

RCEP and the China-Japan-South Korea Industrial Chain: Obstacles and Pathways Forward

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Abstract: In force since January 2022, the Regional Comprehensive Economic Partnership (RCEP) has given China, Japan, and South Korea - together over 80 per cent of RCEP's GDP - their first shared preferential framework. Yet deeper trilateral industrial-chain integration remains elusive. Drawing on the agreement's texts, recent utilisation data, and the post-2022 geopolitical environment, this paper identifies three structural constraints on collaboration: politicised economic relations under the US alliance system, industrial homogenisation in strategic sectors, and low enterprise uptake of preferential rules. It proposes three corresponding pathways: upgrading RCEP rules and accelerating the long-stalled China-Japan-Korea FTA; establishing standing trilateral supply-chain security dialogues; and embedding trilateral initiatives in broader multilateral frameworks, including selective convergence with the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. The central claim is that RCEP establishes an institutional floor, not a ceiling: incremental deepening - not grand redesign - offers the most feasible route to a more integrated East Asian production network.

Keywords: RCEP; China-Japan-South Korea; Industrial Chain; Supply Chain; East Asian Integration

1. Introduction

RCEP entered into force on 1 January 2022 and created the world's largest free trade area by combined GDP and population. Its fifteen members account for roughly 30 per cent of global output and one-third of world trade (Asian Development Bank, 2021; Petri & Plummer, 2020). China, Japan, and South Korea dominate this bloc: together they account for over 80 per cent of RCEP's GDP, and their bilateral trade in intermediate goods has long formed the backbone of the East Asian

production network.

The negotiation history itself diagnoses the trilateral problem. RCEP, initiated by ASEAN in 2011, concluded only in 2020 after eight years of bargaining among economies with divergent development levels and strategic preferences (SHS Web of Conferences, 2023). The China-Japan-South Korea Free Trade Agreement, launched at the November 2012 ASEAN summit in Phnom Penh, advanced through sixteen negotiating rounds from March 2013 to November 2019 yet has never concluded; the leaders' joint declaration at the Ninth China-Japan-Korea Summit in Seoul, May 2024, reopened discussion of acceleration (Trilateral Cooperation Secretariat, 2024). East Asia therefore remains the only major world region without a high-standard comprehensive framework binding its three core economies.

RCEP matters for trilateral industrial cooperation less for what it adds than for what it organises. Cumulative rules of origin now allow a Chinese assembler using Japanese and Korean components to ship finished goods throughout the bloc at preferential rates, provided a 40 per cent regional value-content threshold is met (Asian Development Bank, 2021). For intra-East-Asian supply chains, where intermediate goods dominate trade, this provision transforms a fragmented spaghetti bowl of bilateral FTAs into a coherent regional regime. The Japan External Trade Organisation ranks cumulative rules of origin as the single most valuable provision for Japanese firms in regional production networks (East Is Read, 2024).

Yet the institutional achievement has not been matched by integration on the ground. This paper asks two questions. What realistic obstacles constrain China-Japan-South Korea industrial-chain collaboration under RCEP? And what pathways are feasible within existing institutional and geopolitical constraints? Section 2 outlines RCEP's contribution to the trilateral. Section 3 examines three structural obstacles. Section 4 proposes three

corresponding pathways. Section 5 concludes.

2. RCEP's Institutional Contribution to the Trilateral

RCEP's contribution rests on three innovations. The first is cumulative rules of origin: inputs sourced from any member count toward the originating-content threshold anywhere in the bloc. For the China–Japan–South Korea corridor — where intra-industry trade in parts and components dominates — the provision lets firms restructure production across the three economies without forfeiting preferential access (China Briefing, n.d.; East Is Read, 2024). Industry associations across the three countries consistently cite cumulative rules of origin as the agreement's most consequential provision.

The second is harmonised tariff schedules. RCEP eliminates tariffs on roughly 90 per cent of traded goods between advanced members over a twenty-year horizon (Asian Development Bank, 2021). The historical significance for the trilateral is considerable: prior to RCEP, China and Japan had no bilateral FTA, and South Korea's arrangements with each were narrow. RCEP marks the first time all three have exchanged tariff concessions within a single framework. Japan eliminates duties on about 86 per cent of its imports from China; China eliminates duties on about 88 per cent of its imports from Japan, with average tariffs falling from 9.76 per cent to 0.04 per cent (China Briefing, n.d.; China Daily, 2022).

The third is baseline regulatory convergence. Chapters on e-commerce, intellectual property, competition policy, and small and medium-sized enterprises establish shared minimum standards across the bloc (China Council for the Promotion of International Trade, 2021). For firms operating across three regulatory regimes, this lowers frictions that no bilateral arrangement can resolve. The combined effect is straightforward: a Chinese final assembler, a Japanese component supplier, and a Korean materials producer can now organise their production network across three jurisdictions within a single preferential regime rather than navigating three overlapping bilaterals.

