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Trade Policy as Geoeconomic Statecraft: Regulatory Positioning in Vietnam's Rare Earth Supply Chains

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Abstract

Vietnam combines substantial reported rare earth element (REE) reserves with limited extraction and processing capacity and rising domestic demand, a configuration that makes resource-based geopolitical leverage uncertain. Existing Vietnam-focused studies describe resource potential, demand, legal reform, and external partnerships, but do not compare the evidentiary support for multiple geoeconomic instruments while explicitly separating regulatory action from demonstrated strategic effects. This study asks which of Blackwill and Harris's seven geoeconomic instruments are traceable in a purposively constructed documentary corpus on Vietnam's REE sector during 2018–2025 and what strategic outcomes that corpus can support. Using a qualitative single-case documentary design, it applies directed content analysis to 18 official policy, bilateral, statistical, institutional, academic, and contextual sources selected for direct relevance to state action or supply-chain outcomes and cross-checked across source types. Within this corpus, trade policy receives the strongest evidentiary support through export-eligibility rules, processing requirements, and domestic-priority provisions. Reciprocal trade agreements provide an enabling market-access framework, but no REE-specific concession deliberately deployed to elicit a geopolitical response was identified. Japan-centred trade and the 2024 formal inclusion of REEs in Vietnam–Japan critical-mineral cooperation provide externally observable evidence of continued market access and institutional recognition. However, the available pre-2021 baseline does not establish that these external options or Vietnam's institutional standing measurably improved because of the subsequent regulatory measures. The evidence therefore supports a bounded interpretation of regulatory positioning rather than a demonstrated positional gain, and it does not show coercive leverage, partner behavioural change, or political concessions.

KEYWORDS

geoeconomics; rare earth elements; trade policy; strategic positioning; supply-chain security.

Introduction

The global transition toward clean energy and advanced manufacturing has increased the strategic importance of rare earth elements (REEs) in international supply chains. High-performance permanent magnets based primarily on neodymium (Nd) and praseodymium (Pr), with dysprosium (Dy) and terbium (Tb) used to improve performance under demanding conditions, are essential inputs for electric vehicles, wind turbines, industrial motors, data centres, aerospace systems, and defence technologies. REEs are therefore embedded in both decarbonisation and advanced industrial systems (Balaram, 2019; M. D. Bazilian, 2018; Sovacool et al., 2020). The International Energy Agency (International Energy Agency, 2025) estimates total demand for magnet rare earths at 91 kt in 2024, comprising 19 kt for clean-energy technologies and 72 kt for other uses; under the Stated Policies Scenario, total demand reaches 123 kt by 2030 and clean-technology demand reaches 38 kt. These volume-based estimates make the demand denominator and reference years explicit and illustrate why REE availability has become an economic-security and geopolitical concern (M. Bazilian et al., 2020; Blondeel et al., 2021; Overland, 2019).

Supply-chain concentration amplifies this strategic significance. The REE value chain extends from mining and beneficiation to chemical upgrading, separation into individual oxides, metal refining, alloy production, and permanent-magnet manufacturing (International Energy Agency, 2025). In 2024, China accounted for approximately 60% of global mined production of magnet rare earths, while its share reached around 91% in separation and refining and 94% in sintered permanent-magnet manufacturing (International Energy Agency, 2025). Research similarly shows that supply risk is shaped not only by geological scarcity but by concentration across processing and downstream stages (Mancheri et al., 2019; Salim et al., 2022). Recent evidence on permanent-magnet trade further indicates that geopolitical risk can alter export patterns in highly concentrated markets (Depraeter et al., 2025), while global trade analysis identifies distinct upstream, midstream, and downstream structures (Zuo et al., 2022). Processing, refining, and magnet-manufacturing capacity therefore carry strategic significance beyond the geographical distribution of deposits alone.

The vulnerability created by this concentration became especially visible in April 2025, when Chinese authorities placed seven groups of medium- and heavy-REE-related products, including specified metals, compounds, and magnetic materials, under export-control requirements (Ministry of Commerce of the People's Republic of China & General Administration of Customs of the People's Republic of China, 2025). Export volumes subsequently declined sharply and downstream manufacturers faced difficulties securing permanent-magnet inputs (International Energy Agency, 2025). This episode is used in this study only as contextual evidence of the vulnerability of concentrated REE supply chains; it is not coded as evidence of Vietnamese geoeconomic statecraft. China's longer use of regulatory, tax, and industrial-policy instruments nonetheless provides relevant context for understanding why state control over processed-material flows can have effects that extend well beyond the volume of the controlled material (Ge & Lei, 2018; Shen et al., 2020; Woods, 2025).

Vietnam occupies an analytically informative position within this structure because significant geological endowment coexists with very limited current production. The U.S. Geological Survey's 2026 commodity summary reports Vietnam's reserves at approximately 3.5 million tonnes of rare-earth-oxide (REO) equivalent, revised 2024 mine production of about 300 tonnes, and estimated 2025 production of about 150 tonnes (U.S. Geological Survey, 2026). The 2026 publication is used retrospectively to provide revised or estimated figures for 2024–2025 and is not treated as contemporaneous policy evidence within the 2018–2025 analytical window. For comparison, China produced approximately 270,000 tonnes in 2024, around 71% of the approximately 380,000 tonnes produced globally (U.S. Geological Survey, 2026). The contrast illustrates

Vietnam's central puzzle: a substantial reported resource base does not translate automatically into present production or market leverage (see Table 1).

Despite its reported reserve base of approximately 3.5 million tonnes REO, Vietnam's mine production remained extremely limited, at around 300 tonnes in revised 2024 data and an estimated 150 tonnes in 2025 (U.S. Geological Survey, 2026). This gap between geological availability and realised output is central to the case because mineral endowment does not automatically produce supply security or bargaining power; effective participation in strategic mineral chains also depends on extraction, processing, technological capability, and market access (Wang et al., 2023). The production-reserve comparison is therefore used to establish the structural context of the case rather than to infer geoeconomic leverage by itself.

Constraints at these stages remain significant. Vietnam's major REE deposits are concentrated in the northwestern provinces of Lai Chau, Lao Cai, and Yen Bai, with deposits containing substantial light rare earth elements such as lanthanum and cerium (Huy et al., 2024). Only two REE mines were reported to hold licences covering mining, processing, and refining, while the broader domestic REE industry continued to face technological and processing limitations (Huy et al., 2024). These constraints limit the conversion of domestic mineral resources into separated oxides and other materials suitable for industrial use.

Vietnam's own demand adds further pressure to this supply structure. Huy et al. (2024) estimate cumulative REE demand for clean-energy equipment at approximately 3.8 kt over the 2021–2030 period and 10.5 kt over 2031–2050, rather than annual demand at those levels. The demand is associated primarily with permanent magnets used in electric-vehicle motors and wind-turbine generators. The same study projects domestic supply to remain below demand during 2021–2030. Vietnam therefore faces a supply-security challenge spanning extraction, processing capability, material availability, and access to inputs required by expanding domestic industries.

Vietnam's REE supply vulnerability is also relevant to an economy strongly connected to manufacturing and electronics. In 2024, exports of electronics, computers and components, together with phones and components, reached approximately USD 126.5 billion, equivalent to around 31.2% of merchandise exports; the same gross export flow was about 26.6% of GDP (Tuoi Tre News, 2025; Vietnam News, 2025; World Bank, 2024). The GDP ratio is presented only as a scale comparison and not as a measure of the sector's value-added contribution, because gross exports include imported intermediate inputs. In 2023, Vietnam imported approximately USD 283.19 million of permanent magnets of metal under HS 850511, including around USD 239.07 million from China, while China reported approximately USD 17.37 million of HS 280530 rare-earth-metal imports from Vietnam (World Bank, n.d.). These are different product stages and mirror-trade directions, so the comparison is only indicative: it is consistent with upstream

Table 1. Selected REE Mine Production (2023–2025) and Reported Reserves

Country	Mine Production 2023 (tonnes REO)	Mine Production 2024, revised (tonnes REO)	Mine Production 2025, estimated (tonnes REO)	Reported Reserves (tonnes REO)
China	255,000	270,000	270,000	44,000,000
United States	41,600	45,500	51,000	1,900,000
Australia	16,000	29,000	29,000	6,300,000
Vietnam	300	300	150	3,500,000
World total	376,000	380,000	390,000	>85,000,000

Source: U.S. Geological Survey (2025, 2026), compiled by the authors.

