

SUPPLY CHAIN IN VIETNAM IN POST-COVID-19: GOVERNANCE AND REGULATION OPPORTUNITIES AND CHALLENGES

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Abstract

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The COVID-19 pandemic and subsequent geopolitical shifts have promoted the restructure and reorganization of global supply chains, and Vietnam has found out chance to take advantage of cooperation with the Chinese economy as the “China + 1” strategy (Ahmad & Hien, 2025). However, foreign direct investment (FDI) attraction and assembly-oriented exports reinforce structural vulnerabilities, thereby limiting long-term sustainable economic development. As a result, the Vietnamese economy shows a ‘shallow integration’ paradox. Employing global value chains (GVC) theory, the analysis points out five core characteristics of this paradox: 1) supply-chain disruptions due to low supply chain maturity; 2) profound dependency on imported inputs; 3) high sensitivity to global demand fluctuations; 4) a widening capability gap between FDI lead firms and a fragmented domestic supplier base; and 5) prevalent organizational misalignments hindering strategic supply chain management (SCM). Although Vietnam has adapted to global shifts, it coped with challenges in joining the global supply chain.

Keywords: Vietnam, Supply Chain Resilience, Global Value Chains (GVCs), Economic Upgrading, Shallow Integration, Post-Pandemic Economy, China Plus One

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1. INTRODUCTION

The first decades of the 21th century’s global supply chains have been accelerated for cost and efficiency (Gereffi, 2020; Pham et al., 2016), based on assumptions of a stable global economy that have been fundamentally challenged in post COVID-19 pandemic (Raj et al., 2022; World Bank, 2022). Moreover, the Sino-US trade tensions initiated a period of strategic reassessment, forcing multinational corporations (MNCs) to change their concentration in China to diversify their investment (Shi et al., 2025). This contracted the global economy, with a 3.4% decline in collective gross domestic product (GDP) in 2020, and laid bare

the profound vulnerabilities inherent in lean, geographically concentrated supply chains (Statista, 2024; Li et al., 2025). Therefore, the “China + 1” strategy is selected by MNCs in order to mitigate investment risks (Hsu, 2021; Tang, 2019). They have diversified their investment to various economies in the world and even transferred their investment from China to other neighbored economies. Vietnam is a favored choice due to its geographical gap, highly open economy, political stability, and competitive labor costs (Ahmad & Hien, 2025).

The research questions of the paper are as follows:

RQ1: How does Vietnam integrate into global value chains (GVCs) in the post-COVID-19 period?

RQ2: How does this model shape the potential for supply chain upgrading?

This study utilizes GVC theory to analyze governance dynamics, power asymmetries, and upgrading trajectories that characterize Vietnam's position.

The new approach is shown as follows. First, it offers a theoretically grounded and critical perspective on the sustainability and quality of Vietnam's widely acclaimed foreign direct investment-led development model. Second, through the specific case of Vietnam, the study derives broader insights into the structural barriers that emerging economies face when pursuing foreign direct investment (FDI) based, assembly-focused integration strategies in an increasingly volatile global environment.

The paper is followed by the GVC theoretical framework and research methodology for analysing our evidence.

The following structure of the paper is as follows. Section 2 review the literature and the theoretical framework. Section 3 offers the methodology used in the study. Section 4 presents the main argument of Vietnam's 'shallow integration' paradox in the global economy. Section 5 provides policy implications of the research. Finally, Section 6 concludes the paper by summarizing the key findings, reiterating the academic contributions, and suggesting critical avenues for future research.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. Literature review

The concept of "China + 1" strategy emerges in recent years because of rising labor costs in China (Gereffi, 2019; Verité, 2014). In addition, escalating US-China trade tensions, and particularly the disruptions caused by the COVID-19 pandemic, have shifted the focus from cost optimization toward risk mitigation and supply diversification (Shi et al., 2025; Hsu, 2021). China-US trade war strengthened the reduction in import-export in the world, disrupting global supply chains (Fan et al., 2022; Johnson & Haug, 2021). Moreover, the COVID-19 pandemic worsened the world economy, affecting 215 countries and territories and causing severe damage to global distribution (Rahaman et al., 2020). In this context, Vietnam has emerged as a leading strategic destination due to its highly open economy and stable political situation (Nguyen et al., 2023; Việt, 2020). Vietnam has attracted redirected investment from many MNCs after considering the benefits and risks of shifting their operations away from the Chinese market.

However, Vietnam's supply chains are highly vulnerable due to its high dependence on fluctuated global demand for imported inputs (Phan et al., 2019), particularly from China (Nguyen et al., 2025). Supply disruptions exposed structural weaknesses in the export-processing (Canwat, 2024). Domestic firms's contribution in key industries such as electronics and textiles is limited (Ngoc & Binh, 2019; Pham et al., 2022).

