

American Journal of Economics and Business Management

Vol. 9 Issue 7 | **pp.** 380-393 | **ISSN:** 2576-5973
Available online @ https://www.globalresearchnetwork.us/index.php/ajebm

Article

Selective Openness and Supply-Chain Resilience: Japan Under Geoeconomic Fragmentation

Matvey Egorovich Shipilov*[1]

1. Postgraduate Student, Department of International Business; Director of the Center for Work with Branches, Plekhanov Russian University of Economics
*Correspondence: shipilov.me@rea.ru

Abstract: The article examines how Japan is adapting its international economic model to geoeconomic fragmentation. The research problem is the apparent contradiction between Japan's continued dependence on global markets and its growing use of economic-security instruments. The study applies a structured descriptive and institutional analysis of trade, value-added linkages, foreign direct investment, technology policy, and energy security using official data and policy documents for 2010-2025, with the latest trade-in-value-added indicators available for 2022. The results show that Japan is not pursuing broad deglobalization. Instead, it is developing a model of selective openness: market access and participation in regional agreements are preserved, while concentrated dependencies in semiconductors, critical minerals, digital infrastructure, and energy are reduced through supplier diversification, domestic capacity support, stockpiling, investment screening, and public-private coordination. Japan's 2023 exports remained concentrated in transport equipment and machinery; China accounted for about one-fifth of total goods trade in 2024; inward foreign direct investment stock reached a record 53.3 trillion yen in 2024; and energy self-sufficiency remained only 15.3%. The article contributes an integrated mechanism linking geoeconomic shocks, transmission channels, critical vulnerabilities, and adaptive instruments. For Russia, the most transferable elements are dependency mapping, supply-chain transparency, strategic reserves, industrial automation, and coordinated diversification toward Asian markets; alliance-specific instruments require substantial institutional modification.

Keywords: Japan; geoeconomic fragmentation; selective openness; global value chains; economic security.

Citation: Shipilov M. E. Selective Openness and Supply-Chain Resilience: Japan Under Geoeconomic Fragmentation. American Journal of Economics and Business Management 2026, 9(7), 380-393.

Received: 10th Apr 2026
Revised: 11th May 2026
Accepted: 11th Jun 2026
Published: 15th Jul 2026

Copyright: © 2026 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/)

1. Introduction

The world economy is entering a period in which geopolitical rivalry increasingly influences the geography of trade, investment, technology, finance, and production. Geoeconomic fragmentation is broader than a temporary rise in protectionism. It is a policy-driven reorientation of cross-border linkages according to strategic alignment, technological security, and the perceived reliability of partners. The International Monetary Fund identifies fragmentation as a multidimensional process capable of reducing the efficiency gains created by specialization and multilateral integration [1]. Recent evidence also shows that trade and foreign direct investment are increasingly sensitive to geopolitical distance, although global economic ties have not been divided into fully isolated blocs [2].

Global value chains are central to this transformation. Their efficiency depends on specialization, scale, and the availability of intermediate inputs, but the same characteristics may create vulnerabilities when production is concentrated in a small number of countries or firms. The literature therefore distinguishes resilience from simple localization. Shorter or more domestic supply chains are not automatically safer; resilience depends on substitutability, inventory policy, information transparency, logistics, and the capacity to reconfigure production after a shock [3]. Empirical studies of recent supply-chain shifts similarly describe a reallocation of sourcing rather than the end of globalization: firms combine China-linked production with additional locations in Southeast Asia, North America, and other regions [4]. The Global Value Chain Development Report 2025 characterizes this process as rewiring or reglobalization, in which technological change, the green transition, and geopolitical pressures alter the configuration of international production without eliminating cross-border interdependence [5].

Japan is a particularly important case for studying this contradiction. It is a technologically advanced industrial economy, a major exporter of transport equipment, machinery, materials, and components, a large international investor, and a central participant in Asian production networks. At the same time, Japan depends heavily on imported energy, critical minerals, digital platforms, and selected semiconductor inputs. The country is also exposed to the economic consequences of strategic competition between the United States and China, its two most important external partners. The 2025 International Monetary Fund consultation for Japan explicitly identifies deepening geoeconomic fragmentation and growing trade restrictions as downside risks to economic growth [6]. Japan's Ministry of Economy, Trade and Industry likewise treats supply-chain resilience, critical minerals, economic security, and the weakening of the rules-based trade order as core external-economic policy issues [7].

The existing literature offers strong analyses of global fragmentation, supply-chain risk, and individual elements of Japan's economic-security policy. However, three gaps remain. First, many studies treat trade diversification, investment screening, semiconductor support, and energy policy separately, although they operate as components of one adaptation system. Second, the relationship between continued openness and selective protection of critical nodes is often described politically but not formulated as an economic model. Third, the transferability of Japan's instruments to other industrial economies is frequently discussed without a clear distinction between universally applicable mechanisms and those dependent on Japan's alliance structure, financial capacity, and corporate organization.

