Tomorrow's Affairs
Analysis of today
Assessment of tomorrow

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Supply-chain vulnerability risks can be reduced



In 1927, Henry Ford sought to bypass the Dutch and British rubber monopolies of the time by acquiring a 2.5-million-acre rubber plantation along the Tapajós River in Brazil. But "Fordlândia" never produced rubber at scale and was eventually sold back at a loss.

A century later, Europe's largest ammunition maker, Rheinmetall, has placed a similar bet on another raw material: nitrocellulose, without which most artillery shells cannot be fired.

But Rheinmetall's stockpiling is a private, piecemeal solution to a collective challenge.

At a time when hostile governments are weaponizing trade dependencies and exploiting supply-chain vulnerabilities, we cannot leave it to private companies to secure critical supplies.

Many firms (especially startups), and the investors who support them, cannot even trace materials and subcomponents beyond the first or second tier of suppliers.

In the defense industrial sector, for example, 84% of prime contractors claim to have no visibility beyond the first tier.

Others do not know whether a component sourced domestically is actually from a foreign supplier (having traveled through three or four intermediaries).

Indeed, few defense industry firms can systematically assess their exposure to disruption, coercion, sanctions, or other national-security challenges.

Even a corporation as large and well-resourced as Nvidia had no National Security and Export Control Oversight Committee until its current crisis.

Responding to strategic competition with China

This opacity across the supply chain means that global production risks are being collectively underestimated.

That is why ten countries (the United States, Australia, India, Israel, Japan, South Korea, Qatar, Singapore, the United Arab Emirates, and the United Kingdom) recently signed the San Francisco Declaration on the Secure Foundations of Enduring Prosperity, which emphasizes the need to protect AI-infrastructure supply chains more systematically.

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Responding to the strategic competition with China, the Declaration looks beyond the "on again, off again" approach of targeted export controls and entity lists, which have ultimately contributed to supply-chain volatility.

We would advise a three-stage approach to supply-chain resilience: identify current vulnerabilities, let markets and public tenders price them, and intervene only where this process fails.

Identifying vulnerabilities

The first stage is no longer infeasible. Matching customs records, shipping manifests, and supplier declarations to map sub-tier networks used to require years of surveys, but we now have platforms that can do it in weeks.

The US Defense Advanced Research Projects Agency's National Security Economic Theory program, for example, is designed to reveal market mechanisms that serve national-security ends; and, following a July executive order, the Department of Defense (DoD) will require an indentured bill of materials for all national-security acquisitions.

The European Union needs to do the same with its lending of up to €150 billion ($165 billion) for joint defense procurement through Security Action for Europe, and with the forthcoming Defence, Security and Resilience Bank.

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Moreover, tracing requirements should be extended from defense procurement to federal investment, and they must be made visible to the markets that finance production.

A possible model here is the US Commerce Department's existing Section 232 investigative authority.

The US and the EU have both already conducted confidential risk assessments with industry, and South Korea's Supply Chain Stabilization Committee brings ministers and private-sector experts together to steer a national resilience plan.

Markets can more clearly understand underlying risks

The second step requires a revamped financial toolkit. By mapping vulnerabilities in production, markets can more clearly understand underlying risks.

Much as accounting standards bring to light financial risks, a standard disclosure of supply-chain vulnerabilities would allow for proper pricing. Insurers could adjust premiums for companies that demonstrate and then fix vulnerabilities, and lenders could adjust terms for those making proactive decisions to limit possible supply-chain infiltration.

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Eventually, mapping these markets could lead investors to start accounting for the true cost of concentrated offshore production relative to domestic capacity.

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More surgical approach than traditional protectionist measures

The third step is to intervene to protect resilience only when mapping and pricing fail to resolve the issue.

Such an approach would be more surgical than traditional protectionist measures undertaken in the name of national security.

It would not merely reflect official lists of so-called strategic sectors, and it could be extended beyond individual firms.

Governments would determine whether specific sectors or supply chains must be home-shored and—drawing on the supply-chain mapping (combined with intelligence from national-security agencies)—publish a quarterly list of the most significant and vulnerable components and materials.

That would then guide private-sector pricing and investment in the potential future gaps.



In cases where markets have not priced a vulnerability, the government can do so with its own financing tools

The Trump administration's Executive Order 14307 shows what this looks like in practice.

It directs federal agencies to favor US-made, National Defense Authorization Act-compliant drones; and it gives qualifying domestic manufacturers a fast path to procurement, aligning security with competitiveness.

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In addition, a price floor for well-defined strategic materials would blunt China's ability to crash prices whenever a competitor nears production. Standard offtake agreements would give lenders the bankable, contracted revenue they need to underwrite capital-intensive investments in essential components.

Consider the financing for MP Materials' rare-earth production, which was configured through a Defense Department package and built around market mechanics: a $400 million equity investment, a $150 million loan to expand heavy rare-earth separation, a ten-year price floor on neodymium-praseodymium products, and a ten-year offtake agreement for MP's new magnet facility.

Scaling the strategies across NATO's allies

There is a big opportunity to extend these approaches to allies. Under the EU's Corporate Sustainability Due Diligence Directive, large firms will soon have to assess risk across their supply chains, and the proposed Critical Raw Materials Centre will pursue the market intelligence to act on what it finds.

What is missing is the link between different instruments. Adding geopolitical concentration to the due-diligence checklist, and conditioning access to SAFE loans or other guarantees on mapping and pricing, would unlock progress.

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Scaling these strategies across NATO's allies and partners would mean that resilience no longer rests on the shoulders of a Ford or a Rheinmetall.

The costs can be borne more effectively across insurers, lenders, entrepreneurs, and investors, yielding a greater security dividend for all.

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