This paper focuses on the 'shallow integration' of the Vietnamese economy into the global economy. While relying on imported intermediates,

Vietnamese domestic firms were laid on the lowest level of the global supply chain, and consequently hindering the development of a genuinely resilient, innovative, and competitive domestic supply chain ecosystem.

2.2. Theoretical framework

This study employs the GVC framework in analyzing global supply chain. This framework takes a comprehensive view of supply chain, including economic upgrading and governance — from conception and design to production, marketing, distribution, and policy support (Gereffi, 2019; Rolf et al., 2025).

Economic upgrading focuses on the ability of domestic firms, countries, or regions to upgrade from low-value to high-value activities within GVCs. It can occur in four forms:

- 1) process upgrading in production efficiency in technology or organization;
- 2) product upgrading into more sophisticated product lines;
- 3) functional upgrading in new, higher-value functions in the chain (e.g., design, branding, research and development);
- 4) chain upgrading in a new, more technologically advanced value chain (Gereffi, 2019).

GVC governance refers to the coordination and linkage of firms within the supply chain. Lead firms (MNCs) in the supply chain determine how value is distributed and what upgrading opportunities are available to suppliers. In fact, lead firms exert high control over small suppliers, and they struggle to move up the value chain (Gereffi, 2020). A state of 'shallow integration' means the position of domestic firms in the global supply chain. Many countries face barriers to functional upgrading, staying at low-value-added stages.

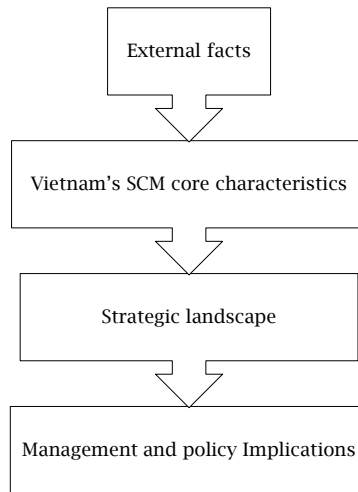
3. RESEARCH METHODOLOGY

To investigate the paradox of shallow integration in Vietnam's post-pandemic supply chains, this study employs a systematic integrative review methodology. An integrative review emphasizes on a systematic process, and it is more comprehensive than a meta-analysis as it allows for the inclusion of diverse literature types, both quantitative and qualitative (Bowen, 2009). It is suitable for synthesizing a complex and multifaceted topic where data is collected across various academic journals, government publications, and international institutional reports.

Figure 1 explains the systematic data selection process employed in this study, adapted from the PRISMA 2020 guidelines. The data is collected via Google Scholar and citation tracking, and via Google Search for government and industry reports.

An initial screening of titles and abstracts was conducted using the primary keyword string "Supply chain" and "Vietnam" and "COVID-19" in both English and Vietnamese. Data was excluded if it did not focus on the post-pandemic context or lacked relevance to supply chain management (SCM). Subsequently, full-text documents were detected and assessed for eligibility based on their analytical depth and data availability regarding Vietnam's specific economic context (Bowen, 2009).

Figure 1. Systematic selection process adapted from the PRISMA 2020



Source: Authors' elaboration.

Firstly, a comprehensive search for relevant literature from three premier academic databases, including Scopus, Web of Science, and Google Scholar, were systematically searched to capture peer-reviewed scholarly research. In parallel, we analyzed data from reputable international organizations specializing in economic assessments of Vietnam, including the World Bank, the International Labour Organization (ILO), and the Asian Development Bank, as well as Vietnamese government agencies such as the General Statistics Office and the Ministry of Industry and Trade.

This was critically supplemented by a targeted search for “grey literature” from highly credible institutional sources known for their economic analysis of Vietnam, including the World Bank, the ILO, the Asian Development Bank, and Vietnamese government bodies such as the General

Statistics Office of Vietnam and the Ministry of Industry and Trade.

Keywords for searching were selected and combined with Boolean operators: (“supply chain” or “logistics” or “global value chain”) and “Vietnam” and (“COVID-19” or “pandemic” or “resilience” or “post-pandemic” or “FDI” or “upgrading”). The search was performed in both English and Vietnamese to ensure the inclusion of important localized perspectives and domestic government reports.

The collected literature was analyzed using a theory-guided thematic analysis. First, an initial inductive coding of the documents was performed to identify emergent themes and patterns regarding Vietnam’s supply chains. Secondly, these themes were systematically interpreted based on the GVC framework.

