantity, and location, precisely when the customer needs them, all at a competitive cost.

The pandemic has underscored the crucial role of e-logistics in ensuring the resilience of supply chains and uninterrupted business operations. It has also unveiled the potential for the continuous evolution of the future e-logistics market.

2. Current situation of E-logisticsat Shopee in VietNam

2.1 An Overview of Shopee

***2.1.1** The history of Shopee*

Shopee is the leading E-Commerce platform in Southeast Asia, headquartered in Singapore and belongs to SeA company, formerly Ganera (owner of major brands such as Ganera, Foody, Now, Airpay) was born in 2015 and is currently present in 7 countries, which includes 6 Asian countries: Singapore; Thailand; Taiwan; Indonesia; Vietnam; Philippines and one nation outside of Asia - Brazil. The founder of Shopee is the billionaire Forrist Li - who is known to confront Alibaba.

2015: Shopee launched in Singapore with the orientation of being an e-commerce platform developed mainly on mobile devices, operating as a social network to serve the demand to buy and sell anytime, anywhere for users. Integrating operation, delivery, and payment support systems, Shopee was an intermediary that made online shopping easier and safer for both buyers and sellers. Shopee Vietnam exclusively provided a safe online shopping policy called "Shopee guarantees" (“Shopee đảm bảo”), which means payment was sent to the seller only when the buyer had successfully received the goods.

2017: Shopee Vietnam launched Shopee Mall, a sales portal with commitments from leading brands and major retailers in Vietnam. In Taiwan, the leader in e-commerce was Shopee. Shopee Company was very suitable here as they can make the online shopping experience better, faster and safer with support from the ordering to delivery phase. With the goal of becoming a go-to spot for online trades in Southeast Asia, Shopee was constantly improving & developing products as well as diversifying types of items: health, beauty, fashion, fast-moving consumer goods, home, lifestyle, electronics, ...

As of 2017: Shopee recorded 80 million application downloads, including Vietnam

with more than 5 million times. This platform is currently working with more than 4 million suppliers and more than 180 million products. Also in the fourth quarter of 2017, the total value of Shopee goods was reported to be more than 1.6 billion US dollars, an increase of 206% over the previous year.

As of the third quarter of 2018: According to data from the Vietnam E-commerce map, iPrice Insight announced that Shopee leads in both website traffic and mobile app ranking.

At the end of October 2019: Sudden activities in Brazil - the first time Shopee stepped out of the Asian market, however, its operations were quite primitive and vague.

By the fourth quarter of 2022: Shopee still ranked first in website traffic of Vietnamese E-Commerce sites as reported by the E-Commerce map from iPrice.

- Quarter 4/2020: 68,590,300 visits
- Quarter 4/2021: 88,956,700 visits

2.1.2 The business model of Shopee

To date, Shopee has expanded to a B2C model with the launch of Shopee Mall - an exclusive trade platform for big brands & businesses on Shopee. In its first years of operation, Shopee focused on developing a customer-to-customer trading network (C2C). Financial reports showed that Shopee spent up to 90% of its marketing budget on promotional campaigns, free shipping, flash sales and coupons for both buyers and sellers to attract customers from different platforms. The C2C model at that time helped Shopee build a huge network of buyers and sellers without any concerns about inventory. More than that, Shopee also creates a word-of-mouth marketing effect when it owns a multi-product "market" with logistics services and a professional customer support center, all of which have promoted the wave of online shopping.

From this foundation, Shopee has brought industry-leading suppliers to the e-commerce platform ever since it added the B2C model, which turned Shopee into a direct competitor with Lazada - "the E-Commerce giant" at that time.

2.2 Current status of Shopee's E-logistics activities in the world & Vietnam

2.2.1 Activities

Warehouse management and logistics activities

Shopee's warehouse management and logistics department is responsible for storing, preserving, preparing and packaging goods. In Vietnam, Shopee currently has 3 large warehouses in the Tan Phu Trung industrial park (Cu Chi, Ho Chi Minh City). Shopee warehouses are integrated with modern information technology, positioning and analysis systems Arrange goods with shoppers to optimize the delivery process.

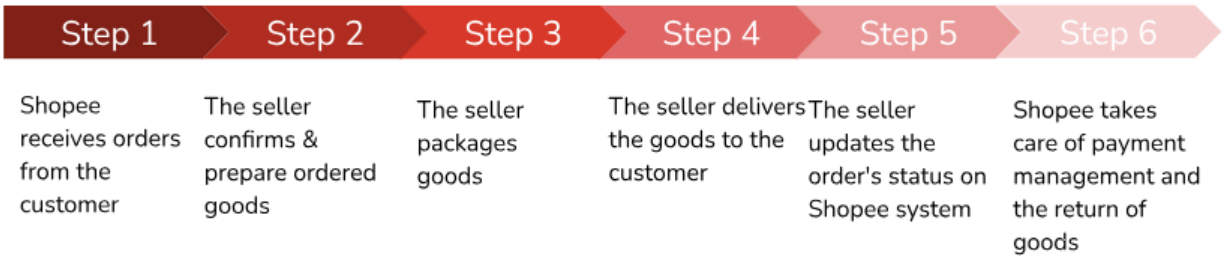
Currently, Shopee is implementing warehouse and logistics management activities under two models:

The first is the warehouse management model by Shopee (Fulfillment by Shopee). This is a model that is only available to selective overseas sellers. Specifically, this model is for top distributors and brands, as well as main sellers on Shopee (sellers who have high sales) and those who lack the ability to fulfill their logistics obligation. There are 6 steps to operate this model:

Source: *Shopee (2022)*

The second is the Dropshipping model (Self-operated seller), Shopee uses its partner's warehouse, when customers place an order, Shopee will ship the goods directly from the seller's warehouse to the

buyer. Specifically, Shopee applies this model to goods with a limited shelf life, bulky goods and goods that require special installation. This model is operated through 6 steps:



Source: *Shopee (2023)*

Transportation and delivery activities:

Shopee's shipping model: Currently, shopee combines 2 corresponding shipping models in accordance with 2 logistics formats - 1PL and 3PL.

For the 1PL format, Shopee has organized and built 2 delivery services - Shopee Xpress and Shopee Xpress Instant. Shopee Xpress delivers within 2 to 4 days of order confirmation. Shopee Xpress also has an express delivery option in which goods are delivered within 1 hour of order confirmation (SPX, 2022).

However, because of the specific shipping time requirement, Shopee Xpress service applies for items with length, width and height dimensions less than 60 cm; weight of a packaged goods is less than 15 kg (Shopee, 2023). And this service only applies to certain cities & districts in Hanoi & Ho Chi Minh city.

