Kasetsart Journal of Social Sciences

journal homepage: http://kjss.kasetsart.org

Global supply chain management in Thai ventures: Advancing traditional supply chain resilience

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Article Info

Article history:
Received 05 January 2025
Revised 02 May 2025
Accepted 09 June 2025
Available online 12 November 2026

Keywords:
global supply chain management,
self-reliance,
sufficiency economy philosophy,
supply chain resilience,
Thai ventures

Abstract

This study examines the holistic operations of global supply chain management (GSCM) in Thai ventures, focusing on how they respond to changes and foster sustainable growth. A multiple case study method was adopted using semi-structured, in-depth interviews to investigate 33 organisations in various Thai industries, sectors, and tiers of the supply chain. The data were managed using content and cross-case analyses. Most Thai ventures rely heavily on Chinese suppliers and use high-quality Thai logistics service providers (LSPs) to facilitate customs formalities and shipments. The Delivery Duty Paid term (DDP), just as free on-board (FOB) and cost insurance and freight (CIF), is widely used, whereas a letter of credit (L/C) is not popular. There has been an increase in the use of roads and air transport instead of sea freight. With extensive experience in GSCM, most respondents have only been minimally impacted by the COVID-19 pandemic and the current economic recession. The fraud and ineffectiveness of Thai Customs have been perceived as long-term barriers to shipping efficiency and resilience; however, customs officers have denied this. Government transparency, beneficial free trade agreement (FTA), and business ethics enable long-term self-resilience and sufficiency. This study develops a conclusive model of sufficiency in GSCM and provides suggestions for ventures and feedback on Thai Customs. The Buddhist sufficiency economy philosophy (SEP) provides a valuable framework for environmental change and sustainability to reduce dependency on China.

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https://doi.org/10.34044/j.kjss.2026.47.4.34
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Introduction

Globalisation and free trade policies (low tariffs and stable trading rules) fine-tune GSCM by accessing inexpensive raw materials, labour mobility, larger markets, and technological progress and diffusion (Javorcik, 2020; Raj et al., 2022). Merchandise is passed from the exporter (seller or supplier) to the importer (buyer) in more than one nation. Ventures must manage local cultures, customs practices, economics, and regulations (Branch, 2008). Ocean freight container shipping supports this distribution function. The global economy has shifted towards reliance on China and the Far East as manufacturing bases (Jomthanachai et al., 2022; Lee et al., 2021). The COVID-19 pandemic, the Russo–Ukraine war, climate change, and geopolitics have increased risk, vulnerability, and financial and operational losses (Javorcik, 2020; Raj et al., 2022). However, countries accelerate their economic growth by exporting more with fewer imports (Tanasritunyakul, 2023).

Supply chain disruptions would have been less severe if firms had constructed more supply chain resilience (SCR). SCR is "the adaptive capability of a supply chain to prepare for and/or respond to disruptions, to make a timely and cost-effective recovery, and therefore progress to a post disruption state of operations – ideally, a better state than prior to the disruption" (Tukamuhabwa et al., 2015, p. 8). To enhance sustainability, firms have established a "micro supply chain" (decentralisation) or diversified their supplier base, reshored, and engaged in collaborative risk assessment and negotiations with partners (Chukwu et al., 2023; Panwar et al., 2022). To understand vulnerabilities (where risks lie), all tiers in the full global supply chain need mapping (Shih, 2020). This holistic pipeline involves sourcing, payment terms, Incoterms, third-party logistics (3PL) engagements (sea, rail, flight, and road), customs clearance, packing, transport, dispatch documentation, and information technology (Branch, 2008). However, few studies have examined holistic GSCM, especially in Thailand (Table 1). Being "more resilient" does not mean bringing manufacturing back home; instead, it redesigns the global value chain (Panwar et al., 2022), which maintains a balance between capabilities and vulnerabilities (Pettit et al., 2013). However, Pettit did not provide empirical evidence or an example to determine the best level, a situation addressed in this study.

A review of the extant literature reveals that firms are increasingly outsourcing, centralising distribution, reducing supplier bases, shifting to being buyer-driven, and integrating decisions across international networks (Table 1). In China, Liu et al. (2022) identified a sharp drop in logistics demand, a change in service mode, an increase in operating costs, and several unprofitable enterprises, in which information technology helped reform trends in logistics. Raj et al. (2022) stated that businesses adjusted rapidly to the new nature of shocks and returned to stockpiling (shifting away from just-in-time [JIT] manufacturing). Emerging economies have heightened their involvement in global trade and investment (Branch, 2008; Javorcik, 2020); however, they are more vulnerable to particular supply chain barriers such as bribery, corruption, and other unethical business practices (Chukwu et al., 2023; Tukamuhabwa et al., 2015). Therefore, more academic attention is required to address these issues.

Thailand has experienced rapid economic growth because it is a regional production hub (65% of GDP) (Jomthanachai et al., 2022; Wignaraja et al., 2010). The key export sectors include the automotive, food and beverage, smart electronics, textiles, and agriculture. The Department of International Trade Promotion predicts that Thailand's competitiveness in international trade will reach one in five by 2027[1]. The plan is to improve the transport infrastructure and facilities, customs clearance, and sustainability. The World Bank's Logistics Performance Index (LPI) stated that Thailand ranked 34th in the global market, and customs demonstrated the lowest performance (3.3 score). Limcharoen et al. (2017) believe Thailand is not ready for today's or tomorrow's competitive global supply chains. Thailand has faced severe disruption of logistics and transportation systems (Jomthanachai et al., 2022), where the following serious issues were left unsolved: (1) customs clearance processes and transparency; (2) institutional and regulatory links; (3) the potentialities of LSP; (4) small-sized ventures (knowledge, international experience, language skills, and resources); (5) government supports; (6) fair FTA; and (7) overly relying on foreign markets, particularly China (Apaitan et al., 2019; Jomthanachai et al., 2022; Liu et al., 2022; Tanasritunyakul, 2023; Wannaree, 2022; Wignaraja et al., 2010).