Table 1. Inclusion and exclusion criteria

<i>Criteria</i>	<i>Inclusion</i>	<i>Exclusion</i>
Publication type	Peer-reviewed journal articles, books/book chapters, official reports from World Bank, International Monetary Fund, ILO, Asian Development Bank, government agencies	Opinion pieces, blogs, news articles without verifiable data, and conference proceedings without full text.
Time frame	Published between 2020 and 2025	Published before 2020, unless it was a foundational theoretical text (Gereffi, 2019)
Language	English, Vietnamese.	Other languages.
Relevance	Must focus specifically on Vietnam’s supply chain, logistics, or GVC context in relation to recent disruptions	Generic discussions of global supply chains without a specific focus on Vietnam

Source: Authors' elaboration.

4. THE PARADOX OF VIETNAM’S SHALLOW GLOBAL VALUE CHAINS INTEGRATION

Shallow GVC integration refers to a situation in which a country or an industry participates in GVCs primarily at low-value-added stages (such as processing or final assembly). Vietnam’s linkages in the supply chain are rather weak and experience limited technology transfer. Vietnam has entrenched structural vulnerabilities, creating a system that is more fragile than it appears. We dissect this paradox by first examining the successful ‘surface’ narrative and then delving into the underlying ‘anatomy’ of its shallowness.

4.1. The ‘China + 1’ magnet

Vietnam’s performance in the post-COVID-19 era has been an undeniable success story. The country’s ability to maintain manufacturing momentum while regional competitors faced severe and prolonged lockdowns, particularly in early 2020, provided an immediate resilience premium, catching the eye of global supply chain managers (Hoang, 2021). This initial advantage was powerfully compounded by a confluence of long-term strategic assets. Therefore, FDI inflows have increased to a record \$36.61 billion of registered capital in 2023 — a 32.1% year-on-year increase that is much higher than the modest surge of 3% of global FDI increase

in the same period (General Statistics Office of Vietnam, 2023). This promotes expansion of the manufacturing and processing sector, the cornerstone of the economy. Consequently, Vietnam has maintained its position as a net exporting nation, achieving a record trade surplus of \$28.2 billion in 2023 (Thuongmai University, 2024).

Electronics firms lead the economic growth of Vietnam, such as Samsung, Intel, and Apple supplier Foxconn. They have transformed northern Vietnam into a global production hub. Samsung has invested billions, and its Vietnamese factories contribute up to 72% of its smartphones globally, employing a workforce of around 160,000 people (Herr et al., 2021; Thao, 2019). Similarly, Intel highly increased its investment in Vietnam to offset disruptions elsewhere (Nguyen et al., 2023), and Foxconn has relocated partial production from China (Lee, 2020). From a GVC perspective, this demonstrates remarkable success in process upgrading. Vietnamese resources of labor and infrastructure are capable of meeting requirement of the world's high-tech value chains, proving the country's role as a world-class assembly platform.

4.2. The anatomy of shallow integration

However, looking through the GVC lens reveals that this success comes at a cost, creating a state of shallow and vulnerable integration.

First, Vietnam depends much on imported inputs. The most critical vulnerability is the manufacturing sector's profound dependence on imported raw materials, supplies, and components. Vietnam's export-led model shows an 'import-to-export' model. Key industries like electronics, textiles, and footwear rely fundamentally on imported inputs from a small number of countries, most notably China (Nguyen et al., 2023). This situation was exacerbated during the pandemic due to shortages of critical components from China, so production slowed down, and factory shutdowns occurred across Vietnam (ILO, 2022).

In fact, leading firms orchestrate a regional production network where firms in Vietnam serve as the final assembly position, while more sophisticated component manufacturing remains in China or other established hubs. This arrangement benefits the lead firm by optimizing costs across the region, but it places Vietnamese operations in a highly precarious position. Vietnamese firms find it difficult to adapt to the demand for quality, time, distribution, and technology to move up to higher-tier supplier positions within the supply chain. They depend on the leaders of the suppliers and are vulnerable to any changes in upper-level suppliers. Despite the government tries to promote investment diversification, this reliance remains and has even intensified (Ministry of Industry and Trade, 2023). This situation structure fundamentally restrains Vietnam from climbing up to a higher level in the supply chain hierarchy.

Second, Vietnamese firms have limited capacity and low linkages among domestic suppliers. Vietnam's industrial landscape is separated into the highly efficient, technologically advanced, export-oriented FDI enterprises and a vast sea of domestic small and medium-sized enterprises (SMEs) that are low-tech. The large group of low-

technology firms remain isolated from global supply chains (Can, 2022). And instead of building up a collaborative and thriving industrial ecosystem, these firms struggle to survive in isolation and remain peripheral to global supply chains.