Shopee Xpress Instant is an express delivery model for both Sunday and Special Occasions, applicable in cases where the seller and buyer both locate in the same selective province such as: Hanoi, Ho Chi Minh, Da Nang... This service is only used for goods that meet the following conditions: size, length, width, height less than 60 cm; weight of a packaged good must not exceed 30kg and the maximum order value is 3 million VND.

Because of some limitations on delivery locations and volume of goods, besides operating its own separate delivery system, Shopee also uses the Logistics service (3PL) to minimize delivery time and costs. Some Shopee partners such as: Viettel Post, Giao hàng nhanh (GHN), J&T Express, VN Post tiet kiem, VN Post Nhanh, Ninja Van, ... Among them, there are partners who carry out delivery domestic and foreign such as: J & T Express; VNPost, ...

To develop domestic and cross-border shipping services, Shopee formed Shopee Logistics Services (SLS) system - is a service which connects sellers from China with logistics partners in Southeast Asia. Sellers that do not come from China will use domestic or foreign 3PL logistics service to bring goods to the Shopee warehouse in China.

Customer care activities

Shopee helps sellers update customer information throughout the buying journey. Customers can respond quickly if a problem occurs via seller information that has been updated on the E-Commerce platform or contact directly with the Shopee hotline for support.

Shopee also encourages post-purchase reviews from customers by rewarding customers with Shopee coins when they post feedback.

Besides, Shopee also encourages sellers to use the self-messaging system to quickly respond to common customer inquiries. For automatic message systems, Not only providing responses, Shopee also provides detailed explanation, which helps sellers avoid being underestimated by customers and reducing chat rates.

***2.2.2** Evaluation*

Advantages

- On warehouse management and logistics activities:

First of all, Shopee's warehouse network is centrally distributed in large cities with infrastructure that guarantees: Convenient transportation process & time optimization.

Secondly, Shopee is flexible in applying information technology into the operation of warehouse operations and logistics management, which helps in increase packaging, preservation, storage and reduce risks such as lost goods information, errors in calculating the amount of inventory, ... Furthermore, the two models of warehouse management and logistics are used flexibly and applied to each specific target group, which helps optimize management activities.

- On transportation and delivery activities:

Shopee applies a combination of two formats of Logistics, 1PL and 3PL. This is a smart direction as it helps the company differentiate from e-commerce platforms such as Lazada and Tiki (only focus on 1PL Logistics activities). The flexible combination of the two formats ensures both delivery time & logistics cost savings. In fact, Shopee’s decision to cooperate with parties that provide 3PL logistics services was to focus more on business operations management. Not only shipping activities, but also delivery takes place quickly and conveniently thanks to countless payment methods on Shopee that buyers can choose from such as Momo, Shopee Pay, ZaloPay, ...

Currently, more than 90% of goods on Shopee are shipped directly from countries abroad into Vietnam thanks to the extensive 3PL partner system in the world.

- On customer care activities

Shopee's message interface is friendly, easy for both sellers & buyers to use. The chat response rate is quite high and most of the customer complaints are thoroughly resolved.

Disadvantages

In general, despite having applied technology in management activities, Shopee still has difficulty in controlling the sellers' sources of goods from sellers because it is easy to start a business on the platform. Shopee's warehouse system is expanding, but compared to the current growth rate of goods, it is not proportional.

In addition, the costs of maintaining warehouses that sellers must bear are still higher than those of many competitors.

On customer care activities: Shopee customer care system is costly. On the other hand, although buyers are encouraged to give feedback after purchasing the product, the seller can still remove comments that are detrimental to their products. Besides, complaint resolution and goods refund are not optimized time-wise and the buyer must bear the cost.

2.3 Assessment of the current status of Shopee's E-logistics in VietNam

2.3.1 *Opportunities*

2.3.1.1 Context

With a young population and a large number of smartphone users, Vietnam is currently experiencing a surge in the development of e-commerce, and the E-Logistics industry is considered the "leading force for economic recovery" post-Covid-19. (According to Redseer, 86% of Vietnamese consumers will either maintain or increase their online shopping after Covid-19.)

The growth of the postal and telecommunications system, different generations of smartphones, and convenience, combined with social media networks, are factors that will drive electronic commerce in both B2B and B2C sectors in the coming time. This growth in e-commerce will contribute to the expansion of commercial activities, ultimately boosting logistics operations in general and E-logistics, making it a trend with significant momentum in Vietnam.

According to the "New Emerging Market Logistics Index 2021" report by Agility, Vietnam is ranked in the top 8 markets for the highest global logistics growth. Meanwhile, SYNC Southeast Asia (SYNC Southeast Asia), a project by Facebook and Bain & Company (USA), predicts that the e-commerce sector in Vietnam will be the fastest-growing in Southeast Asia, with a total Gross Merchandise Value (GMV) of $56 billion by 2026. With this level of attractiveness, the competition in the domestic e-logistics sector, the post-commerce service, is becoming more competitive, requiring the application of technology, customer service strategies, and ecosystem development. Additionally, according to the latest report by Google-Temasek, the E-Commerce market in Vietnam is expected to reach $15 billion by 2025. With an annual growth rate of 43% between 2015 and 2025, Vietnam is the second-fastest-growing market in Southeast Asia, following only Indonesia. The rapid growth of the E-Commerce market is the primary driving force for the development of the logistics industry, paving the way for a promising future for the e-logistics sector.

Capturing this trend, major logistics companies have early preparations and are using E-logistics in the Vietnamese market. Domestic logistics companies have also recognized this and are gradually investing in e-logistics. A prominent example is DHL Express, a globally renowned logistics company, with a significant volume of orders in the e-commerce sector. DHL Express is one of the pioneers in applying e-logistics advancements in their delivery operations and overall supply chain management.

2.3.1.2 Conditions

The year 2022 marks a significant milestone as Vietnam is gradually opening up and adapting to the new normal life, with the number of orders through e-commerce platforms continuously increasing. At the same time, hundreds of thousands of online sellers have entered the market through online selling features on social media platforms like TikTok Shop, Instagram Reels, Zalo Shop, Facebook Reels, leading to a real boom in the e-logistics market. Thanks to these developments, the transportation and delivery industry in Vietnam is highly promising, making it a fertile ground for businesses specializing in e-commerce post-commerce services (E-Logistics) to thrive.

