Building a More Resilient Japan: Supply Chains, Industrial Policy & the Global South

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1. Japan's Supply Chains Remain Vulnerable

In recent years, Japan, like many other countries, has experienced sudden disruptions to trade caused by geopolitical tensions, economic coercion, and armed conflict.

Rare earths provide one example. China introduced export controls on seven rare-earth-related products in April 2025. After Japan-China relations deteriorated further following Prime Minister Sanae Takaichi's remarks on Taiwan in November 2025, China introduced additional export-control measures targeting Japan in early 2026. Chinese exports of the seven rare-earth products to Japan in the first half of 2026 were 51% lower than a year earlier.[1]

Japan has experienced similar disruptions in other areas. In August 2023, China imposed a ban on imports of Japanese seafood following the start of the discharge of Advanced Liquid Processing System (ALPS)-treated water into the sea. Although the ban was partially lifted in June 2025, it was imposed again in November 2025.[2]

In 2026, disruption to shipping through the Strait of Hormuz created another shock. Japan's import volume of crude oil between April and July fell by roughly one-third from the same period a year earlier, while the import volume of naphtha also fell by 22%.[3] The Japanese government responded by releasing oil reserves and accelerating imports from alternative suppliers.

Why do these trade disruptions matter so much? The reason is that their effects do not stop with the companies directly involved in international trade. Instead, the shock spreads and can become much larger, as it propagates through domestic supply chains.

A simulation study I conducted with Hiroyasu Inoue of the University of Hyogo[4] illustrates this mechanism. Using data on more than one million Japanese firms and four million buyer-supplier relationships, we simulated various disruptions to Japan's international trade. In one severe scenario, in which imports from China were reduced by 80% for two months, total value added in Japan fell by about 40%.

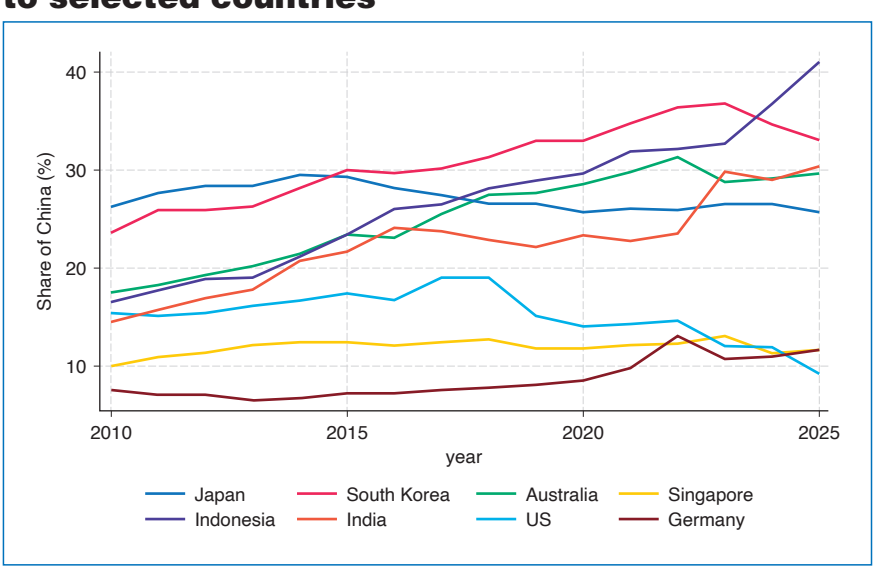
China is particularly important because Japan remains heavily dependent on Chinese suppliers. When imports of materials, parts, or components from China are disrupted, the consequences extend far beyond the companies that import them directly. An importer forced to cut production may reduce its purchases from domestic suppliers. At the same time, its customers may be unable to obtain the parts they need and may also have to reduce production. The shock therefore spreads both upstream and downstream.

Despite these risks which have been increasing recently due to rising Japan-China tensions, Japan's dependence on China has changed surprisingly little. As *Chart1* shows, China's share of Japan's total imports of parts and components has not declined significantly over the past five years. Japan's high dependence, although lower than other Asian countries, contrasts with the United States, which has substantially reduced its reliance on China since the beginning of the US-China trade conflict.

The concentration is even more striking in some strategically important industries. China's share of Japan's automobile-parts imports increased from 36% in 2018 to 44% in 2025. For electrical

CHART 1

China's share in imports of parts & components to selected countries



Source: UN Comtrade

and electronic equipment, China's share has remained at around 45%. Over the same period, the US substantially reduced its dependence on China from 17% to 9% in the former and from 43% to 16% in the latter category.[5]

These figures suggest that supply-chain resilience requires reducing excessive reliance on China in supply chains. One approach for this is to strengthen domestic production capacity in strategically important industries through carefully designed industrial policy. Another is to diversify international supply chains toward a broader range of countries, including rapidly growing economies in the Global South.