Two qualifications are essential. First, RCEP's disciplines on services, investment, and digital trade fall short of CPTPP standards (Petri & Plummer, 2020; Cheng et al., 2026). For high-technology sectors the gap matters because a trilateral industrial chain in semiconductors or

artificial intelligence operates at the intersection of RCEP liberalisation and technology restrictions imposed outside the agreement. Second, RCEP is a framework of moderate ambition by design: ASEAN-centred negotiation produced rules calibrated to the lowest common denominator. The trilateral therefore inherits a floor, not a ceiling.

3. Structural Obstacles to Trilateral Industrial-Chain Integration

3.1 Politicised Economic Relations and the Alliance Constraint

The most fundamental obstacle is the political asymmetry embedded in trilateral relations. Japan and South Korea are military allies of the United States, and their technology and export-control policies are increasingly drawn into the strategic logic of US-China competition (Trilateral Cooperation Secretariat, 2024). The 2019 Japan–South Korea trade dispute — in which Japan restricted exports of fluorinated polyimide, photoresist, and hydrogen fluoride — showed how quickly industrial interdependence can be weaponised even between alliance partners (HKUST LFSCI, 2024). More recently, semiconductor export controls coordinated with US policy have extended this securitisation logic to the China dimension, structurally constraining the space for market-driven trilateral collaboration.

The corporate consequences are concrete. Japanese equipment suppliers face a stark trade-off: complying with US-coordinated restrictions preserves access to Western technology but forfeits Chinese demand; maintaining Chinese sales risks inclusion on allied entity lists. Historical and territorial disputes compound the constraint by generating periodic diplomatic friction, which in turn produces the policy uncertainty that discourages the long-horizon industrial investments supply-chain integration requires. The 2019 Japan–Korea precedent demonstrates that even alliance partners cannot insulate economic relations from political conflict; the implication for the CJK triangle is that political-risk premiums are now built into long-term investment calculations across the three economies.

3.2 Industrial Homogenisation and Competitive Tension

A second obstacle is the shifting structure of

comparative advantage. As China's manufacturing capability climbs the value chain, the three economies increasingly compete in the same product segments — electric vehicles, shipbuilding, display panels, and semiconductors — rather than occupying neatly separated tiers of a vertical division of labour (SHS Web of Conferences, 2023). The pattern is visible across sectors. China now leads global shipbuilding by gross tonnage and is closing the gap in LNG carrier construction. In electric vehicles, Chinese brands dominate domestic and several emerging markets, while Japanese and Korean incumbents respond with their own electrified line-ups. In display panels, Chinese producers have surpassed Korean incumbents in LCD capacity while narrowing the OLED gap.

Without effective coordination mechanisms, competitive dynamics can trigger protectionist responses — evident in trade-remedy investigations among RCEP members — that fragment the very production networks RCEP seeks to consolidate. The absence of trilateral competition-policy coordination means such frictions are managed, if at all, through unilateral measures or WTO dispute settlement, both slow and politically costly. The structural paradox is clear: RCEP liberalises market access, yet industrial competition intensifies within the same market without any institutional mechanism to manage the resulting frictions.

3.3 Technology Blockades and Low Utilisation of Preferential Rules

The third obstacle has two closely linked components. The first is the dense web of US-led export controls, investment screening, and technology-alliance arrangements restricting flows of advanced technology, equipment, and talent to China (PLOS ONE, 2024). For Japanese and South Korean firms, participation imposes significant commercial costs while degrading the efficiency of regionally integrated supply chains. Securitised technology policy thus creates a structural contradiction: RCEP liberalises market access while allied technology policy restricts it, with the restrictive channel currently dominating in critical sectors.

The second is the low rate at which enterprises actually use RCEP preferences. Regional business surveys indicate that complex origin documentation, limited SME awareness, and underdeveloped self-certification procedures suppress utilisation below potential (China

Institute for Reform and Development, 2024). China's export-utilisation rate stood at just 4.21 per cent in 2023 — far below Japan's 76 per cent for imports from China and South Korea's 68.1 per cent for exports to Japan over the same period. The reasons are structural as much as informational: product-specific rules vary by tariff line, forcing firms to run cost-benefit calculations for each product; self-certification is underdeveloped in all three countries, leaving firms dependent on certificates issued by designated authorities; and SMEs, lacking dedicated compliance staff, are disproportionately deterred by documentation complexity. For the CJK corridor — where supply chains are deep but certification procedures remain heterogeneous — the gap between *de jure* liberalisation and *de facto* utilisation is particularly wide.

4. Pathways Forward

4.1 Upgrading RCEP Rules and Accelerating the CJK FTA

The most direct institutional path is to convert RCEP's floor into a higher-standard trilateral ceiling. Negotiating parties should prioritise a comprehensive CJK FTA that goes beyond RCEP in tariff coverage, services liberalisation, investment protection, and digital trade rules (SHS Web of Conferences, 2023). The Ninth China–Japan–Korea Summit in Seoul, May 2024, reaffirmed this commitment, with leaders explicitly tying acceleration of the trilateral negotiations to the RCEP baseline (Trilateral Cooperation Secretariat, 2024).

