Japan's Digital Economic Security Strategy in the Indo-Pacific: Postures for India

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Introduction

Japan's economic security framework has undergone a decisive conceptual transformation. Though it began as a conventional preoccupation with supply chain concentration and resource dependency, it has evolved into qualitatively more ambitious: a multi-layered digital security architecture whose constitutive elements, semiconductor materials, Open Radio Access Network (ORAN) telecommunications infrastructure, data centre ecosystems, Artificial Intelligence (AI) governance, and undersea cable networks are conceived not as discrete policy streams but as components of a unified digital order.

The India–Japan Special Strategic and Global Partnership has emerged as the most consequential bilateral expression of this architecture. This article argues that the bilateral relationship reflects a structural complementarity between Japanese technological depth and Indian digital scale that, if institutionally sustained, could constitute a meaningful pole of trusted technology governance in the Indo-Pacific order.

The Digital Turn in Economic Security

Japan's strategic evolution is the recognition that geoeconomic vulnerability has migrated from physical goods to digital platforms. As Kazuto Suzuki, Professor of Economic Security, has argued that the risk environment for advanced economies has shifted from the disruption of tradeable goods to the weaponisation of technological platforms, semiconductors, telecommunications networks, data infrastructure, and AI systems on which modern economic and political life depends.[1] A state that controls the chips embedded in another state's critical systems or the protocols governing its communications possesses a form of leverage qualitatively different from and more durable than conventional trade coercion.

The updated Free and Open Indo-Pacific (FOIP) framework, released by Japan's Ministry of Foreign Affairs in May 2026, operationalises this by prioritising its area. It highlights the construction of economic infrastructure for the age of AI and data, encompasses semiconductor supply chain resilience, ORAN telecommunications systems, data centre ecosystems, and AI governance architecture.[2] The normative architecture of this vision—its organising principles of safety, security, trust, and interoperability—is a deliberate positioning against digital infrastructure models that embed surveillance capability or vendor lock-in as structural features.

The Semiconductor Layer: Indispensability as Strategy

Japan's approach to semiconductor policy is analytically distinctive. It has concentrated strategic investment in the upstream layers of the value chain, where its firms already occupy irreplaceable positions. As Suzuki argues, the optimal strategy for goods dependent on a global division of labour is for Japan to make itself indispensable by controlling choke points and specialising in areas of international competitiveness, such as advanced materials and production equipment.[3] Firms such as Shin-Etsu Chemical in silicon wafers, Tokyo Electron in manufacturing equipment, and Japan Synthetic Rubber Co Ltd in photoresists hold global market shares that render the entire international semiconductor industry structurally dependent on Japanese supply. The economic security of this position lies not in its scale but in its substitutability.

India introduces a complementary logic into this architecture. India's ambition, expressed through the Semicon India programme and Ministry of Electronics and Information (MeiTY) Chips to Startup initiative, is to build capability in chip design, packaging, and eventually fabrication, the downstream layers where Japan's position is less dominant and where India's engineering talent base represents a genuine structural advantage. The Memorandum of Cooperation on Semiconductor Supply Chain Partnership, signed by Ministry of Economic, Trade, and Industry and MeiTY in Jul 2023, institutionalised this complementarity, while the Japan–India Semiconductor Policy Dialogue has since elaborated on it through engagements that integrate government agencies, firms, and educational institutions to map specific opportunities for supply chain integration.[4] Renesas Electronics' Outsourced Semiconductor Assembly and Test facility in Sanand, Gujarat, in partnership with CG Power, represents a commercially motivated investment simultaneously advancing Japan's supply chain diversification objectives.[5] The Memorandums of Understanding between Renesas and Indian Institute of Technology-Hyderabad for very large-scale integration and embedded systems research incorporate this industrial investment in an institution-building logic that will shape Indian semiconductor engineering culture for a generation.[6] Tokyo Electron's strategic partnership with TATA Electronics to develop a semiconductor ecosystem in India adds a further structurally significant layer to what is becoming a genuine bilateral value chain.[7]

The Telecommunications Layer: Open Radio Access Network and the Architecture of Trust

The telecommunications infrastructure represents a politically consequential expression of Japan's digital security strategy. Japan's bilateral engagement with India and its multilateral efforts through the FOIP Digital Corridor advance ORAN as both a technical standard and a geopolitical instrument. ORAN's strategic significance lies in a network built on proprietary, vertically integrated infrastructure, which is inherently dependent on a single vendor's continued cooperation and alignment with its geopolitical interests. A network built on ORAN standards is, in principle, vendor-agnostic: components can be sourced, audited, and replaced without disrupting the network. Promoting ORAN is also a commercial strategy, as Nippon Electric Company (NEC) and Fujitsu compete in ORAN components. Therefore, a security strategy that reduces partner-country dependence on untrusted vendors and a normative strategy that establishes interoperability and transparency are the organising principles of regional telecommunications governance.