2.3.1.3 Industrial Revolution

The Fourth Industrial Revolution, with breakthroughs in artificial intelligence integrated with the Internet of Things (IoT) and modern tools, is beginning to reshape the entire landscape of warehousing and global goods distribution services, with an estimated 5.5 million new devices being

connected every day. Therefore, the demand for fast and immediate delivery of online shoppers, especially in urban areas, is on the rise. This presents a significant opportunity for logistics companies to use technology solutions, specifically e-logistics, to enhance delivery service quality and optimize operational systems.

2.3.1.4 Development and Widespread Application

Up to the present moment, the Vietnamese logistics market has applied technology (E-logistics) in four main areas:

Firstly, there is the use of information technology in road transportation to optimize vehicle capacity, route planning, and control of routes and schedules, ultimately improving the rate of full cargo trucks. This is also a form of the sharing economy, and the strong emergence of companies like Grab, Be, and Gojek clearly demonstrates the signs of this new wave. An example case is Abivin Vietnam Joint Stock Company, which offers solutions to address logistics issues based on big data analysis and artificial intelligence, applying algorithms to create the fastest routes for hundreds of delivery vehicles and thousands of orders within seconds. Abivin's software can increase delivery efficiency by 30%, save transportation costs over time, and improve end-to-end supply chain management for businesses. Abivin is currently operating in four countries worldwide. One of the platforms developed by Abivin that receives high praise is Abivin vRoute, an AI-optimized logistics platform that helps businesses save costs, automate manual processes, and manage the supply chain from start to finish. It saves approximately 35% of time for coordination and transportation planning, optimizes operational costs, and increases vehicle utilization by 95%. For distribution companies, Abivin vRoute reduces planning and coordination time by 85%, saves time and costs in logistics operations, and improves the Vehicle Fill Rate by up to 25%.

Secondly, there are solutions for automating e-commerce warehouse operations, last-mile delivery, and express delivery services. The applications of Lazada serve as a specific example of this trend and continue to attract the attention and participation of many large domestic companies.

Thirdly, some companies are introducing integrated automation systems in production, following lean manufacturing principles, and operating very efficiently. For instance, Samsung's manufacturing plant has incorporated robots into the process for component assembly, end-product assembly, and inventory checks using drones (unmanned aerial vehicles). Another example is FPT, which has introduced the Akachain solution, utilizing blockchain technology to trace the origin of Vietnamese export goods. Akachain enables effective end-to-end supply chain management, from order processing and quality control to packaging, warehousing, and distribution. This allows for the retrieval and tracking of information about goods at any time. Choosing blockchain technology also allows for easy integration with big data and AI technologies, ensuring high information security and accelerating transaction speeds.

Fourthly, some domestic retailers in Vietnam are implementing a combination of information systems, automation, and artificial intelligence in supply chain management, from procurement to distribution, reaching the end consumers. An example is Logivan, a startup specializing in transportation technology, which uses AI and algorithms for optimizing the utilization of empty cargo trucks. Logivan is often likened to the "Uber for trucks" and provides cargo transportation services between provinces and cities in Vietnam.

If e-commerce is considered the future industry, then E-logistics is seen as the backbone of this industry. In the Vietnam E-commerce Index 2021, published in April 2021, the Vietnam E-commerce

Association (VECOM) predicted an average growth rate of 29% for the e-commerce sector in Vietnam from 2020 to 2025, with an expected e-commerce scale of $52 billion by 2025. This figure indicates significant prospects for the development of post-commerce services, particularly E-logistics. In the "New Emerging Market Logistics Index 2021" report by Agility, Vietnam is ranked among the top 8 markets with the highest logistics growth worldwide. With this level of attractiveness, it is certain that the competition in the E-logistics market in Vietnam will intensify with the active participation of dynamic businesses, both domestic and foreign.

***2.3.2** Challenges*

Occupying up to 15% of the total online shopping market in the Southeast Asian region (Institute of Strategy and Financial Policy, 2020), Vietnam is experiencing a significant surge in the trend of online shopping among its population, especially during and after the Covid-19 pandemic. This growth is closely linked to the development of both domestic and international e-commerce platforms. However, the logistics industry, in general, and E-logistics, in particular, are encountering various burdens and challenges.

2.3.2.1 Impact of Covid-19

The global disruption of supply chains, business bankruptcies, disrupted production lines, labor and input shortages due to supply chain disruptions – the Covid-19 pandemic has completely altered the way we assess and operate logistics.

- **Regarding transportation and delivery services**

The Covid-19 pandemic has had a significant impact on the logistics industry in Vietnam. Commercial activities have declined due to quarantine and isolation measures in many regions and countries. Many orders have been delayed, unable to clear customs at border crossings, leading to increased costs for warehousing and transportation, subsequently driving up the prices of goods. Most imports along the supply chain to Vietnam have decreased substantially, and some markets have implemented stringent inspections. Operations in Asian markets and certain regions have been slower than usual.

- **Regarding labor resources**

There is a severe shortage of logistics personnel, and the risk of many domestic logistics companies going bankrupt has resulted in significant disruptions in the supply chain. The changing scale and operations of logistics organizations have led to the emergence of new skills. Workers need to adapt quickly and update their knowledge, but many are struggling to cope with the changes and impacts of Covid.

In terms of consumer behavior and shopping, contrary to predictions that consumer demand would decrease significantly during and after Covid, there has been a rapid increase in consumer demand, particularly for remote, touchless, and convenient shopping methods with low transportation costs. This has placed significant pressure on last-mile delivery logistics.

2.3.2.2 Regarding operational costs

Logistics costs in Vietnam remain high, accounting for over 20% of GDP, while the global average logistics cost is approximately 11% of GDP. Technology plays a crucial role in E-logistics, and businesses need to invest in information technology systems worth millions of dollars. These systems include order management software (OMS), warehouse management software (WMS), transportation

management software (TMS), and enterprise resource planning (ERP) software to connect information infrastructure and provide real-time information, ensuring fast, accurate, and efficient delivery of millions of orders daily, with diverse types and distributed locations.

2.3.2.3 The rapid development of artificial intelligence

The Internet of Things (IoT), comprehensive digital transformation, and the application of blockchain technology in management are still in the early stages. The shortage of high-level skilled labor has prevented the immediate reduction of manual processes and redundant labor, which has contributed to high operational costs.

Policies and legal frameworks related to E-logistics activities still have several shortcomings. Regulations on terms and conditions are unclear and lack specific details, failing to adequately protect the rights of participating parties. Cumbersome administrative procedures and incomplete digitization processes have hindered the favorable development of E-logistics. For example, in the context of utilizing blockchain technology in E-logistics process management, some blockchain associations in Vietnam have engaged in discussions regarding the development of appropriate legal frameworks to protect the rights and property of users. However, they have concluded that the legal framework still has limitations and needs further development and revision to keep pace with the rapid technological advancements.