Vietnamese SMEs seem not to meet the stringent standards of quality, volume, cost, and lead time demanded by MNCs (Nguyen & Le, 2020; Thao, 2019). Thus, they cannot be recruited to be MNCs' suppliers, resulting in a low localization rate. For instance, reports indicate that domestic suppliers provide only 30–35% of inputs for general electronic devices and a mere 5% for high-tech electronics, which is much lower than regional peers like China and India (Ngoc & Binh, 2019; Can, 2022). Another example is Intel, which reportedly worked with only 18 Vietnamese partners among its hundreds of suppliers (Ngoc & Binh, 2019). This shows that Vietnamese companies are systematically "locked-in" at the lowest tier of value creation — concentrating on assembling and processing activities like packaging, printing, simple plastic molding, or basic services. This represents a critical bottleneck for development.

Vietnam is successful to attract FDI and is upgrading to a higher level with FDI firms, but the essential spillover effects have not yet happened within the domestic firms. The contribution of domestic firms in value-added share captured in key export sectors remains troublingly low, estimated at just 2.2% in the computer and electronics industry (Can, 2022). Vietnam is hosting the supply chain, but it is not capturing the value.

Third, leadership lacks a strategic vision of the strategic supplier relationship. A comprehensive survey by the Vietnam E-commerce Association (2023) revealed that senior leaders have not concentrated on linkages, integration, and participation in the supply chain. The units which are responsible for building up input and output supplier network fragmentedly operate and have not yet shown a proactive and integrated strategic function in designing a pathway to level the firms up and integrate into the supplier network.

The absence of an integrated business planning strategy and strategic supplier relationship management restrains the firms from utilizing opportunities from global integration and FDI MNCs. This further intensified supply-demand imbalances, slowed inventory turnover, and resulted in lost orders (Vietnam E-commerce Association, 2023).

Fourth, domestic firms are highly vulnerable to external shocks. Operating at the lower tiers of the value chain makes the economy more susceptible to fluctuations in global consumer demand, as it lacks both a sufficiently strong domestic market and higher-value-added, less volatile activities such as design and research and development. Nguyen et al. (2023) proved the dependence of Vietnam on external economy that in 2023, as economic growth in Vietnam's key export markets — particularly the United States and the eurozone — slowed down and competition intensified from emerging production hubs such as India and Mexico, demand for Vietnam's major export products, including textiles and garments, furniture, and electronics, also declined sharply. Consequently, industrial output contracted significantly, export revenues fell, and widespread

job losses occurred, particularly during the early months of the year (Ministry of Industry and Trade, 2023).

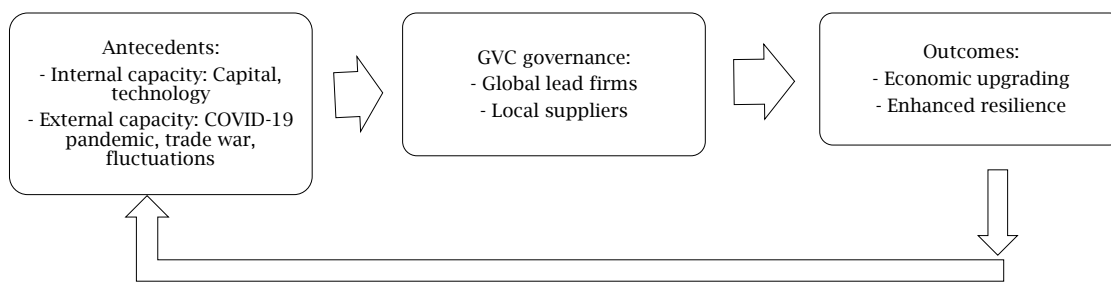
Fifth, domestic firms have coped with falling behind in digital and sustainable transformation, making collaboration with FDI companies even more challenging. Digitalization and sustainability became mandatory requirements in the post-pandemic period (Do et al., 2020). Domestic firms have not yet adapted to such advanced technologies for automation, data analytics, and integrated logistics platforms, which require substantial capital investment and skilled human resources — both of which are weak points of Vietnam’s human resources (Kashem et al., 2024; Cuong & Tien, 2022). Domestic firms find it difficult to pay for the high costs and capital to develop digital equipment, and only 11% of surveyed companies report their use of

these advanced technologies (Vietnam E-commerce Association, 2023). Moreover, meeting the strict environmental and labor standards set by global FDI MNCs requires a big investment (Nguyen & Le, 2020). These even further widen the gap between leading FDI firms and potential domestic suppliers, thereby reducing opportunities for collaboration.