The India–Japan dimension of this strategy has acquired notable operational depth. Japan's Ministry of Internal Affairs and Communications supported an ORAN pilot project in India, and NEC established a Centre of Excellence Laboratory in Chennai specifically to advance end-to-end ORAN system development.[8] The strategic partnership between NEC and Reliance Jio, India's largest mobile network operator, to collaborate on 5G technology and ORAN infrastructure, represents a large-scale deployment opportunity capable of transforming a pilot initiative into a genuinely market-shaping commitment.[9] India's network scale makes it an indispensable theatre for commercialising ORAN.

The Data and Artificial Intelligence Layer: Digital Partnership 2.0 and the Governance Frontier

The most analytically complex dimension of Japan's digital economic security strategy concerns data and AI governance domains, where the concept of security resists easy operationalisation but where the stakes are potentially the highest.

The Japan–India AI Cooperation Initiative, announced at the 15th India–Japan Annual Summit in Aug 2025, is explicit about its objectives—deepening cooperation on Large Language Models (LLM), establishing platforms for industry–academia exchange, supporting joint research projects, and facilitating the development of data centres in India.[10] Joint LLM development is not simply a research collaboration; it is an attempt to

ensure that AI systems increasingly mediating economic and political life in both countries are developed within a framework of shared normative commitments, trustworthiness, transparency, and cultural and linguistic specificity rather than imported wholesale from developers whose values may diverge.

The data centre dimension also carries equivalent strategic weight. Nippon Telegraph and Telephone's (NTT) expansion to 20 data centres in India, financed through the Japan Information and Communication Technology Fund and JBIC, and the NTT DATA, Neysa Networks, and Government of Telangana partnership to establish an AI data centre cluster in Hyderabad with an investment of INR 10,500 cr represent a major commitment of Japanese capital to Indian digital infrastructure.[11] Data centres are nodes of digital sovereignty. Japanese investment in Indian data infrastructure simultaneously constitutes a commercial bet on Indian digital growth and a contribution to a regional data governance architecture. The Digital Public Infrastructure (DPI) dimension of Digital Partnership 2.0, encompassing Aadhaar, Unified Payments Interface, and the Account Aggregator framework, introduces a further analytical layer.[12] If the open, interoperable DPI standards India has pioneered are exported and replicated across the Global South through the Japan–India partnership, the strategic footprint of bilateral cooperation vastly exceeds its immediate bilateral applications.

Conclusion

Japan’s digital economic security strategy ultimately amounts to a claim about the relationship between technological architecture and political order, which holds special implications for India. ORAN versus proprietary telecommunications stacks; transparent AI development ecosystems versus opaque ones; interoperable DPI frameworks versus captive digital platforms; distributed data centre ownership versus concentrated sovereignty—these are not technical selections but governance choices with long-run political implications. The semiconductor cooperation that invests in IIT engineering programmes, the ORAN deployment that builds Indian technical capacity through NEC’s Chennai laboratory, and the AI partnership that co-develops culturally appropriate LLMs—all reflect a consistent strategic logic: that durable digital security is achieved not through exclusion but through the cultivation of trusted, capable, and genuinely interdependent partners.

The Dialogue on Economic Security established at the Vice Foreign Minister and Foreign Secretary level in Nov 2024, and the parallel Keidanren-Confederation of Indian Industries private sector dialogue, ensure that the governmental framework is matched

by business-level engagement capable of identifying and removing specific impediments to cooperation.[13] The recommendation to establish joint government–industry–academia platforms for ongoing coordination reflects a mature understanding that structural complementarity requires sustained institutional cultivation to yield operational results.[14] The India–Japan digital partnership is an institutional architecture designed to establish a credible normative alternative to the dominant models of digital order currently contending for the Indo-Pacific's future.

Endnotes

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