Note: 2023 production values are from U.S. Geological Survey (2025); 2024 values are revised and 2025 values are estimates reported in U.S. Geological Survey (2026). China, the United States, and Australia are shown as major comparator producers alongside Vietnam and the world total. Reserve figures follow USGS reporting conventions, but country-level estimation methods and data quality may differ; they should not be read as perfectly harmonised measures of economically recoverable resources.

participation alongside dependence on externally supplied downstream magnetic products, but it is not a like-for-like measure of value-chain dependence.

During the study period, Vietnamese mineral governance introduced several candidate measures for geoeconomic analysis. Circular No. 23/2021/TT-BCT and Circular No. 45/2023/TT-BCT regulate mineral export eligibility, while Decision No. 866/QĐ-TTg links mineral development to processing and domestic material requirements (Ministry of Industry and Trade of Vietnam, 2021, 2023; Prime Minister of Vietnam, 2023). These provisions are not treated as geoeconomic statecraft merely because they regulate a strategic mineral. In this study, a measure is classified as geoeconomic only when documentary evidence links state-controlled economic action to an external, supply-chain, or strategic objective under the operational criteria specified in the Method section.

For this article, geoeconomic statecraft is understood as the deliberate use of state-controlled economic instruments to pursue strategic external or supply-chain objectives. This working definition separates an instrument from structural leverage. Blackwill & Harris (2016) provide the primary instrument-based coding framework, while scholarship on asymmetric interdependence and regional geoeconomic power is used as a complementary interpretive lens for evaluating outcomes and structural (Farrell & Newman, 2019; Scholvin & Wigell, 2018; Wigell, 2016). Thus, the existence of trade, investment, or resource ownership does not itself establish geoeconomic power; the analysis requires a traceable state mechanism and evidence relevant to strategic purpose or outcome. This distinction is especially important for critical minerals, where regulatory intervention, partnerships, and friend-shoring can coexist with market concentration and commercial motives (Aggarwal & Reddie, 2025; Glencross, 2024; Ilankoon et al., 2022; Ufimtseva et al., 2024; Vivoda, 2023).

The literature reviewed for this study is weighted toward major powers, import-dependent industrial economies, and China's rare-earth market position. Studies of China examine resource taxation, market intervention, supply-chain resilience, and strategic lead (Ge & Lei, 2018; Mancheri et al., 2019; Shen et al., 2020; Woods, 2025), while broader critical-mineral research emphasizes alliance strategies, diversification, supply security, and the constraints faced by consuming economies (Glencross, 2024; Ufimtseva et al., 2024; Vivoda, 2023). Resource-politics scholarship cautions against assuming that mineral ownership automatically produces strategic power (Ostrowski, 2023). Nesadurai (2026) broadens the study of Global South geoeconomic agency by showing that agency need not be reducible to zero-sum coercion. Building on that insight, this study addresses a narrower conceptual problem: how a resource-holding developing state can use regulatory instruments in a strategically important supply chain before it possesses the market power required to impose target-specific costs. The analysis therefore distinguishes the state-controlled regulatory mechanism from independently observable external outcomes. Regulatory change is treated as evidence of the mechanism, not as evidence that Vietnam's strategic position improved; any claim of positional improvement requires a demonstrable change in external options, institutional standing, market access, diversification, bargaining access, counterpart behaviour, or concessions relative to the specified baseline.

The closest Vietnam-focused studies address important parts of this problem without applying a common instrument-and-outcome test. Huy et al. (2024) quantify critical-mineral demand and assess domestic resources and technological constraints, while Zhiltsov & Hoang (2025) examine government policy, legal reform, foreign investment, trade

agreements, and efforts to diversify external partnerships. These studies establish the relevance of Vietnam's REE sector but leave a bounded analytical question unresolved: which state economic measures satisfy explicit geoeconomic criteria, and what strategic outcomes can be demonstrated without conflating regulatory action with leverage or positional improvement? The gap claimed here is therefore not the absence of scholarship on Vietnam, but the absence within the reviewed Vietnam-focused literature of a common seven-instrument coding framework combined with an explicit mechanism-and-outcome distinction. Because the documentary search is purposive and not equally instrument-specific across all seven categories, the study compares evidentiary support within the assembled corpus rather than claiming an exhaustive systematic screen of Vietnamese policy.

This study builds on that broader insight but addresses a narrower conceptual problem: how a resource-holding developing state uses regulatory instruments in a strategically important supply chain before it possesses the market power required to impose target-specific costs. To avoid conflating the regulatory mechanism with its consequences, the analysis separates three empirical elements. First, the mechanism is state regulatory control over the external circulation of REE products. Second, the pre-policy comparator is the 2018–2020 period, during which the corpus captures Vietnam's broader trade architecture and REE-related trade but no REE-specific export-eligibility and processing rules equivalent to Circular No. 23/2021/TT-BCT. Third, external outcomes are assessed independently through observable changes in market access, partner diversification, formal strategic inclusion, bargaining access, counterpart behaviour, or identifiable concessions. The existence of post-2021 regulation is therefore not itself counted as evidence that Vietnam's strategic position improved. Where the documentary record shows recognition or continued access without a demonstrable pre/post improvement, the study uses the more limited term regulatory positioning rather than positional gain. A coercive interpretation requires the still stronger evidence of target-specific costs or credible threats together with a change in counterpart behaviour or political concessions.

Accordingly, the main research question is: Which geoeconomic instruments are empirically traceable in Vietnam's rare earth element sector during 2018–2025, and what strategic outcomes are supported by the documentary evidence? The objective is to compare the evidentiary support for each of Blackwill and Harris's seven instruments within the assembled corpus and, for the most strongly supported instrument, distinguish regulatory positioning and external recognition from demonstrated positional improvement and coercive outcomes. Trade policy and strategic positioning are therefore treated as empirical findings to be evaluated rather than as assumptions built into the research question.

Methods

Research Type

This study uses a qualitative, descriptive-interpretive single-case design combined with directed qualitative content analysis. The case-study dimension defines Vietnam's REE sector as the bounded empirical case, while the descriptive-interpretive dimension is used to trace state measures and assess their meaning within Vietnam's institutional, trade, and supply-chain context. Directed content analysis is appropriate because the study evaluates the empirical traceability of a pre-existing seven-instrument framework rather than generating categories entirely inductively (Hsieh & Shannon, 2005). The design does not test causal effects statistically; it assesses whether documentary evidence satisfies explicit instrument and outcome criteria.

Research Context and Unit of Analysis

Vietnam is treated as a theory-extending case because it combines three features that are analytically difficult to reconcile under simple resource-power assumptions: a substantial reported REE resource base, very limited current extraction and processing capability, and growing exposure to strategic-mineral supply-chain pressures. This configuration allows the study to examine how a resource-holding developing state may use economic regulation before it possesses dominant market power. The overarching case is the Vietnamese REE sector. Embedded units of observation are individual policy measures, regulatory provisions, official bilateral statements or trade arrangements, and statistical observations relevant to those measures. Primary inferences are made at the policy-measure level and are aggregated to a state-level pattern only when multiple pieces of evidence converge. Relevant institutions include the Ministry of Industry and Trade, the Prime Minister/Government of Vietnam, and counterpart foreign-government bodies involved in trade and critical-mineral cooperation. The 2018–2020 period is used as the pre-regulatory comparator for external trade patterns, market-access architecture, and evidence of formal REE-related strategic inclusion. REE-specific export-policy evidence enters the corpus from Circular No. 23/2021/TT-BCT onward. The comparison is used to ask whether post-2021 external options or institutional standing can be shown to have changed; the existence of the regulation itself is not treated as an outcome indicator. CPTPP ratification in 2018 remains contextual rather than the origin of REE-specific statecraft ([Ministry of Industry and Trade of Vietnam, 2018](#)).

Data Sources and Selection

The core documentary corpus was constructed purposively to privilege traceable evidence of state action and supply-chain outcomes rather than to provide exhaustive systematic coverage of every possible manifestation of all seven instruments. Sources were identified through searches of the Government of Vietnam legal-document portal and Ministry of Industry and Trade resources, the Viet Nam National Trade Repository, Japan's METI, Japan Customs and e-Stat, the IEA, the U.S. Geological Survey, and World Bank WITS/World Development Indicators. Search and retrieval combinations included 'Vietnam/Viet Nam' with 'rare earth', 'rare earth elements', 'critical minerals', 'mineral export', 'processing', the identifiers 'Circular 23/2021/TT-BCT', 'Circular 45/2023/TT-BCT', 'Decision 866/QĐ-TTg', and relevant HS codes including 2530.90.90.90, 280530, and 850511. These searches are strongest for trade, mineral regulation, processing, and observable supply-chain outcomes. Equivalent instrument-specific searches were not conducted across dedicated sanctions, cyber, aid, monetary/financial, and state-directed investment repositories; accordingly, findings for those categories are reported as 'not supported in the assembled corpus' rather than evidence of their absence from Vietnamese policy. Academic sources were used to contextualise the case and identify the closest Vietnam-focused literature. Inclusion required direct relevance to developments in or retrospective measurement of 2018–2025, traceable institutional provenance, and substantive relevance to state action, a coded mechanism, or an outcome indicator. Sources were excluded when they merely repeated another source, lacked verifiable provenance, or provided only generic REE background without bearing on the research question. The final core corpus comprises 18 sources: four Vietnamese policy/regulatory documents, four bilateral or foreign-government sources, six official statistical/institutional sources, two academic case sources, and two media sources used only for macroeconomic context. Appendix A provides

the complete corpus inventory and evidentiary role. Corpus adequacy is interpreted in relation to the stated purposive search strategy and cross-source corroboration, not as proof that all seven instrument categories were exhaustively searched.