Regulations related to logistics service contracts are not centralized in a specific legal document but are scattered across various legal texts, which can complicate the contracting process between parties. This can be especially challenging for businesses operating along the entire logistics chain when attempting to create contracts that satisfy the standards present in different documents, particularly within the transport services segment. Furthermore, the legal framework governing logistics services lacks regulations pertaining to procedures and documents. This is also a shortcoming in Vietnamese law concerning logistics services.

2.3.2.4 E-logisticsenterprises in Vietnam

In Vietnam, the majority of logistics and express delivery enterprises are small-scale, with 90% of them having capital of less than 10 billion VND, and only 5% having capital ranging from 10 to 20 billion VND. These businesses face limitations in terms of investment and the adoption of information technology, and they predominantly rely on manual processes, leading to errors and high operational costs.

Domestic E-logistics enterprises have a lower competitive capability compared to foreign direct investment (FDI) companies, but they capture a significant market share, accounting for 70-80% of the market. The primary services provided by Vietnamese logistics businesses to their customers are basic services, often offered as individual, standalone services with a focus on price competition. These services typically play a subcontractor or agency role for foreign companies and include warehousing, freight transport, goods delivery, loading and unloading, sorting, packaging, and warehousing services. Other services within the logistics service chain are offered by some domestic companies, but their numbers are limited, and these services have not received significant attention for development.

3. Shopee's E-logictics development solution in Vietnam

3.1 Development and Trends of E-logistics

***3.1.1** E-commerce promotes E-logistics in the global context*

Industrial Revolution 4.0 with breakthroughs in the field of artificial intelligence integrating artificial intelligence with the Internet of Things (IoT) and modernization tools is starting to change the entire landscape of warehousing and distribution services worldwide, with an estimated 5.5 million new devices connected every day.

According to a report by Armstrong and Associates (2017), E-commerce has been the main leading factor in the development of global logistics in the near future. The development of the postal and telecommunications system, smart and convenient phone generations, along with the social network system are factors that will promote E-commerce in both B2B and B2C segments in a short time.

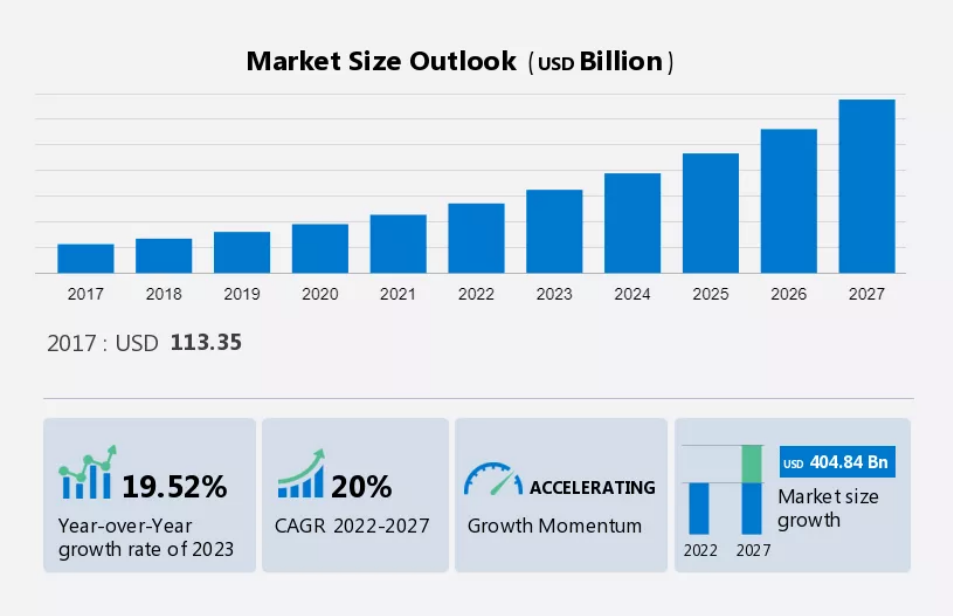


Figure 2. Global E-commerce logistics market size 2017-2027

***Source**: technavio.com (2017)*

Along with the development of E-commerce, growing commercial activities are contributing to promoting logistics activities in general and E-logistics becoming a development trend with many driving forces in the world in general and in Vietnam in particular.

According to surveys and calculations by Google and Temasek Holdings (Singapore), Southeast Asia's E-commerce market can increase from 5.5 billion USD in 2015 to 88 billion USD in 2025. According to Nomura Investment Bank (Japan), B2C and C2C E-commerce revenue in the ASEAN region reached 36.1 billion USD in 2020, with a compound annual growth rate (CAGR) of 34%. E-commerce delivery revenue reached 7 billion USD. According to Facebook and Bain & Company's annual report on E-commerce, the E-commerce market in Southeast Asia increased by 85% in 2020 alone, equivalent to more than 70 million consumers shopping online from the end of 2019 to early 2020.

***3.1.2** Prospects in the Vietnam's market*

In particular, Vietnam has become one of the most potential E-commerce markets in the ASEAN region, ranking third in recent years. A report from market research company Statista shows that the

number of Vietnamese people buying online will reach more than 51 million in 2022, an increase of 13.5% compared to the previous year. In addition, the report "Research on cross-border E-commerce business" was recently published by E-logistics company Ninja Van Group in cooperation with DPD Group postal network. This shows that Vietnamese people love online shopping and are leading Southeast Asia in many indicators. Specifically, 73% of respondents in Vietnam said they regularly shop on E-commerce shopping platforms and 59% have repeatedly ordered or shipped on international websites (DHL group, 2016). According to the report, Vietnam currently accounts for 15% of the total online shopping market in Southeast Asia, second only to Thailand at 16% and on par with the Philippines.