These two approaches need not be alternatives. Greater domestic capacity can reduce exposure to external shocks, while broader international networks can prevent excessive dependence on any single country. The central challenge is therefore not to eliminate international supply chains, but to make them more diversified and resilient.

2. Industrial Policy Can Strengthen Resilience – But Its Design Matters

To strengthen domestic production of critical goods, Japan and many other countries have increasingly turned to industrial policy, i.e., government support targeted at strategically important industries using subsidies, tax incentives, and trade protection.

For decades, many economists were skeptical of such policies. Governments may support the wrong industries, subsidies may keep inefficient firms alive, and protected companies may lose the incentive to innovate. The disappointing experience of import-substitution policies in many developing countries from the 1950s through the 1980s reinforced this skepticism.

Recent research, however, suggests that industrial policy can work under the right conditions. A study of South Korea's promotion of heavy and chemical industries in the 1970s, for example, finds that the policy increased production, productivity, and exports, with benefits spreading through supply chains to downstream industries.[6] Research on China's shipbuilding and solar-panel industries likewise finds that government support contributed substantially to their rapid expansion largely through technological improvements.[7] Recent research on semiconductor subsidies across countries also suggests that such policies can expand domestic production and generate international spillovers through knowledge sharing and collaboration.[8]

At the same time, the evidence makes clear that industrial policy or government support does not always succeed. Studies of broader firm subsidies produce much less favorable results. China's subsidies to companies in the late 1990s and early 2000s were found to be more effective when competition within an industry remained strong.[9] Another study using more recent Chinese data finds that subsidies disproportionately went to less productive firms and increased their employment but decreased productivity.[10] Evidence from Europe is similarly cautionary: subsidies increased employment at recipient firms but not their productivity, while harming the sales, employment, and productivity of competing firms. Once these effects on competitors are taken into account, the estimated aggregate effect is negative.[11]

Taken together, the literature points to several principles that appear to matter for effective industrial policy. Support is more likely to produce lasting benefits when it

1. targets sectors with economies of scale or spillovers across sectors;
2. preserves competition rather than protecting individual firms from rivals;
3. remains open to foreign markets and technology;
4. builds supply-chain and knowledge networks that spread benefits beyond subsidized firms;
5. and promotes innovation rather than simply expanding production.

Evaluation of Japan's recent industrial policy

Japan's recent semiconductor policy incorporates several of these features. A prominent example is the government's support for TSMC's semiconductor plants in Kumamoto, Kyushu. An important feature of this policy is its openness to foreign investment and foreign technology. Rather than attempting to develop the entire semiconductor industry behind national barriers, Japan has provided substantial support to attract one of the world's leading semiconductor manufacturers. Government support for the first TSMC plant in Kumamoto amounted to as much as 476 billion yen.

The policy has also emphasized research and innovation. In addition to the plants in Kumamoto, TSMC established its R&D center in Tsukuba in 2021, provided with subsidies from Japan. This research center conducts research on advanced three-dimensional integration and packaging technologies in collaboration with Japanese firms, research institutes, and universities.[12] Such international research networks can facilitate the transfer and creation of knowledge rather than simply relocating production capacity.

The arrival of TSMC has also been accompanied by a broader expansion of the semiconductor ecosystem in Kyushu. Producers of materials, components, and semiconductor-manufacturing equipment, as well as firms that use semiconductors, have announced substantial new investment in the region of 5.7 trillion yen in 231 projects. Government initiatives have facilitated these investments by creating networks among firms, universities, financial institutions, and public organizations, with the aim of promoting information exchange, human-capital development, and collaboration across the regional supply chain.[13]

Rapidus offers a second example. Established in 2022 with substantial government support, Rapidus aims to rebuild Japan's capacity to manufacture leading-edge logic semiconductors. A distinctive feature of the project is its utilization of international

knowledge networks. Rapidus dispatched approximately 150 engineers to IBM's facilities in Albany, New York, to acquire advanced process technology. By 2025, about 80 had returned to its plant in Chitose, Hokkaido, where they were applying this knowledge to its pilot production line. In July 2025, Rapidus announced that it had successfully obtained electrical characteristics from its 2-nanometer-generation GAA transistors.[14] It should be emphasized that this is not a closed policy in the sense that Rapidus will have to compete with established global manufacturers, including TSMC, rather than operate in a protected domestic market.