Data Collection Procedures

Document collection and coding were organised through a source inventory, extraction sheet, and written codebook. The first author conducted the primary extraction and coding, consistent with the author-contribution statement. The second author reviewed interpretation and borderline classifications but did not conduct independent parallel coding of the full corpus. For each source, the extraction sheet recorded document identity, date, issuing institution, source type, relevant provision or observation, proposed instrument code, strategic objective, outcome indicator, and contradictory or alternative explanation. A coding unit was delimited as one legal provision, table observation, official statement, or clearly bounded passage describing one state economic measure. A unit could receive more than one provisional code during first-pass screening; at final classification, a primary code was assigned according to the mechanism directly enacted, while secondary relevance was recorded in notes to prevent double counting. Statistical observations were not coded as independent instruments and were used only to corroborate scale, continuity, concentration, or outcomes. Where wording in Vietnamese legal documents required interpretation, document numbers and substantive provisions were re-checked against official government-hosted versions; explanatory English wording was treated as secondary to the official text.

For a robustness check, the second author re-evaluated 11 of the 28 coding units (39.3%) against the pre-existing codebook and decision rules, focusing on borderline and overlap-prone classifications. Substantive agreement with the pre-R3 classifications was reached for 9 of 11 units (81.8%). Two units were conservatively reclassified: U07, the mining-processing linkage in Decision 866, was treated as Context/Other because it does not itself enact a cross-border trade condition; and U25, the foreign-investment/external-partnership observation, was treated as insufficient evidence for investment policy because it does not demonstrate a Vietnamese state-controlled or state-directed investment instrument. Differences were resolved by applying the predefined inclusion, exclusion, and overlap rules and retaining the narrower classification where the required mechanism was not independently demonstrated.

Data Analysis

The analysis proceeded in four stages. First, all units in the assembled corpus were screened against the seven predetermined [Blackwill & Harris \(2016\)](#) categories while an additional 'context/other' code remained open for evidence that did not satisfy any instrument definition. This was an analytical screen of the collected corpus, not an exhaustive seven-category search of all potentially relevant repositories. Second, provisional codes were tested against the inclusion and exclusion rules in [Table 2](#). Third, evidence was classified using the decision rules in [Table 3](#). 'Supported' required a direct state action, a clear match to the instrument mechanism, and a strategic external or supply-chain objective, together with corroboration from another source type or a traceable outcome. 'Partially supported' was used when an instrument-like mechanism was present but one core element - such as state control, strategic intent, or external effect - remained ambiguous. 'Insufficient' means insufficient evidence within this corpus and search strategy; it does not establish that the instrument is absent from Vietnamese policy. Fourth, negative-case analysis was used to challenge

provisional classifications: commercial contracts, price/product-composition effects, existing production networks, and other non-state explanations were considered before attributing observed patterns to policy. Conflicting evidence was resolved in favour of the narrower

classification. For overlapping measures, the final code followed the mechanism directly enacted; for example, export-eligibility rules were coded as trade policy unless independent evidence showed structural monopoly.

Table 2. Analytical Framework and Coding Criteria

Geoeconomic Instrument	Study-specific inclusion rule	Exclusion / boundary rule
Trade policy	State-controlled measures that alter cross-border market access or conditions of trade, including export eligibility, tariffs, quotas, or product/processing requirements, and are linked to a strategic external or supply-chain objective.	Ordinary commercial flows, non-state market outcomes, or domestic industrial measures with no external-trade mechanism. Reciprocal FTAs are enabling context unless an REE-specific inducement is deliberately deployed.
Investment policy	State-controlled or state-directed capital, investment restrictions, incentives, SOE/state-bank financing, or other investment tools used for a strategic external objective.	Private or foreign investment activity without demonstrated Vietnamese state control and strategic use is not sufficient.
Economic sanctions	Targeted economic restriction or chokepoint action intended to alter another actor's behaviour for a strategic objective.	General export regulation without an identifiable target or behavioural demand.
Cyber	State-sponsored or materially state-enabled cyber activity using an economic mechanism affecting firms, infrastructure, finance, or intellectual property.	General cyber risk or private cyber incidents lacking state attribution and an REE-related strategic mechanism.
Economic assistance	Vietnam acting as provider of development, humanitarian, military, or state-financed assistance in order to obtain strategic influence relevant to the REE sector.	Vietnam receiving assistance or ordinary development cooperation without provider-side strategic leverage.
Financial and monetary policy	Use of state monetary, currency, sovereign financing, or borrowing-cost capacity to generate external influence connected to REE objectives.	Domestic financing or commercial credit without an external influence mechanism.
Energy and commodities	Structural leverage arising from monopoly, monopsony, or transit centrality that allows Vietnam's supplier, buyer, or transit position to affect other states.	Resource ownership, export participation, or regulatory control alone. Where a measure regulates cross-border eligibility but does not create structural market power, it is coded as trade policy.

Source: Conceptual instrument categories adapted from Blackwill & Harris (2016); inclusion, exclusion, and overlap rules operationalised by the authors for this study. Farrell & Newman (2019), Scholvin & Wigell (2018), and Wigell (2016) are used as complementary lenses for interpreting structural position and outcomes, not as additional coding categories.

Table 3. Evidentiary Classification and Outcome Decision Rules

Decision	Minimum requirement	Example in this study	Interpretive consequence
Supported instrument	Direct state action + mechanism match + strategic external/supply-chain objective + corroborating source/outcome.	Export-eligibility and processing rules in Circulars 23/2021 and 45/2023, read with Decision 866 and external-market evidence.	Instrument can be treated as empirically traceable; outcome still evaluated separately.
Partially supported instrument	Instrument-like action exists, but at least one core element such as state control, strategic intent, or external effect is not demonstrated.	Planned investment in REE mining/refining and discussion of incentives or subsidies are visible, but state-controlled capital used for geopolitical influence is not established.	Evidence is reported but not elevated to a fully supported instrument.
Insufficient instrument	No direct evidence satisfies the core mechanism; evidence is contextual, commercial, or merely potential.	REE endowment without monopoly/monopsony/transit centrality does not satisfy the energy-and-commodities instrument.	No claim that the instrument is absent from all Vietnamese policy; only that it is not supported in this corpus/window.
Positional improvement / outcome	Observable improvement relative to the 2018–2020 baseline in strategic options, institutional standing, market access, diversification, or bargaining access; regulation itself is not an outcome indicator.	Continued Japanese market access and 2024 critical-mineral recognition are observable, but the corpus does not establish measurable improvement relative to the baseline.	No demonstrated positional gain; the findings are reported as regulatory positioning and external recognition. Realised economic benefits, greater bargaining power, and causal policy effectiveness require separate evidence.
Coercive outcome	Target-specific costs or credible threat plus an identifiable change/concession by the target.	No such evidence identified.	Coercive leverage is not demonstrated.

monopsony, or transit leverage. These procedures reduce, but do not eliminate, the confirmation and coder-dependence risks inherent in directed content analysis (Bowen, 2009; Hsieh & Shannon, 2005; Miles et al., 2014; Yin, 2018)

Data Trustworthiness and Integrity

Trustworthiness controls focused on provenance, versioning, translation, and traceability. Legal and policy claims were anchored to official government-hosted documents and checked by document number, date, issuing body, and relevant article or appendix. Statistical series were labelled as observed, revised, or estimated where applicable; post-period publications were admitted only when they retrospectively reported or revised data for 2018–2025 and were not used as evidence of post-2025 policy action. For the 2025 Japan trade observation, the Ministry of Finance/e-Stat release is treated as a revised retrospective source and its different dissemination basis is disclosed in the Results section. Each coded claim can be traced to a source and extracted passage in the corpus inventory. Media reports are used only for contextual economic scale and never as the sole basis for instrument classification. Where translation ambiguity or conflicting evidence remained, the analysis adopted the more conservative interpretation.