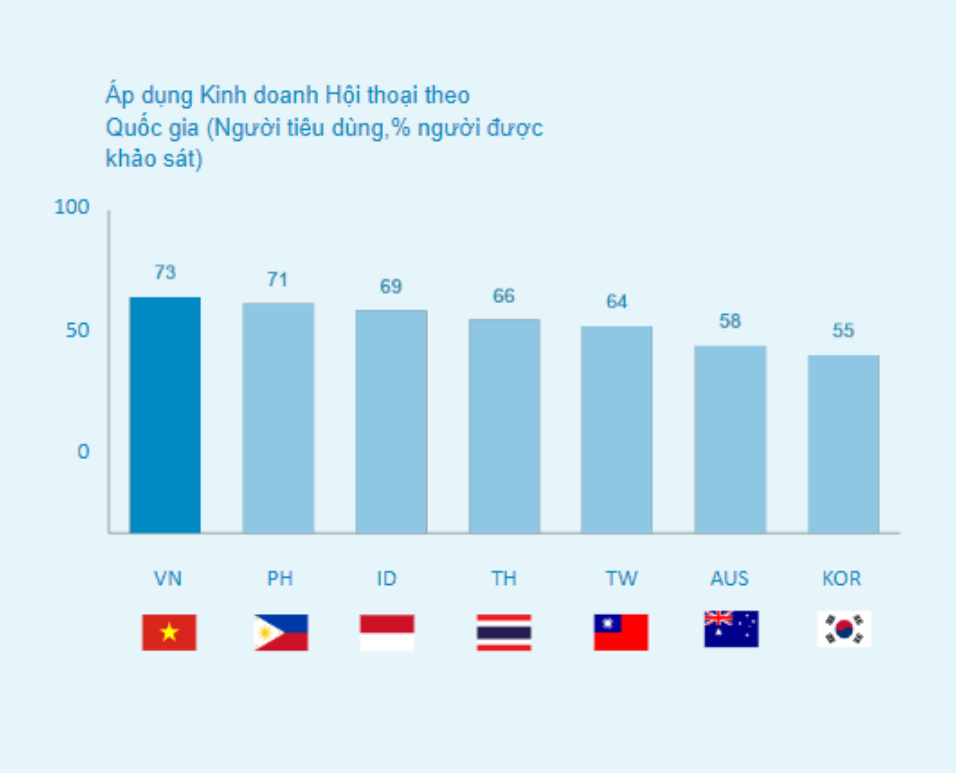
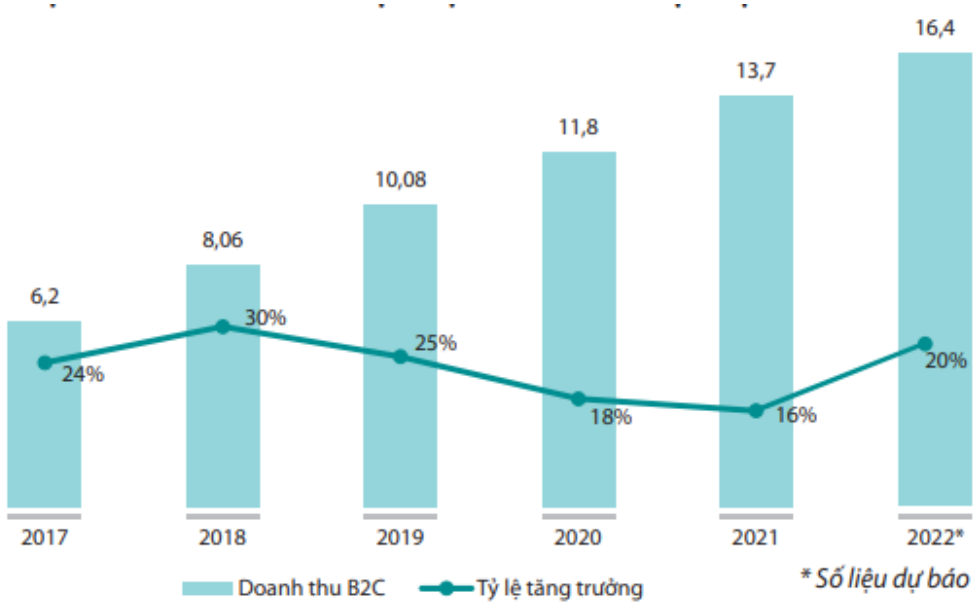


Figure 3. Percentage of consumers shopping online surveyed on 02/08/2022

Source: *iptc.hochiminhcity (2022)*

The strength of the young population as well as the high proportion of smartphone users and the large number of people transacting on E-commerce platforms are the main factors that help Vietnam achieve these numbers.



Doanh thu TMĐT B2C Việt Nam năm 2017 – 2022 (tỷ USD) [17]

Figure 4. Vietnam's B2C E-commerce revenues in 2017-2020

***Source**: Department of E-commerce and Digital Economy (2020)*

With high growth, E-commerce contributes significantly to promoting the flow of goods and services, supporting businesses, especially small and medium-sized enterprises, to seize production and business opportunities. favorable in the context of deep integration and the spread of the 4.0 Technology era.

In the recent growth of the E-commerce market, there has been a huge contribution from the strong development of E-logistics services. Leading E-commerce platforms in Vietnam are researching and improving delivery methods and speeds to increase customer experience.

Grasping that trend, large logistics companies have soon prepared and used E-logistics in the Vietnamese market. The first example to mention is DHL Express, a famous global logistics company, with the number of shipping orders in the E-commerce sector increasing from 10% in 2013 to more than 20% in 2016 of the total number of international orders of goods. DHL Express is one of the pioneering companies in applying E-logistics advances in delivery operations as well as managing its entire supply chain.

In early October 2017, UPS Vietnam announced to increase services in 10 provinces and cities in the Central and Southern regions at the same time as improving the transport time of imported and exported goods in the Asian region from two days to one day, and imported goods from Europe from three days to two days. The company also decreased the latest delivery time of the day by 3 hours. UPS has invested millions of dollars in technology to provide superior services to customers, including express delivery services for small packages in the early morning, services that provide estimated delivery times as well as such as tracking delivery status, international return services, assisting customers in creating shipping labels and commercial invoices for packages sent from one country and returned to another specified country. UPS also provides services to help businesses update license regulations, tax codes, and forms, and these services are integrated into the online retailer's website. For customers who own E-commerce websites, UPS can support logistics system

integration, enable order fulfillment and tracking, and ensure a seamless shopping experience for customers. Excluding the US market, 21% of UPS's delivery services in the international market are B2C. UPS Vietnam believes that the development of cross-border E-commerce will create a major breakthrough for the logistics sector because Vietnamese manufacturers can sell directly on E-commerce platforms around the world.

Another example is Deutsche Post DHL Group (Germany), with the DHL eCommerce E-commerce logistics service in Vietnam (opened in July 2017). The main highlight is that DHL eCommerce provides services like current E-commerce delivery companies, including cash collection services, partly relieving obstacles in B2C and C2C activities.

Domestic logistics companies are also aware and are gradually investing in E-logistics. A typical example is ALS Thai Nguyen, which has made breakthroughs in applying information technology to manage transportation services and warehouse systems. Transportation services are monitored via real-time GPS systems, modern exploitation processes with advanced information technology equipment and systems. Status information for each shipment is continuously updated in real time using PDA systems and smartphones; goods storage is managed based on a smart barcode system. With innovative efforts, ALS Thai Nguyen has met the service standards of the Vietnam Aviation Administration, the International Air Transport Association (IATA) and the International Civil Aviation Organization (ICAO).

