# SC1 · Supply Chain Diversification

## Southeast Asia 2026

**COMPLIMENTARY PREVIEW · 5 SELECTED PAGES**

This preview contains 5 pages selected from the full 59-page report.

Full report includes an Excel model with TCO calculator, country scoring, and risk matrix.

CHAPTER 1

# The Strategic Case for Supply Chain Diversification

The China+1 shift is structural, not cyclical. US Section 301 tariffs of 7.5-100% on Chinese goods, compounded by rising Chinese labor costs (+8-10%/yr since 2015) and geopolitical concentration risk, have made Southeast Asia the default diversification destination for global manufacturers. Between 2022 and 2025, over USD 120 billion in manufacturing FDI was announced across the six ASEAN countries covered in this report.

This chapter establishes the macro investment rationale, compares all six countries across seven competitiveness dimensions, maps the SEZ landscape, the FTA framework and the logistics benchmarks.

## 1.1 The China+1 Imperative: Tariff Exposure by Sector

The Section 301 tariff regime, in force since 2018-2020, imposes an additional 7.5-25% duty on most Chinese manufactured goods entering the US. The May 2024 USTR review retained all existing rates and raised targeted sectors -- EVs to 100%, batteries to 25% rising to 50% in 2026, solar to 50%. In 2025, reciprocal tariff surcharges extended the burden further: Vietnam, Indonesia and Thailand now face ~19-20% effective US tariffs on manufactured exports, but this is still 5-12 percentage points below what Chinese-origin goods face on the same HS codes.

For a manufacturer shipping USD 50 million/yr of electronics to the US, relocating from China to Vietnam saves USD 2.5-6 million in annual duties at current rates.

**Section 301 Tariff Rates: China vs SEA by Sector**

| Sector / HS Code | China rate (301 + MFN) | SEA effective rate (2025 reciprocal est.) |
|---|---|---|
| **Electronics HS 8471-8542** | 25-27.5% | ~17-20% depending on country |
| **Textiles & apparel HS 61-62** | 24-32% (7.5% 301 + MFN 16.5%) | ~17-20% depending on country |
| **Furniture HS 9403** | 25-29% (25% 301 + MFN 0-4%) | ~17-20% depending on country |
| **Auto parts HS 8708** | 27.5% (25% 301 + MFN 2.5%) | ~17-20% depending on country |
| **Chemicals & plastics HS 28-39** | 25-32.5% | ~17-20% depending on country |
| **EV batteries HS 8507.60** | 25% now; 50% from 2026 | ~17-20%; no 301 surcharge |
| **Solar cells HS 8541.40** | 50% (2024 review) | ~17-20%; but AD/CVD risk for VN/TH/MY (see Ch5) |

**Country-Level US Reciprocal Tariff Rate (2025 est.)**

| | Vietnam | Thailand | Malaysia | Indonesia | Singapore | Philippines |
|---|---|---|---|---|---|---|
| **US reciprocal tariff (est.)** | ~20% | ~19% | ~19% | ~20% | ~17% | ~18% |
| **Tariff delta vs China (electronics)** | -5 to -8 pts | -6 to -9 pts | -6 to -9 pts | -5 to -8 pts | -8 to -11 pts | -7 to -10 pts |
| **Annual duty saving (USD 50M exports)** | ~USD 2.5-4M | ~USD 3-4.5M | ~USD 3-4.5M | ~USD 2.5-4M | ~USD 4-5.5M | ~USD 3.5-5M |

**Major Documented Relocations (Selected, 2022-2025)**

| Company / Sector | Destination | Capex (est.) | Key Details |
|---|---|---|---|
| **Foxconn / Pegatron (Apple)** | Vietnam (Bac Ninh, Nghe An) | USD 1.5B+ | iPhone assembly; 15-20% of global iPhone production shifted to Vietnam by 2025 |
| **Samsung** | Vietnam (ongoing) | Cumulative USD 22B+ | Largest global hub: >50% of global Samsung smartphone output |
| **GoerTek (AirPods)** | Vietnam (Nam Dinh) | USD 280M | AirPods assembly >80% in Vietnam; explicit China risk diversification |
| **BYD** | Thailand (Rayong) | USD 490M | 150,000 unit/yr EV plant; serves ASEAN and EU as China export alternative |
| **CATL / LG Energy** | Indonesia (Karawang) | USD 500M+ | EV battery and assembly; anchored by Indonesia nickel supply chain |
| **Great Wall Motor** | Thailand + Malaysia | USD 150-200M | ICE/HEV production to serve ASEAN; tariff arbitrage vs China exports |
| **Lego** | Vietnam (Binh Duong) | USD 1B | First SEA factory; operational 2024; EVFTA-driven location decision |
| **Nike / Adidas suppliers** | Vietnam + Indonesia | Ongoing | Vietnam: ~50% of Nike shoe production; China now <20% of global footwear sourcing |

## 1.2 Manufacturing Competitiveness Scorecard: 6-Country Comparison

NOTE: Manufacturing cost benchmarks and competitiveness indicators in §1.2 reflect published estimates from primary research providers (see Annex A for full source list). Figures vary by source depending on methodology and reporting period -- independent estimates may differ.