[1] https://www.ditp.go.th/en/post/about/about-ditp-thai

Table 1 Recent studies in global supply chain management

Authors	Topic	Method
Javorcik (2020)	SCR of post-COVID-19	Literature review
Shih (2020)	SCR of post-COVID-19	Literature review
Van Hoek (2020)	Resilient post-COVID-19 GSCM: Research gaps	Literature review, online seminars and roundtables, and interviews with supply chain executives
Wannaprasert and Choenkwan (2021) [Thai Article]	Impacts of the COVID-19 pandemic on ginger production	Field research: Government records, onsite observation, and semi-structured interviews
Kaeo-Tad et al. (2021) [Thai Article]	Resilient manufacturing of Thai automotive during COVID-19	A semi-structured interview of three companies of tier 1 automotive suppliers
Raj et al. (2022)	GSCM during and post-COVID-19, challenges, strategies, and policies in the network	Literature review, a survey of experts and academics, and grey-DEMTEL
Liu et al. (2022)	SCR of post-COVID-19: China's logistics industry	Literature review
Panwar et al. (2022)	SCR of post-COVID-19	Literature review
Tanasritunyakul (2023) [Thai Article]	Thailand's export post-COVID-19	Literature review and econometric model
Wannaree (2022) [Thai Article]	FTA of Thailand	A single case study with a semi-structured interview
Jomthanachai et al. (2022) [Thai Article]	GSCM vulnerability in COVID-19: Metric of risk and resilience	Coherent data envelopment analysis (CoDEA) method of six ASEAN countries
Chukwu et al. (2023)	Ethical supply chain	Literature review
Samutachak et al. (2025) [Thai Article]	Sufficient economic philosophy and sustainable resilience	Focus group discussions

In observing this phenomenon, Van Hoek (2020) stated the need for more empirical, event-based, and conceptual research, while Branch (2008) and Shih (2020) suggested mapping the supply chain pipeline (holistic view). Therefore, this study conducted a qualitative analysis to observe the holistic GSCM operations of Thai ventures. This covers the status, practices, challenges, and opportunities that ventures face. The research serves as a national direction for shaping policies to address issues related to enhancing resilience and sustainable competitiveness.

Methodology

The central objective of this study is to determine the holistic operations of the GSCM in Thai ventures, focusing on how they respond to change and foster sustainable growth. This study adopted a qualitative analysis to explore the full breadth of the phenomenon. The research design, findings, and discussion are structured according to Branch (2008).

Data Collection Approaches

The "semi-structured in-depth interview" was the most appropriate to collect data regarding beliefs, attitudes, and behaviour among case studies. This approach offers the freedom to modify questions based on the situation (Yin, 2009). The researchers obtained data from the head of the organisation as the firm's representative because they had authority over organisational strategies and operations (Banomyong & Supatn, 2011). For convenience, the respondents selected several interview methods, including face-to-face (site visits and video calls), telephone, chat, and email. Multiple interviews were conducted between March and December 2023 because information regarding government services was provided when the respondents felt more comfortable with the researchers. Banomyong and Supatn (2011) stated that firms in Thailand often perform more than one activity; for example, firms often operate both imports and exports, and LSPs are often both shippers and deal exclusively with shipping lines. Consequently, the interview questions were designed based on an analysis of the literature. The main questions were probed with sub-questions along with the respondents' discussions.

Interview Topics

The interview topics were as follows: (1) the profile of the respondents (including business type, size, product/service, performance, year of business operation, and customers); (2) the respondents' GSCM operations; (3) supplier selection criteria; (4) processes from placing an order to the arrival of goods; (5) technology (such as contacting suppliers, customers, or operating businesses); (6) criteria for choosing the LSP and transport modes; (7) Incoterms adopted; (8) L/Cs usage; (9) payment methods and currencies; (10) managing SCR during and after COVID-19 (anticipating, responding to, and recovering from disruptions); (11) problems in imports and exports; (12) feedback to customs and relevant government authorities (1 = poor, 2 = fair, 3 = good, 4 = very good, and 5 = excellent); (13) competitive SCR strategies and advice for new ventures; and (14) the future of Thailand's GSCM.

Data Analysis

The unit of analysis was the enterprise (or case) involved in the interviews. After the interview, answers were transcribed and grouped according to the major theme—the interview topic. Thus, thematic analysis, which inspects the text to look for relationships and marks similar passages using a code for further retrieval (Miles & Huberman, 1994),was adopted. Subsequently, the answers to each interview were carefully analysed and sorted into the developed subthemes to later count their scores (Appendix). This process uses "the content analysis method", which critically examines the main ideas and common themes of the content and identifies similarities and differences between cases (Yin, 2009).

