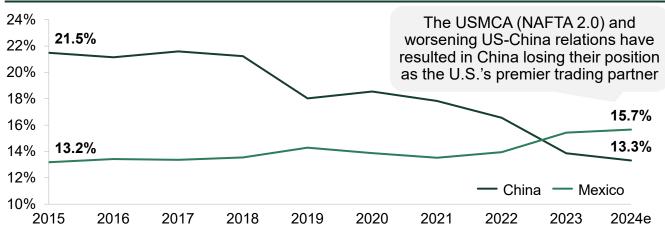




1. Introduction

In recent years, the trend of globalization in manufacturing has begun to reverse. Since 1980, manufacturing companies expanded globally, with China emerging as the world's manufacturing hub due to its low costs and favorable policies. However, a high-tariff environment and increasing geopolitical risks have prompted companies to reassess their supply chain strategies, as evidenced by the decline in China's share of U.S. imports since 2015 (Fig. 1). This shift made nearshoring—relocating manufacturing closer to key markets—more attractive, with Mexico becoming the U.S.'s primary trade partner in 2023.

Figure 1: China vs. Mexico Share of US Imports, %



Sources: United States Census Bureau; Applied Value Analysis

With President Donald Trump set to take office in 2025, significant policy changes related to tariffs, corporate taxes, trade, and domestic production incentives are anticipated. On Monday, November 25th, the Trump Administration announced the first wave of tariffs: a 25% tariff on all goods imported from Canada and Mexico, and an additional 10% on goods from China. This evolving post-election landscape presents both challenges and opportunities for companies to build more flexible and resilient supply chains. To navigate these changes, businesses should adopt a comprehensive approach to minimize tariff exposure through strategies such as manufacturing footprint optimization, cost-driven engineering (VA/VE), hedging, and strategic supplier negotiations.

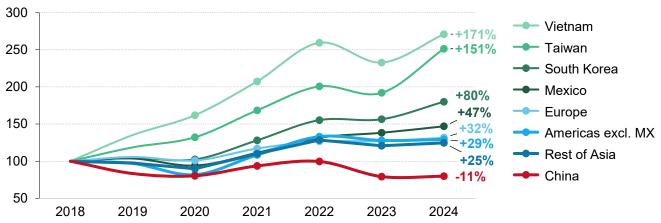
This paper explores potential future tariffs and practical strategies for companies to mitigate cost impacts. Applied Value has a proven track record of assisting clients in reducing costs and mitigating supply chain disruptions by leveraging key levers such as these.

- **Process Enablement & Scenario Planning:** Stand-up org. capabilities to prepare for a range of policy scenarios (e.g., tariffs, wars, etc.) and proactively manage risk.
- **Financial Risk Management**: Mitigate raw material volatility through financial hedging and coordinated efforts across Purchasing, Sales, and Treasury teams.
- **Pricing Strategy:** Absorb or offset cost increases by analyzing the product portfolio and developing an updated pricing structure to protect margins.
- **Multi-Sourcing Strategy:** Diversify and stabilize supply chains to mitigate risks from tariff targeted regions and international policy changes (e.g., China+1).
- **Design for Cost (VA/VE):** Evaluate current designs and materials to identify opportunities to reduce waste, lower costs and simplify supply chains.
- **Upstream Nearshoring & Reshoring:** Redesign mfg. footprint & sourcing strategies to shift away from APAC and capitalize on domestic production incentives.

2. The Shift Away from China

As China's share of total U.S. imports continues to decline, other regions are emerging as alternative sourcing and manufacturing destinations. The rise of alternative APAC countries as price-competitive supply alternatives has become the primary method for shifting supply away from China. Companies are turning to low-cost countries like Vietnam, Taiwan, and India to diversify their manufacturing footprint & leverage new supply chains / markets. With that said, Europe and the Americas have also experienced growth from US investments (Figure 2).