5. NAVIGATING THE PATH FROM SHALLOW TO DEEP INTEGRATION

Before delving into specific implications, Figure 2 illustrates how firm-level capabilities and external contexts (antecedents) influence GVC governance structures, which in turn determine the outcomes of upgrading and resilience for Vietnamese supply chains.

Figure 2. Conceptual framework



Source: Authors' elaboration.

An analysis of Vietnam’s shallow integration situation shows that the traditional model of growth relying heavily on FDI inflows and the assumption that participation in supply chains will naturally follow seems infeasible. To promote the position of domestic firms in the supply chain, Vietnam must undertake a national strategic shift — attracting selectively and strategically to build a foundation for deeper, more sustainable, and value-creating integration.

5.1. Theoretical implications

The findings of this study hold notable academic value.

First, the findings show a critical thinking on theories of GVC. In theory, GVC participation is often considered a favorable pathway for development, yet the case of Vietnam demonstrates that it can also evolve into a “low-value trap”. Integration, without a clear roadmap for upgrading the capabilities of the economy’s productive actors, may lead to a form of dependent development. Therefore, concrete plans, strategies, and policies are required to achieve essential objectives such as technological sovereignty and improved positioning within value chains.

Second, the findings emphasize the role of the state in shaping GVC outcomes. Successful integration into supply chains should not focus solely on firm-level strategies but explicitly incorporate the active role of the state in creating a favorable environment for resilience and upgrading, particularly in emerging economies. In many cases, the state must not only interfere with the invisible hand but also act decisively and

proactively in steering and facilitating the upgrading of domestic firms’ positions within value chains.

5.2. Practical implications for business leaders

In light of this situation, the government and domestic business leaders need to reassess their strategies and publish appropriate policies. In practice, lead firms have focused primarily on extracting short-term benefits through low-cost sourcing, generating immediate gains. However, the domestic economy will not be utilized long-term benefits from these investments.

Encouraging lead firms to develop domestic supplier networks requires a good quality of domestic suppliers. Because it is essential to be well-trained to access technical know-how, managerial capabilities, such as quality control, financial management, and digital competence. Such efforts promote building a more capable and resilient domestic ecosystem, ultimately benefiting the lead firms themselves by reducing risk and enhancing operational flexibility.

Domestic Vietnamese enterprises need to move beyond the passive role of subcontractors, accepting low positions in the supply chain characterized by low prices, low technology, and the costly trade-off of significant resources merely to secure work. To achieve this, local firms must go beyond meeting minimum technical standards and invest in building their own core capabilities. This may include targeted investments in quality management systems (such as International Organisation for Standardisation certifications), the adoption of scale-appropriate digital technologies to improve planning and execution, and, most importantly,

the development of absorptive capacity to learn from and co-innovate with customers. Enhancing collaboration through industry associations can enable firms to share resources and knowledge, helping them overcome scale constraints (Vu et al., 2022).

5.3. Policy implications for the Vietnamese government

The most critical implications are for policymakers. The government has been successful in the “attraction” phase of its FDI strategy; the challenge now is to transition to a ‘linkage and upgrading’ phase. This requires a more surgical and sophisticated policy.

First, policy should move beyond a fragmented “hedgehog-style” approach that pursues too many objectives simultaneously and, as a result, achieves none effectively. Instead, policies should actively drive FDI flows toward selected sectors. To implement, it needs firms’ clear commitments to assist domestic manufacture, supply technology transfer, and concreting in localization targets or formal linkage programs. Importantly, such linkage programs must be designed based on cooperation that generates mutual benefits for all stakeholders and for the entire supply chain. Linkages should be built from a perspective of global competitiveness and long-term gains in fostering domestic enterprises.

Second, a national strategy should be introduced to develop industries with a focus on genuine production rather than mere assembly. This strategy should not focus only on financial support but also on clearly-targeted programs that improve specific weaknesses of SMEs, such as quality management training, digital transformation support, shifts in collaborative mindsets of globalization, and facilitation of linkages with FDI firms (“Why Vietnam’s supporting industry”, 2022).

Third, the workforce should be better trained to undertake higher value-added functions and to leverage artificial intelligence for rapid advancement. This requires reforms in the education and vocational training systems toward future-oriented skills, including artificial intelligence, digital SCM, data analytics, strategic procurement, and logistics management.

Fourth, investment in hard infrastructure (such as seaports and road networks) and soft infrastructure that facilitates production and exports, including customs procedures, digital trade platforms, and the digital economy more broadly, should be deployed.

In short, the role of the government should shift from a “landlord” — merely providing assembly platforms — to that of an active “gardener” who nurtures and develops the entire industrial ecosystem.