So it can be seen that both market trends and the capacity of logistics businesses promise the development of E-logistics in Vietnam in the near future.

3.2 E-logistics development solution at Shopee in Vietnam

3.2.1 E-Logistics development solutions in Vietnam in general

3.2.1.1 On the State and Department side

Improving policies and laws related to logistics activities and new types of E-logistics: The State should promote reform of administrative procedures, simplifying and digitizing them to create a favorable E-logistics service environment. This will cut costs for businesses. International cooperation in logistics is also crucial. A legal corridor should be established to encourage E-logistics businesses to use information technology to reduce service prices and improve capacity. Support for electronic payments should be widespread, limiting cash transactions.

Promoting upgrading infrastructure for logistics such as transportation, telecommunications and information technology: The State and Logistics Association should review planning and build logistics centers and E-logistics to efficiently coordinate with seaports, warehouses, and roads. They should also promote the application of information technology in E-logistics organizations to create a favorable business environment and meet technical requirements, space, and market needs.

Perfecting the organization of the state management apparatus for logistics: The state should establish a flexible management decentralization mechanism between central and local levels to improve logistics operations, while also assembling a professional team with strong language skills and legal understanding.

Expanding the E-logistics human resources training network: The state needs universities and associations to develop training programs and retrain human resources in the new, complex E-logistics field to ensure the efficient operation of the system.

Additionally, the State should implement investment policies, tax incentives, land rental, and loan interest to support domestic E-logistics businesses, particularly small and medium-sized enterprises. This will enable them to invest in warehouse systems, goods classification systems, equipment upgrades, and information technology, thereby improving competitiveness and customer satisfaction.

3.2.1.2 On the Business side

Change distribution channel structure

The distribution channel should minimize intermediaries, with the introduction of E-logistics services or platforms to address delays and higher costs caused by traditional intermediaries. These new intermediaries must integrate with E-commerce sales solutions, including ordering, processing, sorting, packaging, and delivery planning, thereby creating a B2B2C elogistics system and integrating information technology components (Chung, P., Yeh, R. C., and Chen, Y. C, 2015).

More importantly, the development of a distribution center system and last mile delivery system is crucial for E-logistics service providers. This involves dividing distribution centers into multiple districts and enhancing system synchronization. This includes locating and self-checking ready inventory near delivery addresses for faster delivery and setting up drop box systems to avoid second and third delivery costs (Pham, H. C., Nguyen, D., Doan, C., Thai, Q., and Nguyen, N, 2019), flexibly arranging same-day delivery as soon as possible to avoid the cost of returning goods to the warehouse, reducing the rate of undelivered goods or complaints from customers (D.T. Phuong, 2020).

Connect the system of equipment and serving E-logistics facilities

Compared to the international E-commerce market, equipment and vehicles serving elogistics services in Vietnam are relatively simple, such as: general warehouses, district distribution post offices, trucks, small vans or cars. box mounting machine. Meanwhile, developed countries can apply more automatic sorting and packaging warehouses to high-tech means such as automatic delivery robots, aerial delivery drones, etc. Therefore, the proposed solution is to automatically synchronize the logistics center with the E-logistics system (Nguyen Xuan Quyet, 2021), but any solution needs to be suitable for traffic culture and infrastructure of the host country.

Improve after-sales service quality

This process is called reverse logistics, to handle orders that are defective after delivery, wrong products that need to be exchanged, recalled for repair, warranty, or destroyed and recycled. mechanism. As soon as the customer responds on the system, the delivery unit will be notified of the status and allocate the nearest delivery staff to receive the goods (Nguyen Hoang Phuong, 2019).

3.2.2 E-logistics development solutions at Shopee

3.2.2.1 Expanding warehouse system

In 2021, more than 10 new warehouses were opened across the region, giving more Shopee brand partners access to FBS (Fulfilled by Shopee). Shopee Xpress, Shopee's door-to-door delivery service, will also be expanded to more second- and third-tier cities in markets such as Thailand, Indonesia and the Philippines.

3.2.2.2 Developing Shopee Mart platform

During the Covid-19 epidemic, many countries implemented social distancing, making it difficult to buy necessities at markets or supermarkets. Quickly adapting to market situations, Shopee launched the Shopee Mart feature - Go to the supermarket at home, with the purpose of expanding the grocery delivery platform, attracting more fast-moving consumer goods (FMCG) sellers. However, Shopee has had to compete quite a lot with E-commerce channels attacking this market such as RedMart, NTUC FairPrice and Amazon Fresh, etc. To continue expanding Shopee Mart, Shopee will need to improve its response capabilities in areas such as warehouses and distribution centers. "It could be a combination of stocking the items ourselves or having certain brands or partners consign them, putting the items in a warehouse and us doing the fulfillment."

3.2.2.3 Applying 4.0 technology

With the explosive development of the 4.0 revolution, there are now many applications of science and technology in Logistics activities. Currently, developed countries are gradually developing E-logistics through the application of cloud computing technology such as Blockchain technology, artificial intelligence or robots to perform a number of services such as container packing services. or loading and unloading goods in warehouses, etc.

Therefore, Shopee needs to proactively and quickly apply the latest technologies of the 4.0 industrial revolution, integrating many applications, such as order management system software, warehouse management, and automatic product classification, transportation management, etc. Some technologies that could be needed in storage and warehouse management include: autonomous vehicles (AVG), automated mobile robots (AMR), automatic sorting systems, automatic storage and retrieval systems (AS/RS), etc. From that, Shopee can connect and look up orders anytime, anywhere, minimizing time spent counting, storing, and minimizing errors in the logistics process, easy accessing, receiving and processing customer feedback, improving reputation and efficiency in Shopee's management.

3.2.2.4 Managing the process stages to facilitate the E-logistics supply chain

- For products:

Need to have a seller management policy: Sellers must provide complete information and documents related to goods sold on Shopee. Censor the product's origin and invoice documents before posting for sale.

Build ratings of reputable shops so that customers can buy with confidence and sellers can increase order sales. Improve the quality of customer care and after-sales services such as: adding more staff to the customer care switchboard 24/7 to avoid busy lines when customers respond, building a quick response system such as: Customers Online chat box store with Shopee.

- For ordering conditions:

Develop a clear sanctions policy with sellers requiring commitment to product quality, delivery according to the correct design and color of images posted for sale, and packaging of goods according to regulations to limit goods breakage errors, product distortion.

