

Beyond Buffer-State Logic: Node-Based Agency in the Caspian–Middle East Conflict Network

Shaoyuan Wu

Global AI Governance and Policy Research Center, EPINOVA LLC, USA

ORCID: <https://orcid.org/0009-0008-0660-8232>

Email: sywu@epinova.org

Abstract

Buffer-state approaches generally interpret geographically exposed states as objects of competition constrained by stronger rivals. This territorial view is incomplete for conflicts sustained through logistics corridors, overseas bases, airspace permissions, ports, sensors, maintenance systems, and transferable operational knowledge. This article asks when authority over such a connection can become strategic agency. It defines implemented node-based agency as purposeful use of a consequential node or interface, together with relevant control rights, that changes another actor's admissible or effective use. The framework separates structural potential, a control attempt, implemented agency, and realized strategic leverage. Criticality, dependence, and substitutability shape potential leverage; control rights and discretion permit an attempt; and an observed access or use change establishes implementation. A response by the affected counterpart does not itself establish leverage: attribution, substantive effect, and direction must be specified. Negotiated benefit and resilience are separate outcomes. An evidence-constrained comparison examines the northern Caspian logistics system, Gulf basing and airspace access, and Ukraine's provision of drone-interception expertise to five Middle Eastern states in 2026. Caspian evidence establishes situational logistics importance but not purposeful smaller-state conversion. The Gulf provides the most specific reported access-policy change, but conflicting accounts leave implementation provisional and downstream effects unverified. Ukraine's deployment and subsequent Gulf agreements establish service delivery and partial institutional follow-through, but not direct reciprocity, recipient dependence, or relational weakness. The case therefore extends the framework to a knowledge interface without fully validating the weaker-state leverage claim. July attacks on Caspian-linked shipping and export infrastructure illustrate external intervention and network adaptation, not smaller-state agency or resilience. The article concludes that centrality, implementation, counterpart impact, bargaining return, and durability must be established separately.

Keywords: buffer states; node-based agency; middle and small states; networked conflict; strategic access

1. Introduction

The return of buffer-state language in contemporary analysis reflects a durable geopolitical intuition. States located between stronger rivals are commonly treated as shock absorbers, contested spaces, or objects of alignment pressure. Their location matters, but primarily as a source of exposure. Classical accounts accordingly emphasize geography, capability distribution, neutrality, and the restrictions that rival powers impose on the buffer's diplomatic options.¹ This logic remains relevant in Eurasia and the Middle East, where territorial proximity still shapes threat perception, force posture, and access to markets. It does not, however, fully capture the strategic significance of states that govern a route, base, airspace corridor, sensor network, maintenance system, data channel, or body of operational knowledge on which stronger actors depend.

¹ Partem (1983); Chay and Ross (1986).

Contemporary conflicts are sustained through systems that extend beyond the battlefield. Material moves through ports, rail lines, roads, storage sites, and maritime corridors. Military operations depend on host-nation permissions, overflight rights, early-warning sites, repair facilities, and communications interfaces. Knowledge also moves: combat data, tactics, software, training, and adaptation experience may become transferable security assets. A state may therefore remain weak in aggregate resources yet become consequential at a particular connection. Conversely, a state may occupy a highly central location but possess little practical authority over it. The analytical problem is no longer only where a state lies between stronger powers; it is which consequential connections the state can govern and how that control can be converted into effects.

This article asks two questions. First, under what conditions does network position create more than potential leverage? Second, what evidence distinguishes a control attempt, implemented node-based agency, attributable counterpart impact, negotiated benefit, and durable control? Functional criticality, counterpart dependence, and substitutability describe structural opportunity. Control rights and political discretion determine whether an actor can attempt to vary access. Implementation capacity is the *ex ante* ability to carry out that decision; implemented change is the observed alteration in admissible or effective use. Realized strategic leverage requires an attributable and substantively consequential change in the counterpart's options, costs, timing, posture, or exposure. A concession or return supports a separate claim of bargaining benefit. Resilience concerns duration and repeatability, not effect magnitude.