6. CONCLUSION

This study provides an in-depth analysis of Vietnam’s supply chains in the complex post-COVID-19 context. Although Vietnam has integrated successfully and maintained good growth

amid a fluctuating global economy, it faces the paradox of “shallow integration”. In the post-COVID-19 years, while Vietnam has skillfully leveraged the “China + 1” trend to become a global assembly hub, this mode of integration has simultaneously exacerbated deep structural weaknesses, including heavy dependence on imported inputs and the systemic entrenchment of domestic firms in low-value-added segments. Based on the GVC framework, the study demonstrates that success in process upgrading has not translated into functional upgrading — a critical prerequisite for long-term and sustainable development.

This study makes two main contributions to the academic literature. First, it provides a critical examination of the GVC framework. The theory acknowledges the benefits of an FDI-led, assembly-oriented growth model, typically assessed based on indicators of trade volumes and the scale of FDI inflows. However, the analysis demonstrates that “on appearance” integration measured by these indicators has not yet reflected genuine economic resilience or long-term developmental progress. Second, the study highlights the decisive role of structural positioning within GVCs and state-led industrial policy in shaping supply chain performance at the national level, that are often underestimated in firm-centric analytical models.

To deepen and broaden the research, further quantitative and empirical studies should be deployed in order to understand linkages between FDI firms and domestic enterprises. Moreover, in-depth studies conducted over a longer time are required to clarify the specific obstacles faced by domestic firms during their integration into supply chains. Such studies can utilize surveys on firms and suggesting long-term national strategies and policies. In addition, comparative studies across other emerging “China + 1” (such as India, Indonesia, and Mexico) are necessary to derive appropriate alternative policy responses.

In conclusion, Vietnam stands before an opportunity for transformation, and the pursuit of positioning its economy as a creator of sustainable value within the global economy will constitute a defining challenge for the country’s next phase of economic development.

This study is primarily based on a review of domestic and international literature; therefore, it faces considerable limitations in verifying and validating the research results, findings, and proposed solutions. Accordingly, further primary empirical studies are required to examine specific issues in greater depth. To deepen and broaden the research, further quantitative and empirical studies should be deployed in order to understand linkages between FDI firms and domestic enterprises. Moreover, in-depth studies conducted over longer time are required to clarify the specific obstacles faced by domestic firms during their integration into supply chains. Such studies can utilize surveys on firms and suggesting long-term national strategies and policies. In addition, comparative studies across other emerging “China + 1” (such as India, Indonesia, and Mexico) are necessary to derive appropriate alternative policy responses.