At the same time, establish shipping policies with affiliated companies, ensuring quality and procedures for loading and unloading goods, transporting and delivering goods to customers. Ensure the best shipping price, commit to following the common process between both parties.

- For information sources:

Soon introduce regulations on the accuracy of information posted on Shopee by suppliers subject to sanctions according to the provisions of the Cyber Security Law to increase the legally binding value in providing information.

Build an automatic filter for keywords that are banned, are reported to be false or exceed the true function of the product. Build a list of suppliers and user accounts that often provide false information to limit or ban the use of Shopee functions for a limited or indefinite period.

Conclusion

Shopee is a leading e-commerce platform in Southeast Asia and Taiwan. It is a suitable platform for the region, providing customers with easy, secure, and fast online shopping experiences through strong support for payment and delivery services from Shopee. What sets Shopee apart in the Vietnamese market, even surpassing its early competitors like Lazada and Tiki, can be attributed to its coordination process from online order placement to delivery, which can be referred to as E-logistics. Thus, Shopee's E-logistics activities comprise three main areas: warehouse and logistics management, transportation and delivery operations, and customer care. Among these, the last-mile delivery is particularly crucial as customers are concerned about delivery times, costs, and the condition of their items after transportation. Shopee has applied technology and digital integration to enhance the customer experience, exemplified by the introduction of Shopee Express, an integrated delivery service within the app.

The robust expansion of Shopee's e-logistics infrastructure, including warehouses, fulfillment centers, and last-mile delivery networks, underscores its dedication to providing seamless and reliable services. As e-commerce continues to thrive in Vietnam, Shopee's strategic investments in e-logistics position the platform to capitalize on the burgeoning market.

In conclusion, the current status and potential of Shopee's e-logistics activities in Vietnam reflect a dynamic landscape poised for continued growth and innovation. Shopee has demonstrated a commitment to optimizing its logistics operations to meet the evolving demands of the Vietnamese market, leveraging technology and strategic partnerships to enhance efficiency and customer satisfaction.

Accenture. (2023), “Resilient supply chain: Managing disruption”, *Accenture.com*, Available at: https://www.accenture.com/us-en/insights/consulting/supply-chain-disruption [Accessed 11 Nov. 2023].

Adam, M., Ben, D., Stephen, L., Brenna, S. & Joe, M. (n.d.), “The digital supply network meets the future of work People,0 machines, and a new era of collaboration”, *Deloitte*, Available at: https://www2.deloitte.com/content/dam/insights/us/articles/4052_DSN-meets-the-future-of-work/4052_DSN_FoW.pdf [Accessed 26 Oct. 2023].

Alicke, K. (2016). “Supply Chain 4.0 – the next-generation digital supply chain | McKinsey", *www.mckinsey.com*, Available at: https://www.mckinsey.com/capabilities/operations/our-insights/supply-chain-40--the-next-generation-digital-supply-chain [Accessed 29 Oct. 2023].

ALL THE WAY 2021 Sustainability Report. (2021), A.P. Moller. Available at: https://www.maersk.com/~/media_sc9/maersk/corporate/sustainability/files/resources/2021/maersk-sustainability-report_2021.pdf [Accessed 2 Nov. 2023].

Amazon Web Services, Inc. (2023). What is a Data Lake? - Introduction to Data Lakes and Analytics - AWS, Available at: https://aws.amazon.com/what-is/data-lake/ [Accessed 3 Nov. 2023].

Ashcroft, S. (2023). Nike - an omnichannel inventory management cautionary tale, supplychaindigital.com. Available at: https://supplychaindigital.com/digital-supply-chain/nike-an-omnichannel-inventory-management-cautionary-tale?fbclid=IwAR0cuJL-E9X3mrh2cpyZf9PSgS69amLGiAnhRn4-aMH0o6NnN_-KXHnSoGM [Accessed 12 Dec. 2023].

Bragstorm, J. (2020), "The future of supply chain post-pandemic | Deloitte Insights, www2.deloitte.com. Available at: https://www2.deloitte.com/us/en/insights/focus/industry-4-0/supply-chain-future-post-pandemic.html [Accessed 1 Nov. 2023].

Christian Kjærgaard-Winther. (2020), "A.P. Moller - Maersk launches Maersk Flow, a digital supply chain management platform", *A.P. Moller*, Available at: https://www.maersk.com/news/articles/2020/07/28/ap-moller-maersk-launches-maersk-flow-a-digital-supply-chain-management-platform?fbclid=IwAR10hcK3lJce3wOP9yyjQDW-J2vqezG3msKfS8IzkWQi8aQTdG74pyFaJ1c [Accessed 12 Dec. 2023].

Chung, P., Chuen Yeh, R. & Chen, Y.-C. (2015), "Implementation of e-Logistics Systems for Developing EC Capability in Small and Medium-sized Enterprises: A Conceptual Model", *International Journal of e-Education, e-Business, e-Management and e-Learning*, pp.203–211.

CỔNG THÔNG TIN ĐIỆN TỬ CHÍNH PHỦ. (2022), "thương mại điện tử bán lẻ của Việt Nam năm 2022 sẽ tăng trưởng 20%", *media.chinhphu.vn*, Available at: https://media.chinhphu.vn/du-bao-thuong-mai-dien-tu-ban-le-cua-viet-nam-nam-2022-se-tang-truong-20-102220913123442443.htm [Accessed 19 Nov. 2023].

Cổng thông tin điện tử thương mại và đầu tư (n.d.), "Người dùng thay đổi hành vi tiếp cận nhãn hàng, mua sắm online", *itpc.hochiminhcity.gov.vn*, Available at: http://itpc.hochiminhcity.gov.vn/-/nguoi-dung-thay-oi-hanh-vi-tiep-can-nhan-hang-mua-sam-online [Accessed 14 Nov. 2023].

Dassault Systèmes. (2021), "The Rise of Digital Transformation in Inventory Management", Available at: https://www.3ds.com/manufacturing/operational-optimization/inventory-control-digital-transformation-inventory-management.

Deloitte. (2020), "Legal Technology Transformation | Deloitte | Legal | Article", Available at: https://www.deloitte.com/global/en/services/legal/perspectives/legal-technology-transformation.html?fbclid=IwAR1HxSisb9i7Ch_IrU65uXLCQXWBjZe4uyl-5P6hZckeZBMYRBcwUmAGzAY [Accessed 12 Dec. 2023].