The objective of this article is to develop an integrated explanation of Japan's economic adaptation to geoeconomic fragmentation and to determine which elements can inform the external-economic strategy of the Russian Federation. The central research question is: how can a highly integrated national economy reduce critical external dependencies without abandoning the benefits of international specialization? The working hypothesis is that Japan is moving from an efficiency-dominant model of integration toward selective openness, understood as the preservation of broad participation in international markets combined with targeted diversification, strategic production support, investment and export controls, stockpiling, and public-private coordination in critical sectors.

The scientific contribution consists of three elements. First, the article differentiates selective openness from deglobalization, regionalization, and autarkic import substitution. Second, it proposes a mechanism that links external shocks, transmission channels, vulnerabilities, adaptive instruments, and competitiveness outcomes [8], [9]. Third, it develops a transferability matrix for Russia that separates directly adaptable practices from measures requiring institutional modification or having limited applicability.

2. Materials and Methods

The study uses a structured descriptive-analytical design. The principal observation period is 2010-2025, which covers the post-global-financial-crisis restructuring of Japanese industry, the policy cycle associated with Abenomics, pandemic-related supply disruptions, and the strengthening of economic-security policy after 2022. Longer historical comparisons are used where necessary, while the latest Organisation for Economic Co-operation and Development trade-in-value-added dataset extends through 2022 because input-output-based indicators are published with a time lag.

The information base includes the International Monetary Fund, the Organisation for Economic Co-operation and Development, the World Trade Organization, the United Nations Conference on Trade and Development, the Statistics Bureau of Japan, the Ministry of Finance, the Ministry of Economy, Trade and Industry, the Cabinet Secretariat, the Agency for Natural Resources and Energy, and the Japan External Trade Organization. Japan's macroeconomic constraints are interpreted with reference to the OECD Economic Survey of Japan. Trade values and commodity structures are taken from the Statistical Handbook of Japan 2025 and Ministry of Finance trade statistics. The geographic concentration of Japan-China trade is cross-checked against official Ministry of Foreign Affairs data. Value-added linkages are assessed using the OECD Trade in Value Added 2025 edition and the Japan country note published in 2026. Foreign investment and corporate internationalization are evaluated using the JETRO Global Trade and Investment Report 2025 and the JETRO Invest Japan Report 2025. Energy vulnerability is measured using the Energy White Paper 2025.

The methodology consists of five sequential stages. The first stage defines and differentiates globalization, deglobalization, regionalization, and geoeconomic fragmentation. The second stage identifies seven transmission channels: trade, investment, technology, production and logistics, finance, energy and resources, and institutions. The third stage maps critical dependencies through partner concentration, product concentration, foreign value-added linkages, import reliance, and the availability of substitutes. The fourth stage classifies adaptation instruments into diversification, domestic capacity-building, strategic reserves, screening and controls, international agreements, and public-private coordination. The fifth stage assesses the transferability of these instruments to Russia according to institutional compatibility, fiscal and technological requirements, implementation costs, and dependence on alliance-based arrangements.

The article introduces selective openness as an analytical construct rather than a mechanically calculated index. It is represented as SO = f(O, D, C, I), where O is preserved external openness, D is diversification of partners and suppliers, C is domestic strategic capacity in critical nodes, and I is institutional coordination. A country approaches selective openness when it simultaneously maintains broad trade and investment links, reduces concentrated vulnerabilities, develops replacement capacity only in strategically justified sectors, and coordinates government and corporate responses. This formulation avoids equating resilience with maximum self-sufficiency.

The study applies triangulation: a conclusion is accepted only when supported by at least two types of evidence, such as statistical data and policy documents, or value-added indicators and commodity trade data. The main limitation is that some 2025 policy measures are too recent for a complete ex post evaluation. Consequently, the article distinguishes observable structural outcomes from policy intentions and does not attribute all trade changes directly to geoeconomic policy.

Table 1. Distinguishing major forms of transformation in the world economy.

Category	Core economic meaning	Typical indicators	Implication for Japan
Globalization	Expansion and deepening of cross-border flows based on specialization, scale, and lower transaction costs.	Trade and investment growth; rising foreign value added; broader international production networks.	Remains the structural foundation of Japan's export, investment, and technology model.
Deglobalization	Broad contraction of cross-border integration and reduction in the economic importance of international flows.	Falling trade-to-GDP ratios; declining cross-border investment; persistent reduction in foreign inputs.	Not supported as the dominant description: Japan preserves major trade agreements, outward investment, and inward FDI targets.
Regionalization	Concentration of production and exchange within a geographic region.	Growing intraregional trade and value-added shares; regional production hubs.	Visible in stronger Asian production links, particularly with ASEAN, while global ties with the United States and Europe remain important.
Geoeconomic fragmentation	Policy-driven reconfiguration of economic ties according to geopolitical alignment, security, technology, and reliability.	Export controls; investment screening; subsidies for critical industries; supplier diversification; stockpiling.	Explains Japan's selective protection of critical nodes alongside continued international integration.
Selective openness	Preservation of broad market access combined with targeted reduction of critical dependencies.	Open trade architecture plus diversification, strategic capacity, screening, reserves, and public-private coordination.	Emerging adaptation model identified in this study.

