# Green Logistics Practices in Vietnam's E-commerce Market: A Framework

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**Abstract**

The rapid growth of e-commerce in Vietnam has become a major driver of digital transformation, reshaping consumer behavior and business practices. However, it has also simultaneously created significant environmental challenges, particularly in logistics operations such as transportation, packaging, and warehousing. Green logistics —logistics activities that aim at minimizing environmental impact is increasingly recognized as a solution to balance economic growth, environmental protection, and social well-being. In Vietnam, the concept of green logistics is not completely new but it has not been fully implemented into operation. The study aims at examining the status quo of green logistics in Vietnam's e-commerce sector and previous framework of sustainable logistics. The methodology follows a literature-based approach with the use of secondary data. Drawing on academic research, government reports, and industry surveys, it identifies and proposes a green logistics framework tailored to the situation of e-commerce in Vietnam. The model provides theoretical contribution by conceptualizing green logistics in developing the e-commerce market, and practical implications for policymakers, logistics companies, and platforms. Future research may focus on empirical testing of the impact of each pillar on green logistics performance.

**Keywords**: *Green logistics, sustainable logistics, e-commerce*

## 1. Introduction

E-commerce has emerged as a dominant trend, significantly influencing consumer awareness and behaviour in Vietnam. The COVID-19 pandemic accelerated digital transformation and online shopping activities, with consumers increasingly turning to e-commerce platforms for their purchasing habits (Nguyen & Nguyen, 2020). Vietnam's e-commerce growth ranks among the highest globally and regionally, currently placing in the top three in Southeast Asia. Projections indicate that by 2030, the market size will reach USD 63 billion – nearly triple its current value – positioning Vietnam as the second-largest e-commerce market in the region (Duy, 2025). The Vietnam e-commerce market is expected to experience sustained and robust expansion from 2024 to 2032, with a compound annual growth rate (CAGR) of approximately 9.36%, as demonstrated in Figure 1.
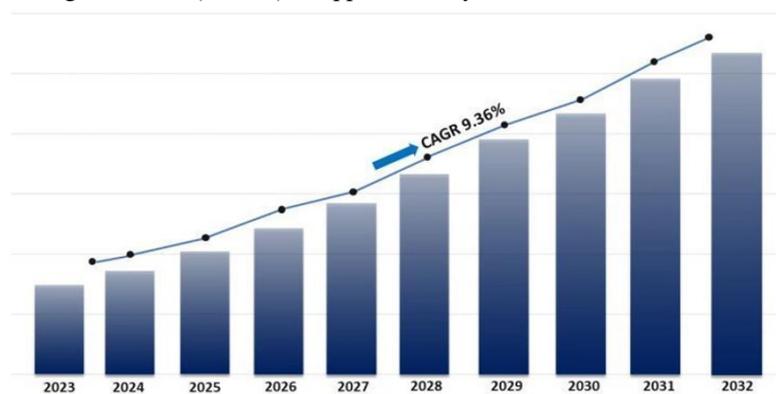


(Source: IMARC, 2024)
**Figure 1**: Vietnam E-Commerce Market Size Share Growth Trends Report 2024-2032

However, Vietnam's e-commerce sector is also revealing concerning issues related to environmental impacts and sustainable growth. According to the National Master Plan for E-commerce Development for the period 2026-2030 issued by the Ministry of Industry and Trade, e-commerce is identified as a pioneering sector of the digital economy. Its development must prioritize sustainability, aiming to optimize the entire process – from production and business operations to consumer experience – through solutions that generate positive impacts and

balance the three pillars of economic growth, social equity, and environmental protection. At present, most e-commerce policies primarily emphasize rapid growth solutions. In the future, policies promoting sustainable and environmentally friendly e-commerce development will be further strengthened, with consumers, e-commerce enterprises, and logistics partners playing a core role in implementing solutions to foster sustainability.