Vietnam leads on cost for labor-intensive manufacturing; Malaysia and Singapore lead on ecosystem quality for high-value production. Indonesia holds a structural advantage in battery materials. Thailand dominates automotive. The Philippines offers English-fluent, cost-competitive labor for electronics assembly. The table below consolidates the seven most investment-critical indicators; full benchmarks for each country are available in the Country_Compare tab of SC1_Data_Model.xlsx.

| Indicator | Vietnam | Thailand | Malaysia | Indonesia | Singapore | Philippines |
|---|---|---|---|---|---|---|
| **Min. wage (USD/month, 2025)** | ~190 (Zone I) | ~270 (EEC) | ~333 (national) | ~180 (Java avg) | ~1,400+ | ~250 (NCR) |
| **Assembly worker (USD/month, est.)** | 350-380 | 480-520 | 750-850 | 300-400 | 2,500-3,500 | 350-450 |
| **Industrial electricity (USD/kWh)** | 0.08-0.09 | 0.10-0.11 | 0.09-0.11 | 0.09-0.12 | 0.13-0.16 | 0.15-0.18 |
| **Standard CIT rate** | 20% | 20% | 24% | 22% | 17% | 25% |
| **Best SEZ incentive** | 10% CIT / 15 yrs | 0% / 8 yrs BOI | 0% Pioneer / 5 yrs | 0% / 5-20 yrs | 5-10% GIP | 0% ITH 4-7 yrs |
| **World Bank LPI 2023 (1-5)** | 3.3 (~43rd) | 3.4 (~35th) | 3.5 (~26th) | 3.0 (~63rd) | 4.3 (#1) | 2.9 (~68th) |
| **Political stability WGI (pct.)** | ~42nd | ~22nd | ~55th | ~25th | ~90th+ | ~20th |

## 1.3 Special Economic Zones: Top Industrial Estates by Country

SEZs are the entry point for most foreign manufacturers: they provide pre-approved land, streamlined licensing, tax holidays and shared infrastructure that cut greenfield setup time by 30-50% versus non-SEZ locations. Each country profile below covers two leading export-oriented zones selected for FDI relevance and availability; cost figures are 2025 benchmarks.

CHAPTER 3

# Sector Deep-Dives: Which Industries Transfer Best

Not all industries relocate with equal ease. The degree of difficulty depends on three variables: supply chain depth (how many tiers of sub-suppliers must move with you), certification complexity (which compliance frameworks your buyers require), and rules-of-origin exposure (whether SEA processing will satisfy US or EU country-of-origin requirements). Textile and apparel relocation is relatively straightforward for final assembly but requires yarn-forward compliance discipline for EU market access.

Electronics is the most active sector but also the most demanding in terms of supplier ecosystem -- moving PCB assembly without the surrounding component supply chain increases defect rates and lead times. Furniture and wood products face aggressive anti-circumvention enforcement in the US channel. Automotive parts and food processing require sector-specific certification infrastructure that only exists in a subset of SEA countries.

The six profiles below quantify these differences country by country, with the compliance requirements that determine whether a relocated operation will actually clear customs at the destination market.

**Sector-Country Fit Matrix: Navigation Guide**

The matrix below rates transfer feasibility by sector and country (High / Medium / Low) based on supply chain depth, ecosystem maturity, and rules-of-origin compliance. Use it as a navigation guide before reading the detailed sector profiles.

| Sector | Vietnam | Thailand | Malaysia | Indonesia | Singapore | Philippines |
|---|---|---|---|---|---|---|
| **Textile & Apparel** | Very High | Medium | Medium | High | Low | Medium |
| **Electronics & PCB assembly** | Very High | Medium | Very High | Low-Med | High | High |
| **Furniture & Wood Products** | Very High | Medium | Medium | Medium | Low | Medium |
| **Automotive Parts (ICE/EV)** | Medium | Very High | High | High | Low | Low-Med |
| **Chemicals & Plastics** | Low-Med | Medium | Very High | Medium | Very High | Low |
| **Food Processing & Agri** | High | Very High | High | High | Low-Med | Medium |

## 3.1 Textile & Apparel: Yarn-Forward Rules and Certification Landscape

China's share of global textile and apparel exports has declined from ~35% in 2020 to ~28-30% in 2025, as buyers diversify to Vietnam (the primary beneficiary), Indonesia and Bangladesh. Vietnam's EVFTA provides a genuine tariff advantage to the EU (0% under yarn-forward rules of origin), while Indonesia and the Philippines benefit from RCEP for intra-Asian trade. Thailand and Malaysia play a limited role in apparel but are relevant for technical textiles and man-made fiber inputs.