3. Results

3.1. From efficiency-oriented integration to selective openness

Japan's postwar internationalization was built on a combination of imported resources, competitive manufacturing, technology-intensive exports, and the overseas expansion of Japanese corporations. During the 1990s and 2000s, cost reduction and access to fast-growing Asian markets encouraged the spatial fragmentation of production. This model did not disappear after the global financial crisis; however, the criteria used to organize production gradually changed. Reliability, strategic control, and the political acceptability of suppliers became additional variables alongside price and quality.

The pandemic demonstrated the vulnerability of concentrated production and logistics, while strategic rivalry intensified the risk of export controls and restrictions on sensitive technologies. Japan's response was not a generalized closure of the economy. The government continued to support the rules-based trading system and regional economic agreements while introducing targeted instruments for semiconductors, storage batteries, cloud infrastructure, pharmaceuticals, critical minerals, and essential infrastructure [10],

[11]. This combination corresponds to selective openness because the protective measures are concentrated on a limited set of critical nodes rather than applied indiscriminately to all imports and investments.

The Economic Security Promotion Act institutionalized this approach. It established systems for the stable supply of critical products, the protection of essential infrastructure, the development of critical technologies, and the non-disclosure of selected patent applications [12]. The policy logic is explicitly cooperative: Japanese documents emphasize the need to balance economic security with free economic activity and international cooperation. The government therefore seeks autonomy in critical functions without eliminating interdependence.

This approach can be understood through four complementary dimensions. Openness preserves access to markets, finance, technologies, and foreign investment. Diversification reduces exposure to single suppliers and transport corridors. Strategic capacity ensures that selected products or functions can be produced, stored, repaired, or substituted domestically. Institutional coordination aligns industrial policy, foreign policy, competition policy, trade agreements, and corporate risk management. Weakness in any one dimension reduces the effectiveness of the whole model.

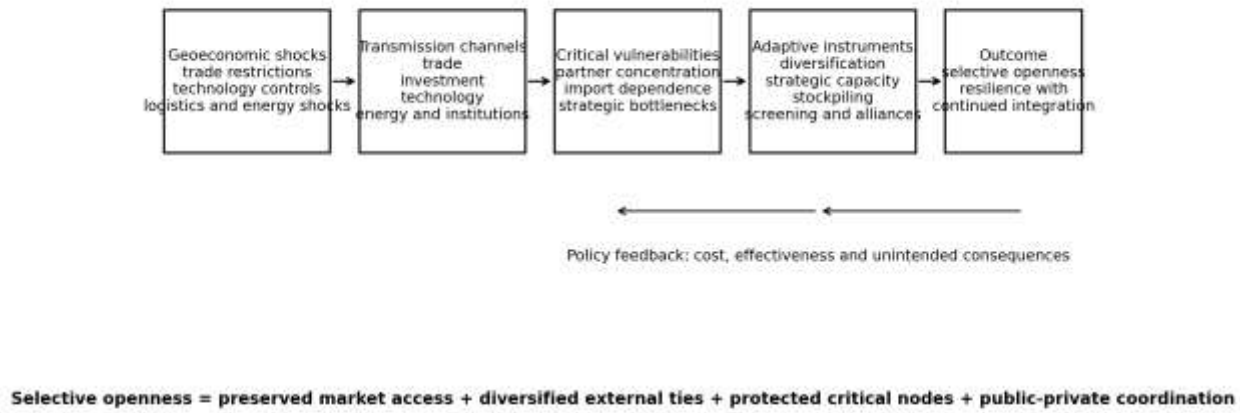


Figure 1. Mechanism of Japan's adaptation to geoeconomic fragmentation.

Source: developed by the author.

3.2. Trade and global value-chain reconfiguration

Japan's trade structure confirms both the strength of its industrial specialization and the persistence of concentrated external exposure. In 2023, goods exports reached 100.9 trillion yen and imports 110.4 trillion yen, producing a trade deficit of 9.5 trillion yen [13]. Transport equipment represented 23.4% of exports, general machinery 18.3%, and electrical machinery 16.6%. Motor vehicles alone accounted for 17.1% of total export value. These figures demonstrate that Japan's external competitiveness remains concentrated in complex manufacturing sectors that rely on international markets and cross-border supplier networks.