Logistics serves as the backbone of e-commerce, enabling operation flow, service delivery, and market access (Song, 2023). With sustainable development now taken as a guiding principle for global economic growth, every sector and industry is increasingly aligning with sustainability-oriented practices. In recent years, Vietnam's logistics industry has experienced an average annual growth rate of 14-16%, alongside improvements in service quality. However, the growth of logistics activities has also had significant environmental consequences. According to Doherty and Hoyle (2009), logistics operations globally account for approximately 5.5% of total greenhouse gas emissions. Green logistics represents a system linking resources with products and products with consumers (Arslan & Sar, 2017). Its goal is to extend the lifespan of finite natural resources and thereby minimize environmental damage. Green logistics has therefore emerged as the dominant development trend in modern logistics, serving as both an inherent requirement and a foundational pillar for the circular economy.

Beyond its environmental benefits, green logistics can also influence consumer decision-making in products. 72% of Vietnamese consumers are willing to pay more for green options, showing the efforts and attention of consumers on sustainability matters. Over 30% of consumers agree with the use of transportation, materials that are environmentally friendly. In the context of climate change and environmental pollution, a green consumption trend is emerging in Vietnam, particularly in urban cities such as Hanoi. A recent questionnaire result demonstrated that 61% of consumers in Hanoi are willing to pay a premium for sustainable services (Tran & Le, 2023). This constitutes a shift from price-oriented priorities to a more sustainable approach and emphasizes both pressure and opportunity for ecommerce platforms and logistics providers to adopt a greener solution.

Despite the trend, the implementation of green logistics in Vietnam remains challenging. Unlike developed economies where logistics systems are highly standardized, Vietnam's e-commerce market operates through a mix of formal and informal delivery networks. This creates unique sustainability challenges that existing frameworks are not able to capture. Therefore, it is vital to develop a framework that is not only suitable with the characteristics of the market, but also aligns with the country's policy and current goal. The purpose of this paper is to examine the integration of green logistics in the e-commerce sector in Vietnam and propose a suitable green logistics model for the market and managerial recommendations for the future.

## 2. Objectives
The objectives of this paper are to:
1) Identify the current status-quo of the implementation of green logistics in e-commerce sector in Vietnam
2) Analyze existing international and domestics green logistics frameworks
3) Propose a green logistics framework tailored to the e-commerce market in Vietnam

## 3. Materials and Methods
### 3.1. Status quo of green logistics in e-commerce sector
The concept of green logistics is relatively new in Vietnam, however, the term originated in the 1980s of the last century. Green logistics broadly refers to logistics activities that minimize environmental harm while maintaining efficiency and service quality. Yildiz and Kilic (2016) defines green logistics as logistics activities that aim at sustainability, environmental friendliness, and protection, while minimizing negative impacts on the environment. Green logistics as a system of logistics activities designed to meet human needs and preferences while adhering to the principles of sustainable development. According to Seroka-Stolka et al. (2019), the implementation of international green logistics will ensure the logistics stages are done properly, while cutting off on the negative impacts on the environment.

The green logistics industry all over the world is looking at the emerging technologies such as the adoption of blockchain for supply chain transparency, IoT for real-time monitoring, and autonomous vehicles for efficient transportation are set to revolutionize the sector. (Larina et al., 2021). Artificial Intelligence (AI) can transform logistics operations by integrating smart data-based solutions to run the supply chain efficiently and more sustainably at lower costs (Hoang, Do, & Pham, 2023). This ensures compliance with both economic and environmental requirements while assisting the delivery of logistics services that are aligned with environmental responsibility (Do, 2023). While Evangelista et al. (2018) emphasize on the importance of implementing

technologies into the logistics process in a European context, Dekker et al. (2012) highlight the need in optimising logistics operation to achieve green goals. According to Boz et al. (2020), one of the most significant negative impacts of e-commerce on the environment is the increase in packaging waste. Common types of packaging used in e-commerce include cardboard boxes, plastic wrapping, and bubble wrap. Boz et al. (2020) also mentioned the need to replace materials that are difficult to decompose, with an effort to make green logistics happen.

