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Review

China–US Relations, Global Supply Chain Restructuring, and an Emerging International Financial Order: Resource Allocation in Emerging Technologies, Agricultural Products, and Logistics

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Abstract: Changes in China–US relations have intensified debate over whether international production and finance are separating into rival systems. This article develops an integrative review of research and official evidence, focusing on emerging technologies, agricultural products, and logistics during the period from 2018 to 2025. It compares the mechanisms through which political restrictions alter access, prices, production locations, transport capacity, and financing requirements. Semiconductor controls target access to technological capabilities; soybean trade illustrates substitution among suppliers subject to seasonal, infrastructural, and environmental limits; maritime disruptions show how route changes absorb transport capacity and may extend cash-conversion cycles, depending on payment terms. The synthesis distinguishes direct bilateral trade from upstream dependence and separates currency invoicing, payment arrangements, credit provision, and reserve holdings. It argues that physical reallocation can proceed without equivalent financial decentralization because established funding and hedging networks remain valuable to firms operating across new production locations. Financial adaptation may therefore take the form of greater hedging and selective currency diversification alongside continued use of dominant intermediaries. The article proposes an analytical framework linking sectoral substitution constraints to balance-sheet exposure, proposes criteria for assessing whether diversification improves resilience, and outlines an empirical research agenda. Its contribution is a conditional account of an emerging financial order: more contested and differentiated, but not demonstrably replaced by a coherent alternative system.

Keywords: international relations; supply chains; geoeconomics; trade policy; logistics; monetary systems

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1. Introduction

A factory can change its export destination without changing the origin of its machinery, the currency of its loans, or the ports through which its inputs travel [1, 2]. This simple observation complicates claims that adjustments in China–US relations necessarily produce a comprehensive separation of national economies. The relevant transformation is multidimensional: trade restrictions alter commercial incentives, firms reorganize production, governments pursue strategic objectives, and financial intermediaries reassess exposure. These adjustments need not occur at the same speed or reinforce one another. Slowing integration has been distinguished from a wholesale reversal of globalization, providing a useful baseline for interpreting subsequent changes.

The central question is consequently not whether globalization has ended, but which dependencies are changing, through what mechanisms, and with what consequences.

Recent research offers divergent signals. Direct US sourcing from China has declined in important product categories, yet replacement suppliers often retain Chinese input links. Research on US import patterns therefore raises doubts about interpreting a change in customs origin as a complete reduction in Chinese production exposure. Meanwhile, studies of geopolitical fragmentation identify weakening trade and investment relationships across analytical geopolitical groupings alongside the growing importance of connecting economies. These findings can coexist [3]. The geography of the final transaction may change more quickly than the networks of intermediate production, technical knowledge, ownership, and finance that make the transaction possible.

Three sectors make these differences especially visible. Emerging technologies depend on specialized capabilities and access to complementary equipment. Agricultural trade depends on biological production cycles, natural resources, storage, and transport to market. Logistics provides the capacity that connects both sectors, while also responding to security incidents and environmental shocks [4]. Their comparison is analytically useful because the objects being reallocated differ: technological capability, land-intensive output, and transport services. A uniform account of “decoupling” obscures these differences and can lead to inappropriate policy comparisons.

The financial implications deserve separate analysis. Replacing a supplier does not establish that an invoice changes currency, a bank extends credit in a new unit of account, or a central bank reallocates reserves [5]. Research on dominant-currency usage explains why international pricing and funding arrangements can persist beyond the geography of production. At the same time, geopolitical restrictions may increase incentives to diversify financial relationships. A satisfactory explanation must accommodate both adaptation and persistence rather than assuming either inevitable dollar displacement or permanent institutional continuity.

This article asks three questions. How do changes in China–US relations interact with sector-specific factors to redirect resources? When does reallocation reduce exposure rather than relocate it to a different bottleneck? Through which channels can production and trade adjustments influence international finance? The contribution is an integrated mechanism comparison, supported by dated public evidence, that links real-sector decisions to balance-sheet requirements. The term “emerging international financial order” is used as a research problem: it concerns possible changes in access, intermediation, and monetary functions, not an assertion that a replacement order has already formed [6].

2. Literature Review and Analytical Framework

2.1. Trade Costs, Networks, and the Meaning of Reallocation

The first strand of literature examines the effects of trade restrictions. Empirical analyses indicate that certain tariff measures implemented in 2018 reduced targeted trade flows and imposed costs on import purchasers, with overall welfare implications depending on domestic producer outcomes and government revenue. These findings challenge the notion that trade policy adjustments fully shift associated economic burdens onto foreign suppliers [7]. However, such historical assessments do not evaluate the impact of subsequent technology-related policy instruments or quantify broader strategic considerations. Price transmission and technological capability represent distinct dimensions of analysis.