Selecting Case Organisation and Piloting the Study

This study required in-depth information; therefore, a selective sampling strategy was adopted to only choose organisations that could support this research **(**Yin, 2009**)**. Initially, over 60 import- and export-oriented organisations with connections to Khon Kaen University were contacted. However, only 33 organisations participated in this full-scale study. To meet the generalisability requirements, the selected firms had a variety of products, operations, organisational sizes (small, medium, and large), sectors (public, private, community enterprise, and government), and tiers in the supply chain (manufacturers, importers, exporters, shipping agents, and customs brokers). Potential respondents were contacted through a call to explain the research objectives and processes and received all ethical documents before approval (HE653305). For confidentiality, all names, workplaces, and locations were anonymised, and sensitive information such as finances were excluded from this study.

Results and Discussion

Profile of Case Organisations and Their Operations

The 33 organisations in this study were small (21) and large (5), with 30 ventures, One community enterprise, and Two government authorities (Appendix). They were from industries such as food and beverage, healthcare products, furniture, and automobiles. Figure 1 presents the Thai GSCM pipeline, starting from the customer placing the purchase order to the arrival of goods after passing customs formalities. Goods flow and documents are represented by solid lines, whereas financial flow is represented by dotted lines.

Adapted from Author

The total lead time for import/export was approximately one month in China and three to four months in European countries during the COVID-19 pandemic (2019–2022). This was because (i) there were shortages in containers, workforce, and ships; (ii) suppliers had insufficient raw materials or had closed their factories; (iii) many countries were locked down; (iv) customs increased inspections of both goods and documents; and (v) ports were congested. The situation improved in 2023–2024, although it was only 50–70 percent compared to the pre-COVID-19 period. The economy gradually recovers and customers spend less money. Transport flow slightly improved, as shipping from China took 4–7 days and shipping from Europe took approximately one month.

Initially, customers select suitable foreign suppliers on the supplier's webpage and catalogue or the line application, exhibition, etc. Wholesale customers often contact suppliers directly. Retail customers use dealers/agents/intermediaries, which saves costs because agents share the costs of several purchase orders. The volume of purchases varies according to business size and customer demand. For instance**,** furniture shops purchase 1–50 million baht per order, Japanese Used Shop#1 purchases 90,000–100,000 baht per order, and dairy companies purchase 20–30 tons of materials per month (2 TEU). After the supplier checks the production capacity (for manufactured products) or products (for finished products), a

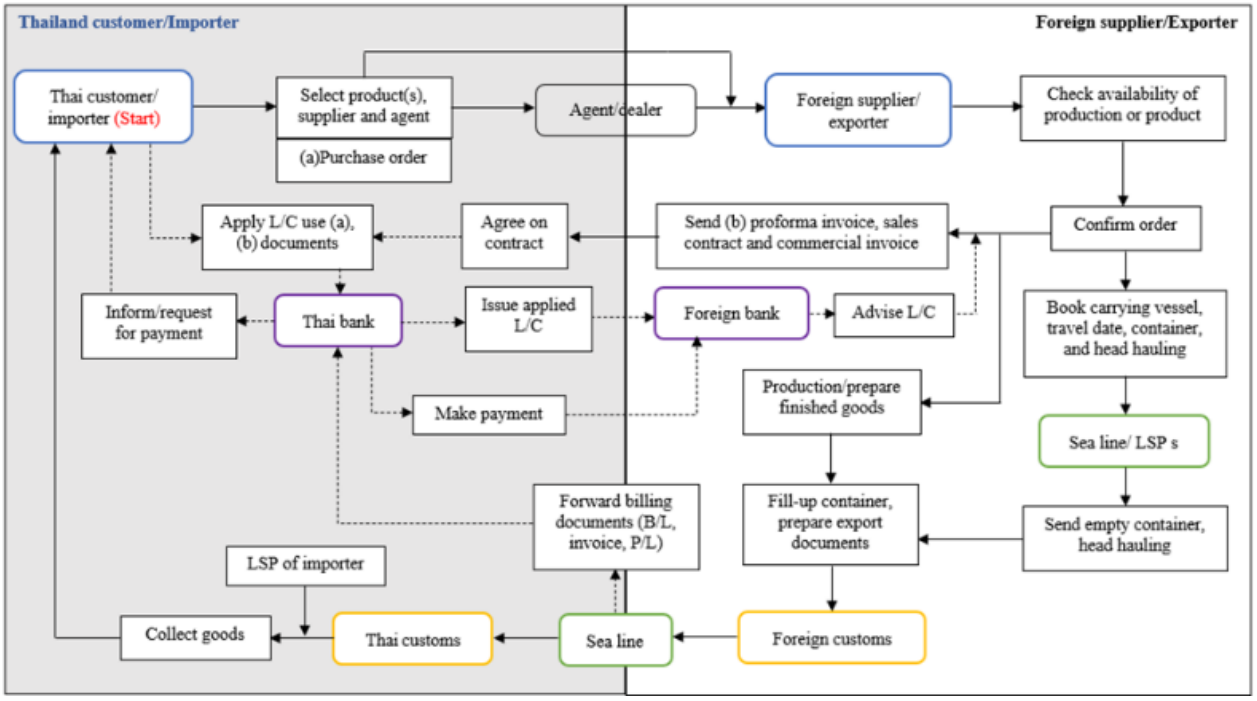


Figure 1 Pipeline of global supply chain processes (in case liabilities devolve at the port of origin)