According to the World Bank (2022), the performance of logistics in Vietnam reached 3.3. Points in 2023, ranking the country 43 out of 154 countries and fifth among ASEAN countries. Vietnam is also among the top 10 emerging logistics markets, ranking 4th in terms of opportunities for international logistics. According to a survey by the Vietnam Logistics Research and Development Institute, up to 73.2% of logistics and manufacturing enterprises have officially included "green logistics" in their long-term development strategies. However, the actual rate of implementing specific solutions such as using clean energy in transportation, reusing packaging or reducing emissions remains low.

In Vietnam, however, logistics infrastructure remains fragmented, and many e-retailers rely heavily on third-party logistics providers with limited sustainability mandates. Nguyen and Le (2021) observed that while awareness of green logistics is growing among Vietnamese firms and consumers, adoption remains inconsistent due to high upfront costs, limited electric vehicle infrastructure, and low consumer demand for sustainable delivery options. Efforts such as implementing electrical vehicles and recycling packages by enterprises are being implemented but remain experimental. However, Hoang et al. (2025) argued that Vietnam lacks government policies and incentives to encourage the development of green logistics transformation, as well as the absence of regulatory frameworks for subsidies, urban areas. According to Nguyen and Luu (2024) digital infrastructure of the ecommerce market in Vietnam is weak. Moreover, delivery networks or warehousing are usually big challenges and companies have to rely on third-party partners to execute ecommerce orders. Even if a business has a logistics network, it still has to rely on third-party partners to fulfill ecommerce orders. Kiem (2024) examined factors impacting on sustainable last-mile delivery, but also mentioned the need to implement a strategic framework suitable for the market conditions of Vietnam.

### 3.2. Green logistics model

In recent years, the study of green logistics has been emphasized all over the world. Scholars have introduced a variety of green logistics models aiming at the reduction of environmental impacts. The models vary in terms of scope - from the optimization of the operation process to the coordination of stakeholder, which reflect the diverse priorities and status-quo of logistics across different regions. While most studies agree that green logistics integrates multiple operational areas, the relative emphasis differs across context.

In a study by Wang (2019), the relationship between green logistics activities and business performance is emphasized. The author identifies four key components of green logistics such as green product design, green warehouse, environmentally friendly packaging; and green transportation and delivery. On the other hand, Ma and Kim (2023) included green purchasing, green warehousing, green production, green transportation, green delivery and reverse logistics as parts of the green logistics model. While studies show that green logistics is the combination of different activities, Pourhejazy and Kwon (2016) claimed that the concept of green in logistics should only be about the use of raw material and transportation facilities in outbound and inbound logistics. In the Indian context, Kuruvilla et al. (2020) demonstrated the model of green logistics involving eco-friendly procurement, green warehousing, stock management and reverse logistics, green packaging and waste recycling, and green transportation. In the context of the food industry, Galli et al. (2024) mentioned that the new classification for green logistics should be infrastructure/nodes, distribution, packaging, reverse logistics, compensation, other factors such as management system, training, noise pollution and innovations technology.

In another study by Nguyen et al. (2023), the principles of green logistics should be developed from the principles of sustainable development, which include system-wide, economic, environmental and socio-cultural aspects. The following table summarizes key green logistics models from international studies, comparing the core components, strengths and limitations of each model.

**Table 1:** Summary of previous research on green logistics framework

| Authors | Scope | Core components |
|---------|-------|-----------------|
| Ma & Kim (2023) | Comprehensive logistics sustainability | Green purchasing, green warehousing, green production, green transportation, green delivery and reverse logistics |
| Wang (2019) | Observations of green logistics activities and performance | Green product design, green warehouse, environmentally friendly packaging; and green transportation and delivery |
| Pourhejazy and Kwon (2016) | Green logistics as part of the green supply chain management | Raw material and transportation facility |
| Kuruvilla et al. (2020) | Green logistics in the Indian context | Eco-friendly procurement, green warehousing, stock management and reverse logistics, green packaging and waste recycling, and green transportation. |
| Vu (2024) | Reflects local logistics challenges and emerging sustainability efforts | Green transportation, warehousing, packaging, information systems, reverse logistics |
| Galli et al. (2024) | Green logistics model in the context of food industry | Infrastructure/nodes, distribution, packaging, reverse logistics, compensation, other factors such as management system, training, noise pollution, etc and innovations in technology. |