REFERENCES

- Ahmad, M. M., & Hien, T. T. M. (2025). Opportunities that arise during a crisis: The case of Ho Chi Minh City, Vietnam. In B. K. Paul, & L. Juran (Eds.), *The Routledge handbook of disaster response and recovery* (pp. 358-370). Routledge. <https://doi.org/10.4324/9781003414834-37>
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40. <https://doi.org/10.3316/QRJ0902027>
- Can, L. (2022). Upgrading Vietnam's participation in the global value chains. In D. Singh, & H. T. Ha (Eds.), *Southeast Asian affairs* (pp. 392-410). ISEAS Publishing. <https://doi.org/10.1355/9789815011036-024>
- Canwat, V. (2024). COVID-19-related supply chain disruptions: Resilience and vulnerability of micro, small and medium enterprises. *Cogent Business & Management*, 11(1), Article 2315691. <https://doi.org/10.1080/23311975.2024.2315691>
- Cuong, T. H., & Tien, N. H. (2022). Application of ICT in logistics and supply chain in post-COVID-19 economy in Vietnam. *International Journal of Multidisciplinary Research and Growth Evaluation*, 3(1), 493-501. https://www.allmultidisciplinaryjournal.com/uploads/archives/20240727133831_A-22-59.1.pdf
- Do, A. D., Nguyen, Q. V., Le, Q. H., & Ta, V. L. (2020). Green supply chain management in Vietnam industrial zone: Province-level evidence. *The Journal of Asian Finance, Economics and Business*, 7(7), 403-412. <https://doi.org/10.13106/jafeb.2020.vol7.no7.403>
- Fan, D., Zhou, Y., Yeung, A. C. L., Lo, C. K. Y., & Tang, C. (2022). Impact of the U.S.-China trade war on the operating performance of U.S. firms: The role of outsourcing and supply base complexity. *Journal of Operations Management*, 68(8), 928-962. <https://doi.org/10.1002/joom.1225>
- General Statistics Office of Vietnam. (2023). *Statistical yearbook 2023*. <https://www.nso.gov.vn/en/default/2024/07/statistical-yearbook-of-2023/>
- Gereffi, G. (2019). Economic upgrading in global value chains. In S. Ponte, G. Gereffi, & G. Raj-Reichert (Eds.), *Handbook on global value chains* (pp. 250-254). Edward Elgar. <https://doi.org/10.4337/9781788113779.00022>
- Gereffi, G. (2020). What does the COVID-19 pandemic teach us about global value chains? The case of medical supplies. *Journal of International Business Policy*, 3(3), 287-301. <https://doi.org/10.1057/s42214-020-00062-w>
- Herr, H., Schweisshelm, E., & Vu, T.-M. (2016). *The integration of Vietnam in the global economy and its effects for Vietnamese economic development* (GLU Working Paper No. 44). Global Labour University. <https://www.econstor.eu/bitstream/10419/156308/1/874332303.pdf>
- Hoang, L. (2021, January 27). Intel increases Vietnam chip investment by nearly 50%. *Nikkei Asia*. <https://asia.nikkei.com/Business/Technology/Intel-increases-Vietnam-chip-investment-by-nearly-50>
- Hsu, S. (2021, June 11). Which Asian nations can benefit from the "China plus one" strategy? *The Diplomat*. <https://thediplomat.com/2021/06/which-asian-nations-can-benefit-from-the-china-plus-one-strategy/>
- International Labour Organization (ILO). (2022). *Viet Nam's electronics supply chain: Decent work challenges and opportunities*. https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_dialogue/@sector/documents/publication/wcms_865520.pdf
- Johnson, J. E., & Haug, P. (2021). Modifications to global supply chain management strategies resulting from recent trade disruptions: An exploratory study. *Journal of Global Operations and Strategic Sourcing*, 14(4), 701-722. <https://doi.org/10.1108/JGOSS-12-2020-0074>
- Kashem, M. A., Shamsuddoha, M., & Nasir, T. (2024). Digital-era resilience: Navigating logistics and supply chain operations after COVID-19. *Businesses*, 4(1), 1-17. <https://doi.org/10.3390/businesses4010001>
- Lee, Y. (2020, November 26). Exclusive: Foxconn to shift some Apple production to Vietnam to minimise China risk. *Reuters*. <https://www.reuters.com/world/china/foxconn-shift-some-apple-production-vietnam-minimise-china-risk-2020-11-26/>
- Li, Z., Sheng, Y., Meng, Q., & Hu, X. (2025). Sustainable supply chain operation under COVID-19: Influences and response strategies. *International Journal of Logistics Research and Applications*, 28(1), 24-50. <https://doi.org/10.1080/13675567.2022.2110220>
- Ministry of Industry and Trade (2023). *Thúc đẩy kết nối chuỗi ứng hàng hóa quốc tế, hỗ trợ doanh nghiệp xuất khẩu tìm đầu ra* [Promoting international supply chain linkages and supporting exporting firms in accessing markets]. <https://moit.gov.vn/tin-tuc/xuc-tien-thuong-mai/tim-giai-phap-ket-noi-hieu-qua-cho-doanh-nghiep-tham-gia-viet-nam-international-sourcing-2023.html>
- Ngoc, T. T. B., & Binh, D. T. (2019). Vietnam's electronics industry: The rise and problems of further development. *Humanities & Social Sciences Reviews*, 7(4), 1-12. <https://doi.org/10.18510/hssr.2019.741>
- Nguyen, T.-T., Pham, C. M., Thai, V. V., Tan, J. Y., Pham, H.-V., & Thi, T. H. T. (2025). How has the aquaculture supply chain's competitiveness changed after the COVID-19 pandemic in emerging countries? The case of Vietnam. *Sustainability*, 17(4), Article 1451. <https://doi.org/10.3390/su17041451>
- Nguyen, V. M. H., Ho, T. H., Nguyen, L. H., & Pham, A. T. H. (2023). The impact of trade openness on economic stability in Asian countries. *Sustainability*, 15(15), Article 11736. <https://doi.org/10.3390/su151511736>
- Nguyen, X. H., & Le, T. A. (2020). The impact of global green supply chain management practices on performance: The case of Vietnam. *Uncertain Supply Chain Management*, 8(3), 523-536. <https://doi.org/10.5267/j.uscm.2020.3.003>
- Pham, H. S. T., Nguyen, A. N., & Johnston, A. (2022). Economic policies and technological development of Vietnam's electronics industry. *Journal of the Asia Pacific Economy*, 27(2), 248-269. <https://doi.org/10.1080/13547860.2020.1809055>
- Pham, T. S. H., Darabi, F., & Wilmot, N. V. (2016). International supply chain case study. In B. Christensen (Ed.), *Handbook of research on global supply chain management* (pp. 205-226). IGI Global. <https://doi.org/10.4018/978-1-4666-9639-6.ch012>
- Phan, A. C., Nguyen, H. A., Trieu, P. D., Nguyen, H. T., & Matsui, Y. (2019). Impact of supply chain quality management practices on operational performance: Empirical evidence from manufacturing companies in Vietnam. *Supply Chain Management: An International Journal*, 24(6), 855-871. <https://doi.org/10.1108/SCM-12-2018-0445>