pro forma invoice (a description of the goods and total payable amounts) is sent to the customer to make an ordering decision. The supplier then sends a contract of sale of goods and a commercial invoice for the customer's agreement via email or facsimile. For new business partners and/or many orders, the customer could request the Thai bank to issue an L/C to ensure safe payment. The Thai bank sends an L/C to an advisory bank located in the exporter's country to verify its authenticity and forwards it to the exporter. Later, the exporter starts production (e.g. purchasing raw materials and supplying labour) or prepares finished goods. Additionally, the supplier contacts the LSPs to book container(s) and carrying vessels (space) by informing them of the volume of goods shipped, travel date, container, head hauling, and ports of departure and destination. LSPs help complete export documents and customs because (i) customs processes and documents are very complicated and slow, (ii) customs rules are always changing, and (iii) imports/exports require contact with many government authorities, which is time-consuming. The supplier sends these documents, including invoices, packing lists, weight lists, certificates of origin, and insurance policies, to customers. Subsequently, the LSP delivers an empty container to be filled and moves it to a bonded area at the seaport for customs processing. Commonly, Thai Customs processes used paper systems but changed to electronic systems during and after COVID-19 to speed up the process and reduce exposure. However, there are urgent cases where paper documents can be submitted. Goods that passed these formalities were transported by ship to the destination port. During this period, the exporter presented documents (bills of lading, invoices, etc.) to the advising bank, which forwarded them to the issuing bank. The received documents were verified and payments were obtained from the importer. When goods arrived in the destination country, they were checked again. Therefore, the customer or (mostly) agent presents documents and makes payments for duties and taxes. Sometimes, the process took longer than expected because the cargo was physically examined and other supporting documents had to be presented. Finally, all cargo is sent to the customer.

Selecting Suppliers/Vendors, Mode of Transport, and Logistics Providers

Respondents primarily stated the quality of the product, followed by reasonable prices, as their key criteria for selecting vendors. The remaining were the reliability of suppliers, speed of transport, quality of services (such as ease of contact and provision of sufficient information), and products (such as products from the sources). The suit shop purchases ready-made suits from China because of their high quality, low price, and fast sea transport. The Wagyu restaurant selected

Kagoshima Wagyu beef from among Japanese farmers, the wholesaler imports malt and barley from Germany, and K-Pop shops contacted Korean agencies. Most respondents selected sea transport because of cost savings, shipping huge volumes of products, high price rates, vessels, and different departure times. Goods such as dried food, clothes, and medical devices are suitable for sea transport because they are non-perishable goods, heavy, inexpensive, and noncritical.

The cost of transporting a 40-foot container is 50,000–60,000 baht. Pickup trucks, trucks, and trains are often transported to Myanmar, Vietnam, Cambodia, Laos, Malaysia, and China because of land-based transport. Only a fishing net manufacturer (public company) had departments that processed customs documents and formalities using the LSPs only for transport and container checks during customs. Five respondents had used the same LSP for several years because of their long-term relationships, prices, and service quality (tracking, pick-up, and drop-off products). To diversify the risk of transport, such as delayed delivery caused by weather, respondents often used various LSP companies. LSPs believe that fast container tracking and responses to 24/7 customer services, good connections with customs, and expertise in customs laws, documents, and processes are their strengths.

Letter of Credit and Incoterms

L/C is required, although trading partners have long-term relationships when (i) the purchase volume is high and (ii) it is a universal condition for some products, such as raw materials, to produce animal feed. Concerning Incoterms, suppliers generally presented all costs of these terms and approved their selection. For example, the UK offers a wide range of Incoterms to Thai dealers. The main Incoterms used are as follows (the number of respondents is in parentheses): FOB (15), CIF (11), DDP (10), Ex-Work (6), and CFR (4). The FOB is the most widely accepted because of its convenience and fair responsibility sharing (fair agreement), and the importer can select transportation companies. The suit shop selected ex-work to transport suits from a Chinese factory to Thailand because there was a reliable LSP and the total cost was cheaper than other terms. Laos' timber suppliers offer DDP because it reduces the risk of legal non-compliance and difficulties in customs processes. The laboratory equipment shop preferred CIF because the seller handled outbound activities, whereas the shop only managed inbound customs clearance. CIF helps calculate product costs immediately as: cost = "weight (cost of transport) + exchange rate + profit gained". CFR was the least used because of the difficulty in tracking the shipment status.

Effects of COVID-19 and Future Direction

Many ports closed during the pandemic; therefore, ventures moved to open ports, which led to higher congestion. Volumes of sea lines/airlines, containers, imports, and exports decreased. Additionally, the pandemic reduced the demand for furniture and timber shops. This was except for the pottery manufacturer, which made yearly agreements with customers in advance, and Korean online shops, which quarantined increased online shopping. After COVID-19, the economy started recovering in the market, but free trade increased competition. Medical Equipment Shop#2 stated, "*Many Chinese suppliers have established their businesses in Thailand. They sell the same products as Thailand at lower prices because China owns the supplies and production. Therefore, Thailand should establish barriers for China*". In the view of the meat producer, "*The world has increased free trade for product distribution and modern technology. Transporting goods from China to Thailand takes only one* to *two days. Increased free trade has also resulted in high competition, and businesses with good control could survive*". Most of the respondents indicated that Thailand should establish trade barriers with China. However, dairy authorities, furniture shops, and beverage shops could not forecast their future because of uncertain factors such as changes in government, FTA, fluctuations in global trade, the world economy, and technological shifts. A Taiwanese restaurant said, "*The future of our business is difficult to answer when there are still bribes in Thailand*".