The majority of research on green logistics has focused on introducing conceptual models and examining their integration into traditional logistics and manufacturing businesses. However, in most cases, e-commerce is not specifically addressed as the central scope of study. This is particularly evident in Vietnam, where the rapid growth of the ecommerce sector has created new logistical challenges, such as fragmented last-mile delivery, packaging waste, and high order return rates, that differ significantly from conventional supply chains. While some Vietnamese scholars have begun to investigate green logistics principles (Vu, 2024), few studies have proposed a strategic framework suitable for the e-commerce sector. As a result, there remains a research gap in academic and practical implementation of the green logistics model in Vietnam's digital retail ecosystem. To address this gap, the paper adopts a literature-based analytical approach to develop a strategic model.

*3.3. Methodology*

The paper was first carried out with the analysis of literature. Concept such as Green Logistics, Sustainable Logistics have been taken into consideration for the analyzing. Major databases and an extensive review of relevant academic literature were developed through initial research on specific terminology. The first systematic review is on theories that are linked to the topic. The second systematic review is based on the ecommerce industry and logistics. The data collection to support this methodology occurred by reviewing a large-scale amount of literature and using secondary data. According to Seuring and Müller (2008), the purpose of literature review is to summarize existing research by identifying patterns, results and identifying the conceptual content of the domain. The main sources of secondary data are international journals, magazines, reports of independent consultants, etc. The output of two concurrent analyses is a list of different green logistics models that are applied in different contexts. After that, a green logistics model for Vietnam's ecommerce market is suggested, with a detailed analysis of each component. Last but not least, suggestions on managerial and practical implementations were emphasized.

## 4. Results and Discussion

The proposed green logistics model tailored for the e-commerce sector in Vietnam is designed in order to address the unique characters, challenges and natures of the field. Drawing from the previous international and domestic frameworks and adapting to the Vietnamese context, the model integrates three core pillars, as demonstrated in the table below.

**Table 2:** Green logistics classification

| **Network design** | | |
|---|---|---|
| Green infrastructure | Warehouse building improvements | Energy efficiency |
| | | Water |
| | | Noise pollution |
| | | Wastage |
| | Processes | Inventory management |
| | | Storage |
| | | Handling |
| | | Waste management |
| | Technology | |
| Distributions | Type of transport | FTL (Full truck load) |
| | | Last miles |
| | Means of transport | Fuel |
| | | Electrical |
| | Driver's behaviour | |
| | Management | Traffic route |
| | | Spaces |
| Packaging | Materials | |
| | Size | |
| | Management | |
| **Reverse logistics** | Return Management | |
| | Recycling | |
| | Refurbishment | |
| | Disposal | |
| **Governance** | Human Resources | |
| | Management System | |
| | Result Monitoring | |
| | Policy compliance | |

The purpose of network design is to plan the distribution system, in regards to the numbers and types of nodes, hubs. Some companies are operating on the basis of centralized warehouses, port centric logistics, fulfillment centers, or simply just parcel lockers. In Vietnam, many e-commerce businesses such as Tiki, Shopee and Lazada are using centralized warehouses in big cities. SPX express, for example, has opened a fully automated sorting center in Bac Ninh province, with the capacity of organizing around 2.5 million parcels every day while minimizing the travelling effort. Companies can decide the design of their network, with a combination of different systems such as central warehouse and port centric, in order to enhance the use of intermodal transportation. Research by Qian, Dargusch, and Hill (2022) explains the benefits of improving warehouse building quality for the sake of environmental efforts. Meanwhile, Tsang, Fan, and Feng (2023) and Choudhary and Sangwan (2019) also demonstrated the use of LED lights, building insulation, implementation of electrostatic filters as part of the effort to save energy. Timer technology can assist in the process of reducing the amount of water in operations. Qian et al. (2022) refers to wastage as the unnecessary emissions of energy, water, fuel and other substances. The improvement on the quality of the building will have a positive impact on heat recovery, air ventilation, and water saving. Another element in this field is processes. It involves all the relevant processes