Geographic concentration creates a different type of risk. China accounted for 17.6% of Japan's goods exports and 22.5% of imports in 2024, or 20.2% of total goods trade [14]. The United States remains particularly important for final manufactured exports: in 2023 it absorbed 33.8% of Japan's motor vehicle exports. Japan is therefore exposed to both demand-side concentration in the United States and supply-side concentration in China

and other Asian economies. This dual exposure explains why complete alignment with one economic bloc would carry substantial opportunity costs.

Product-level data reveal sharper bottlenecks than aggregate trade shares. In 2023, Taiwan supplied 54.6% of Japan's semiconductor-related imports, while China supplied 11.9%. Petroleum imports were concentrated in Saudi Arabia and the United Arab Emirates, which together accounted for approximately four-fifths of the relevant import value. Such patterns show that the main policy problem is not import dependence in general but dependence on a limited number of irreplaceable products and suppliers.

Trade-in-value-added data provide a complementary view. In 2022, 17.3% of Japan's domestic value added was driven by foreign final demand, up from 13% in 2010 but below the OECD average of 34.6%. The exposure was highly sector-specific: foreign demand accounted for 59.5% of value added in motor vehicles and 56.7% in information and communication technology and electronics. At the same time, 26.1% of Japan's imported intermediate goods and services was subsequently embodied in exports, compared with an OECD average of 49.2%. Japan therefore combines relatively high domestic value added in exports with strong dependence on foreign demand in selected manufacturing sectors.

The evidence supports a reconfiguration rather than a retreat from global value chains. Japan is diversifying procurement and production toward ASEAN and other partners, but it continues to trade extensively with China and the United States. The JETRO Global Trade and Investment Report 2025 describes global corporate investment as increasingly selective and identifies cost pressures, tariff uncertainty, and geopolitical risk as drivers of procurement and supply-chain restructuring. For Japanese firms, the resulting pattern is often a China-plus-one strategy rather than a complete exit from China.

Regional trade agreements reinforce this logic. Japan participates in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership and the Regional Comprehensive Economic Partnership [15]. These arrangements widen the set of rules-based markets available to firms, reduce the cost of diversification, and provide a framework for maintaining openness even when bilateral tensions rise. The institutional architecture of selective openness is therefore not purely defensive; it also depends on creating alternative opportunities for trade and investment.

Table 2. Selected indicators of Japan's external exposure and adaptive capacity.

Dimension	Indicator	Latest observation used	Interpretation
Goods trade	Exports, imports, and balance	2023: exports 100.9 trillion yen; imports 110.4 trillion yen; balance -9.5 trillion yen.	Large trade scale remains, but imported energy and a weak yen can strongly affect the balance.
Export specialization	Share of leading sectors	2023: transport equipment 23.4%; general machinery 18.3%; electrical machinery 16.6%; motor vehicles 17.1%.	High competitiveness, but exposure is concentrated in cyclical and policy-sensitive manufacturing.
Partner concentration	China's share of goods trade	2024: 17.6% of exports, 22.5% of imports, 20.2% of total trade.	Economic interdependence limits the feasibility of abrupt decoupling.
Demand concentration	United States share of motor vehicle exports	2023: 33.8%.	Automotive performance is highly sensitive to United States market access and tariff policy.

Dimension	Indicator	Latest observation used	Interpretation
Technology bottleneck	Taiwan share of semiconductor-related imports	2023: 54.6%.	A concentrated critical input creates a strong incentive for diversification and domestic capacity support.
Value-added exposure	Domestic value added driven by foreign final demand	2022: 17.3% overall; 59.5% in motor vehicles; 56.7% in ICT and electronics.	Foreign demand is moderate economy-wide but very high in strategic manufacturing sectors.
GVC dependence	Imported intermediates embodied in exports	2022: 26.1%, below the OECD average of 49.2%.	Japan's exports contain substantial domestic value added, but selected inputs remain critical.
Inward investment	FDI stock and greenfield projects	2024: FDI stock 53.3 trillion yen; greenfield investment USD 31.6 billion.	Investment openness continues despite stronger screening in critical sectors.
Energy security	Energy self-sufficiency and fossil generation	FY2023: self-sufficiency 15.3%; about 69% of power generation from fossil fuels.	Energy dependence remains Japan's most persistent structural vulnerability.

3.3. Investment, technology, and the strategic-production turn

Japan's adaptation model also combines openness to foreign capital with more selective screening. In 2024, inward foreign direct investment flows were 2.5 trillion yen, while the inward FDI stock reached a record 53.3 trillion yen, 4.5% above the previous year[16]. Greenfield investment reached USD 31.6 billion, supported by large projects in data centers, logistics, artificial intelligence, and labor-saving technologies. The government subsequently raised its target for inward FDI stock in 2030 to 120 trillion yen. These indicators are inconsistent with a generalized retreat from international investment.

