

MITIGATING SUPPLIER VULNERABILITIES TO IMPROVE SUPPLY CHAIN RESILIENCE

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ABSTRACT

Purpose: After the shocks from the coronavirus pandemic were over, supply chain resilience has been proposed by experts to help businesses and their supply chains to better prepare, better respond, and better recover from the next disruptions within short timeframe. All stakeholders along the chain are equally vital to build a resilient supply chain. To the best of the authors' knowledge, however, almost all studies have built the supply chain resilience through the lens of buyers, where numerous vulnerabilities around the buyers including suppliers as sources of supply have been pinpointed. Resilient initiatives have then been strategised for buyers to eliminate vulnerabilities in their networks (e.g. multi-sourcing and diversifying supplier base). Despite the significant improvement on resilience, these initiatives do not create business-friendly environment with suppliers. The aims of the paper are to look into increasing the resilience capability from the perspective of suppliers. Vulnerabilities of suppliers are analysed, identified, and alleviated through the proposed framework. This is to mitigate supply chain risks created by suppliers. This is to ensure building the resilient supply chain while also maintaining the supplier businesses.

Design/methodology/approach: A case of cross-border supply chain from Thailand to Laos is chosen for this action research study. International trade from Thailand are crucial to drive Laos economic growth and uplift the living standards of population. The research team works with key practitioners in developing the framework for analysing and identifying vulnerabilities of Thai suppliers. Then, the developed framework is validated with actual cross-border supply chains. Mitigation action plans are recommended to increase supplier resilience capacity.

Findings: The developed framework is able to identify vulnerabilities of Thai suppliers. Mitigating supplier vulnerabilities improve reliability and resilience capacity of Thai suppliers. Cross-border supply chain risks can eventually be mitigated.

Originality/value: This paper is among the first to put efforts in improving the supply chain resilience from the perspective of suppliers. Mitigating supplier vulnerabilities can reduce cross-border supply chain risks. Supply chain can be more resilient on one hand. Supplier can maintain their businesses on the other hand.

Keywords: Supplier vulnerability, Supply chain resilience, Risk mitigation, Risk identification, Cross-border supply chain

Introduction

A cross-border supply chain comprises a series of value-added processes and activities (Yan *et al.*, 2020) conducted by different actors (or stakeholders) along the chain including manufacturers, shippers, suppliers (i.e. tier-1, tier-2, and so on), distributors, exporters, traders, and service providers of an exporting country as well as buyers (i.e. including importers, firms, retailers, markets, and final consumers) of an importing country. Figure 1 maps the cross-border supply chain.

The supply chain is as strong as its weakest link (Jazdzewska-Gutta and Borkowski, 2022). It has been observed that one of the most vulnerabilities (or the weakest links) in the cross-border supply chain is the cross-border supplier (i.e. supplier tier-1 in figure 1) who deals with distributing commodities across the border. Over the past few years, the cross-border supply chains and their suppliers have been impacted by numerous uncertainties, risks, and catastrophes such as the coronavirus pandemic, disasters, political tensions, and global economic recessions. Consequently, more complexities of mobilisation, especially when crossing the border, have been remarked. Some borders were temporarily closed and disrupted.

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