A second strand conceptualizes international production as a network structure. This perspective highlights how control over pivotal nodes may confer advantages in information access and functional continuity [6, 8]. Applied to comparative technology sourcing, dependence should be evaluated based on the availability of technically viable alternatives, rather than solely on the monetary scale of bilateral transactions. A relatively small expenditure on a functionally irreplaceable input may carry greater significance than a larger outlay on a widely substitutable commodity. This constitutes a conceptual

extension of network theory, not an empirical generalization about specific technology policies.

Research on supply-chain dynamics further underscores that resilience depends on factors such as structural diversification, shock propagation pathways, and adaptive capacity—not merely the geographic distribution of suppliers. A firm may source from multiple countries while remaining reliant on a single upstream provider. Conversely, a geographically clustered supplier base may demonstrate robustness against particular types of operational challenges if it maintains flexible production systems and adequate inventory buffers. The critical assessment concerns which types of operational challenges a given sourcing configuration can accommodate, the associated resource requirements, and the duration of adaptability. The lack of a universally applicable resilience metric necessitates sector-specific evaluation [6, 9].

2.2. Adjustment Margins and Time Horizons

This review distinguishes four adjustment margins. Transactional adjustment changes the immediate buyer, supplier, or shipment route. Operational adjustment modifies inventories, shipping schedules, contracts, or production processes [10, 11]. Investment adjustment creates or relocates productive capacity. Institutional adjustment modifies the rules and infrastructures governing market access and finance. These categories constitute the article's analytical synthesis. They should not be interpreted as a fixed sequence: a policy announcement may prompt investment before trade patterns shift, while an unexpected event may trigger operational adjustments within days.

The distinction matters for evaluating apparent success. A decline in bilateral imports can occur rapidly through redirection of existing goods; replacing specialized productive capabilities generally requires more than redirection. Agriculture may reallocate sales before farmers can change acreage, whereas shipping can alter a voyage before new vessels or terminals become available. Financial exposure also evolves unevenly. Spot transactions may shift immediately, while debt contracts and long-lived capital assets remain tied to prior expectations. Measuring only the fastest margin creates a misleading impression of comprehensive adjustment.

Analysis of foreign direct investment highlights increasing geopolitical alignment in new investment relationships and models the potential costs of fragmentation [12, 13]. Such project evidence is informative about investment intentions, but announcements are not equivalent to completed facilities or productive output. This measurement distinction is central to the framework. The same caution applies when a government announces procurement diversification or an infrastructure corridor: stated commitments must be distinguished from operating capacity.

2.3. Financial Functions and Sectoral Exposure

International finance serves several distinct functions. A transaction requires a price unit, a means of transferring payment, funding until receipts arrive, and instruments for managing uncertainty. Reserve management concerns public portfolios and liquidity preparedness, which need not align with private trade patterns. Vehicle-currency usage reflects characteristics of trading relationships and pricing practices rather than the origin of counterparties. This implies that shifts in trading partners may leave monetary conventions unchanged, particularly when firms remain active in established markets.

Figure 1 organizes the proposed mechanism. Political measures and independent shocks affect relative costs or access; sectoral characteristics shape feasible responses; those responses influence financing requirements and exposures. Existing financial networks then facilitate or condition the response. The feedback is important: a technically feasible supply alternative may be commercially inaccessible if its financing cost is prohibitively high. Conversely, credit guarantees can render an initially costly route viable without altering its underlying production efficiency [14, 15]. The framework therefore treats finance both as a factor shaping reallocation and as an outcome of it.

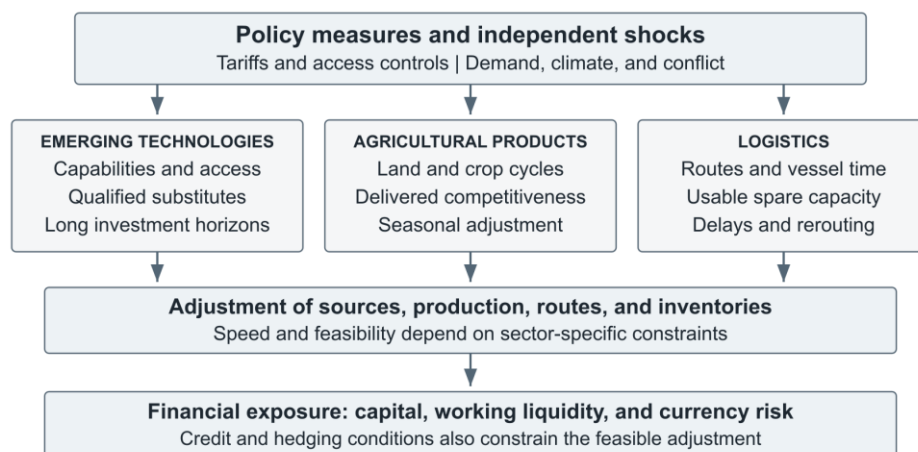


Figure 1. Analytical Framework Linking Political Measures and Other Shocks to Sectoral Adjustment and Financial Exposure. Arrows Represent Proposed Mechanisms, Not Estimated Causal Effects. Author's Synthesis Informed by Trade, Network, and Monetary Research [6, 9, 10].