Figure 2: Indexed US Imports by Exporting Region



Sources: United States Census Bureau; Applied Value Analysis; Note that Rest of Asia includes Middle East

The Trump Administration's 10% tariff on Chinese goods may hasten the shift away from China, especially with the risk of further increases. While countries like Vietnam, Taiwan, and Mexico offer low-cost alternatives, new tariffs on Mexico may limit these options. Strategic industries such as automotive, industrials, and ICs face higher risks due to limited global suppliers and their critical role in U.S. production. Tariffs often serve as negotiation tools, which may be the intent behind these recent measures. Nevertheless, businesses with significant U.S. operations should focus on building tools and capabilities to proactively de-risk their supply chains.

Figure 3: Potential Tariff Impact on Different Goods¹

Category ²		China		Canada & Mexico ³		Other	
		Today	Potential	Today	Potential	Today	Potential
Raw Materials	HRC	20-25%	10-60%	None	25%	None	10-20%
	Copper	6-48%		1%		1%	
	Glass	10-30%		None		None	
	PE Resin	20-43%		None		7%	
	Lithium	35-40%		0-3.5%		0-3%	
Components	Chassis	0-10%	10-60%	None	25%	3%	10-20%
	Cardb. Box	19-35%		None		None	
	Int. Circuit	20-35%		None		None	
	Sensor	27-50%		None		None	
	Blow Molds	0-35%		None		3%	
Finished Good	ICE Car⁴	10%	10-60%	None	25-100%	3%	
	MRI Machine	0-35%		None	25%	3%	10-20%
	Agr. Machine	None		None		1%	
	Smartphone	35%		None		None	
	AC Unit	35%		None		1%	

Source: (1) Analysis across multiple Applied Value client engagements; (2) Table is representative of current duty rates inclusive of any tariffs with the potential rate representing estimates based on Govt. announcements; 3) The administration has referenced punitive tariffs targeting both Canada and Mexico between 10 - 25%. This includes levying tariffs as high as 200% on the Mexico auto industry; 4) ICE car = Internal Combustion Engine Car principally designed for the transport of persons

The recently announced additional tariffs on China as well as the net new 25% tariffs on Canadian and Mexican goods will significantly intensify the challenges for companies reliant on imports from these regions, should they stay in place. The US has become heavily reliant on Mexico in particular as a lower-cost and geographically favorable alternative to China. While the punitive tariffs on USMCA countries are linked to drug trafficking and immigration according to President Trump, they are representative of the volatile future trade policy over the next four years. For example, the U.S. government is likely to impose stricter measures to prevent Chinese companies from routing goods through third-party nations like Vietnam or Mexico to evade tariffs. These actions may mirror Section 232 tariffs, which penalized non-USMCA metals, and further complicated efforts to avoid tariff exposure. President Trump has already threatened a 100% tariff on China-linked automakers producing in Mexico, leading Tesla to suspend its Monterrey production plans.

Currently, companies can bypass tariffs by importing components from China, performing minimal assembly in Mexico, and qualifying products as "Made in Mexico." With the introduction of a 25% tariff on Mexican goods, these practices now incur significant additional costs, removing a key circumvention route for businesses. Given the recent tariff announcement on Mexico and Canada, it is unclear if the USMCA will be renewed in 2026, but if it is, it will likely include stricter rules on material sourcing and value-added activities, further reducing China's influence on U.S. trade, while limiting Mexico circumvention.

The new tariff announcements, if they stay in place, could also exacerbate broader economic challenges, particularly inflation, by increasing the cost of goods. With threats of up to 60% tariffs on China, industries that are heavily reliant on Chinese imports could face significant headwinds. The 25% tariff on Mexican goods adds an even greater layer of complexity, given the extensive integration of U.S. and Mexican supply chains, particularly in the automotive and manufacturing sectors. Mexico's economy minister has attempted to downplay these concerns, but businesses relying on Mexican production now face a more uncertain and costly operating environment.

Higher tariffs are expected to ripple across industries, driving up costs in automotive, pharmaceutical, and raw materials sectors (e.g, metals, chemicals, etc.), while a potential trade war may suppress demand for U.S. exports. Freight costs are likely to rise as companies re-route supply chains, leading to constrained capacity in regions that offer relief from tariffs. To manage these impacts, some companies are pre-purchasing materials to lock in lower prices before tariff hikes take effect. However, this strategy poses short-term risks such as excess inventory and cash flow strains. With tariffs potentially reaching unprecedented levels, businesses must prioritize long-term strategies like manufacturing footprint assessments, cost-focused engineering (VA/VE), hedging, and supplier negotiations to mitigate risks, adapt to evolving trade policies, and maintain supply chain resilience.