of keeping the stocks at the warehouse. Inventory management is also important as it influences the carbon footprint. Handling refers to the process of preparing for the orders, such tasks as movement, categorizing, and placing of stocks (Kunrath, Dresch, &Veit, 2023). According to Accorsi et al. (2022), storage encompasses systems designed to store, retrieve, and manage goods or information efficiently. Examples include optimizing container dimensions to increase product density and implementing shared warehousing solutions to reduce resource use. Waste management, as defined by Tsang et al. (2023), includes practices for handling and disposing of waste within a logistics node. These include recycling initiatives, energy recovery processes, and innovative solutions such as zero-waste gardening systems. Last but not least, technology is not just a supporting tool, but also the enablers to accelerate the green logistics process. Masan Vietnam is implementing a cutting-edge supply chain system, which utilizing AI and Machine Learning for the operation process. It can be observed that the need to convert traditional warehouse to smart warehouse is evident, especially in sectors with high turnover rate such as e-commerce.

Despoudi (2020) mentioned the activity of distribution includes moving goods from one node to others and to the end users. Transport modes such as Full Truck Load (FTL) refer to the movement of stocks from production factory to warehouse, or between warehouses. On the other hand, last mile delivery encompasses the transport from warehouse to end users or final destinations. While transport modes are usually fixed, means of transport are up to the decisions of companies (Das & Jharkharia, 2019; Ueasangkomsate & Suthiwartnarueput, 2018). According to Tsang et al. (2023), fuel is considered as one of the key factors that cause emissions. Reducing or replacing fuels with other alternative options electric vehicles can be the solutions for sustainable transport. In Vietnam, many initiatives have been done in order to minimize the use of fuels. A partner of Lazada Logistics – Selex Motors have introduced the use of electric motorbike delivery since 2022, contributing to 40% reduction in operational costs and local carbon emissions (Bao & Tri, 2022). The use of electric motorbikes Honda Benly to deliver parcel in the area of Hanoi. The organization is the first to use "green vehicle" with an effort to protect the environment. Survey from Ministry of Industry and Trade (2024) demonstrated that about 68% of asked companies have applied IoT in warehouse and transportation management, around 52% have implemented Big Data/AI solution. The application results show that technology assisted in reducing logistics costs by 23% and shorten order processing by 35%.

Fritz and Ruel (2024) emphasized on the correlations of driver's activities such as acceleration, gear switch, de-loading and pollution. Furthermore, management means the planning of distributing trips and spaces inside assigned vehicles. In the context of Vietnam, planning the right routes is extremely imporant as it would help with reducing emissions due to the heavy problems with traffic jam in urban areas. The saturation in the weight and space of the vehicles should also be taken into consideration as it can influence the amount of fuel used, while reducing the amount of trips.

In the packaging pillar, materials are in regard to the most important factors in accelerating green logistics (Tsang et al., 2023). Apart from the materials, using the right sizing of the package is critical. Bradley and Corsini (2023) brought up the importance of management with return packaging and refillable packaging. Reverse logistics, as defined by Tsang et al. (2023) is the process of transporting goods from their final point of consumption back to the manufacturer or another designated node within the supply chain. This process typically includes activities such as returns management, recycling, refurbishment, and disposal, contributing to both environmental sustainability and operational efficiency. Beyond the efficient disposal and recycling of products, reverse logistics contributes to cost optimization, reduction of packaging waste, and increased consumer awareness regarding sustainable practices. These outcomes collectively support the development of a cleaner and more sustainable circular economy (Kuruvilla et al., 2020). In Vietnam, packaging waste remains as a major challenge. According to Truong (2024), the sector is accounted for 300,000 tons of packaging waste in 2023. Program such as Tiki's Go Green is one of the pioneers in encouraging the replacement of plastic waste with recyclable materials. The program result is positive as 85% of the packaging material is environmentally friendly. This indicates efforts from corporates in terms of sustainable packaging practices.

