

บทความรับเชิญ

Invited article

From Efficiency to Indispensability: Rethinking Supplier Resilience

What smaller export-oriented countries can learn from Thailand's GVC experience

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Abstract

Resilience has become one of the most invoked concepts in economic policy, yet it means different things to different actors. This article develops a framework for supplier resilience — the form of resilience available to smaller, export-oriented economies whose prosperity depends on participation in chains governed by lead firms headquartered elsewhere. It argues that supplier resilience requires three levels to work together: individual firms, global value chain (GVC) structure, and state policy.

Applying this framework to Thailand, the article shows that cost-based positioning is no longer sufficient in an era of geopolitical fragmentation. Building supplier resilience requires three forms of intelligence in concert: geoeconomic intelligence, GVC intelligence, and domestic capability mapping—all translated into resilience-creating value. Thailand's automotive sector illustrates the cost of misalignment: state policy attracted foreign electric vehicle manufacturers without building domestic supplier capability, weakening rather than deepening structural indispensability. The argument extends to any smaller economy navigating the era of geopolitical tensions. The alignment of resilience at the three levels is critical. The question is no longer whether you can join a global chain. It is whether others can do without you.

Keywords: Global Value Chains, Resilience, Supplier Resilience, Thailand

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This article began with what sounded like the most generous of invitations. Associate Professor Dr. Nitida Sangsingkeo, the Editor of this journal, asked if I would contribute a piece—on any topic, in any style, at any length, and in any language I chose. I was genuinely touched by the trust she had in me, yet I quickly realised that a decline was not really an option.

Then I sat down to write, when the hard deadline approached and her messages to me became more frequent.

As anyone who has ever faced a blank page with no constraints will recognise, total freedom turns out to be its own kind of difficulty. I went through many ideas before landing on the topic that felt most relevant to my work.

That word is *resilience*.

We hear it everywhere, but rarely examine what it means with any precision. Government strategies invoke it. Corporate reports promise it. International organisations fund programmes in its name. Yet when you press for a concrete answer to the question ‘resilient for whom: companies, industries, or countries?’, the answers tend to differ. This article is an attempt to provide a framework that allows us to unpack the concept. It draws on my own research on global value chains and international business strategy, but I hope that it can be useful for anyone who is interested in figuring out what resilience actually means for Thailand, and for the people making policies or running businesses here.

A system built for a world that no longer exists

Let me start with Thailand’s economic development story that is still unfinished.

For most of the past thirty years, Thailand did something genuinely impressive. Following the success of its East Asian neighbour’s, Hong Kong, Singapore, South Korea, and Taiwan, Thailand adopted an export-led development model, welcoming foreign direct investment and inserting itself into the global economy not just as a market, but as a production hub in key export sectors. The world’s leading multinationals in electronics, automotive, and hard disk drives chose Thailand as a place to make things. Seagate, Western Digital, Nissan, Toyota, Honda did not come to Thailand because Thai firms built these industries. They came because Thailand offered what they needed: reliable infrastructure, a skilled workforce, political stability, and a competitive cost base. Their overall production

networks can be split into different sections and relocated to countries that can best accomplish those tasks.

The logic underpinning all of this was efficiency. Find the best location for each stage of production, connect those locations through trade and investment, and the entire system becomes more productive than any single country could be on its own. This is the organising idea behind the global value chain (GVC) literature, which examines how the activities required to produce a good or service, from conception and design through production, marketing, distribution, and after-sales services, are fragmented and distributed across firms and countries (Gereffi & Fernandez-Stark, 2016). Thailand played this game well, and the results showed in export revenues and in the rise of foreign direct investment (FDI). By the late 1980s, Thailand was among the fastest-growing economies in the world, and one of the most important destinations for foreign investment. The country became a crucial production base for many of the global industries mentioned above.

Resilience, in this world, was largely an afterthought. The assumption was that an efficient global system would also be a resilient one: if one node failed, others would step in. Disruptions were treated as temporary frictions, not structural vulnerabilities.

Then came a sequence of events that challenged this assumption. Shortages of many products during COVID-19 revealed how fragile concentrated supply chains could be. The US-China trade tensions raised concerns about locations of production. Russia's invasion of Ukraine, and now the US-Iran war, highlighted the significance of energy security and critical chokepoints. Each of these, in different ways, demonstrated that efficiency and resilience are not the same thing. Security-driven resilience for Iran, demonstrated by its control over the Strait of Hormuz, sent shock waves along the value chain of energy, food, petrochemicals, and beyond. Similarly, President Trump's quest for resilience in the US through high tariffs and calls for reshoring hurts firms located in Thailand as their products exported to the US become more expensive or the factories that produce them risk being closed down as multinational headquarters consider relocation.

That is the world Thailand is navigating right now. And it is why resilience, properly understood, matters more than ever.

Resilience decoded: why the same word means different things at different levels

Resilience is not a one-dimensional concept. In general, it implies the ability of an organisation or a system to plan, absorb, sustain, and adapt to shocks and disruptions. Understanding resilience requires looking at different levels within an economy. These span individual firms, the structure of global value chains, and the policies of the state.