The article makes three contributions. First, it complements buffer-state and small-state scholarship by shifting the unit of analysis from territory to a controller-function-counterpart relationship. The counterpart is the actor whose access to, or effective use of, the focal connection may be varied by the controller. Dependence and relative weakness are assessed as relational conditions rather than embedded in the unit's name. Second, the article separates centrality, attempted control, implemented access change, attributable counterpart impact, bargaining benefit, and durability. Third, it treats external coercion or attack as distinct from counterpart response. Exposure alone neither proves agency nor establishes that a control action caused intervention.

These claims are explored through an evidence-constrained comparison of the northern Caspian logistics system, Gulf basing and airspace access, and Ukraine's deployment of drone-interception specialists to five Middle Eastern states in 2026. The cases vary in functional domain and evidentiary status; they are illustrations for concept development rather than uniform tests of necessary and sufficient conditions. July 2026 attacks on Caspian-linked shipping and export infrastructure are used only to illustrate exposure, external intervention, and adaptation. The article first reviews buffer-state, small-state agency, network-power, and base-politics literatures. It then develops the conceptual framework, explains the comparative method, evaluates the evidence case by case, and draws restrained theoretical and policy implications.

2. Literature Review

2.1 Buffer States and Territorial Exposure

The buffer-state tradition begins from a spatial relationship among a weaker state and two or more stronger powers. Partem's formulation treats a buffer system as a configuration produced by geography, capability distribution, and foreign-policy orientation, with neutrality emerging as a likely response to the buffer's restricted options.² The broader literature likewise examines how sovereignty, alignment, and survival are conditioned by the state's position between rivals. This approach supplies an important corrective to analyses that exaggerate the freedom of exposed states. Geographic location can limit choices, make external penetration more likely, and turn domestic politics into an arena of great-power competition.

² Partem (1983).

Yet the traditional model tends to fuse position with territory. A state is a buffer because it separates rival powers or occupies an intermediate geopolitical space. This makes it harder to explain cases in which the consequential relationship is functional rather than contiguous. Qatar need not sit between the United States and Iran to matter as a host of U.S. military infrastructure. Kazakhstan need not control the entire Caspian Sea to affect a rail, port, or transshipment alternative. Ukraine need not possess a Gulf base to become a provider of scarce operational knowledge. Territorial exposure remains relevant, but it no longer exhausts the meaning of strategic position.

2.2 Middle- and Small-State Agency

Research on small states has progressively moved away from defining weakness only through population, territory, or gross resources. Relational approaches instead ask whether a state is the weaker party in a salient asymmetrical relationship.³ This is especially useful here because the relevant comparison changes by function: a state can be weak in aggregate capabilities but relatively strong at a particular interface. Long shows that small states may gain influence through intrinsic, derivative, and collective forms of power, while Panke demonstrates that expertise can help smaller actors overcome capacity disadvantages in negotiation.⁴ Scholarship on hedging similarly explains how weaker states preserve room for maneuver through mixed, sometimes apparently contradictory, policies under conditions of uncertainty.⁵

This literature establishes that material size does not determine political irrelevance. It also identifies multiple strategies through which weaker states can influence institutions, relationships, and norms. Its principal limitation for the present problem is that agency is often located at the level of general foreign-policy behavior: balancing, hedging, brokerage, coalition-building, or niche diplomacy. These approaches do not always specify how authority over a concrete operational connection becomes usable leverage during conflict. Node-based agency addresses that narrower conversion problem. It does not replace hedging or relational power; it identifies one material and institutional basis through which those strategies can become consequential.

2.3 Networks, Interdependence, and Strategic Nodes

Network analysis treats relationships among actors as structures that can enable and constrain action rather than as background conditions. It draws attention to centrality, brokerage, clustering, and the unequal distribution of connections.⁶ In international relations, this perspective helps explain why actors with apparently similar resources can occupy very different structural positions. Farrell and Newman's account of weaponized interdependence adds a crucial political mechanism: states may exploit jurisdiction over central nodes in asymmetric economic networks when they possess the institutions required to convert structural advantage into coercive capacity.⁷

This argument provides a foundation for node-based agency but cannot simply be transferred unchanged. Weaponized interdependence primarily explains how powerful states use central nodes in global networks. The present article asks when middle and small states can exercise a more limited, relational, and often temporary form of leverage. Their control may be shared, contested, contractually constrained, or vulnerable to coercion. They may be able to delay an operation without preventing it, condition access without terminating

3 Keohane (1969); Baldacchino and Wivel (2020); Long (2022).

4 Long (2017); Panke (2011).

5 Kuik (2021).

6 Hafner-Burton et al. (2009).

7 Farrell and Newman (2019).

an alliance, or provide expertise without controlling the wider defense ecosystem. For such states, the ability to govern a node is more fragile than possession of the node itself.