Aside from processes of logistics, governance plays a vital role in accelerating sustainability. Factors such as human resources include the implementation of training internally or in collaboration with external parties (Tsang et al., 2023). Management systems refers to structured organizational processes designed to plan, implement, monitor, and continuously improve operational activities (Kalpande & Toke, 2021). Result monitoring, as described by Kumar et al. (2023), involves comparing actual outcomes with predefined objectives to identify performance gaps and determine corrective actions. This process is essential for continuous

improvement and strategic alignment in logistics operations. The adherence to legal framework and policy is extremely important, especially in the context of Vietnam, where sustainable policy and law are still developing.

## 5. Conclusion

Identifying green logistics practices within the ecommerce sector is critically important due to the sector's substantial contribution to greenhouse gas emissions, particularly during the distribution phase. Moreover, the concept of green logistics is only mentioned in case studies or wider supply chain frameworks. A notable research gap exists in the development of a green logistics framework specifically designed for the e-commerce sector in Vietnam. The findings show that green logistics can only be achieved through initiatives and systemic transformation including three big pillars: network design, reverse logistics and governance. Theoretically, this paper extends green logistics literature by contextualizing sustainability practices within the dynamics of Vietnam's digital commerce ecosystem. Practically, it offers policymakers and logistics providers a structured framework to align environmental goals with technological and operational realities. The proposed taxonomy supports the identification of innovative approaches across various stages of the logistics function that can reduce emissions and enhance environmental performance. Unlike earlier models that treat logistics functions separately, the proposed framework highlights the interconnectedness of operational, technological, and governance dimensions. It also contributes practically by guiding businesses and policymakers toward implementing measurable, technology-enabled sustainability practices suitable for Vietnam's rapidly evolving digital economy. Nevertheless, the research is limited by the lack of quantitative analysis on the impacts of different pillars on identified practices. Further research could therefore be focused on evaluating the level of influence of each factor on the performance of green logistics, and propose a suitable logistics solutions through case studies.

## References

Accorsi, R., Cholette, S., Guidani, B., Manzini, R., & Ronzoni, M. (2022). Sustainability assessment of transport operations in local food supply chain networks. *Transportation Research Procedia*, 67, 1–11. https://doi.org/10.1016/j.trpro.2022.12.049

Arslan, M., & Sar, A. (2017). Examination of environmentally friendly "green" logistics behavior of managers in the pharmaceutical sector using the Theory of Planned Behavior. *Research in Social and Administrative Pharmacy, 14(11),* 1007-1014. https://doi.org/10.1016/j.sapharm.2017.12.002

Bao, A., & Tri, D. (2022). *Vietnamese firm debuts electric motorbike delivery system for business. The Investor.* https://theinvestor.vn/vietnamese-firm-debuts-electric-motorbike-delivery-system-for-business-d2707.html

Boz, Z., Korhonen, V., & Koelsch Sand, C. (2020). Consumer considerations for the implementation of sustainable packaging: A review. *Sustainability, 12(6),* 2192. https://doi.org/10.3390/su12062192

Bradley, C., & Corsini, L. (2023). A literature review and analytical framework of the sustainability of reusable packaging. *Sustainable Production and Consumption, 37,* 126-141. https://doi.org/10.1016/j.spc.2023.02.009

Choudhary, K., & Sangwan, K. S. (2019). Adoption of green practices throughout the supply chain: An empirical investigation. *Benchmarking: An International Journal*, 26(6), 1650–1675.

Das, C., & Jharkharia, S. (2019). Effects of low carbon supply chain practices on environmental sustainability: An empirical study on Indian manufacturing firms. *South Asian Journal of Business Studies*, 8(1), 2–25. https://doi.org/10.1108/SAJBS-04-2018-0037

Dekker, R., Bloemhof, J., & Mallidis, I. (2012). Operations research for green logistics: An overview of aspects, issues, contributions and challenges. *European Journal of Operational Research*, 219(3), 671–679. https://doi.org/10.1016/j.ejor.2011.11.010

Despoudi, S. (2020). *Green supply chain. In The interaction of food industry and environment* (pp. 35–61). Academic Press.

Do, H. M. (2024). Solutions for developing green logistics in Vietnam. *Tạp chí Công Thương. 10.* https://tapchicongthuong.vn/giai-phap-phat-trien-logistics-xanh-tai-viet-nam-123276.htm

Doherty, S., & Hoyle, S. (2009). *Supply chain decarbonisation: The role of logistics and transport in reducing supply chain carbon emissions*. Geneva: World Economic Forum.