Drawing on my work with Gary Gereffi and Torben Pedersen (Gereffi et al., 2022), we argue that resilience operates at three distinct levels simultaneously. The strategies appropriate to each level differ fundamentally. But the alignment and interplay among all three levels is no less consequential.

At the level of individual firms, resilience is primarily operational. It is the ability to absorb a disruption and restore normal functioning as quickly as possible. Timing matters: how fast can a firm resume normal operations after a shock? Robustness matters too — how well the firm holds up while the shock is happening (Miroudot, 2020). After the 2011 floods in Thailand wiped out nearly half of global hard disk drive production within weeks, the firms that recovered fastest were those with backup suppliers, inventory buffers, and flexible logistics. This kind of resilience is real and important. But it is also limited. A firm can be operationally agile and still find that the position it bounced back to is weaker than the one it started from when the context changes.

It is worth noting that Thailand's role as a supplier in globally integrated chains extends well beyond manufacturing. Tourism feeds into global travel and hospitality chains. Agriculture and seafood supply global food chains led by multinational retailers. Even services such as healthcare and education are increasingly part of cross-border networks. In all of these, Thailand is a supplier. Its position depends on decisions made by lead firms headquartered elsewhere. It is always potentially substitutable. This is the common structural condition across all sectors. This is why I refer to this firm-level concept as supplier resilience. While this article draws primarily on Thailand's manufacturing GVC experience, the logic of supplier resilience applies wherever Thailand participates in globally integrated production, service, or commodity networks.

At the GVC level, resilience looks different. It is about the configuration of activities along the chain. The focus is not on individual firms per se. It is on whether the value chain as a whole can sustain shocks that travel through multiple players across different geographies.

The choices that lead firms make about where to source key inputs, and whether alternative suppliers exist, determine how resilient the chain is.

The contrast between rubber gloves and face masks during COVID-19 illustrates this clearly (Gereffi et al., 2022). Face mask supply collapsed because production had migrated almost entirely to China in pursuit of cost efficiency, leaving no alternative supply base when exports were disrupted. Rubber gloves, by contrast, remained available. The supply chain was strained but not broken. This was because rubber plantations, latex processing, and glove manufacturing companies across Malaysia and Thailand had created a supply base with depth. The resilience came not from diversification, but from accumulated capability embedded in a regionally integrated chain that no alternative supplier could quickly replicate.

At the level of the state, resilience is about policy. It is the capacity of governments to shape the terms on which their economies participate in global production networks. States can use economic power to push home-country interests and to coerce others (Farrell & Newman, 2019). When national security concerns dominate, states restrict access for foreign firms, impose tariffs, and build barriers around what they consider strategic industries. But this is where the distinction between large and small economies becomes decisive. Powerful states can restructure global chains to serve their own resilience interests. They can reshore, friend-shore, and subsidise at a scale that distorts global markets. Smaller, export-oriented states cannot. They have neither the market size nor the fiscal capacity. Their resilience strategy must operate within the logic of global integration, not against it.

Given these differences, resilience cannot mean the same thing for all stakeholders. It reflects the interplay among the ability of firms, the flexibility of GVC governance, and the capacity of the state. Understanding resilience requires looking at all three together.

The mistake made by most current policy advice is to conflate these levels. The common debates on resilience take the state-level, security-driven logic, developed by superpowers for superpowers, and apply it wholesale to firms and countries for whom it simply does not fit. Moreover, resilience is not a static concept. It is not enough to understand where a country sits in global value chains today. It is an active and dynamic process of improving the quality of that position over time.

What resilience actually demands of Thailand: from cost supplier to capability partner

Understanding resilience at three levels, firm, GVC, and state, points directly to a question that Thailand cannot afford to avoid: what is the resilience Thailand is actually operating at, and is it the right one?

The world has moved. The era of stable globalisation that rewarded cost-competitive production is giving way to an era of geopolitical contest. Governments increasingly select economic partners based not on economic efficiency but on political proximity. They want supply chains that travel shorter distances and depend less on rivals. For Thailand, this changes the terms of participation in the global economy.

The key question for policymakers and managers is no longer how to become part of the GVC. It is about strengthening supplier resilience. That means maintaining global connections while actively building the kind of capability that makes a country's position in those chains genuinely difficult to replace (Gereffi et al., 2025). Supplier resilience for Thailand requires firms and policymakers to find ways to stay relevant and indispensable in the value chains we are already part of, and in the new ones we want to join. Interdependence still matters, but the leverage we can develop within those interdependencies matters too.

This is not the same as the resilience agenda being pursued by advanced economies. When Washington talks about resilience, it means less interdependence on others. Rather than offshoring, we hear more from the US about reshoring, onshoring, and friendshoring. The trend is now towards weaponising and securitising supply chains, restricting foreign economic activities in the name of national security.