At the same time, the screening perimeter has expanded. Amendments to the inward-investment regime strengthened prior notification and review in sectors connected to critical infrastructure and sensitive technology. This reflects a risk-based distinction between capital that contributes to productivity and innovation and transactions that may enable the transfer of strategic assets or create control over essential infrastructure. Selective openness therefore requires administrative capacity to evaluate investors, ownership structures, technology access, and security risks without creating indiscriminate barriers.

Industrial policy has become more prominent in semiconductors, cloud computing, storage batteries, and digital infrastructure. Under the Economic Security Promotion Act, METI approved support of up to 72.5 billion yen for projects designed to strengthen domestic cloud and computing capacity for artificial intelligence [17]. Japan has also supported semiconductor production and research to fill missing links in the domestic supply chain. The economic rationale is not to reproduce every stage of global production domestically. It is to secure a minimum viable capacity in nodes where a disruption would impose exceptionally high social and industrial costs.

This shift carries benefits and risks. Public support can accelerate investment, attract complementary suppliers, and reduce the time required to restore production after a shock. However, it may also produce subsidy competition, excess capacity, technological lock-in, and higher fiscal costs. The effectiveness of strategic production policy therefore

depends on sunset clauses, performance indicators, private co-financing, competition among projects, and periodic reassessment of whether the relevant dependency remains critical.

The 2025 revised Grand Design and Action Plan for a New Form of Capitalism integrates economic security with investment, innovation, supply-chain resilience, and measures against technology outflow [18]. This institutional integration is significant. It moves economic security away from a narrow control function and embeds it in a broader productivity and growth strategy. In this model, resilience is expected to support competitiveness rather than replace it.

3.4. Energy and resource dependence as the binding constraint

Energy is the most difficult dimension of Japan's selective openness. The country's energy self-sufficiency rate was only 15.3% in fiscal year 2023, the lowest among the Group of Seven economies, while approximately 69% of electricity generation depended on fossil fuels [15], [16]. Imported liquefied natural gas, petroleum, and coal expose Japan to price volatility, maritime transport risks, and geopolitical disruption. Energy costs also influence the competitiveness of domestic semiconductor plants, data centers, steel, chemicals, and other energy-intensive industries.

Japan's response combines diversification, strategic stockpiles, long-term procurement, nuclear restarts, renewable energy, energy efficiency, hydrogen and ammonia initiatives, and green-transformation investment. The government plans substantial anticipatory investment under its green-transformation framework. Yet the energy transition itself creates new dependencies in batteries, grid equipment, critical minerals, and digital-control systems. Consequently, decarbonization and economic security cannot be treated as separate policy domains.

The National Security Strategy of Japan places economic security, technology, and energy within a unified framework while simultaneously committing Japan to an open and stable international economic order [17]. This policy combination illustrates the essence of selective openness: resilience is pursued through diversification and strategic capacity, but international cooperation remains necessary because full energy and resource autonomy is economically and physically unrealistic.

The resource dimension also demonstrates why friend-shoring should not be treated as a universal solution. Politically aligned suppliers may still be geographically concentrated, exposed to natural disasters, or unable to expand production quickly. A robust strategy must combine partner diversification with recycling, substitution, demand management, stockpiling, and transparent monitoring of upstream ownership and logistics.

3.5. An integrated model of state-corporate adaptation

Japan's emerging model can be summarized as a portfolio of mutually reinforcing instruments. The first group consists of preventive measures: dependency mapping, scenario analysis, supply-chain visibility, inventories, and early-warning indicators. The second group contains market-shaping measures: subsidies, tax incentives, public procurement, research support, and infrastructure investment. The third group includes regulatory safeguards: investment screening, export controls, protection of essential infrastructure, and patent-security rules. The fourth group is external-economic: regional agreements, cooperation with partners, development finance, and support for overseas diversification. The fifth group consists of corporate mechanisms: multi-sourcing, modular production, inventory redesign, geographic diversification, and long-term contracts.

The central governance problem is proportionality. Resilience measures should be strongest where three conditions coincide: a high probability or severe consequence of disruption, limited short-term substitutability, and systemic importance for the broader economy. When these conditions are absent, excessive localization may reduce

productivity without materially increasing security. OECD analyses similarly emphasize that broad relocalization can impose substantial economic costs and that diversified, transparent, and flexible networks are generally more effective than indiscriminate self-sufficiency [18].

Japan's experience also shows the importance of public-private information exchange. Governments may possess geopolitical and intelligence assessments that firms cannot access, while firms have detailed knowledge of tier-two and tier-three suppliers, technical substitutability, and production lead times. Effective economic-security policy requires a protected mechanism for combining these information sets. The policy literature on Japan's supply-chain strategy highlights this coordination function as a central feature of the Economic Security Promotion Act [19].

Table 3. Japan's selective-openness policy portfolio.