2.4 Base Politics, Access, and the Remaining Gap

The politics of overseas bases directly demonstrates that infrastructure on foreign territory does not eliminate host-state agency. Cooley shows that overseas bases are political institutions embedded in domestic bargaining, while Gresh links Gulf basing choices to regime security and the internal and external calculations of host governments.⁸ Formal agreements therefore do not make operational access automatic. Hosts may approve, delay, restrict, compartmentalize, or deny particular uses.

Taken together, the four literatures explain important parts of the puzzle. Buffer-state scholarship shows how geography creates constraint; small-state scholarship shows that weaker actors can exercise agency; network analysis explains how unequal connections create leverage; and base politics demonstrates that access is politically governed. Node-based agency integrates these insights around a narrower conversion question: when can a weaker actor use partial authority over a consequential connection to change a stronger actor's admissible or effective use? Its theoretical increment lies in separating partial control rights, function-specific authorization, temporary dependence, implementation, and durability. It is therefore complementary to these literatures rather than a replacement for them.

The account also requires a sharper distinction between a relation's existence and its usability. The same route, base, or knowledge interface can be usable by one actor but not another, for one function but not another, in one direction or period but not another. Rules define such access conditions; administrative, technical, and physical interfaces implement them; and control rights identify who can set, interpret, authorize, veto, enforce, or override them. These distinctions are used here to clarify an actor-centered mechanism of node-based agency. The article does not attempt a comprehensive theory of all node, boundary, network, and system relations.

3. Conceptual Framework: Node-Based Agency

3.1 Definition and Analytical Boundaries

Implemented node-based agency is the purposeful use of a consequential node or interface, together with relevant control rights, that changes a counterpart's admissible or effective use of that connection. The counterpart is the actor whose access to, or effective use of, the focal connection may be granted, conditioned, prioritized, restricted, or denied by the controller. The adjective *implemented* marks the empirical threshold. A deliberate but unsuccessful decision remains a control attempt. Realized strategic leverage requires a substantive change in the counterpart's options, costs, timing, posture, or exposure that is plausibly attributable to the control action, with the direction of that change specified. A response alone is not sufficient. A concession, payment, technology transfer, or other return supports a separate claim of negotiated benefit.

Five distinctions follow. First, a node is functional rather than merely geographic: it may be a port, airspace corridor, base, sensor, maintenance facility, data exchange, or concentration of specialized knowledge. Second, centrality is not agency because rule-setting, authorization, veto, enforcement, and override rights may be divided. Third, possession is not conversion; ownership may coexist with weak implementation. Fourth, mission adjustment, noncompliance, and substitution are counterpart responses, whereas coercion or attack by an external opponent is coded separately. Fifth, rerouting, bypass, or rewiring is a downstream adaptation, not proof of strategic leverage or systemic power.

The framework treats middle and small states relationally. When the paper claims that a weaker actor influenced a stronger one, it must identify the dimension of asymmetry within the focal controller-function-

⁸ Cooley (2008); Gresh (2015).

counterpart relationship rather than transfer weakness from another relationship. Counterpart dependence is not required to establish that an access or service change was implemented, but it is necessary to assess the potential magnitude of leverage. Where relative weakness or dependence is unestablished, an event may still illustrate interface control without validating the full weaker-state leverage proposition.⁹

3.2 Conditioning Sources, Exercise, and Durability

Functional criticality and counterpart dependence are analytically separate observables. Criticality describes the importance of a node or interface for a specified function. Dependence describes how much a specified counterpart needs that function under prevailing conditions and available alternatives. Criticality can arise from throughput, operational uniqueness, temporal urgency, brokerage, or coordination concentration. Dependence must be assessed for an actor, function, direction, and period rather than inferred from general network centrality. A modest Caspian route may become more important when southern maritime access is disrupted; battle-tested drone-interception expertise may become more valuable when expensive missile interceptors are scarce. Neither observation by itself proves that a smaller state controls the relevant interface.