Ethical Approval

The study relied exclusively on publicly available documents, regulations, aggregate trade statistics, institutional reports, and published academic literature. It involved no human participants, personal or confidential data, or intervention requiring informed consent; therefore, formal ethics approval was not applicable.

Result and Discussion

Screening Across the Seven Geoeconomic Instruments

Applying the decision rules in Table 3 identified trade policy as the only fully supported geoeconomic instrument in Vietnam's REE sector during 2018–2025. Investment policy

was partially supported: Huy et al. (2024) reports planned investment in REE mining and refining and discusses incentives or subsidies for domestic enterprises, but the evidence does not establish a Vietnamese state-controlled or state-directed capital instrument deliberately used to generate geopolitical influence. Evidence from Zhiltsov & Hoang (2025) is retained as contextual evidence of foreign investment and external partnerships rather than as an independently traceable investment-policy instrument. Evidence for sanctions, cyber instruments, economic assistance, financial and monetary policy, and structural commodity leverage was insufficient. Table 4 makes this ranking transparent by linking each category to the strongest evidence, the criterion met or missing, and the resulting classification. The classifications refer only to evidence traceable within the stated corpus and period and do not imply that an instrument is absent from Vietnam's broader economic policy.

The trade-policy/energy-and-commodities boundary was resolved by coding the mechanism directly enacted. A measure that sets export eligibility, processing conditions, or domestic-allocation requirements governs cross-border trade and is therefore coded as trade policy. The same measure would also qualify under energy and commodities only if separate evidence demonstrated structural leverage arising from Vietnam's supplier, buyer, or transit position - for example, monopoly, monopsony, or transit centrality capable of affecting another state. No such structural leverage was demonstrated. Provisional multi-coding was allowed during screening, but the final primary code followed this mechanism rule to avoid double counting.

Trade Policy: Selective Export Regulation and Domestic Value Retention

Vietnam's mineral-export regime provides the clearest direct evidence for the trade-policy category. Article 4 of Circular No. 23/2021/TT-BCT required exported minerals to have lawful origin, appear on the authorised list, and meet the quality standards in Appendix 1. For REEs specifically, Appendix 1 item 4 identifies HS 2530.90.90.90 - total rare-earth oxides, hydroxides, and salts - with a TREO threshold of at least 95%

Table 4. Evidence Matrix Across the Seven Geoeconomic Instruments

Instrument	Strongest traceable evidence	Criterion met / missing	Classification
Trade policy	Circular 23/2021 Article 4 and Appendix 1 item 4; Circular 45/2023 amended Article 4; Decision 866 domestic-priority/export provision; product-specific market-access context under the Japan–Viet Nam EPA.	Direct state control over external trade conditions and processing; strategic supply-chain relevance corroborated by official bilateral/market evidence. No coercive target or concession.	Supported
Investment policy	Huy et al. (2024) reports planned investment in REE mining/refining and discusses incentives or subsidies for domestic enterprises; Zhiltsov & Hoang (2025) is retained as external-partnership context.	Investment-related planning is visible, but Vietnamese state-controlled or state-directed capital and a demonstrated geopolitical-use mechanism are not established.	Partially supported
Economic sanctions	No targeted REE-related economic restriction against an identifiable state was found.	Target, behavioural demand, and coercive mechanism missing.	Insufficient
Cyber	No traceable state-sponsored REE-related cyber-economic measure was found.	State attribution and REE-specific economic mechanism missing.	Insufficient
Economic assistance	No evidence of Vietnam acting as an assistance provider to gain REE-related influence.	Provider-side assistance and strategic leverage missing.	Insufficient
Financial and monetary policy	No traceable use of currency, sovereign financing, or borrowing-cost capacity for REE-related external influence.	External monetary/financial leverage mechanism missing.	Insufficient
Energy and commodities	Vietnam has REE endowment and export participation, but current production and market position remain limited.	No monopoly, monopsony, transit centrality, or demonstrated partner dependence that converts resource position into structural leverage.	Insufficient

(Ministry of Industry and Trade of Vietnam, 2021). The regulation established a verifiable REE-specific export-eligibility rule. Earlier mineral-export controls predated Circular No. 23/2021: Circular No. 41/2012, as amended by Circular No. 12/2016 and partly repealed by Circular No. 13/2020, already regulated processing, authorised export lists, quality standards, lawful origin, and related administrative conditions (Ministry of Industry and Trade of Vietnam, 2012, 2016, 2020). The legal baseline assesses whether later rules added or more explicitly specified legally exercisable choices over origin, processing, domestic priority, and export eligibility.

Circular No. 45/2023/TT-BCT, issued on 29 December 2023 and effective from 15 February 2024, amended Article 4 by explicitly requiring minerals for export to have been processed and by distinguishing the eligibility rules for minerals of domestic and imported origin (Ministry of Industry and Trade of Vietnam, 2023). The amendment also updated the appendices and HS-code structure. Importantly, the REE entry retained the TREO $\geq 95\%$ quality threshold; the demonstrated tightening therefore lies in the explicit processing and origin requirements, not in a higher REE-quality threshold. This change provides a concrete basis for describing the export regime as more selective.

Decision No. 866/QĐ-TTg connects mineral development to domestic value-chain objectives. For products processed from rare-earth ores, the plan states that total rare-earth oxides, hydroxides, and salts with TREO content of at least 95%, together with individual rare-earth oxides, are to serve domestic demand, with export considered (Prime Minister of Vietnam, 2023). The plan also links new REE mining activity to corresponding processing projects and technological capacity. This mining-processing linkage is treated as Context/Other rather than as an independent trade-policy instrument because it does not itself enact a cross-border trade condition. The trade-policy classification instead relies on the export-eligibility rules and the domestic-priority/export provision.

Taken together, the export-eligibility rules and the domestic-priority/export provision demonstrate a policy mechanism: the state can condition whether and in what processed form specified REE products enter external markets, while domestic demand and processing receive explicit priority. This mechanism is consistent with vulnerability management and domestic-value objectives, but the documentary design does not directly measure how much material was retained domestically or whether the rules produced realised value-added gains during the study period. Accordingly, the study treats domestic retention and value addition as intended or plausible consequences of the regulatory mechanism rather than as observed outcomes. The supported trade-policy classification rests on the demonstrated external-trade mechanism and strategic supply-chain relevance, not on an unmeasured claim of policy effectiveness.

At the same time, Vietnam's actual REE trade reveals that its external position is more complex than that of a conventional raw-material exporter. HS 280530, which covers rare-earth metals together with scandium and yttrium in mixed or alloyed forms, provides a useful but limited indicator of trade at the rare-earth-metal stage. It does not capture the entire REE value chain and should therefore be interpreted separately from rare-earth compounds and permanent magnets.

Japan reported imports of HS 280530 from Vietnam worth approximately USD 159.36 million in 2018 and USD 162.15 million in 2024, although substantial fluctuations occurred between these years (World Bank, n.d.). Japan's imports reached their highest value in the series at approximately USD 195.43 million in 2022, even though

import volume fell from nearly 3,977 tonnes in 2018 to approximately 2,118 tonnes in that year.

The divergence between trade value and physical volume is analytically important. The apparent trade unit value rose from around USD 40.07/kg in 2018 to USD 92.29/kg in 2022 before declining to around USD 60.33/kg in 2024. These ratios should not be interpreted as observed market prices because HS 280530 can contain heterogeneous products, grades, and compositions. Higher trade values therefore do not demonstrate larger physical exports or greater policy success; product mix, contract terms, reporting practices, and price conditions may all affect the value-to-mass ratio.

Across the full study period, Japan-reported physical import volumes followed a fluctuating rather than continuously expanding trajectory. The World Bank WITS/UN Comtrade series shows a decline from approximately 3,976.87 tonnes in 2018 to 1,605.41 tonnes in 2023, followed by a recovery to 2,687.87 tonnes in 2024. To extend the physical-volume series through the end of the analytical window, the study uses the Ministry of Finance of Japan/e-Stat revised 2025 country-by-commodity release, which reports 2,264.96 tonnes for 2025 (Ministry of Finance of Japan, 2026; World Bank, n.d.). Both sources represent Japan-reported imports from Vietnam under HS 280530 and are used on a physical-quantity basis, but they differ in dissemination system and revision status. For that reason, the 2025 observation is shown only in the volume trajectory in Figure 1 and is not appended to Table 5's value/unit-value comparison. The 2026 publication date is admissible only because the source retrospectively reports revised 2025 trade; it is not evidence of post-2025 policy action. The absence of sustained volume growth cautions against reading continued trade as an expansion of geoeconomic leverage.