Feedback for Thai Government, Especially Thai Customs

Some respondents are satisfied with the Thai government. They are Medical Equipment Shop#2, meat producers, and community enterprises, which received support and tax deductions according to national policy. Others did not contact customs directly because of the use of LSP. The dairy authority, which is also a governmental authority, cannot provide negative feedback regarding Thai Customs. Timber shops, Taiwanese restaurants, and dairy companies pay police and customs for container releases. Seventeen respondents stated that customs were unsupportive, non-transparent, slow, inconvenient, used complicated documents, highly paper-based, confusing rules, and often increasing/changing tax rates (the previous tax was 50,000 baht per container; now it is 100,000–200,000 baht). Increasing tax rates shift the prices of imported products, affecting customer decisions and lowering competitiveness. Customs hotlines closed on weekends, did not support import/export that worked 24/7. Medical Equipment Shop#2

effectively summarised "*You will be lucky if you can find helpful officers. If customs respond to their duties, many businesses will not need to use LSP, which wastes money. Increasing cost savings can sustain our global competitiveness*".

Radical change in customs is essential in the following: (i) a service without fraud and bribes, (ii) having an effective hotline after working hours or more contact channels, (iii) supporting document proof, (iv) mandating clear legal issues and tax rates, (v) reducing redundant/unnecessary processes or documents, (vi) providing specific measures to support small ventures, not only large-size companies, (v) having knowledgeable officers with service mindsets, (vi) operating faster services, (vii) establishing effective technology for document processing and contacts, and (viii) addressing ineffective legal processes (e.g. Incoterms and L/C).

The Perspectives of Three Customs Officers

Three customs technical officers verified economic improvements, which is reflected by an increase (80%–90%) in the volumes of containers for customs formalities compared to the pre-COVID-19 period. Concerning Incoterms, importers often used CIF, whereas exporters selected FOB based on cost management and convenience. Customs have no research data on whether Thai ventures perform customs formalities themselves or through shipping agents. The participants agreed on a four-point scale regarding the efficiency of Thai Customs. This implies that the services and transparency of Thai Customs are satisfactory; however, improvements are recommended, particularly in technological development. According to customs research conducted in 2017, the "Time Release Study", the clearance process time for "Green" channels (exempt from inspecting goods) is only one minute. Finally, officers confirmed that Thai government seaports were as efficient as private ports. They did not know about the LPI and did not expose any fraud that would halt national development.

Practical Contribution

The supply chain pipeline

Product quality is the criterion for vendor selection, as mentioned by the respondents (Banomyong & Supatn, 2011). Another important criterion is the specialisation of the supplier and/or nation and their long-term quality development. The price factor has led Thai people to select Chinese products because Thailand is a manufacturing base (Javorcik, 2020; Jomthanachai et al., 2022). As understood by Thai ventures, LSP and 3PL are common names for (i) freight transport; (ii) transport (+ warehouse, haulage, containers, and sea line space booking); and (iii) customs brokers or shipping. Knowing the current status of their assets and vulnerable suppliers, there is sufficient time to develop countermeasures against potential failures according to supply chain agility (Tukamuhabwa et al., 2015). When ventures perceive complex customs and FTA procedures, they employ the services of experienced brokers (Wignaraja et al., 2010). To improve the business environment, customs should: (1) make procedures clearer, quicker, and more transparent; (2) treat firms equally; and (3) organise a user-friendly online workshop.

This study employs five major terms (FOB, CIF, Ex-Work, and DDP). Commonly, businesses, trade partners, and LSPs select Incoterms. Cost, convenience, and international experience played major roles in the selection. For the widely used FOB, the pottery manufacturer explained that US wholesale customers want to choose their shipping company to later distribute to several ports of destination. Further explanations of customs and ventures are provided (Figure 2). 1) Thai exporters/sellers selected FOB because the seller (Thai exporter) is responsible for transporting goods to the port of shipment (often Laem Chabang port). Therefore, other responsibilities, such as freight charges, insurance, import duty, taxes, and customs clearance which Thai exporters were unfamiliar with, belonged to the buyers. 2) Thai importers/buyers often use the CIF because they take responsibility mainly from the delivery port (mostly Laem Chabang port) for their firms, which often uses customs brokers to facilitate customs clearance services.

Small businesses could survive

Apaitan et al. (2019) state that a small number of successful export firms in Thailand are large businesses or multinationals. In the UK and China, larger companies apply risk management practices more efficiently (Liu et al., 2022). Export-oriented firms may achieve resilience through supply chain adjustments. Conversely, firms dependent on imported inputs or focused on domestic markets may struggle to compete with Chinese firms, potentially leading to their market exit. However, the small firms in this study, such as the pottery manufacturer and fish farm, were as successful as the large firms, and the COVID-19 pandemic did not cause significant export failure. A high level of venture experience can help to address various changes and diversified risks, including market trends, customer demands, customs formalities, and import/export processes. According to Van Hoek (2020), improving SCR requires focusing on the internal factors of the supply chain, including control, demand, and supply risks. When facing supplier stock shortages, long-term collaboration between suppliers and customers has led suppliers to secure a sufficient supply (Javorcik, 2020; Pettit et



Incoterms	Export Packaging	Loading Charges	Delivery to Port	Export Duty, Taxes Customs Clearance	Origin Terminal Handling Charges	Loading on Carriage	Freight Charges	Insurance	Destination Terminal Handling Charges	Delivery to Destination	Unloading at destination	Import Duty, Taxes & Customs Clearance
FOB	Seller	Seller	Seller	Seller	Seller	Seller	Buyer	*Negotiable*	Buyer	Buyer	Buyer	Buyer
CIF	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Buyer	Buyer	Buyer	Buyer

Figure 2 Application of Incoterms through Thai ventures
Adapted from https://forceget.com and https://guidedimports.com

al., 2013; Tukamuhabwa et al., 2015). Therefore, Thailand has high export survival for total merchandise and its product subcategories, and a high level of export diversification (Tanasritunyakul, 2023). Importantly, this study proves that the following external GSCM factors have a greater impact on building long-term SCR in Thai ventures: (i) transparent government and customs practices, (ii) reducing threats posed by FTA, (iii) adopting a self-reliance approach, and (iv) operating as ethical and honest businesses.