Policy block	Representative instruments	Expected economic effect	Main implementation risk
Dependency intelligence	Critical-input mapping; supplier-tier analysis; scenario testing; early-warning indicators.	Improves visibility and reduces response time before a disruption becomes systemic.	Incomplete corporate disclosure; confidentiality problems; false precision in risk scores.
Diversification	Multiple suppliers; ASEAN and other alternative locations; route and logistics diversification.	Reduces single-source exposure while preserving international specialization.	Higher procurement costs; indirect dependence on the original upstream supplier.
Strategic domestic capacity	Support for semiconductors, cloud computing, batteries, pharmaceuticals, and essential infrastructure.	Creates minimum viable replacement capacity and attracts complementary investment.	Subsidy competition; fiscal burden; excess capacity; capture by incumbent firms.
Reserves and continuity	Stockpiling; emergency contracts; spare capacity; business-continuity requirements.	Bridges temporary disruptions and stabilizes production in critical sectors.	Inventory obsolescence; storage costs; moral hazard.
Regulatory safeguards	Investment screening; export controls; infrastructure review; sensitive patent protection.	Reduces technology leakage and hostile control over strategic assets.	Administrative burden; retaliation; reduced investment if criteria are unclear.
Open external architecture	CPTPP; RCEP; cooperation with like-minded and regional partners; outward-investment support.	Expands alternative markets and rules-based channels for diversification.	Rules may fragment across agreements; political alignment can narrow commercial options.
Green and digital transformation	Energy efficiency; carbon-free generation; digital supply-chain management; automation.	Reduces resource intensity, raises productivity, and improves traceability.	New dependencies on minerals, software, data infrastructure, and electricity networks.

4. Discussion

The findings support the hypothesis that Japan is moving toward selective openness rather than deglobalization. Trade, value-added, and investment indicators show continued international integration, while policy documents reveal targeted efforts to protect critical functions. This combination is economically rational for a country whose competitiveness depends on foreign markets and overseas production but whose vulnerabilities are concentrated in energy, semiconductors, digital infrastructure, and selected materials [20].

The distinction between selective openness and decoupling is important. Decoupling implies a broad reduction of economic ties with a particular country or bloc. Japan's actual behavior is more differentiated. It seeks to reduce excessive dependence, especially where technology or critical inputs have few substitutes, but it maintains substantial trade with China and continues to rely on the United States as a major export market and technology partner. This is consistent with broader empirical research showing that geopolitical fragmentation changes the direction of flows more rapidly than their total scale [21], [22].

Japan's policy mix also confirms that resilience should be evaluated at the level of functions and nodes rather than entire sectors. A country does not need to produce every semiconductor, battery, medicine, or digital service domestically. It needs to identify which functions cannot be replaced within an acceptable time and which disruptions would propagate across many industries. This functional approach can reduce the fiscal and efficiency costs of economic-security policy [23].

Nevertheless, the Japanese model has limitations. First, industrial subsidies may encourage rent-seeking and international subsidy races. Second, coordination with politically aligned partners can reduce one dependency while creating another. Third, domestic strategic capacity may be constrained by labor shortages, demographic ageing, high construction costs, and electricity availability. Fourth, tighter controls can discourage foreign investment or limit scientific exchange. Fifth, the success of diversification cannot be inferred from the first-tier supplier alone because upstream production may remain concentrated in the original country.

These limitations imply that the effectiveness of selective openness should be measured with a balanced scorecard. Relevant indicators include the maximum partner share for critical inputs, the number of qualified suppliers, substitution time, inventory coverage, domestic repair and production capacity, the share of imports routed through single logistics corridors, fiscal support per unit of additional capacity, and the effect of controls on investment and innovation. OECD work on economic security similarly recommends focusing on clearly identified vulnerabilities and avoiding measures that unnecessarily weaken the open international system [24], [25].

The Russian Federation faces a different institutional and external environment, but several elements of Japan's experience are transferable. Russian strategic documents emphasize economic security, technological development, and adaptation to changes in the world order [26,27]. The most directly applicable Japanese practices are systematic mapping of critical dependencies, protected exchange of supply-chain information between government and firms, strategic reserves, support for industrial automation, and a portfolio approach to geographic diversification. These measures can be implemented without copying Japan's alliance-dependent arrangements.

For Russia, supplier diversification should be connected to the development of production and logistics links with China, India, the Association of Southeast Asian Nations, the Middle East, Central Asia, and other partners. However, geographic diversification must be assessed at the upstream level. Importing a component through a third country does not reduce vulnerability when the underlying technology, material, or intellectual property remains controlled by a single external source.

Japanese experience is particularly relevant for the Russian Far East and for industrial cooperation in Asia. A practical application would be the creation of sectoral external-dependency maps for machine tools, electronics, pharmaceuticals, transport equipment, energy technology, and critical minerals. Each map should identify the input, supplier concentration, ownership structure, logistics route, substitution time, domestic capacity, and the cost of disruption. Policy support should then be allocated according to systemic importance rather than the lobbying power of an individual industry.