It is still too early to judge whether these semiconductor policies will ultimately be commercially successful. But their design contains several elements emphasized by the recent industrial-policy literature: openness to foreign technology, international research collaboration, development of regional supplier networks, and continued exposure to domestic and international competition.

Investments in the 17 strategic fields should be open and innovation-oriented

These lessons are becoming increasingly important because Japan is now extending industrial policy far beyond semiconductors. The Japan Growth Strategy adopted in July 2026 identifies 17 strategic fields and 62 major products and technologies, ranging from AI and semiconductors to quantum technology, aerospace, biotechnology, critical minerals, energy, and defense-related industries. The associated roadmap envisages more than 370 trillion yen in cumulative public and private investment through fiscal 2040. Importantly, this figure refers to combined public and private investment, not government expenditure alone.[15]

The semiconductor experience suggests one way to assess such programs. The key question is not simply how much public money is spent, but how much additional activity that spending generates. Public support can be particularly valuable when it induces much larger private investment, creates regional supply chains, generates international knowledge networks, or facilitates innovation that continues after the subsidy itself ends. By contrast, a project that requires continuing government support simply to remain viable provides much weaker evidence that new industrial capabilities have been created.

The literature also highlights the importance of exit mechanisms. Large initial support may sometimes be justified when economies of scale or coordination failures require a "big push". However, some studies show that subsidies are provided to less productive firms to survive without any positive impact on the entire economy, suggesting that support should be selective and short-lived. Technological progress, private investment, and networks with other firms provide observable benchmarks against which policies in a particular industry can be assessed. Policies that consistently fail to generate such outcomes can then be reconsidered rather than automatically receiving additional support.

Japan's investments in the US can be used for domestic industry development

Another related suggestion arises from the large Japan-US strategic investment initiative agreed in 2025. The two governments established a framework involving up to $550 billion of Japanese investment in the US in areas including semiconductors, pharmaceuticals, energy, advanced materials, quantum technology, and other strategically important industries. Japan subsequently established a new Japan Bank for International Cooperation (JBIC) facility to support overseas investment in fields important for economic and national security.[16]

Although these Japanese investments are not aimed to develop domestic industries in Japan, they can be utilized for that purpose if they are associated with knowledge flows from the US. One possibility is to link these investments more closely to joint research and development. Japanese companies investing in the US can collaborate with US universities, national laboratories, startups, and technology companies. The Rapidus-IBM partnership illustrates how overseas investment and international knowledge transfer can reinforce one another.

For example, the projects already selected under the Japan-US strategic investment framework include investments in the synthetic diamond industry, in which Japan has strengths in diamond semiconductor technologies whereas the US has advanced capabilities in military and space applications. Therefore, joint R&D associated with the investment could promote mutual learning and innovation.

The Japanese government should therefore encourage joint R&D to be incorporated into projects under the US-Japan investment framework. Doing so could transform these large-scale investments into opportunities to deepen knowledge networks with US firms, universities, and research institutions and thereby strengthen Japan's own innovation capacity.

Seen in this way, investment in the US need not conflict with Japan's industrial policy. If public support for overseas investment helps Japanese firms gain access to advanced technologies, build international research networks, and transfer the resulting knowledge back to Japan, it can become an important measure of open industrial policy.

3. Diversification Toward the Global South Can Also Strengthen Resilience

Domestic production alone cannot make Japan economically secure or resilient. Japan will continue to depend on overseas sourcing and production because modern supply chains are highly internationalized and specialized. Even in semiconductors, no country can efficiently reproduce the entire global supply chain within its own borders.

Therefore, the second pillar of resilience should be to diversify Japan's supply-chain partners across a wider range of countries and

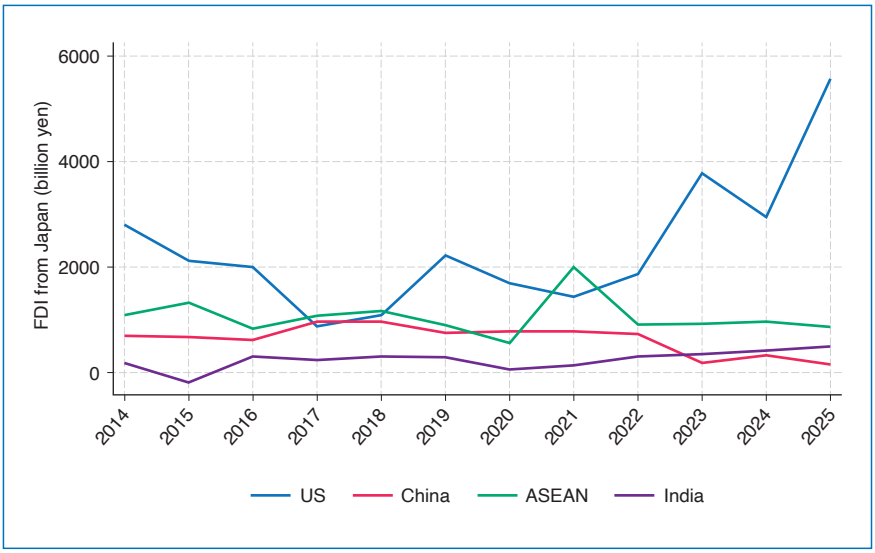
reduce its heavy dependence on China shown in *Chart 1*. The Global South, developing and emerging economies, should play a central role in this strategy for three reasons.