3. Strategies to Mitigate Tariff Exposure

To manage tariff risks companies must enhance supply chain visibility and take a proactive and holistic approach to their supply chain strategy. Mapping the current supply chain helps identify vulnerabilities and opportunities for improvement. Once risks are assessed, companies can implement strategies to reduce costs and minimize exposure to tariffs. While there is a lot of speculation around how tariff policies will develop in 2025 and beyond, it is unclear exactly how these policies will play out. One or many of the mitigation levers below can help companies proactively prepare for global supply chain disruptions and potential new tariff policies, ranging from short-term strategies to long-term operational transformations.

Source: (1) CNBC; (2) Reuters; (3) Wall Street Journal

Figure 4: Illustrative Future Tariff Scenarios and Potential Mitigation Levers

Potential Future Scenarios (Note that these are illustrative)	Scenario Planning	Hedging Strategy	Price Increase	Multi- Sourcing	Design to Cost (VA/VE)	Near- & Reshore Strategy
Scenario 1: Little to no change from current tariff policy	✓			✓		
Scenario 2: 60% tariffs on China and 20% tariffs on Rest of World	✓	✓	✓	✓	✓	√
Scenario 3: USMCA is renewed, and MX is a tariff safe-haven	✓		✓	✓	✓	√
Scenario 4: Add'l. tariffs on APAC countries to limit CN circumvention	✓	✓	✓		✓	√
Scenario 5: Punitive tariffs on Mexico due to CN circumvention	√	√	✓		✓	
	Low		Time to	Implement =		High

It is important to note that a company's strategy is influenced by existing processes and capabilities, risk appetite, competitive positioning, industry, and other factors. Before deploying the above / below levers, comprehensive analysis is required to understand current risk exposure.

1 Process Enablement & Scenario Planning

Regardless of how tariff policies ultimately play out, businesses must focus on reducing tariff risk and preparing for market uncertainties. Companies should develop internal databases for the existing supply chain to track spend and KPIs (e.g., cost, speed, risks). KPIs should be benchmarked to identify gaps, supported by sensitivity analyses and scenario modeling. A risk dashboard can be a helpful reference tool to provide actionable inputs to identify exposure and take the necessary steps. Given the uncertainty with how tariffs will be levied on non-China countries, proactively identifying vulnerabilities and outlining response plans can allow businesses to stay agile and minimize disruptions.

2 Financial Risk Management 🙃

Financial Risk Management helps companies mitigate raw material price volatility through strategies like financial / supplier hedging and coordinated efforts across Purchasing, Sales, and Treasury teams. Additionally, companies can help mitigate margin volatility by aligning purchase contract index mechanisms with recovery / sales mechanisms on the customer side. In an environment as volatile & unknown as the one coming up in 2025, it would be a mistake not to do everything possible to help smooth out the forthcoming hikes & drops. Actions like analyzing BOMs to identify high-runner and high-risk parts, complemented with locking in long-term fixed price contracts with as many suppliers as possible are wise decisions. Companies can also explore locking in a financial hedge through a bank, which can also help with price stability / certainty in the short to medium term.



3 Pricing Strategy (\$)



A well-defined pricing strategy is critical for mitigating tariff risks by effectively absorbing, sharing, or offsetting tariff-induced cost increases while maintaining market competitiveness. To mitigate tariffs through pricing strategies, a thorough evaluation of customer-perceived value relative to competitors is essential. A thorough evaluation of competitor supply chain setups and expected pricing actions is also critical in understanding potential staying power of price hikes. Pricing strategy should ultimately reflect the impact of tariffs (both actual and forecasted) and should be communicated as such. Pricing actions & timing should be dictated by perceived customer tolerance for price adjustments...one must also determine if one or multiple price increases is necessary to offset tariff-related cost increases, considering the forecasted environment and competitor strategies.