Certain Japanese instruments require substantial modification. Japan can use alliance-based technology cooperation, access to major Western financial markets, and established multinational corporate networks. Russia's options are constrained by sanctions, export controls, and different capital-market conditions. Therefore, direct replication of Japanese investment-screening or friend-shoring arrangements would be inappropriate. Russia needs mechanisms compatible with its own legal framework, Eurasian integration, bilateral settlements, industrial structure, and resource base.

The analysis also has implications beyond Japan and Russia. Selective openness may become a general adaptation model for industrial economies that cannot achieve autarky but face increasing strategic risk. Its success depends on preserving competition and openness in ordinary sectors while applying transparent, proportionate, and regularly reviewed measures to a narrow set of genuinely critical functions. This principle offers a middle path between naive dependence on frictionless globalization and costly economic closure.

Table 4. Applicability of Japanese adaptation mechanisms to the Russian Federation.

Applicability group	Japanese mechanism	Recommended Russian adaptation	Implementation condition
Directly adaptable	Critical-dependency mapping and supply-chain visibility.	Create sectoral maps of critical inputs, supplier tiers, ownership, logistics routes, inventories, and substitution time.	Mandatory but protected corporate reporting; unified methodology; interagency analytical center.
Directly adaptable	Strategic reserves and continuity planning.	Develop differentiated reserve norms for components, materials, medicines, and repair capacity.	Regular rotation of reserves; cost-benefit criteria; joint public-private financing.
Directly adaptable	Public-private economic-security coordination.	Establish permanent sector councils linking government, corporations, research institutions, and logistics providers.	Confidentiality rules; clear accountability; measurable risk-reduction targets.
Requires modification	Support for strategic production and technology.	Use competitive project selection, co-financing, procurement commitments, and performance-based support.	Avoid blanket import substitution; focus on bottlenecks with high systemic importance.

Applicability group	Japanese mechanism	Recommended Russian adaptation	Implementation condition
Requires modification	External diversification and regional production networks.	Expand industrial and logistics cooperation with Asian, Eurasian, Middle Eastern, and other partners.	Assess upstream origin and technological control, not only the immediate supplier country.
Requires modification	Investment screening and technology controls.	Develop transparent criteria for strategic assets, beneficial ownership, and technology transfer.	Legal predictability; proportionality; coordination with competition and investment policy.
Limited transferability	Alliance-based friend-shoring and access to allied technology ecosystems.	Use project-specific bilateral and multilateral partnerships rather than copying alliance structures.	Compatibility with sanctions, payment infrastructure, and national foreign-policy priorities.

5. Conclusion

Japan's transformation under geoeconomic fragmentation is best described as a transition toward selective openness. The country continues to depend on international trade, foreign demand, overseas investment, and regional production networks. At the same time, it is developing targeted mechanisms to reduce concentrated dependencies in critical products, technologies, infrastructure, energy, and resources.

The empirical evidence reveals a dual structure. Japan retains strong domestic value added and international competitiveness in motor vehicles, machinery, and electronics, but foreign demand is exceptionally important for these sectors. China remains indispensable in total trade, the United States is a central final market, and selected semiconductor and energy imports are highly concentrated. Inward FDI continues to grow, while screening becomes more selective. Energy self-sufficiency remains the most persistent structural constraint.

The principal theoretical result is the proposed mechanism linking geoeconomic shocks, transmission channels, vulnerabilities, adaptive instruments, and competitiveness outcomes. Selective openness is effective when four elements operate together: preserved external openness, diversified partners and suppliers, minimum viable strategic capacity in critical nodes, and institutional coordination between the state and business. A strategy focused only on localization would sacrifice efficiency, while a strategy focused only on diversification could leave upstream dependencies unchanged.

For Russia, the most useful elements of Japanese experience are dependency mapping, supply-chain transparency, strategic reserves, automation, support for narrowly defined bottlenecks, and coordinated diversification toward Asian and Eurasian markets. Instruments based on Japan's alliance system and access to Western capital and technology require major modification and should not be copied mechanically.

Future research should quantify a comparative adaptive-transformation index for Japan, Germany, the Republic of Korea, China, and Russia; calculate product-level concentration and substitution-time indicators; and develop scenarios for Japan's position in the world economy through 2035. Such research would make it possible to distinguish temporary trade reorientation from durable structural transformation.

REFERENCES

[1] S. Aiyar, J. Chen, C. H. Ebeke, et al., Geoeconomic Fragmentation and the Future of Multilateralism, IMF Staff Discussion Note 2023/001. Washington, DC, USA: International Monetary Fund, 2023, doi: 10.5089/9798400229046.006.