3. Methodology

3.1. Review Design and Source Selection

The article employs a structured integrative review rather than conducting new econometric analysis or an exhaustive systematic review. This approach is appropriate given that the research question spans diverse literatures with heterogeneous outcomes and units of analysis. The objective is to develop an explanatory synthesis while explicitly articulating the selection process and inferential boundaries. No original survey, interview dataset, experimental trial, or newly estimated causal coefficient is reported [16].

Sources were identified through targeted web searches of publisher platforms, author or institutional repositories, and official organizational websites. Search terms combined concepts such as 'US–China', 'tariffs', 'supply chains', and 'geoeconomic fragmentation' with sector- and mechanism-specific terms including 'semiconductors', 'soybeans', 'maritime chokepoints', 'dominant currency', and 'trade finance'. Policy and sectoral evidence focuses on the period 2018–2025, with foundational theoretical work retained only when directly relevant [17]. Verification was completed on September 27, 2026. This constitutes a bounded historical synthesis, not a comprehensive inventory of all policies in effect on that date.

The final bibliography comprises 40 sources [18]. Inclusion required a direct contribution to understanding a causal mechanism, a sectoral pattern, a measurement challenge, or the methodological framework itself. Peer-reviewed research forms the foundation for theoretical and empirical interpretation; working papers are explicitly labeled as such; official statistics and policy documents provide time-stamped observations and formally announced measures. Institutional commentary is used only when its source type is transparently indicated. Unattributed numerical claims, unverified references, and assertions lacking a traceable analytical basis were excluded. As selection was purposive and iterative, the bibliography should not be interpreted as a field-wide census or as the output of a reproducible database-screening exercise.

3.2. Comparison Procedure and Evidence Standards

Each source was examined for its unit of analysis, observation period, measurement approach, underlying mechanism, and inherent limitations [19]. The sectoral comparison applied a consistent analytical framework: Which resource is subject to constraint? What alternative resources or pathways are available? Which adjustments can be implemented immediately? Which require capital investment? What financial exposures arise as a consequence? Table 1 records the resulting analytical categories. This is an interpretive comparison, not a ranking generated from a unified statistical model.

Table 1. Sectoral Comparison Used in the Integrative Synthesis.

Sector	Resource and constraint	Feasible adjustment	Financial implication to examine
Emerging technologies	Specialized equipment, design tools, skills, and permitted access	Product redesign, qualified suppliers, regional capacity investment	Capital intensity, uncertain utilization, funding duration
Agricultural products	Land, water, crop cycles, storage, and delivered cost	Supplier substitution, inventories, seasonal contracting	Commodity basis risk, working capital, farm-income exposure
Logistics	Vessel time, port capacity, routes, and reliable transit	Rerouting, schedule changes, buffers, infrastructure	Longer cash cycles, insurance costs, liquidity needs

Four distinct evidence categories are maintained [15, 20]. Descriptive statistics document observed changes without inferring causation. Econometric estimates drawn from published studies are retained within their original temporal scope and explicitly attributed to their methodological context. Model-based scenarios depict conditional outcomes rather than empirically observed losses or predictive forecasts. Policy documents serve to delineate the formal content and timing of interventions, not their actual implementation outcomes. Financial implications derived from accounting relationships or synthesized across multiple sources are presented as reasoned inferences, not as attributions to unobserved transactions.

The review does not aggregate or pool quantitative coefficients across studies. Concepts such as tariff incidence, shipment delays, reserve shares, and investment announcements involve incompatible denominators, reference periods, and counterfactual assumptions. Numerical illustrations retain their original units, time frames, and data vintages. Specifically, nominal trade values are not interpreted as physical quantities, reserve shares are not conflated with payment shares, and quarterly changes are not presumed to reflect discrete portfolio reallocations. These methodological constraints narrow the scope of direct numerical comparison but strengthen the interpretive validity of the conclusions [21].

4. Sectoral Findings: Three Patterns of Resource Reallocation

4.1. Emerging Technologies: Access Constraints and Production Capabilities

The semiconductor example illustrates why certain restrictions cannot be reduced to a tariff-equivalent price increase. On October 7, 2022, controls were introduced on specified advanced computing and semiconductor-manufacturing items, associated end uses, and certain support activities by personnel subject to relevant jurisdiction. A subsequent update in December 2024 extended these measures to include specified manufacturing equipment, software tools, high-bandwidth memory, and additional entity-related provisions. These measures affected access to complementary technologies. They did not constitute a blanket prohibition on all semiconductor-related transactions, and their stated security rationale reflects the position of the issuing authority rather than a conclusion drawn from this review.