The government can increase the competitiveness of small firms by: (1) restructuring tariffs that are unnecessarily high and distorted (e.g. auto parts and garments), (2) ensuring international technology transfer, (3) promoting R&D, and (4) supporting industrial clusters (Wignaraja et al., 2010, p. 20). Ethical resilience can position organisations during crises and create a more responsible, sustainable business ecosystem (Chukwu et al., 2023). However, these external factors have scarcely been discussed in previous studies. Concerning customs performance, a dairy company representative stated, "*Actually, Thai Customs management have global standards, such as inspection processes, knowledgeable human resources, infrastructure, and equipment, as efficient as other countries. Only 'corruption' degrades Thai's creditability in the world market*". Clearly, most studies conducted during and after the COVID-19 pandemic have only highlighted "crisis management" to address immediate problems, but not "corruption". The lessons learned from low-corruption countries, such as Singapore, indicate that anyone found guilty of corruption must be punished, and the anti-corruption agency must be incorruptible (Quah, 1988). Thailand requires structural changes not only among policymakers but also in its laws and regulations. Nitiyavanich (2015) noted that Thailand should revise its laws to address fraudulent practices in commercial contracts.

Theoretical Contribution

Sustained by Buddhist economics

To pursue extreme economic growth, several GSCM strategies have been adopted to access inexpensive raw materials, labour, and larger markets, which ultimately increases the risk of an unsustainable supply chain. The pandemic calls for building SCR by increasing domestic production and employment (Shih, 2020), enhancing collaborative business interactions (Raj et al., 2022), and fixing market failure through public policies (Javorcik, 2020). However, the root cause of Western materialism, "unlimited greed for maximising profit", remains unsolved.

This study presents the Buddhist economic concept proposed by Schumacher (1973). This philosophy focuses on sustainable sufficiency, opposing the Western culture of consumerism and encouraging material abundance at unsustainable levels. Schumacher highlighted "simplicity", or as he phrased it, "to obtain the maximum of well-being with the minimum of consumption". A more rational approach is small-scale production using local resources for local needs rather than dependence on imports and exports to unknown people (Schumacher, 1973, p. 36). Therefore, the best level of resilience, as suggested by Pettit et al. (2013), can be achieved through shorter GSCMs, appropriately sized businesses (for effective manageability), and increased local employment. Thailand has promoted the SEP, a branch of Buddhist Economics (Contipelli & Picciau, 2020). This philosophy focuses on moderation, rationality, and prudence (or the need for a self-immune mechanism to provide sufficient protection from the effects of both internal and external changes). The final aim of SEP is to build social immunity against extreme

consumerism, shocks (e.g. economic crises and outbreaks), and environmental degradation (Contipelli & Picciau, 2020).

Many studies have observed sufficient behaviours in various contexts and verified how they are widely adopted. During the COVID-19 pandemic, the Arab Gulf States found that foreign farmland investment strategies failed (Woertz, 2020), contradicting the sufficiency concept. Conversely, Thai people can still secure essential items to maintain their livelihood through balanced consumption, prudent planning, and social cooperation (Samutachak et al., 2025). Many Thai villages have agricultural potential (Wannaprasert & Choenkwan, 2021). Thailand requires better systems to monitor food security challenges and risk management more frequently. In Nepal, to relieve natural disasters, the Buddhist religion has also helped Nepalese live in harmony and seek support from others (Siawsh et al., 2021). To promote sufficiency, European legislation has encouraged significant recycling in the car industry, higher levies on landfill waste, and VAT reduction in low-value consumer goods repairs (Bocken et al., 2022). Policies penalise marketing, which leads to overconsumption and taxing of unsustainable industries (e.g. aviation, livestock) (Bocken et al., 2022).

Being less dependent on China

To reduce their dependence on China, firms should replace imported intermediates with local products. Reshoring (domestic self-sufficiency) is possible in Thailand because of several strengths, including a daily minimum wage, diverse skillsets, strategic locations, export performance, and a favourable business environment. However, several issues need to be addressed: (1) improving FTA (existing labour regulation, venture assistant programs, and digitalisation (Wannaree, 2022; Wignaraja et al., 2010); (2) minimising disruptions in logistics and transportation systems (Jomthanachai et al., 2022); and (3) improving inefficient government management (Tanasritunyakul, 2023). Thailand should answer these questions: (1) what distinguishes China from Thailand? and (2) can Thailand be considered self-sufficient? While Thai manufacturing firms consider quality improvement (driven by an innovative culture) their most important competitive priority, Chinese firms focus on delivery, followed by customer focus (Phusavat & Kanchana, 2007). Thailand lacks local ownership and consistency in promoting domestic value added (Lee et al., 2021). Other factors welcoming China to the world workshop include reform policies, foreign direct investment, domestic labour mobility, and exporting their brand names (Li & Chen, 2006). Therefore, Thai firms should: (1) market and sell products from their brands, which is supported by their R&D capabilities and sales force (Li & Chen, 2006); (2) operate abroad to enhance the international competitiveness of their brand and gain international business expertise, technology, and brand influence (Li & Chen, 2006); and (3) challenge more innovation by creating and facilitating knowledge among workers and effectively managing human capital (Phusavat & Kanchana, 2007). The government should improve the business environment, especially trade facilitation (Tanasritunyakul, 2023), by: (1) providing supportive policies with aggressive firm-level responses to in-house technological efforts (Lee et al., 2021); (2) strengthening individual and community resilience and promoting prudent borrowing habits/financial literacy (Samutachak et al., 2025); 3) increasing collaboration among businesses, government organisations, and educational institutions to develop technology and innovation (Kaeo-Tad et al., 2021); (4) building international cooperation to address urgent problems during crises; and (5) developing a commitment to fair treatment, stable and transparent rules, and investor-friendly attitudes (Javorcik, 2020).