First, production and procurement in many Global South countries remain more cost-effective than in advanced economies. Second, these countries are already major markets and are likely to become even more important. The combined GDP of ASEAN, as well as the GDP of India, is already comparable to that of Japan. Third, some Global South countries have significant reserves of critical minerals and other materials whose production is currently concentrated in China.

Yet Japan has made only limited progress in diversifying its supply chains toward the Global South, despite the growing emphasis on economic resilience. *Chart 2* shows that Japanese manufacturing FDI in ASEAN has remained broadly stagnant for many years. Investment in India has increased recently, but its scale is still much smaller than investment in ASEAN.

CHART 2

Foreign direct investment in the manufacturing sector from Japan to selected countries/regions



Source: Bank of Japan

Two factors may be particularly important in explaining this limited diversification. One is intensifying competition with China over official finance, including official development assistance (ODA), in the Global South. The other is the burden created by environmental regulations imposed by advanced economies, including Japan, which can be difficult for firms and producers in developing countries to meet.

Official finance should be effectively utilized

China moved earlier than Japan and many other advanced economies to deepen its economic ties with the Global South. Through the Belt and Road Initiative (BRI), it combined infrastructure investment, public finance, trade, and private investment. Empirical studies find that the BRI strengthened economic links between China and participating countries: Chinese FDI increased, and exports from BRI countries to China also expanded. By contrast, Japan did not experience a comparable increase in investment links with these countries, while its relative presence in infrastructure investment and diplomatic relationships weakened.[17]

Whatever its geopolitical implications, the BRI highlights an important economic lesson: supply chains do not develop automatically. Infrastructure, information, finance, and trust all influence where firms choose to invest and trade. Public policy can therefore play an important role in shaping the geography of supply chains.

Japan already has institutions that can serve this purpose. ODA through Japan International Cooperation Agency (JICA) and other official finance through institutions such as the JBIC can improve infrastructure, reduce information barriers, share investment risks, and help Japanese firms establish relationships in markets they might otherwise be reluctant to enter. Empirical research has indeed found that Japanese ODA can encourage subsequent Japanese FDI in recipient countries.[18] In this sense, official finance can serve not only recipient countries but also Japan by helping create new international production networks.

Japan has recently strengthened these policy instruments. An amendment to the JICA Act that took effect in April 2025 expanded JICA's financial tools, including guarantees and bond acquisition, with the aim of mobilizing more private-sector capital for development.[19] Further reforms involving the JBIC in 2026 introduced additional instruments for overseas projects related to economic security, including financing mechanisms that can take greater risks in order to encourage private investment.[20]

These reforms make it easier to use public finance as a catalyst rather than relying solely on traditional ODA. This is particularly important because Japan cannot and need not compete with China simply by matching the scale of its public spending. A more effective strategy is to use limited public resources to leverage much larger private investment. ODA and other forms of official finance can help Japanese firms enter new markets, build supplier relationships, and diversify supply chains toward the Global South.

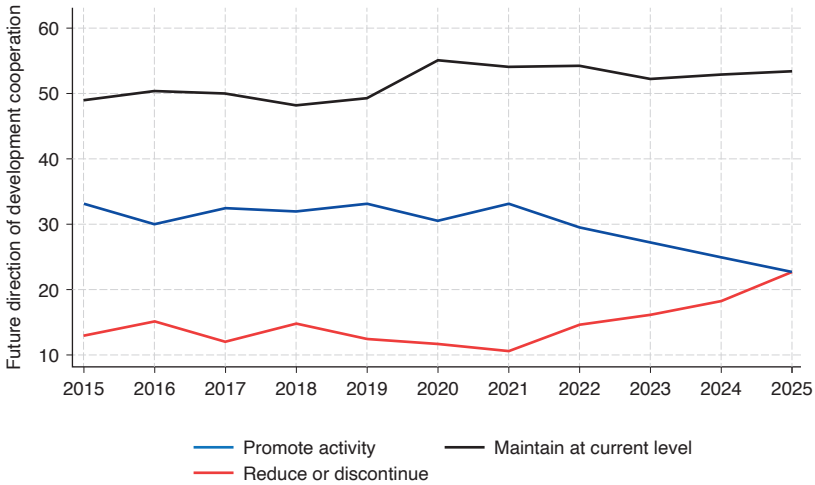
However, there is an important domestic constraint. Public support for development cooperation in Japan has weakened in recent years. According to the Cabinet Office survey, the share of respondents favoring a reduction or termination of development