| Indicator | Vietnam | Thailand | Malaysia | Indonesia | Singapore | Philippines |
|---|---|---|---|---|---|---|
| **T&A exports 2025 (est.)** | USD 42-44B | USD 5-6B | USD 3-4B | USD 9-10B | Negligible | USD 3-4B |
| **Primary market** | US + EU | Japan + ASEAN | ASEAN + Japan | US + EU | n/a | US + Japan |
| **Labor cost vs China** | -40% | -20% | -15% | -50% | n/a | -25% |
| **Local fabric sourcing** | ~45% | ~35% | ~30% | ~40% | n/a | ~20% |
| **EU tariff under FTA** | 0% (EVFTA, yarn-forward) | MFN ~12% | MFN ~12% | MFN ~12% | 0% (EUSFTA) | MFN ~12% |

| Indicator | Vietnam | Thailand | Malaysia | Indonesia | Singapore | Philippines |
|---|---|---|---|---|---|---|
| **Semiconductor fab presence** | None (assembly only) | None | None (OSAT only) | None | TSMC, GlobalFoundries | None (test only) |

### Key Standards & Qualifications

| Standard | Scope | Relevance for SEA Manufacturers |
|---|---|---|
| **ISO 9001:2015** | Quality management system | Baseline requirement for all electronics OEM/EMS; prerequisite for most buyer audits |
| **IECQ QC 080000 (HSPM)** | Hazardous substance process management | Required for RoHS supply chain compliance (EU, California) |
| **RoHS (EU 2011/65/EU)** | Restriction of hazardous substances in electronics | Mandatory for all electronics sold in EU; covers Pb, Hg, Cd, Cr6+, PBBs, PBDEs |
| **IPC-A-610** | Workmanship standard for electronic assemblies | Industry standard for PCB solder quality; required by most Tier-1 OEMs |
| **IATF 16949:2016** | Automotive quality management | Required for automotive electronics supply chain (Thailand, Indonesia, Malaysia) |
| **AEO / C-TPAT** | Customs security certification | Required by US importers for CBP fast-lane clearance; recommended for all SEA exporters |

Vietnam and Malaysia serve fundamentally different roles in the electronics supply chain. Vietnam (Bac Ninh, Bac Giang, Binh Duong) is the assembly and component manufacturing hub, driven by Samsung and Foxconn anchor investment; it is the right choice for volume consumer electronics and PCB assembly where labor cost dominates. Malaysia (Penang, Kulim) is the advanced packaging and semiconductor test hub, with higher IP protection, English common law, and the most extensive OSAT infrastructure outside Taiwan and South Korea.

For companies handling proprietary chip designs, trade secret processes or advanced packaging, Malaysia's IP framework is the decisive differentiator.

## 3.3 Furniture & Wood Products: Origin Rules and Anti-Dumping

US Section 301 tariffs on Chinese furniture (25-35%, HS 9403) have driven significant relocation to Vietnam, which is now the world's #2 furniture exporter with USD 14-15B in exports (2025 est.), predominantly to the US. Indonesia's Jepara cluster (Central Java) is the second major base for solid wood furniture, with strong European market access. Both countries face LACEY Act (legal timber) and EUDR (deforestation) compliance requirements, which are increasingly enforced at the importer level.

| Indicator | Vietnam | Thailand | Malaysia | Indonesia | Singapore | Philippines |
|---|---|---|---|---|---|---|
| **Furniture exports 2025 (est.)** | USD 14-15B | USD 2-3B | USD 2-3B | USD 4-5B | Negligible | USD 0.5-1B |
| **Primary market** | US (~55%) | Japan + ASEAN | ASEAN + Japan | EU + US | n/a | US + Japan |
| **US tariff (post-301)** | ~20% reciprocal | ~19% reciprocal | ~19% reciprocal | ~20% reciprocal | ~17% | ~18% reciprocal |
| **EU tariff (MFN / EVFTA)** | 0% (EVFTA) | MFN 2-5.6% | MFN 2-5.6% | MFN 2-5.6% | 0% (EUSFTA) | MFN 2-5.6% |
| **CARB ATCM Phase 2 compliance** | High (major exporters) | Medium | Medium | High (Jepara) | n/a | Low-Med |
| **EUDR compliance readiness** | Medium | Medium | High | Low-Med | n/a | Low-Med |
| **LACEY Act risk** | Low (FSC adoption rising) | Low | Low | Medium (verify chain of custody) | n/a | Medium |
| **Lead time FOB to LA** | 30-35 days | 28-33 days | 25-30 days | 32-38 days | 20-25 days | 32-38 days |

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# The full report is 59.

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