Import protection represents a distinct policy instrument. In September 2024, additional duties were scheduled for covered products under Section 301, including a 100% rate for electric vehicles in 2024 and a 50% rate for semiconductors in 2025. These represent specified additional rates outlined in that notice, not comprehensive current tariff levels. Export controls restrict the availability of inputs or technical support; import duties alter the commercial terms for market access [22, 23]. While their effects on investment incentives may overlap, they must be treated as analytically separate instruments.

This review finds that substitution becomes significantly more complex when multiple complementary capabilities must be replaced simultaneously. An alternative

component may necessitate redesign, revised testing protocols, compatible software integration, and qualification of an entire production line [24]. A geographically adjusted manufacturing stage may therefore retain dependence on the same upstream tools. Conversely, introducing a domestic supplier may reduce exposure to one input while creating new reliance on imported materials or technologies. Assessing such shifts requires mapping functional dependencies across value chain stages rather than relying solely on country-of-origin counts for suppliers.

Research conducted during prior tariff periods offers related evidence on trade reorganization, though it does not assess the effects of technology controls implemented after October 2022. Analyses of US imports between 2017 and 2022 indicate that replacement exporters in strategic industries also increased sourcing from China. Other studies identify trends toward reallocation of certain activities toward other economies, while underscoring persistent uncertainty regarding residual exposure to Chinese inputs. Interpretations differ: some view increased upstream US imports as suggestive of partial domestic reintegration, whereas others find no consistent evidence of broad-based reshoring. These indicators do not converge on a common magnitude of domestic relocation [25]. Moreover, neither finding implies that third-country exports necessarily reflect transshipment; local production, imported intermediates, and logistical rerouting require distinct empirical identification.

Official bilateral data provide a descriptive benchmark. As of the September 2026 data vintage, nominal US goods imports from China totaled \$536.27 billion in 2022, \$427.23 billion in 2023, \$440.32 billion in 2024, and \$308.65 billion in 2025. The temporary increase observed in 2024 cautions against assuming a monotonic adjustment path. These totals encompass all goods categories and cannot isolate semiconductor-specific dynamics, physical volume changes, or the share of Chinese value added embedded in imports originating from other countries. They reflect the scale and irregular timing of direct trade adjustments, not a causal decomposition of underlying drivers.

For resource allocation, the central unresolved question concerns the operational quality of newly established capacity. Subsidized infrastructure development can expand facility footprints without ensuring commercially viable output, and firms may defer investment decisions amid recurring policy adjustments. A rigorous evaluation would compare realized production volumes, technical performance metrics, equipment utilization rates, and total support costs against a clearly articulated objective. Security-related objectives may justify redundancy even at the expense of conventional efficiency, but the extent and distribution of such trade-offs must be substantiated with empirical evidence. Neither announcements of new facilities nor reductions in bilateral trade volumes constitute sufficient evidence of successful outcomes.

4.2. Agricultural Products: Substitution under Natural and Infrastructural Constraints

Soybeans offer a contrasting mechanism. The United States and Brazil already supplied major volumes to China prior to the 2018 trade measures, creating an immediate margin for shifting procurement sources. Interdependence exists among Chinese demand and the production and price dynamics of these two exporting countries [26]. Retaliatory tariffs could therefore redirect existing shipments before any comprehensive reallocation of farming capacity occurred. Subsequent decisions regarding acreage, storage, and infrastructure operate over longer time horizons. A trade share can adjust within a single season even when the underlying productive resource base changes gradually.

A retrospective assessment estimates more than \$27 billion in cumulative U.S. agricultural export losses from mid-2018 through the end of 2019 associated with trade measures applied by six trading partners. Its annualized estimate is \$13.2 billion, with soybeans accounting for approximately 71%. These figures represent counterfactual estimates rather than the value of all observed export declines, and the cumulative and annualized quantities must not be conflated. The result underscores the significance of agriculture in this episode while leaving broader welfare implications, compensation mechanisms, and long-run market relationships to separate analysis.

Product-level research clarifies the underlying mechanism. Evidence indicates trade diversion toward Brazil for soybean products following the imposition of trade measures. A temporary price wedge between U.S. and Brazilian soybeans has been identified, followed by price adjustment that preceded full recovery of U.S. export volume. Price convergence therefore does not imply that commercial relationships or market shares have reverted to their prior configuration [12]. This distinction is relevant for farmers and intermediaries whose decisions depend on both current margins and anticipated access to buyers.

Supplier substitution faces practical limitations. In marketing year 2021/22, Brazil and the United States jointly accounted for 89% of global soybean exports. A cost comparison shows that national farm costs per acre in Brazil were 19.9% below those in the United States that year; however, inland transport efficiency and regional yield differences affected delivered competitiveness. The comparison also notes lower average inland transport costs from Mato Grosso through southern ports—\$77 per metric ton during 2017/18–2021/22, compared with \$98 during 2008/09–2012/13. These period averages illustrate why a sustained trade shift cannot be attributed solely to a single policy decision [27].