cooperation rose from 10.6% in 2021 to 22.8% in 2025 *(Chart 3)*.[21] At a time of fiscal pressure and rising living costs, public support for overseas assistance cannot be taken for granted.

This makes it increasingly important for the government to explain that development cooperation is not simply a transfer of resources abroad. When it helps build infrastructure, create business networks, diversify procurement, and reduce excessive dependence on a small number of countries, it can benefit both recipient economies and Japan. Framing ODA and official finance in this way, as instruments for both domestic economic growth and supply-chain resilience, may be essential for sustaining public support.

CHART 3

Japanese citizens' view of development cooperation



Source: Cabinet Office, Public Opinion Survey on Diplomacy

A more flexible approach to the green transition is needed

Another obstacle to Japan's expansion of supply chains into the Global South is the burden created by environmental regulations in advanced economies. The EU's Carbon Border Adjustment Mechanism (CBAM), fully implemented from 2026, imposes carbon-related costs on imports of products such as steel, aluminum, and cement according to the emissions generated in their production. Such measures can contribute to global decarbonization, but they may also disproportionately affect developing economies, where firms often have less access to low-carbon technologies and financial resources. Simulation studies suggest that the CBAM could reduce production and exports in many developing countries.[22]

Similar tensions arise in energy finance. OECD countries, including Japan, have sharply restricted official support for new unabated coal-fired power generation. China, by contrast, has continued to support some overseas coal-related projects despite its 2021 pledge to stop building new coal-fired power plants abroad.[23] This difference can make Chinese finance more attractive to developing countries that continue to prioritize affordable and reliable energy supplies alongside decarbonization. Recent disruptions to global energy markets, including the Strait of Hormuz crisis, have further highlighted the importance of balancing climate objectives with energy security and supply-chain resilience.

Japan should therefore pursue a gradual and flexible approach to decarbonization in the Global South. Developing countries need to reduce emissions, but they must also secure affordable energy, employment, and economic growth. The Japan-led Asia Zero Emission Community (AZEC) reflects this idea through its principle of "one goal, various pathways", supporting measures such as energy efficiency and the use of lower-emission transition fuels where appropriate.[24] More recently, Japan launched POWERR Asia, providing approximately $10 billion in financial cooperation to strengthen energy supply chains, diversify energy sources, expand stockpiling, and improve energy efficiency.[25]

By combining decarbonization with energy security and economic development, Japan can offer the Global South a pragmatic path toward the energy transition. Such an approach can strengthen trust in Japan, create opportunities for Japanese technologies and firms, and at the same time support the diversification of Japan's supply chains. Environmental and energy cooperation can therefore become an important part of Japan's broader strategy for economic resilience.

4. Summary & Conclusion

Economic security should not mean retreating from globalization. For Japan, which depends heavily on international trade, investment, energy, resources, and foreign technology, self-sufficiency is neither realistic nor desirable. The more appropriate objective is resilient interdependence: preserving the benefits of international integration while reducing excessive dependence on particular countries, suppliers, technologies, and transport routes.

At home, this requires an open form of industrial policy that strengthens strategic production capacity while preserving competition, encouraging private investment, and connecting Japanese firms to international technology and knowledge networks. Abroad, Japan should diversify its supply chains toward ASEAN, India, Africa, and other parts of the Global South. ODA and other official finance can support this process by improving infrastructure,

reducing investment risks, and mobilizing private investment. Japan should also pursue a pragmatic approach to decarbonization that balances environmental goals with energy security and economic development in partner countries.

The central principle is therefore diversification combined with openness. Resilience comes from having multiple suppliers, energy sources, production locations, and knowledge partners, not from economic isolation. Japan's economic-security strategy should aim to broaden its international networks while strengthening its domestic capabilities. In this sense, economic security is not about disconnecting Japan from the world, but about connecting it to the world in a broader, more flexible, and more resilient way.

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