[2] G. Gopinath, P.-O. Gourinchas, A. F. Presbitero, and P. Topalova, Changing Global Linkages: A New Cold War?, IMF Working Paper 2024/076. Washington, DC, USA: International Monetary Fund, 2024, doi: 10.5089/9798400272745.001.

[3] R. Baldwin and R. Freeman, "Risks and global supply chains: What we know and what we need to know," Annual Review of Economics, vol. 14, pp. 153–180, 2022, doi: 10.1146/annurev-economics-051420-113737.

[4] L. Alfaro and D. Chor, Global Supply Chains: The Looming "Great Reallocation," NBER Working Paper No. 31661. Cambridge, MA, USA: National Bureau of Economic Research, 2023, doi: 10.3386/w31661.

[5] World Trade Organization, Asian Development Bank, Institute of Developing Economies–JETRO, and Research Institute for Global Value Chains at the University of International Business and Economics, Global Value Chain Development Report 2025: Rewiring GVCs in a Changing Global Economy. Geneva, Switzerland: World Trade Organization, 2025.

[6] International Monetary Fund, Japan: 2025 Article IV Consultation—Press Release; Staff Report; and Statement by the Executive Director for Japan, IMF Country Report No. 25/82. Washington, DC, USA: International Monetary Fund, 2025.

[7] Ministry of Economy, Trade and Industry of Japan, White Paper on International Economy and Trade 2025. Tokyo, Japan: METI, 2025.

[8] Organisation for Economic Co-operation and Development, OECD Economic Surveys: Japan 2024. Paris, France: OECD Publishing, 2024, doi: 10.1787/41e807f9-en.

[9] Statistics Bureau of Japan, Statistical Handbook of Japan 2025. Tokyo, Japan: Ministry of Internal Affairs and Communications, 2025.

[10] Ministry of Finance of Japan, Trade Statistics of Japan: 2024 Calendar-Year Data. Tokyo, Japan: Ministry of Finance, 2024.

[11] Ministry of Foreign Affairs of Japan, China's Economy and Japan–China Economic Relations. Tokyo, Japan: MOFA, 2025.

[12] Organisation for Economic Co-operation and Development, Trade in Value Added—Country Note: Japan. Paris, France: OECD, 2026.

[13] Japan External Trade Organization, JETRO Global Trade and Investment Report 2025. Tokyo, Japan: JETRO, 2025.

[14] Japan External Trade Organization, JETRO Invest Japan Report 2025. Tokyo, Japan: JETRO, 2025.

[15] Agency for Natural Resources and Energy, Energy White Paper 2025: Summary. Tokyo, Japan: Ministry of Economy, Trade and Industry, 2025.

[16] Ministry of Economy, Trade and Industry of Japan, "Japan's Economic Security Strategies and the Economic Security Promotion Act," in White Paper on International Economy and Trade 2023. Tokyo, Japan: METI, 2023.

[17] Ministry of Economy, Trade and Industry of Japan, "Approval of Plans for Ensuring a Stable Supply of Cloud Programs under the Economic Security Promotion Act," Apr. 19, 2024.

[18] Cabinet Secretariat of Japan, Grand Design and Action Plan for a New Form of Capitalism: 2025 Revised Version. Tokyo, Japan: Cabinet Secretariat, Jun. 13, 2025.

[19] Cabinet Secretariat of Japan, National Security Strategy of Japan. Tokyo, Japan: Cabinet Secretariat, Dec. 16, 2022.

[20] Organisation for Economic Co-operation and Development, Risks and Resilience in Global Trade: Key Trends in 2023–2024. Paris, France: OECD Publishing, 2024, doi: 10.1787/1c66c439-en.

[21] Organisation for Economic Co-operation and Development, OECD Supply Chain Resilience Review: Navigating Risks. Paris, France: OECD Publishing, 2025, doi: 10.1787/94e3a8ea-en.

[22] G.-P. Kim, Japan's Supply Chain Policy and Its Implications for South Korea, KIEP World Economy Brief 2024-05. Sejong, South Korea: Korea Institute for International Economic Policy, 2024.

[23] H. Miura, "Japan's initiatives to ensure resilient supply chain," Journal of International Commerce, Economics and Policy, 2025, doi: 10.1142/S1793930525000029.

[24] Organisation for Economic Co-operation and Development, Economic Security in a Changing World. Paris, France: OECD Publishing, 2025, doi: 10.1787/4eac89c7-en.
[25] United Nations Conference on Trade and Development, World Investment Report 2025: International Investment in the Digital Economy. Geneva, Switzerland: United Nations, 2025.
[26] President of the Russian Federation, Decree No. 208, "On the Economic Security Strategy of the Russian Federation for the Period up to 2030," May 13, 2017.
[27] President of the Russian Federation, Decree No. 229, "On Approval of the Foreign Policy Concept of the Russian Federation," Mar. 31, 2023.