Destination Concentration and Preferential Market Access

Japan's role becomes even clearer when Vietnam's destination structure is considered. In 2021, Japan accounted for approximately USD 175.77 million of partner-reported imports from Vietnam under HS 280530, compared with around USD 17.40 million for China and USD 13.76 million for Thailand (World Bank, n.d.). In 2022, Japan reported USD 195.43 million, while China reported only USD 1.44 million. In 2023, Japan remained the leading destination at approximately USD 100.27 million, followed by China at USD 17.37 million; in 2024, Japan again dominated with USD 162.15 million, compared with USD 19.89 million for China and USD 11.93 million for Singapore (World Bank, n.d.) (Figure 2).

Japan's predominance is also visible within the partner-reported WITS records used for 2021–2024. The denominator for each share is the sum of import values reported by the partner economies identified in the extracted dataset for that

Table 5. Japan-Reported Imports of HS 280530 from Vietnam (2018–2024)

Year	Import Value (USD million)	Volume (tonnes)	Apparent Trade Unit Value (USD/kg)
2018	159.36	3,976.87	40.07
2019	133.90	3,421.20	39.14
2020	103.91	2,560.33	40.59
2021	175.77	3,073.56	57.19
2022	195.43	2,117.53	92.29
2023	100.27	1,605.41	62.46
2024	162.15	2,687.87	60.33

Source: World Bank WITS/UN Comtrade; apparent trade unit value calculated by the authors as reported import value divided by reported mass. Note: this ratio is not a market price. HS 280530 can contain heterogeneous products, grades, and compositions, so changes in the apparent unit value may

reflect product mix and reporting as well as price conditions. year; across the period these reporting partners comprise Japan, China, Thailand, the United Kingdom, Korea, the United States, and Singapore where observations are available. On this basis, Japan represented approximately 84.7% of identified partner-reported value in 2021, 99.2% in 2022, 84.9% in 2023, and 82.9% in 2024 (Figure 3). Because mirror statistics depend on partner reporting and unreported or missing partners could change the denominator, these percentages are interpreted as concentration within the identified reporting set rather than as verified exhaustive shares of all Vietnamese exports (World Bank, n.d.).

The persistence of this concentration shows that the observed HS 280530 trade corridor was strongly Japan-centred rather than broadly diversified across the identified reporting partners. Trade concentration alone does not demonstrate deeper supply-chain integration or strategic alignment. It is therefore treated here as a commercial linkage that may create an option for non-Chinese supply-chain participation; the stronger evidence of strategic inclusion comes separately from formal Vietnam-Japan critical-mineral cooperation discussed below. At the same time, dependence on a single dominant destination creates another form of

external exposure and limits any inference of autonomous leverage from the trade pattern itself.

The trade structure therefore provides an important economic foundation for Vietnam's geoeconomic policy, but export concentration by itself does not establish strategic influence. Evidence of state action, strategic intent, and geopolitical outcomes is required to determine whether this commercial structure is being converted into geoeconomic advantage. The concentration of trade with Japan should also not be attributed to Vietnamese state policy alone. Established commercial relationships, firm-level contracts, product composition, industrial demand, and existing production networks may also shape bilateral trade flows. The trade pattern is therefore treated as evidence of a strong economic linkage rather than as independent proof of geopolitical leverage.

Evidence for positive inducement is weaker than the evidence for restrictive trade-policy mechanisms. Vietnam's participation in the CPTPP, EVFTA, RCEP, and bilateral arrangements creates a reciprocal preferential market-access environment (Viet Nam National Trade Repository, n.d.). A product-specific example can be verified in Japan's schedule under the Japan–Viet Nam Economic Partnership Agreement,

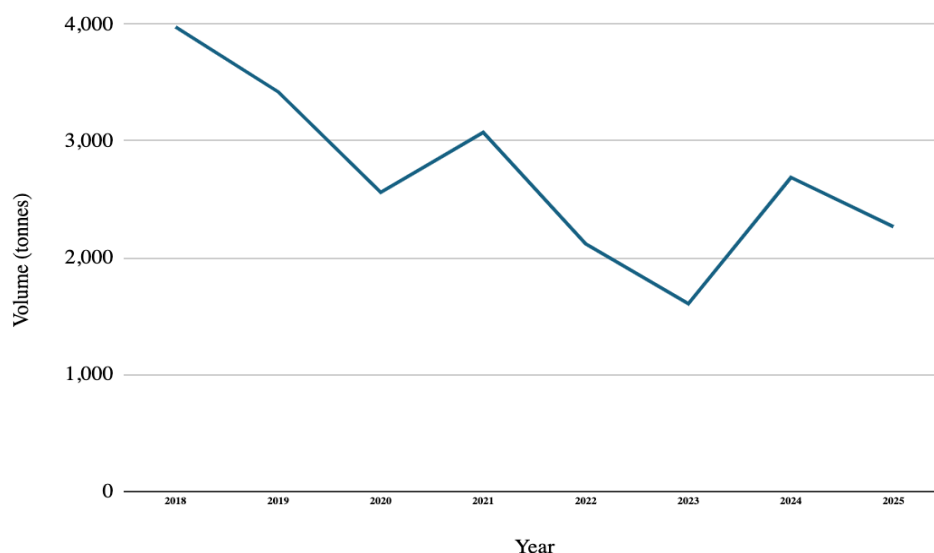


Figure 1. Japan-Reported Imports of HS 280530 from Vietnam by Volume, 2018–2025 (tonnes)

Source: World Bank WITS/UN Comtrade (2018–2024) and Ministry of Finance of Japan (2026), compiled by the authors.

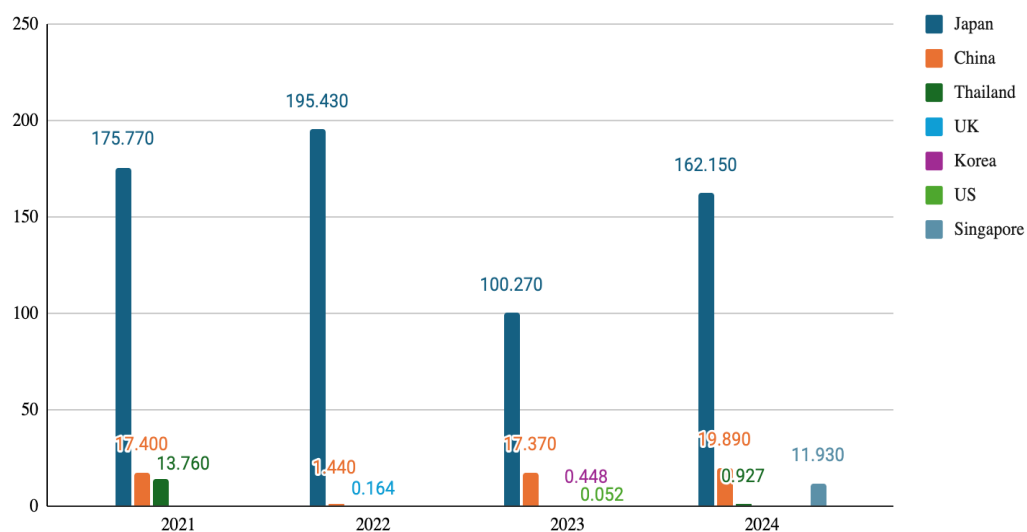


Figure 2. Partner-Reported Imports of HS 280530 from Vietnam by Destination, 2021–2024 (USD million)

Source: World Bank WITS/UN Comtrade, compiled and calculated by the authors.

where statistical code 280530000 is listed as duty-free (Japan Customs, 2025). The study does not have preference-utilisation or product-specific rules-of-origin evidence showing that this tariff treatment caused the observed trade flows. The finding is therefore limited to the existence of an available preferential framework, not actual utilisation or a causal market-access effect.

Under the coding rules, reciprocal FTAs are not automatically treated as a positive inducement deliberately deployed by Vietnam. They are coded as enabling institutional context unless an REE-specific concession or facility can be traced to an intentional effort to elicit a strategic response. No such REE-specific unilateral inducement was identified in the core corpus. Preferential market access therefore provides partial supporting evidence within the broader trade-policy category, while the supported classification itself rests primarily on the export-eligibility, processing, and domestic-priority mechanisms documented above.

External Supply-Chain Positioning and Geopolitical Effects

The outcome evidence is more limited than the evidence for the regulatory mechanism. The policy measures demonstrate increased state control over the conditions of REE export, while the trade data demonstrate continued access to a major external market. Neither finding alone demonstrates an improvement in Vietnam's strategic position. The outcome analysis therefore compares post-2021 observations with the 2018–2020 pre-regulatory baseline and looks for independently observable evidence of widened market access, diversification, higher institutional standing, expanded bargaining access, counterpart behavioural change, or concessions.