Conclusion

This study investigated the current performance of Thai businesses in the global market. Using a qualitative analysis approach, 33 organisations were observed. Most respondents had extensive experience in imports and exports; therefore, COVID-19 only minimally impacted their operations. However, the pandemic requires an accelerated transition to a more sustainable society (Contipelli & Picciau, 2020). Figure 3 presents a sufficient GSCM that firms should monitor holistically to identify potential risks (Van Hoek, 2020), as well as consider internal and external factors. Business should strengthen: (1) their ethics that sustain strong relationships among business partners; (2) the supply chain experience, which allows for better preparedness for and/or response to disruptions; and (3) innovative expertise to be less reliant on China (Chukwu et al., 2023; Samutachak et al., 2025). Greater transparency and effectiveness of the Thai government, customs, and FTA are essential. This is grounded in the Buddhist SEP concept (moderation, rationality, and prudence) to examine the shocks from crises (Contipelli & Picciau, 2020). SEP contributes to building self-sufficiency and leads to sustainable growth.

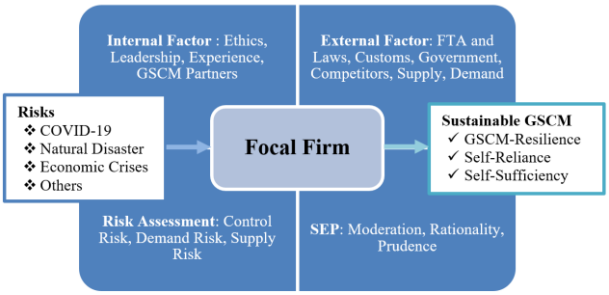


Figure 3 Sufficient global supply chain management
Adapted from Author.

Future Research and Limitations

Future research should observe customs operations if possible. Thailand (ventures and customs) and other countries with a higher LPI should be benchmarked to identify GSCM strategies and opportunities for Thailand. Scholars should integrate disciplines, including law, internal audits, logistics and supply chains, and marketing, to identify this phenomenon. For new ventures, respondents provided useful recommendations: (i) having sufficient finance/budget; (ii) having a good understanding of products, businesses, trends, demand, and competitors; (iii) carefully selecting good/reliable suppliers or dealers, locations, and LSP; (iv) choosing an appropriate mode of transport; (v) designing creative products and services; (vi) understanding customs processes and documents; (vii) ordering from a source that is cheaper; (viii) establishing long-term business alliances; and (vi) being ethical. The key limitation of this study is the lack of access to government information, as many customs offices did not want to be involved. Therefore, the validity of information from this tier is reduced.

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Appendix

Table 1 Results of interviews of 32 case organisations (not including customs office)

Organisation	Supplier Selection	Supplier	Trend (last 5 years)	Logistics Related Problem	Incoterm	L/C	Gov Score (1–5)	Advice for New Ventures
1. Taiwanese restaurant (s) [Im]	PQRS	China and Taiwan	Based on China's manoeuvre	Customs bribes	DDP	No (use cash)	0 Customs	Ensure good supplier selection
2. K-pop shop (s) [Im]	Q	K-town, Hanteo, Apple Music	COVID-19: sales drop	Stock shortage	CIF, DDP	Yes (credit)	2 Customs	Manage delivery delays. Build customer trust
3. Hotpot restaurant (s) [Im]	Q	Factory in China or intermediary	N/A	Stock shortage	CIF	No (use cash)	3 Customs	Select reliable suppliers
4. Medical equipment shop#1 (s) [Im]	No	Sweden, China (Mostly)	Unchanged	Delayed flights	FOB, Ex-work	No (Swift)	4 Customs FDA Excise TISI MOPH	Mitigate supplier stock shortage. Reduce freight cost. Obtain appropriate import/export documentation. Know trade laws and policy changes
5. Medical equipment shop#2 (s) [Im]	Q	Thai, China, Japan Taiwan	Unchanged	Delayed flights	FOB	No (cash, credit)	3 FDA MOPH	Faster transport. Customs container release issues
6. Laboratory equipment shop (s) [Im]	R	China, Japan Australia, the US, the UK, Germany	Unchanged	Wrong goods, complicated processes	CIF	No (cash, credit)	3 Customs	Check difficulties in importing chemical products
7. Furniture shop (s) [Im]	QR	Furniture manufacturing factory in Thailand	COVID-19: sales drop	Currency fluctuation, customs delay, closed country	Ex-work, DDP	Yes (check)	0 Customs DBA DITP	Know currency fluctuation
8. Meat producer (l) [Ex]	PQR	Duck King, contracted farmers	COVID-19: sales drop	Trade barriers, transport costs, insufficient cargo	FOB, CIF, Ex-Work, DDP	Yes (cash)	4 Customs 5 DLD	Know high fuel and raw material prices
9. Fish farm (s) [Im]	R	Omosako koi farm, Sakai fish farm	COVID-19: minor impact	Flight delay, damaged goods	DDP	No (use cash)	0 Customs	Use LSP (documents, contact government)
10. Shipping company (l) [LSP]	P	No	COVID-19: minor impact	N/A	No	No N/A	5 DOA Customs FDA	Manage transshipment damages
11. Community enterprise (s) [Ex]	PQ	Fish Farm Pathum Thani, Ayutthaya	N/A	Customs delay	FOB	No (use cash)	4.5/5	N/A