Natural resource availability further constrains domestic replacement [16]. Studies examining the land and water embodied in China's food imports demonstrate that fully replacing imported soybeans through domestic production would encounter substantial biophysical limits. Expanded soybean demand in Brazil may increase pressure on sensitive ecosystems. Such findings highlight potential environmental consequences of adjustment pathways, rather than establishing direct causation between trade policy and subsequent land-use change. Diversification strategies should therefore consider not only shifts in procurement expenditure but also the geographic distribution of resulting environmental pressures.

The fiscal response introduces a distinction between income support and market reintegration. Assessments of trade-related assistance depend on whether the benchmark reflects short-term price effects or longer-term structural impacts. Compensation may support liquidity during transitional periods, but it does not automatically restore buyer relationships or offset a competitor's infrastructure advantages. For an importer, shifting procurement away from one dominant foreign supplier toward another may substitute one form of supply concentration risk for another. A resilient arrangement requires attention to seasonal availability, correlated weather patterns, storage capacity, and transport access—not merely a reduced purchase share from a particular origin.

4.3. Logistics: Capacity Reallocation and the Price of Time

Logistics differs from the first two cases because it both responds to reallocation and determines whether reallocation is feasible. Transit time has been shown to function as an economically meaningful trade barrier. An alternative supplier with a lower factory price may become unattractive if the route requires additional inventory, incurs irregular delays, or misses a production deadline. Time is particularly consequential when goods are inputs into tightly coordinated production. The full cost of a route therefore includes more than the quoted freight charge.

Recent global maritime trade data show a 2.4% increase in trade volume during 2023 and a larger 4.2% increase in ton-miles. This divergence illustrates why carrying capacity can come under pressure even without equally rapid growth in cargo tonnage: longer voyages require more vessel time. Subsequent reports continue to emphasize uncertainty, rerouting, and rising costs. These global developments provide context for supply-chain restructuring, but they are not attributable exclusively to bilateral trade dynamics.

An early-2024 episode offers a concrete example of the attribution challenge [28]. Analysis indicates that Suez transit trade volume fell 50% year on year in January–February, while Cape of Good Hope transit rose an estimated 74%; Panama transit volume fell almost 32%. The immediate drivers were regional navigation challenges in the Red Sea and hydrological conditions affecting the Panama Canal. These events interacted with

an already evolving trading system, but neither constitutes a measure arising from bilateral trade policy. The relevant comparison is how different external events expose common operational dependencies.

Network studies explain why counting alternative ports is insufficient. Systemic importance of ports extends beyond direct throughput, reflecting dependencies embedded in global production networks. Subsequent analyses of climate-related risk consider how effects propagate through domestic and foreign port infrastructure. Moving a shipment to another terminal can leave it exposed to the same inland corridor, maritime passage, weather pattern, or shipping service. Geographic diversification is therefore useful only to the extent that the alternative route also alters the underlying exposure profile.

Shipping organization can further affect adaptation. Comparative analysis of responses across different types of systemic stress highlights that shipping lines, terminals, and connectivity patterns do not react uniformly. Such analysis cautions against assuming that reduced demand and constrained operating capacity produce identical outcomes. More recent research on critical maritime passages explicitly models delays, rerouting, insurance adjustments, and trade flow interruptions as distinct consequences [15, 29]. Those categories help identify where costs arise, although model-based projections should not be reported as observed annual outcomes.

The implication for resource allocation is that spare capacity must be evaluated in terms of usable service units. A vessel available far from the affected route may not provide immediate relief; an alternative port may lack suitable handling equipment or rail connections. Contracts also matter: a buyer may have nominal access to a route without priority when capacity becomes scarce [17, 30]. Investment decisions should therefore compare service reliability, recovery time, and access conditions, alongside throughput. Table 2 summarizes selected dated evidence while keeping different measurement concepts separate.

Table 2. Selected Numerical Evidence and Limits on Interpretation. Values Are Reproduced or Rounded from the Cited Sources; They Are Not Estimates Generated by This Review.

Indicator	Period and value	Source	Interpretation limit
US goods imports from China	2022: \$536.27bn; 2023: \$427.23bn; 2024: \$440.32bn; 2025: \$308.65bn	US Census, September 2026 retrieval [17]	Nominal gross goods values; no causal or value-added decomposition
Estimated US agricultural export losses	Mid-2018–end-2019: >\$27bn cumulative; \$13.2bn annualized	USDA ERR-304 [19]	Six retaliating partners; report-based counterfactual estimates
Maritime activity growth	2023: cargo volume +2.4%; ton-miles +4.2%	UNCTAD RMT 2024 [27]	Global totals; not a bilateral policy-effect estimate
Suez transit trade volume	January–February 2024: –50% year on year	IMF PortWatch analysis [29]	High-frequency transit estimate; not a 50% fall in world trade
Allocated FX reserves	2024Q4: USD 57.80%; EUR 19.83%; RMB 2.18%	IMF release of April 2, 2025 [34]	Fixed historical release; valuation effects and coverage matter
Global OTC FX turnover	April 2025: \$9.5trn per day	BIS Quarterly Review, December 2025 [35]	Includes financial trading; not a measure of trade settlement