Control rights and political discretion determine whether structural potential can become actionable control. Discretion is the actor's effective ability to permit, delay, prioritize, restrict, compartmentalize, price, or deny use. Its legal and practical basis may lie in distinct rights: setting or interpreting rules, authorizing a transaction or mission, exercising a veto, enforcing a decision, or overriding another controller. Formal sovereignty is insufficient if external dependence, domestic fragmentation, contractual rules, or coercive pressure removes meaningful choice. Evidence must identify the relevant right and the actor that holds it rather than attribute control to a country simply because infrastructure lies within its territory.

Implementation capacity is the *ex ante* ability to carry out a purposeful decision at the relevant interface. It may include ports, storage, customs administration, scheduling systems, trained personnel, command relationships, technical interoperability, or negotiating capability. Implemented access or use change is the distinct observed outcome: the decision actually alters admissible or effective use. A restriction that is merely announced and changes neither admissible nor effective use remains an attempt. A valid change in authorization may establish implementation at the legal interface even when practical compliance remains unverified. A promised service that cannot be delivered remains an offer. Observing an implemented change does not demonstrate that every possible component of capacity was present.

Resilience under pressure concerns the duration and repeatability of implemented control despite retaliation, sanctions, attack, economic loss, political pressure, or bypass efforts. It may depend on redundancy, physical protection, institutional continuity, fiscal capacity, alliance support, and domestic legitimacy. Brief implementation establishes only a short duration of control; it does not determine the magnitude of strategic leverage. Conversely, an attack on a node shows exposure but does not by itself establish either resilience or successful agency.

Substitutability limits the ceiling of leverage but must be measured from the counterpart's perspective. It refers to the cost, time, reliability, capacity, and political feasibility of activating an alternative route, facility, supplier, or interface. Substitutability is not binary. A route may be technically replaceable but too slow during a crisis; expertise may be available elsewhere but not with comparable experience; a base may have alternatives that impose longer flight times or greater force-protection costs. Assertions of low or moderate substitution therefore require evidence about actual alternatives, not only the apparent uniqueness of the focal node.

The causal sequence is not a single index. Functional criticality, counterpart dependence, and substitutability describe structural potential. Control rights and discretion make control actionable. A purposeful decision to grant, prioritize, condition, restrict, or deny use is a control attempt. An observed

⁹ Long (2022); Baldacchino and Wivel (2020).

alteration in admissible or effective use establishes implemented node-based agency. Counterpart responses warrant assessment but do not by themselves establish leverage: attribution, substantive effect, and direction must be specified. Concession or return supports a claim of negotiated benefit; duration and repetition support resilience. External intervention and network adaptation are coded separately and need not occur in a fixed sequence.