Table 1 (Continued)

Organisation	Supplier Selection	Supplier	Trend (last 5 years)	Logistics Related Problem	Incoterm	L/C	Gov Score (1–5)	Advice for New Ventures
12. Timber shop (s) [Im]	PQRS	Wood companies in Laos	COVID-19: sales drop	No	DDP	No (use cash)	5 Customs 4 Forestry	Reduce transport costs. Have a warehouse
13. Wagyu restaurant (s) [Im]	Q	Nexus (Thailand)	N/ A	Close country, substitute produces, low demand	DDP	No (use cash)	1 Thai gov	N/A
14. Suit shop (s) [Im]	Q	Factory in China	COVID-19: delay delivery	No	Ex-work	No (use Cash)	0 Customs RD EPA	Manage delivery delays
15. Japanese used shop#1 (s) [Im]	No	Supplier in Japan	COVID-19: minor impact	No	CIF	No (use cash)	First gave 5, finally gave 3 Customs RD SAO	Ensure good supply chain alliance
16. Dairy authority (Gov) [Ex]	Q	Contracted cow farmers	COVID-19: sales drop	Delayed ship	FOB	No (use cash)	5 DLD MOPH	Avoid inventory overstock of milk
17. Beverage shop (s) [Im]	R	Bangkok Beer & beverage	N/A	Customs bribes	DDP	No (use cash)	2 Excise municipality MOPH	N/A
18. Shipping freelance (s) [LSP]	---	---	COVID-19: shortage	From a foreign country–China customs	FOB, CFR	---	4.5 (no problems found)	Build a strong customer base. Compare shipping cost
19. Big bike shop (s) [Im]	(not head office)	UK	COVID-19: shortage	Increasing import tax reduces sales volume	Many terms	No (bank guarantee)	N/A	N/A
20. Processed fruits exporter (s) [Ex]	P	In Thailand	N/A	Customs did not facilitate export	CIF, FOB	No (use cash)	0 Customs	Ensure compliance with regulatory and packaging standards. Acquire all import/export documentation.
21. Used cloth shop (s) [Im]	Q, P, R	Japan	COVID-19: higher cost	Quality of goods imported	N/A	No (use cash)	N/A	Select reliable suppliers
22. Sewing machine shop (s) [Im]	From main dealer	Germany, China	COVID-19: delay delivery	Few problems found	FOB	N/A	4.5 Customs	Select competent freight forwarders
23. Used car showroom (s) [Im]	Jeep and other brands	US, Japan, Germany, etc.	COVID-19: longer transport	Increase import tax	FOB and CIF	N/A	N/A	N/A
24. Pottery manufacturer (s) [Ex]	---	---	COVID-19: no ship, container	N/A	FOB	No (use cash)	N/A	N/A

Table 1 (Continued)

Organisation	Supplier Selection	Supplier	Trend (last 5 years)	Logistics Related Problem	Incoterm	L/C	Gov Score (1–5)	Advice for New Ventures
25. Korean online shop (s) [Im]	Interesting product	Korea	COVID-19: sales increase	Delayed service of Customs	CFR	No (use cash)	2 Customs	Build customer trust
26. Japanese used shop#2 (s) [Im]	N/A	Japan	COVID-19: higher cost	Increase container tax	N/A	N/A	2–3 Customs	Focus on a small category of product
27. Malt barley wholesaler (s) [Im]	P, S	Germany	COVID-19: no container	N/A	FOB, CIF	T/T	N/A	N/A
28. Customs broker (s) [LSP]	---	---	COVID-19: no ship, container	Increase container tax	Ex-work, FOB, CIF, DDP		3 Customs	
29. Bangkok LSP (s) [LSP]	---	---	COVID-19: no ship, container	Increases in container tax and fuels, insufficient ships	Ex-work, FOB, CIF, DDP		2 Customs	
30. Fishing net manufacturer (s) [Ex]	Near river, sea	(Not exporter)	COVID-19: delay transport	Delay and tracking	FOB, CIF, CFR	No (T/T D/A D/P)	3 Customs	Select reliable suppliers
31. Airplane parts exporter (s) [Ex]		(Not exporter)	COVID-19: no purchase order	-	FOB	Yes (new trading)	2.5 Customs	Ensure compliance with regulatory standards, packaging standards, and import/export documentation
32. Dairy Company (l) [Im, Ex]	Q, Pre-test	USA, NZ, China, India, Argentina	COVID-19: zone quarantine	Customs bribes. Wrong plant's profile. Frequent legal changes	CFR	Yes (new trading)	3 Customs	Have adequate knowledge of foreign trade laws and shipping expenses

Note: Size (s, m, l), Im–Import-oriented firm, Ex Export-oriented firm, LSP Logistics Service Provider

Supplier selection: P-Price Q-Quality R-Reliability T-Transport S-Service and easy contact

---Respondents did not participate in activity

No (use cash) means respondents do not use an L/C but are required to pay deposits or make prepayments in full, for example, bank transfers.