5. Financial Implications: Reconfiguration without Automatic Replacement

5.1. *Working Capital Connects Routes and Production to Finance*

The first financial channel concerns the timing of cash flows. A firm commonly pays for inputs or transport before receiving final revenue. If a replacement route lengthens that interval, more funds remain tied up in goods in transit. This is an accounting implication, not a new empirical estimate: holding other conditions constant, a longer financed period increases the financing charge and the amount of liquidity needed to sustain the same flow of sales. Additional inventory can protect production while further increasing this requirement.

The consequences differ across sectors. A technology firm investing in a qualified production line requires funding over a much longer horizon than a trader redirecting an existing cargo. An agricultural intermediary must manage the period between crop purchase, storage, shipment, and payment. A logistics operator may incur additional fuel expenditure before receiving revenue from a longer voyage. These illustrative mechanisms explain why different shocks and responses generate varying credit demands. They also underscore the need for joint evaluation of resilience expenditures by operating and treasury functions.

Credit access is not guaranteed. A recent survey estimated a global trade-finance gap of \$2.5 trillion for 2022, defined as the difference between financing requests and approvals. This survey-based global estimate does not isolate the impact of bilateral trade realignments, and rejection may reflect multiple macroeconomic and credit-related factors. Its relevance lies in highlighting that financing capacity limits firms' ability to adjust. A supplier capable of producing a compliant replacement may still be unable to meet the payment terms required by an international buyer.

This suggests a distributional mechanism for future testing [31]. Well-capitalized firms may finance parallel suppliers, qualification costs, and larger inventories, whereas smaller firms may accept concentrated exposure because redundancy is unaffordable. Public support that subsidizes a factory but overlooks trade credit could therefore have uneven effects across the supply chain. The prediction is conditional, not an observed result of this review. Establishing who benefits—and through which channel—would require firm-level evidence on credit availability and operational changes.

5.2. *Currency Use Responds to Networks as Well as Trade Geography*

The dominant-currency paradigm highlights the importance of the pricing currency for exchange-rate pass-through and trade responses. Complementarities exist between invoicing, banking, and demand for safe assets [32, 33]. These mechanisms help explain why relocation can coexist with monetary continuity. A producer serving established customers may retain a familiar invoicing convention; a lender financing that producer may prefer the currency in which its receivables are denominated. The relevant network extends beyond any bilateral political relationship that triggered relocation.

A useful distinction exists between changing a financial instrument and replacing a monetary system. A buyer and seller may agree to settle selected transactions in another currency while continuing to use established banks, dollar reference prices, or dollar-based hedges elsewhere. Alternatively, they may change the payment channel while leaving the contractual currency unchanged. These possibilities are analytically distinct. Claims about systemic change require evidence identifying which function shifted and whether alternative arrangements remain usable at scale and during periods of stress.

Historical reserve data illustrate the need for precise measurement [34, 35]. The IMF's April 2, 2025 release reported that the dollar represented 57.80% of allocated foreign-exchange reserves in 2024Q4, the euro 19.83%, and the renminbi 2.18%. Figure 2 reproduces that single release vintage rather than splicing it with later data. Exchange-rate changes can alter these shares without an equivalent change in portfolio transactions. Moreover, reserve holdings are a stock managed by monetary authorities; they do not directly reflect the currency of current trade invoices or private payments.

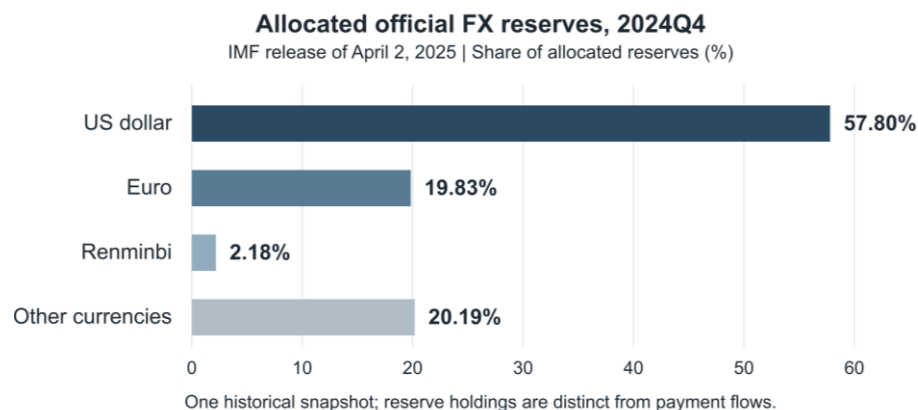


Figure 2. Currency Composition of Allocated Official Foreign-Exchange Reserves in 2024Q4. Author's Chart from the IMF Release Dated April 2, 2025 [34]. "Other Currencies" Combines All Currencies Other Than USD, EUR, and RMB. Shares Total 100%; This Historical Snapshot Excludes Gold and Is Not a Measure of Payment or Invoicing Shares.