DHL. (2016), "Future of Logistic", = Available at: https://group.dhl.com/content/dam/deutschepostdhl/en/media-center/investors/documents/annual-reports/DPDHL_2016_Annual_Report.pdf [Accessed 27 Oct. 2023].

Ericsson. (n.d.), "Modernizing transport and logistic industries with cellular connectivity", Available at: https://www.ericsson.com/en/industries/transport-and-logistics [Accessed 29 Oct. 2023].

FedEx. (2019), “Technology and Innovation | FedEx”, *Fedex.com*, Available at: https://www.fedex.com/en-us/about/policy/technology-innovation.html [Accessed 5 Nov. 2023].

FedEx. (n.d.), “Environmental Reports”, Available at: https://www.fedex.com/en us/sustainability/reports.html [Accessed 10 Nov. 2023].

Gartner. (2020), “Magic Quadrant for Warehouse Management Systems”, Available at: https://www.gartner.com/en/documents/3984757 [Accessed 16 Nov. 2023].

Gartner. (n.d.), “What Is Data and Analytics: Everything You Need to Know”, Available at: https://www.gartner.com/en/topics/data-and-analytics#:~:text=Data%20and%20analytics%20(D%26A)%20refers [Accessed 3 Nov. 2023].

GLOBAL LOGISTICS & TRADING CO., LTD. (n.d.), “GLOBAL LOGISTICS & TRADING CO., LTD”, Available at: https://worldship.com.vn/trien-vong-phat-trien-e-logistics-tai-viet-nam/ [Accessed 28 Oct. 2023].

HIỆP HỘI THƯƠNG MẠI ĐIỆN TỬ VIỆT NAM. (n.d.), “BÁO CÁO CHỈ SỐ THƯƠNG MẠI ĐIỆN TỬ VIỆT NAM 2022”, Available at: https://vecom.vn/bao-cao-chi-so-thuong-mai-dien-tu-viet-nam-2022 [Accessed 1 Nov. 2023].

IBM. (2023a), “IBM Security X-Force Threat Intelligence Index 2023”, *www.ibm.com*, Available at: https://www.ibm.com/reports/threat-intelligence [Accessed 5 Nov. 2023].

IBM. (2023b), “Enterprise Security Solutions | IBM”, Available at: https://www.ibm.com/security?fbclid=IwAR0txfp7iokrDZ-K8PmnP7s4M2VtChTZORT8UFz4XujRZp_MzXVeYiXT9oE [Accessed 12 Nov. 2023].

Kristina Lopienski. (2021), “Understanding The Future Of Warehouse Digitalization”, *ShipBob*, Available at: https://www.shipbob.com/blog/digital-warehousing/?fbclid=IwAR1QuUnXxGC6ZYnG6GXPD0nTuq9jCu3IVTrqjrlkXNncxT7JfTo4WVReKpY [Accessed 13 Nov. 2023].

MacKenzie, I. (2013), “How retailers can keep up with consumers”, *McKinsey & Company*, Available at: https://www.mckinsey.com/industries/retail/our-insights/how-retailers-can-keep-up-with-consumers [Accessed 5 Nov. 2023].

Mai, H.T. (2023), “Xu hướng hành vi mua hàng trực tuyến của người tiêu dùng Việt Nam”, *Tạp chí Công Thương*, Available at: https://tapchicongthuong.vn/bai-viet/xu-huong-hanh-vi-mua-hang-truc-tuyen-cua-nguoi-tieu-dung-viet-nam-104014.htm [Accessed 7 Nov. 2023].

Michel, R. (2022), “Top 20 Material Handling Systems Suppliers 2022”, *Modern Materials Handling*, Available at: https://www.mmh.com/article/top_20_material_handling_systems_suppliers_2022 [Accessed 12 Nov. 2023].

Nike. (2022), “FY21 NIKE, Inc. Impact Report”, *Nike.com*, Available at: https://about.nike.com/en/newsroom/reports/fy21-nike-inc-impact-report-2 [Accessed 15 Nov. 2023].

Reference

Salesforce. (2019), “Beginner’s Guide to CRM Systems”, Salesforce.com. Available at: https://www.salesforce.com/eu/learning-centre/crm/crm-systems/ [Accessed 12 Nov. 2023].

Salesforce. (n.d.), “CRM Software from Salesforce.com - Customer Relationship Management”, Available at: https://www.salesforce.com/crm/?fbclid=IwAR1wWcD7z16iIYIApnNbmMcxpcTt12_BLcaS4XQy8igtJq3zYCYhjevrBsc [Accessed 12 Dec. 2023].

Salesforce. (n.d.), “Explore the future of CRM technology and how it will impact companies”, Available at: https://www.salesforce.com/resources/articles/future-of-crm [Accessed 28 Oct. 2023].

Shopee. (2022a), “Seller Education Hub”, Available at: https://banhang.shopee.vn/edu/article/13819 [Accessed 9 Nov. 2023].

Shopee. (2022b), “Seller Education Hub”, Available at: https://banhang.shopee.vn/edu/article/13819 [Accessed 27 Oct. 2023].

Shopee. (2023a), “Seller Education Hub”, Available at: https://banhang.shopee.vn/edu/article/880 [Accessed 20 Nov. 2023].

Shopee. (2023b), “Seller Education Hub”, Available at: https://banhang.shopee.vn/edu/article/985/Huong-dan-van-hanh-kenh-ShopeeExpress-Instant [Accessed 23 Nov. 2023].

SPX. (n.d.), “SPX Tracking Website”, Available at: https://spx.vn/how-to-ship-introduction [Accessed 12 Nov. 2023].

Store.Frost.com. (n.d.), “Online Store for Global Market Research Studies and Analysis - Frost & Sullivan”, Available at: https://store.frost.com [Accessed 1 Nov. 2022].

Tailieuxnk. (n.d.), “E-logistics trong thương mại B2C ở Việt Nam”, Available at: https://tailieuxnk.com/upload/sanpham/thumb/Tai-lieuelogistics-trong-thuong-mai-b2c-o-viet-nam-774680130098.pdf [Accessed 12 Nov. 2023].

Technavio. (2022), “E-Commerce Logistics Market Analysis: US, Canada, China, Germany, UK - Size and Forecast 2023-2027”, *Technavio*, Available at: https://www.technavio.com/report/e-commerce-logistics-market-industry-analysis [Accessed 19 Oct. 2023].

Tran, P. & Nguyen, C. (2022), Tin bộ tài chính, Mof.gov.vn., Available at: https://mof.gov.vn/webcenter/portal/btcvn/pages_r/l/tin-bo-tai-chinh?dDocName=MOFUCM230992 [Accessed 3 Nov. 2023].