- Rahaman, M., Saha, O., Rakhi, N. N., Chowdhury, M. K., Sammonds, P., & Kamal, A. M. (2020). Overlapping of locust swarms with COVID-19 pandemic: A cascading disaster for Africa. *Pathogens and Global Health*, 114(6), 285–286. <https://doi.org/10.1080/20477724.2020.1793595>
- Raj, A., Mukherjee, A. A., de Sousa Jabbour, A. B. L., & Srivastava, S. K. (2022). Supply chain management during and post-COVID-19 pandemic: Mitigation strategies and practical lessons learned. *Journal of Business Research*, 142, 1125–1139. <https://doi.org/10.1016/j.jbusres.2022.01.037>
- Rolf, B., Beier, A., Jackson, I., Müller, M., Reggelin, T., Stuckenschmidt, H., & Lang, S. (2025). A review on unsupervised learning algorithms and applications in supply chain management. *International Journal of Production Research*, 63(5), 1933–1983. <https://doi.org/10.1080/00207543.2024.2390968>
- Shi, X., Prajogo, D., Fan, D., & Oke, A. (2025). Is operational flexibility a viable strategy during major supply chain disruptions? Evidence from the COVID-19 pandemic. *Transportation Research Part E: Logistics and Transportation Review*, 195, Article 103952. <https://doi.org/10.1016/j.tre.2024.103952>
- Statista. (2024). *Impact of the coronavirus pandemic on the global economy — Statistics & facts*. <https://www.statista.com/topics/6139/covid-19-impact-on-the-global-economy/#editorsPicks>
- Tang, F. (2019, August 14). Will Vietnam challenge China's manufacturing leadership in the electronics industry? *Counterpoint*. <https://www.counterpointresearch.com/insights/will-vietnam-challenge-chinas-manufacturing-leadership-electronics-industry/>
- Thao, P. (2019, February 27). Samsung employs nearly 160,000 Vietnamese employees. *Saigon News*. <https://en.sggp.org.vn/samsung-employs-nearly-160000-vietnamese-employees-post77592.html>
- Thuongmai University. (2024). *Báo cáo thường niên Kinh tế và thương mại năm 2024: Công nghệ ai trong kỷ nguyên số* [Annual report of economy and trade 2024: AI technology in the digital age]. <https://tckhtm.tmu.edu.vn/upload/banner/bctn-2024-pub-onlpdf-1743579709.pdf>
- Tien, N. H., & Ngoc, N. M. (2019). Coping challenges and taking opportunities in international business strategies of foreign enterprises in Vietnam. *International Journal of Advanced Research in Engineering & Management*, 5(7), 18–23. <http://ijarem.org/papers/v5-i7/4.IJAREM-D5053.pdf>
- Verité. (2014). *Forced labour in the production of electronic goods in Malaysia: A comprehensive study of scope and characteristics*. <https://verite.org/wp-content/uploads/2016/11/VeriteForcedLaborMalaysianElectronics2014.pdf>
- Việt, B. H. (2020). *Tác động của đại dịch Covid-19 đến tăng trưởng kinh tế và phát triển bền vững ở Việt Nam* [The impact of the COVID-19 pandemic on economic growth and sustainable development in Vietnam]. Vietnam Academy of Social Sciences. <https://app.vass.gov.vn/nghien-cuu-khoa-hoc-xa-hoi-va-nhan-van/Tac-dong-cua-dai-dich-Covid-19-den-tang-truong-kinh-te-va-phat-trien-ben-vung-o-Viet-Nam-104>
- Vietnam E-commerce Association. (2023). *Vietnam e-business index 2023* (Report). <https://www.scribd.com/document/686762840/EBI-Report-2023>
- Vu, N., Bui, T. A., Hoang, B. T., & Pham, H. (2022). Information technology adoption and integration into global value chains: Evidence from small- and medium-sized enterprises in Vietnam. *Journal of International Development*, 34(2), 259–286. <https://doi.org/10.1002/jid.3591>
- Why Vietnam's supporting industry is vital to manufacturing. (2022, April 18). *Vietnam Briefing*. Viet Nam National Trade Repository. <https://vntr.moit.gov.vn/news/why-vietnams-supporting-industry-is-vital-to-manufacturing>
- World Bank. (2022). *World development report 2022: Finance for an equitable recovery*. <https://www.worldbank.org/en/publication/wdr2022>