Such an indicator appears in the December 2024 Japan-Viet Nam Joint Committee on Cooperation in Industry, Trade and Energy. METI records that the two sides discussed strengthening supply-chain resilience and cooperation in securing critical minerals, explicitly including rare earths, and confirmed that they would further strengthen these efforts (Ministry of Economy & Industry, 2024). The associated ministerial statement also situates Vietnam within supply-chain-resilience cooperation. The record documents formal agenda-level and institutional inclusion; no REE-specific financing commitment, technology-transfer project, or binding offtake mechanism is recorded. Against the historical

baseline, the 2024 record shows formal recognition framed explicitly around critical-mineral security and supply-chain resilience, but it does not by itself demonstrate a measurable improvement in Vietnam's institutional standing or strategic options. The documentary design supports temporal comparison without establishing causal attribution between Vietnamese regulation and the 2024 inclusion. Pre-existing bilateral REE engagement includes JOGMEC joint survey activity from 2007 and Vietnam's 2010 selection of Japan as a partner for REE investigation, exploration, development, and processing (Government of Vietnam, 2010; Japan Oil, Gas and Metals National Corporation, 2007).

The available evidence does not show that Vietnam used REE access to impose target-specific costs, compel another state to alter its political behaviour, or obtain an identifiable concession. The outcome is therefore not coercive. Relative to the pre-existing Vietnam–Japan REE relationship, the 2024 supply-chain-security framing and continued Japanese market access are best interpreted as regulatory positioning and external recognition rather than a demonstrated positional gain. The corpus does not establish measurable improvement in market access, diversification, institutional standing, bargaining access, counterpart behaviour, or concessions relative to the 2018–2020 baseline. Realised economic benefits, greater bargaining power, market dominance, and causal policy effectiveness fall outside the demonstrated outcomes of this study.

Interpreting Vietnam's Defensive Geoeconomic Strategy

The findings support a defensive interpretation of Vietnam's REE geoeconomic practice. In this study, defensive geoeconomic statecraft refers to state-controlled economic measures used primarily to reduce strategic vulnerability, preserve policy discretion, and expand external options rather than to impose costs on a targeted counterpart. This remains distinct from ordinary industrial or supply-security policy because the classification also requires an external-trade or external-positioning mechanism and a strategic supply-chain objective. Vietnam meets that narrower standard through control over export eligibility and processing conditions combined with external market access and formal critical-mineral cooperation. It does not, however, possess the

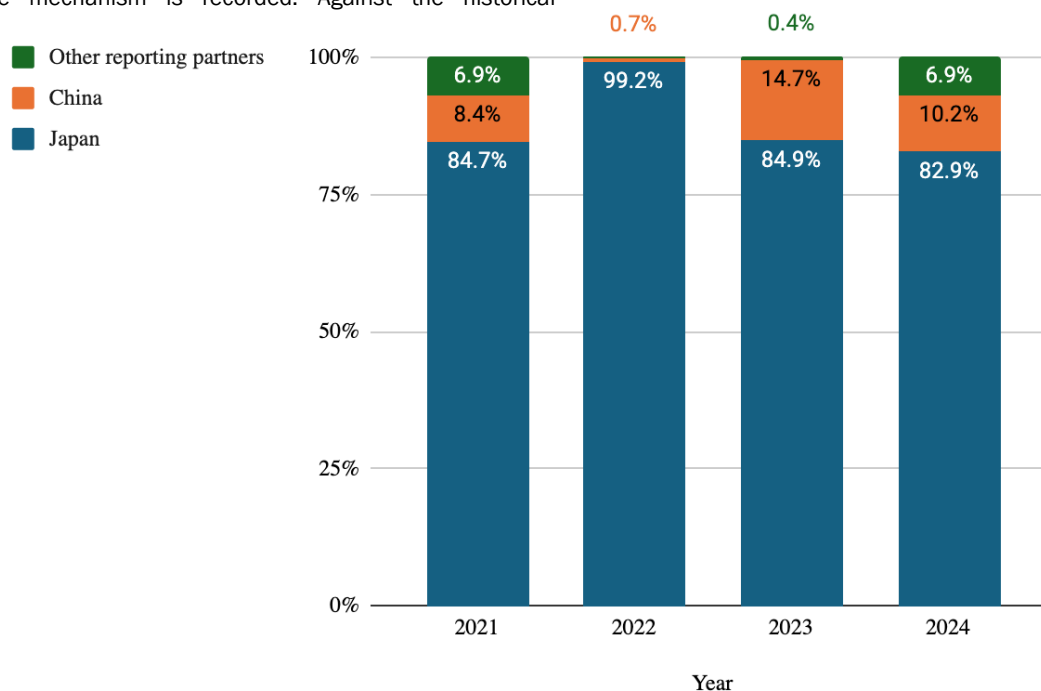


Figure 3. Destination Shares of Partner-Reported Imports of HS 280530 from Vietnam, 2021–2024 (%)

Source: World Bank WITS/UN Comtrade, compiled and calculated by the authors.

structural market position associated with coercive network or commodity power (Blackwill & Harris, 2016; Farrell & Newman, 2019; Scholvin & Wigell, 2018; Wigell, 2016).

Comparison with Previous Studies

China provides an illustrative contrast rather than a second systematically analysed case. Studies of Chinese rare-earth policy show how export controls, resource taxation, industrial restructuring, and processing dominance can affect prices, supply-chain resilience, and strategic behaviour beyond national borders (Ge & Lei, 2018; Mancheri et al., 2019; Shen et al., 2020; Woods, 2025). Vietnam shares the use of regulatory control over mineral circulation but not the scale, downstream dominance, or demonstrated ability to impose significant external costs. The contrast therefore illustrates a theoretical point rather than a cross-case causal claim: the geopolitical effect of trade regulation depends on the state's position in the value chain and the dependency structure surrounding the regulated material.

The Japan-centred HS 280530 corridor also complicates simple claims of diversification. Critical-mineral strategies increasingly use partnerships, friend-shoring, and market-directing arrangements to reduce concentrated dependencies (Glencross, 2024; Ufimtseva et al., 2024; Vivoda, 2023). Vietnam's continued access to Japan and formal critical-mineral dialogue are consistent with participation in that broader restructuring, but the observed destination pattern remains highly concentrated and physical volumes fluctuate. The evidence therefore supports a distinction between access to an alternative supply-chain relationship and diversification of external exposure. This caution is consistent with research showing that geopolitical risk, policy intervention, and market structure cannot be inferred from nominal trade values alone (Depraeter et al., 2025; Mariev & Blueschke, 2025).

Regulatory Positioning, External Recognition, and the Limits of the Gain Claim

For a resource-holding developing state, the strategic problem is not simply whether it owns a critical mineral but whether it can translate endowment into usable material, regulatory control, and demonstrably wider external options. Research on energy-transition minerals emphasizes that rapid mineral demand can reproduce new dependencies when extraction is not matched by processing, technological capability, and resilient supply arrangements (M. D. Bazilian, 2018; Blondeel et al., 2021; Sovacool et al., 2020; Wang et al., 2023). Vietnam represents a transitional configuration: it has meaningful regulatory authority and geological potential, but current output and processing capacity are too limited to demonstrate structural commodity leverage. The post-2021 evidence shows regulatory positioning and formal external recognition, but the available baseline does not demonstrate a measurable improvement in strategic options or institutional standing.

This case-specific finding refines existing accounts of geoeconomic agency outside major powers. Nesadurai (2026) provides the broader proposition that Global South geoeconomic agency need not be reducible to zero-sum coercion. The present study adds a narrower mechanism-and-outcome distinction for resource-and-supply-chain cases: state regulatory control over the external circulation of strategic-resource products is treated as the mechanism, while market access, institutional recognition, diversification, bargaining access, counterpart behaviour, or concessions are evaluated as distinct outcome indicators. A positional improvement requires observable improvement on one or more of those dimensions relative to the baseline; the present corpus does not establish that threshold for Vietnam. The

evidence therefore supports regulatory positioning and external recognition without implying realised economic benefits, greater bargaining power, causal policy effectiveness, or coercion. The proposition is expected to travel most plausibly where a resource-holding developing state has meaningful regulatory capacity, external demand and market access, some participation in the relevant value chain, incomplete processing capability, and no dominant market share. It may not hold where state control is weak, external demand is absent, market access is closed, or another actor controls indispensable downstream stages so completely that domestic regulation cannot expand strategic options.

