

Pivoting away from China's manufacturing power threatens global supply chains

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China's effective and efficient supply chains, deeply rooted in its manufacturing ecosystems, remain resilient to an unparalleled degree. While lower value-added manufacturing has been relocated to alternative countries, China has ascended in the global value chain.

In the first half of 2023, China's exports to the United States fell by 25 percent year-on-year, dropping to second place and being outpaced by Mexico for the first time in 15 years. Meanwhile, greenfield foreign direct investment (FDI) from the US to China plummeted by 90 percent from its peak. These significant declines are seen as evidence that the 'decoupling' between the two largest economies is accelerating.

Over the last three years, global supply chains have undergone significant shifts. This is due to the COVID-19 pandemic, Russia's invasion of Ukraine and strategic competition for technological supremacy between the U.S. and China. These external shocks have highlighted the risks of concentrating supply chain segments in conflict-prone regions. China stands out, with nearly 30 percent of value-added in manufacturing concentrated there. For the processing of critical minerals and manufacturing of lithium batteries and electric vehicles (EVs) – sectors vital to the clean energy transition – this concentration is even more pronounced, exceeding 50 percent for most components.

To mitigate these risks, Western nations are making concerted efforts to reduce dependence on supply chains that rely on China. Emerging contenders include Vietnam, with its economic growth potential and young workforce; Mexico, benefiting from proximity to the US; and India, motivated by geopolitical aspirations and a massive labour pool and market.

China's entry into the WTO in 2001 marked a 'golden age' of globalisation, benefiting both the US and Chinese economies. As offshored manufacturing gravitated to China, its value-added in manufacturing quadrupled in the following two decades, earning it the title of the 'world's factory'. Meanwhile, the US transitioned to an 'innovation economy', emphasising technology and finance, while its manufacturing prowess diminished.

At the heart of this 'golden age' are global value chains (GVCs). These break down complex manufacturing tasks into smaller, independently designed and produced modules that integrate seamlessly into sophisticated products. As a result, global trade has transitioned from mere exchange of goods to supply chain trade. China has emerged as a pivotal 'hub', connecting developing nations with raw material providers, and advanced countries with technological and branding resources.

Constructing a supply chain independent of China's inputs, however, proves to be more challenging than anticipated. This is because the more nodes a country or supplier holds in a supply chain, the harder it is

to replace. China's role as a 'hub' underscores its irreplaceable nature. Western nations, nevertheless, have adopted strategies to shorten supply chains, even if it means sacrificing efficiency. For instance, the US has championed policies aimed at incentivising the restoration of domestic production through [re-shoring](#) strategy. Additionally, [near-shoring](#) and [friend-shoring](#) strategies prioritise relocating manufacturing closer to the US or to countries that align with US political values.

How is progress so far?

Vietnam

Before the Covid pandemic, firms, including Chinese, started relocating supply chains to Vietnam for cost benefits, contributing to its strengths in labour-intensive sectors like textiles and footwear. US-China trade tensions further accelerated this trend, with Vietnam primarily focusing on [processing trade](#): importing components from China and exporting finished products to the West. In 2022, while Vietnam's total export value reached 10.36 percent of China's, its *net* export value (the value of exports minus the value of imports) was just 1.28 percent of China's, highlighting its role in processing trade.

Mexico

Mexico has benefited from the US' near-shoring strategy. Rather than acting as a standalone manufacturing nation, it functions, akin to Vietnam, as a nearshore base for assembling Chinese products. Trade between China and Mexico increased 10 percent in 2022. Moreover, China's FDI jumped 48 percent, making it a leading [destination](#) for production relocation.

India

India's value-added manufacturing ranked behind only China, the US, Germany, and Japan in 2022, but constituted a mere 10 percent of China's total. India possesses the potential to emerge as a manufacturing powerhouse, but significant barriers remain before it can challenge China's dominance. Its infrastructure, including roads and electricity, remains underdeveloped. Even with high growth in [electricity generation](#), it achieved only 21 percent of China's capacity in 2022. While India has a vast labour pool, a significant portion is not adequately skilled or trained. Furthermore, it doesn't have a manufacturing ecosystem to support its supply chains.

'China plus one' strategy

Supply chain safety has taken centre stage in political debates. A common misconception is equating safety with independence in supply chains. Modern technology has reached a level of complexity where it is nearly impossible for any nation to achieve self-sufficiency. Thus, supply chain safety hinges on resilience: the ability to recover swiftly from disruptions. In a globalised economy, the resilience of a supply chain is gauged by the strength of its network, marked by diverse ties to multiple sub-suppliers. Hence, it does not merely need backup options but also agility to mobilise these effectively.

For this reason, many multinational firms are adopting a '[China plus one](#)' strategy. This approach allows them to maintain backup capacity during crises while continuing to benefit from China's expansive supply chains.

Recent trade data indicates that a portion of China's trade surplus with the US has shifted to countries including ASEAN, Mexico, and India, all '[China plus one](#)' destinations. These now function more as backups or extensions of [China's supply chains](#) rather than replacements.

China has evolved from a labour-intensive manufacturer to an investment- and technology-intensive one over the last two decades. Its [manufacturing strength](#) isn't merely a replication of Western innovation, but reflects its unique industrial capabilities. This robustness is anchored by a workforce of skilled and experienced engineers and technicians across various manufacturing hubs. Key examples include electronics clusters in the Pearl River Delta, EV-supply chain clusters in the Yangtze River Delta, and LED display hubs in Hefei and Chengdu.

As China rises in the global value chain, it has developed its own brands that spearhead the development of supply chains in their respective industries. Consequently, foreign-invested enterprises made up less than a third of China's total exports in 2022, a figure halved from a decade ago. This is in stark contrast to Vietnam, where such enterprises accounted for about 70 percent of exports.

China's ascent is bolstered by its vast number of 'hidden champions' – small yet globally dominant niche companies. In 2022, over 8,000 such companies were recognised as 'zhuan, jing, te, xin', (specialisation, focus, uniqueness, and innovation). Such enterprises in upstream supply chains lay the foundation for dominance in downstream production, as seen in sectors like wind and solar energy, EVs, and communications equipment. This advancement is underscored by China's embrace of Industry 4.0 technologies, such as robotics, automation, and digitalisation.

A case in point is Apple's supply chain. While Apple explores alternatives in Vietnam and India, China remains a crucial component. In 2022, a quarter of Apple's nearly 200 global suppliers were headquartered in China, managing production over 300 factories both domestically and abroad. China's unparalleled capacity to rapidly mobilise vast specialised workforces and its efficient and flexible component supplier networks highlight its continued significance for Apple.

In China's manufacturing ecosystem, while single companies may face vulnerability from competition or external shocks, the system as a whole thrives due to its 'antifragility'—it doesn't just withstand challenges but grows stronger from them.

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