Three rule-upgrading measures can be implemented within existing RCEP institutions without awaiting the broader CJK FTA. First, expand products subject to simple change-in-tariff-heading rules to ease compliance for components-intensive goods such as automotive parts and electronics. Second, operationalise the self-certification mechanism by accrediting approved exporters and replacing *ex ante* certification with *ex post* verification. Third, pilot digital origin documentation — blockchain-verified certificates interoperable across the three customs systems — in high-volume sectors such as electronics. Each measure directly addresses the utilisation gap identified in Section 3.3 and is politically tractable because it operates within, rather than against, the existing RCEP architecture.

4.2 Trilateral Supply-Chain Security Dialogue

Given the alliance constraint, pure economic logic is insufficient; institutionalised risk management is required. The three governments should establish a regular trilateral supply-chain dialogue, building on existing leaders' summits, ministerial mechanisms, and the Trilateral Cooperation Secretariat, with three functions: early-warning monitoring of supply disruptions in critical inputs; coordination of strategic stockpiling for essential materials; and a standing consultative channel to forestall the weaponisation of trade measures, drawing the lesson of the 2019 Japan–Korea dispute (Trilateral Cooperation Secretariat, 2024).

Expanding "third-party market cooperation" — under which Chinese, Japanese, and Korean firms jointly undertake infrastructure and industrial projects in ASEAN, Africa, and other markets — offers a politically less sensitive vehicle for maintaining industrial coordination (Ministry of Commerce of the People's Republic of China, 2021). Such cooperation distributes the political costs of trilateral alignment across a wider membership and produces visible joint outputs that build domestic constituencies in each country. Precedents exist: the ASEAN–Japan, ASEAN–China, and ASEAN–Korea industrial cooperation frameworks have each generated joint projects for over a decade.

Concrete sectoral entry points are visible. In the battery supply chain, Japan leads in cathode and anode materials, South Korea in cell manufacturing, and China in refining capacity for lithium, cobalt, and rare earths. A trilateral battery alliance — coordinating standards, co-financing upstream projects, and aligning recycling regulations — would create a regional supply chain resilient to external shocks. Similar logic applies to offshore wind, hydrogen, and supply-chain digitalisation. These sectors lie outside the most sensitive technology-control lists, which lowers the risk of triggering allied export-control complications, and RCEP's e-commerce chapter provides a ready-made legal basis for the necessary data-governance cooperation (China Council for the Promotion of International Trade, 2021).

4.3 Anchoring Trilateral Collaboration in Multilateral Frameworks

Unilateral or purely bilateral approaches are vulnerable to external pressure; embedding

trilateral initiatives in wider regional frameworks improves their resilience. Three measures are central. First, leverage RCEP's review and accession clauses to raise standards progressively over successive negotiating cycles. Second, coordinate trilateral positions within ASEAN-centred institutions to preserve the region's centrality and strategic autonomy. Third, explore selective convergence between RCEP and CPTPP that allows the three economies to approach high-standard rules jointly without subordinating any single party to another's template (Ministry of Commerce of the People's Republic of China, 2021).

This "RCEP-plus" approach enables incremental de-securitisation of economic relations by spreading political costs across a wider membership, and gives the three countries a collective voice in shaping the rules of the emerging Asia-Pacific economic order. China's formal application to join the CPTPP in September 2021 — submitted less than a year after signing RCEP — signals that Beijing itself treats RCEP as a waypoint rather than a destination (Ministry of Commerce of the People's Republic of China, 2021). The sequencing — sign RCEP, apply to CPTPP, restart trilateral talks — is consistent with incremental institutional deepening rather than grand redesign.

5. Conclusion

RCEP has supplied the indispensable institutional infrastructure for China–Japan–South Korea industrial-chain collaboration, above all through cumulative rules of origin that knit the three economies' production networks into a coherent regional regime. Yet collaboration remains constrained by politicised economic relations under the US alliance system, industrial homogenisation that erodes complementarity, technology blockades in strategic sectors, and low enterprise uptake of preferential rules. The breakthrough must therefore be simultaneously institutional, economic, and political: upgrading RCEP toward a high-standard CJK FTA, building standing supply-chain security dialogues, and anchoring both in broader multilateral frameworks. Whether these opportunities are seized depends on each government's ability to build domestic constituencies for integration — export industries that gain from RCEP preferences and consumers who benefit from

competitive prices — and on the evolution of US technology policy, which sets the boundary conditions for what is feasible. Policy makers in Beijing, Tokyo, and Seoul should therefore act with strategic urgency: institutional opportunities, once foreclosed, are far more costly to reconstruct than to preserve.

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