Policy and Practical Implications

The evidence points to different priorities for domestic and external actors. For Vietnamese policymakers, the immediate strategic task is to convert regulatory discretion into credible processing and separation capacity while maintaining transparent export administration; otherwise, restrictive eligibility rules may preserve control without materially strengthening value-chain position. Destination concentration also suggests value in widening commercially viable external options rather than replacing dependence on one dominant partner with dependence on another. For partner governments and firms, cooperation that aims to strengthen supply-chain resilience would be more substantive if agenda-level recognition is followed by transparent co-investment, technology transfer, processing partnerships, or offtake arrangements that can be observed and evaluated. These recommendations are prospective implications of the findings, not effects directly measured by this documentary design.

Limitations and Cautions

Several limitations qualify these findings. First, the study is a single-case documentary analysis and cannot establish causal effects of individual policies on firm behaviour, investment, or bilateral decisions. Second, purposive corpus construction creates a risk of source-selection bias: official materials are especially visible, while informal bargaining and unpublished implementation practices are not. The search strategy is substantially stronger for trade, mineral regulation, and processing than for sanctions, cyber, assistance, monetary/financial policy, and state-directed investment; therefore, 'insufficient' classifications mean insufficient evidence in this corpus rather than demonstrated policy absence. Primary coding was conducted by one author and the second author did not independently parallel-code the full corpus. A second-author robustness check covered 11 of 28 coding units (39.3%) and yielded substantive agreement for 9 units (81.8%); U07 and U25 were conservatively reclassified in line with the predefined decision rules. Directed coding can privilege the predetermined Blackwill and Harris categories despite the use of an open context/other code and negative-case checks. Vietnamese legal and policy documents create potential translation and interpretive effects; these were reduced by re-checking document numbers and relevant provisions against official government-hosted versions, but linguistic nuance may remain. HS 280530 captures rare-earth metals, scandium, and yttrium rather than the full REE value chain, and partner-reported mirror statistics can be affected by product composition, reporting coverage, prices, and firm-level networks. The 2026 USGS and Japanese e-Stat publications are used only retrospectively for revised or estimated 2024–2025 observations and are not contemporaneous policy evidence. Finally, the pre-policy evidence is insufficient to establish that post-2021 institutional recognition or market access represents a measurable improvement rather than continuity or partner-driven cooperation. These limitations bound the article's claims to traceable regulatory positioning

and recognition within the specified corpus and period.

Recommendations for Future Research

Future research should test, rather than assume, whether Vietnam moves from positional options toward stronger leverage. Comparative or longitudinal designs could pre-specify indicators such as Vietnam's share of partner supply, domestic separation/refining and magnet capacity, destination concentration, the degree of asymmetric partner dependence, state-directed investment, and observable partner concessions or changes in bargaining behaviour. Firm-level work could test whether export eligibility and processing requirements alter investment, sourcing, technology transfer, or offtake decisions. Evidence of target-specific costs followed by policy-induced concessions would be necessary to demonstrate a transition toward coercive leverage; growth in processing capacity or formal cooperation alone would indicate stronger position but not coercion.

Conclusion

The documentary evidence directly demonstrates that Vietnam used trade-related regulation to strengthen state control over the conditions under which specified REE products could enter external markets. Circulars 23/2021 and 45/2023 establish export-eligibility, processing, origin, and quality requirements, while Decision 866 gives domestic demand and processing explicit priority. Applying the same coding rules to the assembled corpus gives trade policy the strongest evidentiary support, investment policy partial support, and the remaining categories insufficient support within this corpus. Because the search strategy was not equally instrument-specific across all seven categories, these classifications should not be read as proof that the other instruments are absent from Vietnamese policy.

The evidence for outcomes is more bounded. Japan-centred HS 280530 trade demonstrates continued access to a major external market but also substantial destination concentration; it does not by itself establish leverage. The December 2024 inclusion of rare earths in formal Vietnam–Japan critical-mineral supply-security discussions provides an external indicator of recognition and institutional inclusion. However, the available baseline does not demonstrate that these external options or Vietnam's institutional standing measurably improved after the post-2021 regulatory measures. The evidence therefore supports regulatory positioning and external recognition rather than a demonstrated positional gain. The study also finds no evidence that Vietnam imposed target-specific costs, changed another state's behaviour, or extracted identifiable political concessions. Coercive leverage is therefore not demonstrated.

The theoretical contribution is correspondingly bounded. Vietnam illustrates how a resource-holding developing state with regulatory capacity, external market access, and incomplete value-chain capability can use economic instruments defensively to preserve control and participate in strategically framed supply-chain relationships before it

possesses dominant structural power. A positional improvement requires independently observable evidence that strategic options, institutional standing, market access, diversification, or bargaining access improved relative to a baseline; that threshold is not demonstrated in the present corpus. Geological endowment can create strategic options, but monopoly, monopsony, transit centrality, or coercive bargaining outcomes require additional market and processing conditions that Vietnam has not yet demonstrated.

Whether Vietnam's regulatory positioning develops into stronger leverage is a prospective empirical question. Future evidence would need to show sustained increases in extraction and processing capability, greater or more asymmetric partner dependence, measurable diversification of strategic options, and - for a coercive interpretation - policy-linked changes in counterpart behaviour or concessions. The present study therefore identifies a traceable regulatory mechanism and bounded external recognition without claiming a demonstrated positional gain or measuring the overall effectiveness of Vietnam's REE strategy.

Declaration

Author Contributions

Cinka Andili Rosa contributed to conceptualisation, document collection, data curation, formal analysis, visualisation, and preparation of the original draft. Primadiana Yunita contributed to conceptualisation, supervision, validation, interpretation of findings, and review and editing of the manuscript. Both authors approved the final manuscript.

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Conflict of Interest

The authors declare no conflict of interest.

Generative Artificial Intelligence Use Statement

OpenAI's ChatGPT was used only to assist with language editing, structural reorganisation, and manuscript formatting during manuscript preparation and revision. It was not used to generate or alter research data or to make independent analytical decisions. All AI-assisted changes were reviewed and verified by the authors, who remain fully responsible for the accuracy, integrity, citations, analysis, interpretation, and conclusions of the manuscript.

Ethics Approval and Informed Consent

Not applicable. The study used publicly available documentary and aggregate statistical sources and involved no human participants or personal data.

Data Availability Statement

The policy documents and statistical sources supporting the findings are publicly available through the institutional repositories and databases cited in the manuscript. Derived tables and figures were compiled by the authors from these sources.

References

- Aggarwal, V. K., & Reddie, A. W. (2025). New Economic Statecraft and Global Technology Conflicts: The Dilemma for Middle Powers. *Business and Politics*, 27(4), 465–483. <https://doi.org/10.1017/bap.2025.10011>
- Balaram, V. (2019). Rare Earth Elements: A Review of Applications, Occurrence, Exploration, Analysis, Recycling, and Environmental Impact. *Geoscience Frontiers*, 10(4), 1285–1303. <https://doi.org/10.1016/j.gsf.2018.12.005>
- Bazilian, M., Bradshaw, M., Gabriel, J., Goldthau, A., & Westphal, K. (2020). Four Scenarios of the Energy Transition: Drivers, Consequences, and Implications for Geopolitics. *WIREs Climate Change*, 11(2), e625. <https://doi.org/10.1002/wcc.625>
- Bazilian, M. D. (2018). The Mineral Foundation of the Energy Transition. *The Extractive Industries and Society*, 5(1), 93–97. <https://doi.org/10.1016/j.exis.2017.12.002>
- Blackwill, R. D., & Harris, J. M. (2016). *War by Other Means: Geoeconomics and Statecraft*. Harvard University Press. <https://doi.org/10.4159/9780674545960>
- Blondeel, M., Bradshaw, M. J., Bridge, G., & Kuzemko, C. (2021). The Geopolitics of Energy System Transformation: A Review. *Geography Compass*, 15(7), e12580. <https://doi.org/10.1111/gec3.12580>
- Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, 9(2), 27–40.