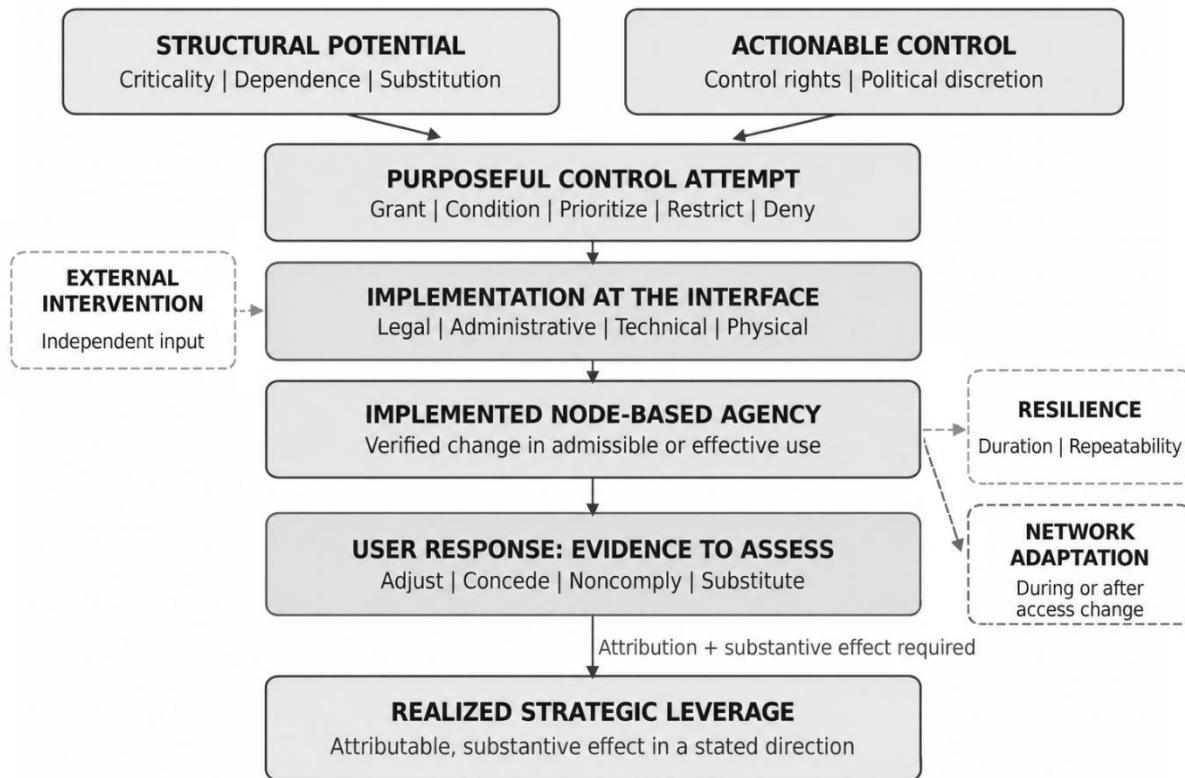


Figure 1. Conceptual model of node-based agency. Source: Author's analysis.

Figure 1 treats external intervention as a separate possible influence on implementation, not as an outcome of counterpart response. It also makes explicit that response is evidence to assess: realized strategic leverage requires an attributable and substantive effect, while resilience and network adaptation are separate dimensions.

3.3 Three Applied Configurations of Node-Based Agency

The three labels used in the case analysis are **empirical configurations**, not an exhaustive or mutually exclusive typology. They combine two different dimensions. The first is the **functional domain**—material logistics, basing and airspace, or knowledge provision. The second is the **boundary action**—granting, conditioning, prioritizing, restricting, or denying use. Keeping these dimensions separate prevents a domain such as a corridor from being mistaken for an action such as denial.

Corridor power describes potential or implemented control at material-flow interfaces. It may operate through opening, pacing, prioritizing, sequencing, or regulating movement and depends on authority over transport and processing interfaces rather than proximity alone. Controller-directed prioritization is a boundary action; rerouting undertaken by a counterpart is network adaptation.

Conditional-access power describes selective authorization of a facility, airspace, sensor, maintenance system, technical interface, or body of expertise. It may be exercised positively through provision or sequencing as well as through mission-specific conditions. Knowledge transfer belongs here when the holder can determine the recipients, timing, and scope of a deliverable through personnel, training, technology, or institutional cooperation.

Denial power describes restrictive action: refusal, delay, throttling, compartmentalization, data limitation, or withdrawal of service. Denial need not prevent the counterpart's wider operation to matter, but it must at least change admissible or effective use at the focal interface. Claims of strategic leverage additionally require an attributable, substantive effect on timing, posture, routing, cost, or exposure.

A port may remain commercially usable while military cargo is restricted; a base may support defensive missions while offensive use is denied; a knowledge provider may share tactics while retaining other technology. Such function-specific control is theoretically important, but the existence of a plausible retained option should not be treated as evidence that a particular restriction occurred. The cases below therefore distinguish observed actions from inferred discretion.

4. Methodology

The article uses an **evidence-constrained structured comparison** for concept development and case illustration. It does not estimate causal effects or test necessary and sufficient conditions. The unit of observation is a **controller-function-counterpart relationship** during a specified period. For each observation, the analysis identifies the controller, function, counterpart, direction, period, relevant right, attempted action, implemented access or use change, counterpart effect, negotiated return, durability, external intervention, and adaptation. Dependence and relative weakness are assessed within that unit rather than assumed in advance.