The broader evidence supports a qualified interpretation [1]. Gradual diversification toward nontraditional reserve currencies has been observed, rather than a simple one-for-one shift from dollars to renminbi. Reviews also document the dollar's substantial roles across several financial functions, while noting that much of the underlying evidence predates recent tariff and credit-rating developments. Those developments therefore provide a baseline, not a test of their effects. Together, these sources support distinguishing persistent monetary centrality from an absence of change.

5.3. Hedging, Fragmentation, and the Conditions for a New Order

Financial adjustment can initially strengthen activity in existing markets. Average daily over-the-counter foreign-exchange turnover reached \$9.5 trillion in April 2025, with part of the increase attributed to heightened hedging activity following announcements of trade policy adjustments. In a related analysis, the renminbi accounted for 8.8% of global foreign-exchange turnover, and 96% of renminbi transactions were conducted against the U.S. dollar. Currency shares in foreign-exchange turnover sum to 200%, reflecting the bilateral nature of each transaction. These figures pertain to trading volumes rather than trade settlement flows, underscoring that growth in renminbi usage does not necessarily correspond to a proportional decline in dollar-based intermediation.

Analysis of financial segmentation identifies mechanisms through which geopolitical factors influence cross-border portfolio allocation, banking relationships, and systemic stability. Within this framework, enhanced access and strategic diversification may exhibit countervailing dynamics. Reducing exposure to a counterparty subject to elevated geopolitical risk may enhance continuity under certain conditions, yet simultaneously constrain the breadth of available lenders or investable assets under others [36]. Resilience must therefore be evaluated relative to defined operational contingencies and financing needs, rather than inferred from the jurisdictional origin of counterparties.

A substantially reconfigured financial architecture would require more than expanded payment infrastructure. It would entail sustained shifts in credit provision, the currencies underpinning liquid hedging instruments, the assets serving as stores of value, and the institutions delivering confidence during periods of stress. These functions may evolve at differing paces. The analysis thus advances a differentiated expectation: financial alternatives are most likely to gain traction where they address discrete transactional challenges and offer sufficient liquidity, whereas established networks retain appeal where substitution entails elevated funding or risk-management costs [37]. This expectation constitutes a testable proposition, not a prediction of a static currency hierarchy.

6. Discussion, Policy Implications, and Research Agenda

6.1. *What the Comparison Adds*

The three sectors reveal a common relationship between adjustment and residual dependence. A technology supplier can change location while retaining specialized upstream inputs. An agricultural buyer can change origin while becoming more exposed to a different production region. A shipment can change route while encountering another constrained corridor. The contribution of comparing these cases is to replace a binary question about separation with a measurable question about the distribution of bottlenecks. The financial layer adds a second test: whether the new arrangement can obtain funding and absorb shocks under commercially sustainable conditions.

This account also explains why evidence of direct decoupling and continued integration is not necessarily contradictory. Gross trade statistics record immediate transactions, whereas network studies examine relationships across multiple stages. Investment announcements describe prospective capacity, while operating data reflect capacity already in service. Reserve statistics describe official stocks, whereas foreign exchange turnover reflects transactional activity in financial markets. Opposing conclusions can arise when analyses use these distinct data objects without acknowledging their differing temporal, functional, or institutional scopes. A stronger assessment would integrate them while preserving their separate conceptual meanings.

Three conditional propositions follow from the synthesis. First, where alternative manufacturing or export locations are feasible but upstream substitutes are scarce, direct sourcing shifts may precede substantial reductions in upstream dependence. Where such alternatives are unavailable, trade contraction or disrupted production may occur instead. Second, where new suppliers or routes lengthen the cash-conversion cycle, credit availability should influence which firms can diversify successfully. Third, among firms relocating sourcing or production, those retaining established lenders and hedging arrangements should exhibit greater continuity in invoicing and funding currencies than firms switching these financial relationships. These propositions are not estimated in this article. They state observable relationships through which the framework can be empirically tested, challenged, or refined.

6.2. *Implications for Firms and Public Policy*

For firms, the analysis supports mapping dependencies by function. Procurement teams need to identify the supplier capable of performing a required task, the inputs that supplier needs, and the transport and financial services required for delivery. A country-level sourcing dashboard is useful but insufficient. The practical unit of assessment is the chain of conditions necessary to complete a transaction. Stress exercises should assess whether substitute capacity can be activated within the available liquidity horizon, rather than simply whether another supplier exists.