- <https://doi.org/10.3316/QRJ0902027>
- Depraiter, L., Goutte, S., & Porcher, T. (2025). Geopolitical Risk and the Global Supply of Rare Earth Permanent Magnets: Insights from China's Export Trends. *Energy Economics*, 146, 108496. <https://doi.org/10.1016/j.eneco.2025.108496>
- Farrell, H., & Newman, A. L. (2019). Weaponized Interdependence: How Global Economic Networks Shape State Coercion. *International Security*, 44(1), 42–79. https://doi.org/10.1162/isec_a_00351
- Ge, J., & Lei, Y. (2018). Resource Tax on Rare Earths in China: Policy Evolution and Market Responses. *Resources Policy*, 59, 291–297. <https://doi.org/10.1016/j.resourpol.2018.07.016>
- Glencross, A. (2024). The Geopolitics of Supply Chains: EU Efforts to Ensure Security of Supply. *Global Policy*, 15(4), 729–739. <https://doi.org/10.1111/1758-5899.13388>
- Government of Vietnam. (2010). VN, Japan to Open Rare Earth and Nuclear Energy Cooperation.
- Hsieh, H.-F., & Shannon, S. E. (2005). Three Approaches to Qualitative Content Analysis. *Qualitative Health Research*, 15(9), 1277–1288. <https://doi.org/10.1177/1049732305276687>
- Huy, P. Q., Sweetnam, G. E., & Hien, T. T. (2024). Shifting toward Clean Energy Technology: Assessing Vietnam Critical Minerals Demand and Domestic Resources. *IOP Conference Series: Earth and Environmental Science*, 1395(1), 12001. <https://doi.org/10.1088/1755-1315/1395/1/012001>
- Ilanakoon, I. M. S. K., Dushyantha, N. P., Mancheri, N., Edirisinghe, P. M., Neethling, S. J., Ratnayake, N. P., Rohitha, L. P. S., Dissanayake, D. M. D. O. K., Premasiri, H. M. R., Abeyasinghe, A. M. K. B., Dharmaratne, P. G. R., & Batapola, N. M. (2022). Constraints to Rare Earth Elements Supply Diversification: Evidence from an Industry Survey. *Journal of Cleaner Production*, 331, 129932. <https://doi.org/10.1016/j.jclepro.2021.129932>
- International Energy Agency. (2025). *Rare Earth Elements 2025*. <https://www.iea.org/reports/rare-earth-elements-2025>
- Japan Customs. (2025). *Japan-Vietnam EPA (2025.04)*
- Japan Oil, Gas and Metals National Corporation (2007). *Japan and Vietnam Begin Joint Basic Survey for Copper and Rare-Earth Resource Development*.
- Mancheri, N. A., Sprecher, B., Bailey, G., Ge, J., & Tukker, A. (2019). Effect of Chinese Policies on Rare Earth Supply Chain Resilience. *Resources, Conservation and Recycling*, 142, 101–112. <https://doi.org/10.1016/j.resconrec.2018.11.017>
- Mariev, O., & Blueschke, D. (2025). Interplay of Chinese Rare Earth Elements Supply and European Clean Energy Transition: A Geopolitical Context Analysis. *Renewable Energy*, 238, 121986. <https://doi.org/10.1016/j.renene.2024.121986>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). SAGE Publications.
- Ministry of Commerce of the People's Republic of China, & General Administration of Customs of the People's Republic of China. (2025). *Announcement No. 18 of 2025: Decision to Implement Export Control on Some Medium and Heavy Rare Earth Related Items*.
- Ministry of Economy, Trade and Industry. (2024). *Seventh Meeting of the Japan-Viet Nam Joint Committee on Cooperation in Industry, Trade and Energy Held*.
- Ministry of Finance of Japan. (2026). *2025 Country by Commodity (Import Jan-Dec: Revised) (103-158: Asia)*.
- Ministry of Industry and Trade of Vietnam. (2012). *Circular No. 41/2012/TT-BCT on Mineral Exports*.
- Ministry of Industry and Trade of Vietnam. (2016). *Circular No. 12/2016/TT-BCT Amending Circular No. 41/2012/TT-BCT on Mineral Exports*.
- Ministry of Industry and Trade of Vietnam. (2018). *National Assembly Ratifies CPTPP*.
- Ministry of Industry and Trade of Vietnam. (2020). *Circular No. 13/2020/TT-BCT Amending and Repealing Certain Business-Investment Conditions under the Ministry of Industry and Trade*.
- Ministry of Industry and Trade of Vietnam. (2021). *Circular No. 23/2021/TT-BCT on the List of Categories and Quality Standards for Exported Minerals under the Management of the Ministry of Industry and Trade*.
- Ministry of Industry and Trade of Vietnam. (2023). *Circular No. 45/2023/TT-BCT Amending and Supplementing Circular No. 23/2021/TT-BCT on the List of Categories and Quality Standards for Exported Minerals under the Management of the Ministry of Industry and Trade*.
- Nesadurai, H. E. S. (2026). Malaysia's Ambivalent Middle Power Status: A Global South Perspective from a Reconceptualised Geoeconomics. *Global Policy*, 17(S1), S65–S74. <https://doi.org/10.1111/1758-5899.70072>
- Ostrowski, W. (2023). The Twilight of Resource Nationalism: From Cyclicity to Singularity? *Resources Policy*, 83, 103599. <https://doi.org/10.1016/j.resourpol.2023.103599>
- Overland, I. (2019). The Geopolitics of Renewable Energy: Debunking Four Emerging Myths. *Energy Research & Social Science*, 49, 36–40. <https://doi.org/10.1016/j.erss.2018.10.018>
- Prime Minister of Vietnam. (2023). *Decision No. 866/Q-TTg Approving the Planning for Exploration, Exploitation, Processing and Use of Minerals for the 2021-2030 Period, with a Vision to 2050*.
- Salim, H., Sahin, O., Elsayah, S., Turan, H., & Stewart, R. A. (2022). A Critical Review on Tackling Complex Rare Earth Supply Security Problem. *Resources Policy*, 77, 102697. <https://doi.org/10.1016/j.resourpol.2022.102697>
- Scholvin, S., & Wigell, M. (2018). Power Politics by Economic Means: Geoeconomics as an Analytical Approach and Foreign Policy Practice. *Comparative Strategy*, 37(1), 73–84. <https://doi.org/10.1080/01495933.2018.1419729>
- Shen, Y., Moomy, R., & Eggert, R. G. (2020). China's Public Policies toward Rare Earths, 1975–2018. *Mineral Economics*, 33, 127–151. <https://doi.org/10.1007/s13563-019-00214-2>
- Sovacool, B. K., Ali, S. H., Bazilian, M., Radley, B., Nemery, B., Okatz, J., & Mulvaney, D. (2020). Sustainable Minerals and Metals for a Low-Carbon Future. *Science*, 367(6473), 30–33. <https://doi.org/10.1126/science.aaz6003>
- Tuoi Tre News. (2025). *Vietnam Sets New Record for Exports in 2024, Runs Trade Surplus for 9 Straight Years*.
- Ufimtseva, A., Li, J., & Shapiro, D. M. (2024). US Critical Mineral Policies and Alliance Strategies in an Age of Geopolitical Rivalry. *Politics and Governance*, 12, 8186. <https://doi.org/10.17645/pag.8186>
- U.S. Geological Survey. (2025). *Mineral Commodity Summaries 2025*. <https://doi.org/10.3133/mcs2025>
- U.S. Geological Survey. (2026). *Mineral Commodity Summaries 2026*. <https://doi.org/10.3133/mcs2026>
- Viet Nam National Trade Repository. (n.d.). *Trade Agreements*.
- Vietnam News. (2025). *Electronics Industry Booms in 2024 with Record Export Turnover*.
- Vivoda, V. (2023). Friend-Shoring and Critical Minerals: Exploring the Role of the Minerals Security Partnership. *Energy Research & Social Science*, 100, 103085. <https://doi.org/10.1016/j.erss.2023.103085>
- Wang, Y., Tzachor, A., Wang, H., & Chen, W.-Q. (2023). Critical Minerals for Sustainability: More Haste, Less Speed. *Resources, Conservation and Recycling*, 198, 107181. <https://doi.org/10.1016/j.resconrec.2023.107181>
- Wigell, M. (2016). Conceptualizing Regional Powers' Geoeconomic Strategies: Neo-Imperialism, Neo-Mercantilism, Hegemony, and Liberal Institutionalism. *Asia Europe Journal*, 14(2), 135–151. <https://doi.org/10.1007/s10308-015-0442-x>
- Woods, D. (2025). A Stackelberg Model of China's Rare Earths Strategic Lead. *Journal of Chinese Political Science*. <https://doi.org/10.1007/s11366-025-09921-w>
- World Bank. (n.d.). *World Integrated Trade Solution (WITS): UN Comtrade*.
- World Bank. (2024). *GDP (current US\$) – Viet Nam*.
- Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods* (6th ed.). SAGE Publications.
- Zhiltsov, S. S., & Hoang, V. T. (2025). Vietnam's Policy in the Field of Rare Earth Metals. *The Russian Journal of Vietnamese Studies*, 9(4), 32–46. <https://doi.org/10.54631/VS.2025.94-639878>
- Zuo, Z., McLellan, B. C., Li, Y., Guo, H., & Cheng, J. (2022). Evolution and Insights into the Network and Pattern of the Rare Earths Trade from an Industry Chain Perspective. *Resources Policy*, 78, 102912. <https://doi.org/10.1016/j.resourpol.2022.102912>