The headings aggregate different numbers of relationships. In the northern Caspian, Russia and Iran are principal actors in the reported flows, while littoral or transit actors hold potential rights over ports, customs, rail, or transshipment. The Gulf contains parallel Saudi-U.S. and Kuwaiti-U.S. relationships; Ukraine contains five provider-recipient relationships. Each controller-function-counterpart observation, rather than the regional heading, is the analytical unit.

Case selection varies functional domain and evidentiary status. The Caspian material illustrates structural importance and dispersed potential control but limited evidence of purposeful smaller-state conversion. The Gulf contains a specific but disputed report of host access-policy change and incomplete evidence of downstream effects. The Ukraine case establishes service provision and partial institutional follow-through but not recipient dependence, direct reciprocity, or Ukraine's weaker position in each bilateral relationship. It therefore extends the framework's scope to a knowledge interface rather than fully demonstrating weaker-state leverage. The comparison is not a matched design and lacks a clean failed-conversion counterfactual.

Evidence covers events through 7 September 2026 and draws on official material, infrastructure reports, and credible news reporting. The author's Middle East Conflict Cost Monitor (MCCM v2.3.4) was used only as a private source-management ledger, not an independently validated dataset. Wu (2026b) supplies scenario-based throughput bounds rather than observed totals. Wu (2026a) combines reported vessel observations, throughput estimates, and System Health Index modeling; its inferred mechanism is used as context rather than independent causal validation.¹⁰

Within each case, public events are reconstructed chronologically where the evidence permits. Table 1 states the questions used to organize the comparison. The article does not claim full visibility into classified

¹⁰ Wu (2026a, 2026b).

access agreements, private bargaining, or internal decision processes. It distinguishes reported facts from inference, treats temporal sequence as insufficient by itself to prove causality, and records explicit evidentiary limits in Table 2. The July 2026 Caspian incident is an illustrative external intervention and exposure event, not a resilience test and not evidence that a smaller state's agency caused the attack.

Table 1. Analytical dimensions and evidence requirements

Dimension	Observable evidence	Uncertainty or failure condition
Functional criticality	Specified function contributes to continuity, speed, scale, or specialized performance	General centrality asserted without a function or period
Counterpart dependence and substitutability	Named counterpart needs the function; alternatives are assessed for time, cost, capacity, reliability, and political feasibility	Dependence inferred from importance; substitutes unmeasured
Control rights	Identified actor can set, interpret, authorize, veto, enforce, or override the relevant access condition	Territorial location or ownership substituted for the relevant right
Political discretion	Evidence that the controller could choose among meaningful access conditions under prevailing constraints	Formal competence with no practical room for choice
Implementation capacity	Legal, administrative, technical, or physical means exist to carry out the decision	Capacity inferred solely from an observed result
Implemented access or use change	Purposeful decision produces a verified alteration in admissible or effective use	Announced, contemplated, symbolic, or disputed change
Attributable substantive counterpart effect	Control action materially changes specified options, costs, timing, posture, or exposure in a stated direction	Response observed without attribution or material consequence
Negotiated benefit	Controller receives a concession, payment, technology, or other identified return	Benefit requested, expected, or discussed but not delivered
Resilience and durability	Implemented control is sustained or repeated under pressure, loss, or bypass efforts	Short duration or exposure observed without evidence of continuity

Source: Author's analysis.

5. Analysis and Findings

5.1 Corridor Power in the Northern Caspian Logistics System

The northern Caspian system became more consequential after disruption in and around the Strait of Hormuz constrained southern access to Iran. In March 2026, Russian grain exports to Iran resumed through the Caspian after a short pause while Black Sea-to-Gulf shipments remained suspended. Vessel-tracking data cited by Reuters showed five ships loading approximately 22,600 metric tons at Astrakhan and nine vessels carrying about 28,000 tons waiting to unload off Iran. Russia's three Caspian grain-export ports had combined capacity of at least three million tons annually, but shallow water and reliance on river-sea vessels of roughly 3,000-6,000 tons limited scale.¹¹ The corridor was therefore critical not because it could replace Gulf-scale maritime trade, but because it could preserve selected flows when alternatives were impaired.