Duy, Q. (2025). *Quy mô thương mại điện tử Việt Nam dự báo tăng gấp 3 lần trong 5 năm tới. Tạp chí Công Thương. [Vietnam's e-commerce market size is forecast to triple in the next five years].* https://tapchicongthuong.vn/quy-mo-thuong-mai-dien-tu-viet-nam-du-bao-tang-gap-3-lan-trong-5-nam-toi-133039.htm

Evangelista, P., Colicchia, C., & Creazza, A. (2018). Is environmental sustainability a strategic priority for logistics service providers? *Journal of Environmental Management*, 216, 178–189. doi:10.1016/j.jenvman.2017.05.017

Fritz, M. M., & Ruel, S. (2024). What does "sustainable supply chain management" really mean? A contribution to bridging the gap between research, education and practice. *The International Journal of Logistics Management*, 35(2), 332–363. https://doi.org/10.1108/IJLM-11-2022-0457

Galli, G., Siragusa, C., Melacini, M., Perego, A., & Tumino, A. (2024*). Green logistics practices in the food sector: A framework. Politecnico di Milano.* https://www.summerschool-aidi.it/images/papers/session_9_2024/1184_Galli.pdf

Hoang, T. H. L., Do, T. H. H., & Pham, T. T. N. (2023). The impact of green supply chain management on the operational efficiency of construction businesses in Vietnam. *Tạp chí Kinh tế và Phát triển, 319*(2), 24–33. https://doi.org/10.33301/JED.VI.1417

Hoang, T.H., Tran, T.T., Huynh, L. N. T., Vo, D. K., Huynh, B. G., Tran, T. M. T., & Nguyen, N. D. (2025). Advances and barriers in promoting green logistics 4.0 from a multi-stakeholder perspective–a systematic review. *Environment Systems and Decisions*, 45(2), 1–19. https://doi.org/10.1007/s10669-025-10006-5

IMARC (2024). Vietnam e-commerce market size share growth trends report. *OpenPR*. https://www.openpr.com/news/3685026/vietnam-e-commerce-market-size-share-growth-trends-report

Kalpande, S. D., & Toke, L. K. (2021). Assessment of green supply chain management practices, performance, pressure and barriers amongst Indian manufacturers to achieve sustainable development. *International Journal of Productivity and Performance Management*, 70(8), 2237–2257.

Kiem, P. V. (2024). Factors influencing sustainable last-mile delivery in Vietnam's e-commerce sector. *Journal of State Management*, 32(9), 45–52.

Kumar, M., Choubey, V. K., Raut, R. D., & Jagtap, S. (2023). Enablers to achieve zero hunger through IoT and blockchain technology and transform the green food supply chain systems. *Journal of Cleaner Production*, 405, 136894. https://doi.org/10.1016/j.jclepro.2023.136894

Kunrath, T. L., Dresch, A., & Veit, D. R. (2023). Supply chain management and industry 4.0: A theoretical approach. *Brazilian Journal of Operations & Production Management*, 20(1), 1263–1263.

Kuruvilla, N., Saju, R., Chandramana, S., & Ramesh, S. (2020). Driving towards sustainable development through green logistics. *Atma Nirbhar Bharat: A Roadmap to Self-reliant India*. Retrieved May 1, 2025, from https://doi.org/10.6084/m9.figshare.13332302.v2

Larina, I. V., Larin, A. N., Kiriliuk, O., & Ingaldi, M. (2021). *Green logistics – Modern transportation process technology. Production Engineering Archives, 27*(3), 184–190. https://doi.org/10.30657/pea.2021.27.24

Ma, R., & Kim, Y. J. (2023). Tracing the evolution of green logistics: A latent Dirichlet allocation-based topic modeling technology and roadmapping. *PLOS ONE,* 18(8), e0290074. https://doi.org/10.1371/journal.pone.0290074

Ministry of Industry and Trade. (2024). *Logistics service businesses in Vietnam transform digitally to reduce costs*. https://logistics.gov.vn/logistics-service-businesses-in-vietnam-transform-digitally-to-reduce-costs

Nguyen, M. T., & Nguyen, V. A. V. (2020). Factors affecting online buying activities of customers at Tiki.Vn. *Tạp chí Khoa học và Công nghệ – Trường Đại học Công nghiệp TP.HCM*, 38(1), 59–66.