4 Multi-Sourcing 🌑



Mitigating increased tariffs requires sourcing strategies that enhance supply chain resilience and reduce dependency on high-risk regions. Ideally, one's approach to overall supplier footprint begins by mapping the current supply base across Tier 1, 2, and 3 suppliers to identify exposure within the BOM and assess risk. Companies should evaluate alternative regions, such as non-China APAC, LATAM, and EMEA, to diversify away from tariff risks. Key considerations include the region's capabilities, existing manufacturing footprint, tariff advantages, available capacity, and overall cost competitiveness. It is critical to ensure sufficient capacity in these alternative regions to enable rapid supply shifts when tariff increases occur. This involves working closely with suppliers to validate production capabilities, maintaining buffer capacity, and establishing contingency plans for high-risk products. Such strategies not only reduce tariff exposure but also strengthen the overall supply chain, ensuring long-term stability and competitiveness in a volatile global trade environment. A world-class strategy would consist of identifying and qualifying multiple competitive sources across each major region - to ensure preparedness for all possible tariff scenarios.



5 Design to Cost (VA/VE) 💍



A Design-to-Cost (VAVE) approach can be helpful in identifying opportunities to reduce tariff exposure and lower costs through internal actions and cross-functional coordination. By prioritizing tariff-impacted parts, companies can conduct detailed analyses to identify productspec changes that can open up new supply possibilities from countries with limited to no tariffs. Parts subject to high tariffs can be ultimately substituted with alternative materials sourced from lower-risk regions. Combining unique parts or re-engineering components to source from tariff-friendly regions can further minimize tariff impacts—for example, shifting assembly from China to the U.S. to avoid tariffs. These strategies help reduce or eliminate tariff-impacted materials from the BOM, significantly limiting tariff exposure. However, any changes must be carefully evaluated to ensure they do not compromise functionality or quality, with rigorous testing conducted to maintain product performance standards.





📵 Upstream Nearshoring & Reshoring 🛴

By breaking down product and component production processes across Tier 1, 2, and 3 suppliers, companies can develop a robust manufacturing and sourcing strategy to address high-risk parts. This involves understanding what is happening at each Tier, identifying where key manufacturing operations are taking place, and assessing exposure within each part BOM, based on country of origin. Unlike traditional nearshoring, this approach places greater emphasis on making strategic changes to the company's overall footprint to align with nonimpacted regions, reducing tariff exposure and strengthening long-term supply chain resilience. The safest strategy would obviously be to move as much production & manufacturing operations to the US – although this is also in all likelihood the most expensive option. Key initial steps include mapping existing spend by material and supplier across tiers, analyzing production capabilities and capacity constraints, and identifying critical vulnerabilities or "problem children" within commodities and products. Companies can then assess potential locations for manufacturing adjustments and recommend categories for localization based on supply availability, cost considerations, and tariff implications.

4. Conclusion

Companies should take proactive steps to mitigate tariff-related risks and geopolitical uncertainty. No region or country outside of the United States will be completely risk-free, as shifting production to regions across APAC (e.g., Vietnam), LATAM (e.g., Mexico), or Eastern Europe (e.g., Turkey) may trigger additional tariffs aimed at promoting US domestic production and limiting tariff circumvention. As a result, companies should look at a variety of strategies to determine how best to navigate potential trade disruptions and reduce tariff-related risks. The global supply chain is constantly evolving and companies need to regularly reassess their supply chain as well as their manufacturing strategies to stay competitive.

Companies that seize the opportunity to thoroughly map, prioritize, and establish their supply chain strategy will lay a solid foundation for informed, agile, decision-making in the future. Ultimately, the success of the global supply chain will depend on how effectively companies build this capability. Applied Value has developed a comprehensive approach to each of the aforementioned methodology summaries – further details can be provided upon request.

For more information, please do not hesitate to reach out to:

Justin Leopold Associate Partner

+ 1 (404) 772 2950

Miami





Danielle Cincurak

Manager + 1 (978) 626 6981

New York





Max Groppe

Senior Consultant + 1 (978) 626 4527

New York





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