When Brussels talks about resilience, it can mean strategic autonomy, achieved by moving supply chains closer to the EU or imposing strict due diligence requirements along supply chains. When Beijing pushes for its version of resilience, the world feels the impact of China's control over rare earth minerals or solar panels, and the vertical integration of its leading electric vehicle companies. Resilience for superpowers means making life harder for others. It means high tariffs, compliance requirements, stricter investment screening, or control over inputs that others depend on.

These options are not available to Thailand. Telling Thailand to pursue strategic autonomy is a fundamental mismatch. It applies the strategy of a superpower to a smaller open economy whose entire development model is built on integration, not separation.

What Thailand can do is move from passive dependence on cost-based positioning toward active development of capabilities that lead firms cannot easily source elsewhere. This is resilience for Thailand, from the perspective of a supplier economy. The distinction matters enormously. A cost-based supplier is substitutable. If wages rise, if tariffs change, if geopolitical pressure shifts, the lead firm can relocate. A capability-based partner is not so easily replaced. What it offers cannot be quickly replicated, regardless of where costs are lower or politics are simpler.

Thailand's own automotive sector illustrates why the alignment and interplay of these three levels matters. For decades, the industry performed well by firm-level measures. Thai parts suppliers were productive, reliable, and deeply integrated into Japanese automotive supply chains. But when the global shift toward electric vehicles accelerated, the GVC-level configuration changed faster than either firms or policy could track. Chinese EV manufacturers entering Thailand brought their own established supply networks. Thai suppliers found themselves challenged to be part of the new chains. Their limitations did not result mainly from a lack of operational capability. They lacked the positional significance in the EV value chain that they had built up over decades in the internal combustion engine sector (Kulkolkarn, 2025).

At the state level, Thailand's Board of Investment promoted EV adoption through generous incentives that succeeded in attracting investment. But there was no parallel strategy to build domestic supplier capability for electrification or to manage the transition for the existing base. The result was a policy that worked at one level, attracting foreign EV manufacturers, while inadvertently weakening resilience at the other two. Supplier firms in lower tiers lost orders they could not replace. The GVC configuration shifted in ways that reduced rather than deepened Thailand's structural indispensability. This is the cost of treating resilience as a one-dimensional problem. When the three levels are not aligned, resilience at any single level offers little protection.

The bottom line and why it matters beyond Thailand

Having worked through this argument, I find myself returning to the question I posed at the start: resilient for whom, and at what level? The answer this paper has tried to develop is that supplier resilience requires all three levels, firm, industry, and the state, to work together. And it begins not with policy announcements but with honest self-knowledge.

That self-knowledge has three dimensions. **The first** is geoeconomic intelligence: understanding the shifting geopolitical and economic pressures that are reshaping global chains, and what they mean for Thailand's position. Which chokepoints are becoming more contested? Which alliances are altering where lead firms want to source and produce? Without this intelligence, policy reacts to disruptions rather than anticipating them.

The second is GVC intelligence: understanding where Thailand actually sits in specific value chains. Which nodes does it occupy? What do lead firms genuinely need from their suppliers in those chains? Where is Thailand's position substitutable, and where does it have real leverage? This is not a one-time mapping exercise. As the automotive case shows, chains reconfigure faster than policy can track. GVC intelligence has to be continuous.

The third, and most often neglected, is domestic capability mapping: understanding what firms operating in Thailand are actually doing, what capabilities they have built, and what stands between current performance and the capability-based positioning that supplier resilience requires. For supplier firms, the relevant questions are direct. Are their products traceable and visible to lead firms across the chain? Do they have the scale to serve multiple markets, or are they tied to a single buyer? Do their sustainability practices meet what global chains now require? These are not abstract questions. They are the starting point for any serious supplier resilience strategy.

Together, these three forms of intelligence point toward what we might call resilience-creating value: the shift from cost-driven efficiency toward offering something that genuinely matters to the chain and that others cannot easily replicate. This could be specialised technology, supply chain traceability, scale in hard-to-acquire processing capabilities, or sustainability practices embedded deeply enough to be credible. The state's role is to translate all three forms of intelligence into industrial policy. That means policy designed from the chain inward rather than from the ambition outward.

For Thailand, this is urgent. The automotive case illustrates what happens when the three levels fall out of alignment. State policy moves faster than GVC intelligence. Domestic firm capabilities are not the starting point. The result is activity without position: investment attracted but indispensability not built.

Rethinking resilience in the era of contested globalisation is not only a task for governments. It requires firms to think more like governments—to understand the geoeconomic context in which they operate. And it requires governments to think more like firms—

to understand where real leverage lies, at the level of what companies can actually do. This argument is not Thailand-specific. Any smaller economy whose prosperity depends on globally dispersed production, service, or commodity networks faces the same challenge. The efficiency era asked one question: can you produce reliably at competitive cost? The fragmentation era asks a harder one: is what you do something that others cannot easily do without you? Countries that answer the second question clearly are the ones that will hold their positions as the global economy continues to reorganise. Doing so requires geoeconomic intelligence, GVC intelligence, and an honest assessment of domestic firm capabilities, all translated into resilience-creating value. Countries that substitute aspiration for analysis will find that their supplier resilience, however confidently announced, does not survive the first serious disruption.

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