Nguyen, T. H., & Luu, T. M. P. (2024). Developing e-commerce in Vietnam: Current situation and solutions. *International Journal of Advanced Multidisciplinary Research Studies*, 4(2), 1285–1291. Retrieved May 1, 2025, from https://www.multiresearchjournal.com/admin/uploads/archives/archive-1713884862.pdf

Nguyen, T., & Le, H. (2021). Sustainable logistics in Vietnam's e-commerce sector: Challenges and opportunities. *Asian Journal of Business and Logistics*, 11(2), 45–58.

Pourhejazy, P., & Kwon, O. K. (2016). A practical review of green supply chain management: Disciplines and best practices. *Journal of International Logistics and Trade*, 14(2), 156–164. https://doi.org/10.24006/jilt.2016.14.2.156

Qian, D., Dargusch, P., & Hill, G. (2022). Carbon management behind the ambitious pledge of net zero carbon emission—a case study of PepsiCo. *Sustainability*, 14(4), 2171. https://doi.org/10.3390/su14042171

Seroka-Stolka, O., & Ociepa-Kubicka, A. (2019). Green logistics and circular economy. *Transportation Research Procedia*, 39, 471–479. https://doi.org/10.1016/j.trpro.2019.06.049

Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, 16(15), 1699–1710. https://doi.org/10.1016/j.jclepro.2008.04.020

Song, H. (2023). *Thúc đẩy phát triển dịch vụ logistics: Cần tăng cường các mối liên kết trong ngành*. VnEconomy. [Promoting the development of logistics services: The need to strengthen intra-industry linkages]. https://vneconomy.vn/thuc-day-phat-trien-dich-vu-logistics-can-tang-cuong-cac-moi-lien-ket-trong-nganh.htm

Tran, T.M.H, & Le, Q.D. (2023). Khảo sát người tiêu dùng về xu hướng tiêu dùng xanh tại Hà Nội. [Consumer survey on green consumption trends in Hanoi]. *Tạp chí Kinh tế & Dự báo*, 24(12), 55–60.

Truong, T. (2024). *Vietnam e-commerce generates 300,000 tons of packaging waste in a year*. VnExpress. https://e.vnexpress.net/news/news/environment/vietnam-e-commerce-generates-300-000-tons-of-packaging-waste-in-a-year-4819180.html

Tsang, Y. P., Fan, Y., & Feng, Z. P. (2023). Bridging the gap: Building environmental, social and governance capabilities in small and medium logistics companies. *Journal of Environmental Management*, 338, 117758.

Ueasangkomsate, P., & Suthiwartnarueput, K. (2018). Analysis of the relation between green logistics management practices and export intensity for Thai food and drinks SMEs. *Journal of International Logistics and Trade*, 16(2), 46–56. https://doi.org/10.24006/jilt.2018.16.2.46

Vu, T.A.T. (2024). Tác động của hoạt động logistics xanh và chất lượng dịch vụ trong lĩnh vực thương mại điện tử đến sự hài lòng của khách hàng. [The impact of green logistics activities and service quality in e-commerce on customer satisfaction]. *Tạp chí Khoa học Công nghệ Việt Nam*, 66(4). https://doi.org/10.31276/VJST.66(4).10-16

Wang, Y. (2019). Study on relationship between green logistics activity and logistics performance. *Cluster Computing*, 22(2), 3787–3797. https://doi.org/10.1007/s10586-018-2344-3

World Bank. (2022). *Vietnam Country Climate and Development Report*. https://openknowledge.worldbank.org/

Yildiz, S. B., & Kilic, S. N. (2016). The attitudes and behaviors of the students taking bachelor's degree tourism education about eco-friendly products. *International Journal of Human Sciences*, 13(1), 1304–1323.