Public policy similarly requires a specific objective. If the objective is continuity of an essential input, performance measures should include substitution time, qualified capacity, inventory coverage, and access during operational interruptions. If the objective is technological capability, measures must address technical performance and accumulated skills. If the objective is farmer income protection, the relationship between compensation and the relevant damage benchmark should be explicit. Evaluating all three objectives through a single bilateral trade balance is unlikely to reveal whether any has been achieved.

A major international organization's resilience review provides an important counterweight to blanket localization: its modelling finds that extensive relocation can impose substantial economic costs without consistently improving stability. This does not imply that every diversification or strategic-capacity policy is undesirable. It means the appropriate comparison must include the shocks created by concentrating production domestically, as well as those removed by reducing foreign exposure. Security benefits, where invoked, need to be stated transparently because standard trade-cost measures do not capture them fully.

International cooperation remains relevant even amid strategic competition. Food inspection compatibility, reliable transport information, and predictable documentation requirements can reduce avoidable adjustment costs without requiring agreement on every sensitive technology. Financial arrangements should be evaluated by their accessibility, settlement reliability, hedging capacity, and credit terms. The preferred design will vary across users and transactions. The review does not establish a single optimal currency arrangement; it identifies the economic functions that any viable alternative must perform [38, 39].

6.3. Research Priorities and Limitations

Table 3 translates the framework into prospective research designs. Priority is given to linking real and financial outcomes for the same economic units, rather than correlating unrelated global aggregates. Where data access and definitional consistency permit, supplier records, customs transactions, shipping data, and financial statements could be integrated. Such efforts must carefully distinguish firms that merely reroute trade flows from those that expand productive capacity, while also accounting for policy anticipation and selective relocation decisions.

Table 3. Research Agenda Derived from the Synthesis; All Designs Are Proposed, Not Conducted.

Research question	Evidence required	Possible design	Main identification concern
Does direct trade diversion reduce upstream dependence?	Product trade, input links, ownership, operating capacity	Compare exposed and less-exposed products around policy changes	Origin changes, anticipation, and endogenous relocation
Does finance determine diversification capacity?	Credit terms, inventories, supplier entry, shipment times	Firm panel with pre-shock credit exposure and event timing	Bank selection and simultaneous demand shocks
Do route shocks change currency or only hedging?	Matched invoices, financing currency, routes, hedge positions	Transaction panel around externally timed route disruption	Contract renewal and correlated financial volatility
When does agricultural substitution create new concentration?	Seasonal sourcing, weather, storage, delivered prices	Compare seasonal responses across origins and routes	Harvest variation and pre-existing competitiveness trends

Several limitations constrain the conclusions. The review's targeted selection may underrepresent research published outside English-language channels or less accessible sources. The three sectors examined are illustrative rather than statistically representative of the global economy. Soybeans do not encompass all agricultural commodities, and advanced semiconductors do not represent all emerging technologies. Moreover, causal evidence derives from specific historical episodes, whereas some institutional reports combine descriptive historical analysis with modelling exercises. These materials facilitate comparative assessment of mechanisms but do not support a pooled quantitative estimate of the overall economic impact of China-US adjustment [40].

A further limitation concerns timing: many detailed empirical studies conclude before the most recent observations discussed herein. Official statistical series may undergo revision, and subsequent policy changes can retroactively alter earlier incentives. Numerical examples therefore explicitly specify observation windows and source vintages. Finally, comprehensive linkages among shipping records, invoicing practices, and credit arrangements are rarely visible in the publicly available evidence assembled for this review. The proposed financial transmission mechanism is theoretically well grounded but remains incompletely validated at the transaction level [37].

Acknowledging this gap is essential to distinguishing a forward-looking research agenda from an empirically established conclusion.

7. Conclusion

Adjustments in China–US relations contribute to global resource reallocation, but the mechanism differs across sectors. Technology restrictions can constrain access to complementary capabilities; agricultural tariffs redirect purchases within a production system shaped by natural resources and infrastructure; logistics adjustments reallocate vessel time and expose route dependence. These changes interact with other forces, including climate, demand, and inherited cost advantages. A credible account must identify those interactions rather than attribute every observed shift to bilateral dynamics.

The review's central conclusion is that physical reconfiguration can advance more rapidly than financial decentralization. New suppliers and routes alter funding needs and exposures, while established invoicing, credit, and hedging networks can continue to organize the resulting transactions. An emerging financial order should therefore be assessed through changes in specific functions and access conditions, not inferred from trade shares or isolated settlement announcements. The evidence supports a more contested and differentiated international system, while leaving the extent of durable monetary replacement unresolved. Future research should test whether diversification reduces combined operational and financial exposure for the firms and economies undertaking it.

Data availability: This article synthesizes published research and public institutional sources. Numerical examples are attributed to their original sources and release dates; no original survey or econometric dataset was generated.

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