This pattern demonstrates the distinction between volume and function. A corridor can matter by preserving selected continuity below the level required for surge operations. The author's earlier scenario assessment bounded aggregate sea, rail, and road capacity at approximately 3,800-29,000 tons per day, with a working range of 10,000-15,000 under constrained assumptions. These figures are scenarios, not observed 2026 throughput, and civilian cargo capacity is not equivalent to military sustainment capacity. Under the stated assumptions, the estimate suggests that the system may delay selected supply failures without substituting for

¹¹ Popova and Stolyarov (2026).

southern maritime access.¹² Functional criticality can thus arise from continuity, but the estimate does not establish which smaller state controlled that continuity or converted it into leverage.

Political authority in this system is distributed. Russia and Iran govern the principal ports and bilateral shipping described in the reporting. Kazakhstan, Azerbaijan, and Turkmenistan possess or may possess narrower rights over alternative transshipment, rail, customs, and maritime interfaces. Private carriers, insurers, port operators, and sanctions regimes add further layers. The relevant rights are therefore disaggregated across customs release, berth allocation, scheduling, insurance, and enforcement rather than concentrated in territorial ownership. This structure creates potential opportunities for smaller littoral states, but potential rights are not the same as observed purposeful use. Reuters reported a temporary interruption in Kazakh barley shipments to Iran in March, yet the available account does not establish the responsible decision-maker, strategic intent, implementation mechanism, Iranian dependence, or a resulting concession.¹³ The episode is therefore evidence of disrupted usability, not sufficient evidence of Kazakh node-based agency.

Implementation capacity is a principal constraint: ports, storage, customs processing, vessels, rail gauges, and scheduling determine whether a decision changes throughput. World Bank analysis identifies recurring border, transshipment, vessel, port-productivity, and coordination bottlenecks. Separately, the International Road Transport Union documents a 2020 Amirabad-Kuryk intermodal service and its expected reduction of transit steps and time.¹⁴ These sources explain why interfaces matter but do not evidence a 2026 control action or purposeful smaller-state conversion.

Resilience and substitutability remain open empirical questions. Multi-channel sea, rail, and road options suggest redundancy, while shared ports and coordination interfaces may transmit disruption across channels. Investments in the Middle Corridor and other Eurasian routes may gradually increase substitution. Yet the available evidence does not measure the time, capacity, cost, or political feasibility of those alternatives for a specified Russian or Iranian function in the relevant period. The case therefore supports only a conditional claim: a smaller state could gain bargaining value if it controlled a necessary substitute whose alternatives were materially inferior.

The July incidents illustrate exposure and adaptation but belong to a different causal category. On July 25, competing accounts described an attack on an Iranian commercial vessel and Ukrainian strikes on vessels carrying Iranian-linked military cargo.¹⁵ On July 30, reported Ukrainian strikes near the Caspian Pipeline Consortium terminal at Novorossiysk suspended loadings. Reuters reported that the pipeline handled about 80 percent of Kazakhstan's oil exports, tankers changed course, and alternatives were capacity-constrained.¹⁶ These events show targetability and low short-run substitutability, not purposeful smaller-state control or resilience. Wu (2026a) combines earlier reported observations with estimates and modeling; its inferred mechanism is contextual interpretation, not independent causal validation.¹⁷

The case therefore identifies structural potential rather than demonstrated smaller-state leverage. The northern Caspian had situational logistics importance, and partial control rights were plausibly distributed among states and operators. The public record, however, does not show a specific smaller littoral controller

12 Wu (2026b).

13 Popova and Stolyarov (2026).

14 World Bank (2023); International Road Transport Union (2020) for the Amirabad-Kuryk intermodal service.

15 Reuters (2026a).

16 Light (2026).

17 Wu (2026a).

purposefully changing admissible or effective use and producing an attributable counterpart effect. State-specific conversion and durability remain unestablished.

5.2 Gulf Access and Denial Power

The Gulf case provides the most specific, but disputed, report that infrastructure possession and operational access are not equivalent. U.S. forces use a regional architecture of air bases, ports, airspace, early-warning systems, fuel, maintenance, and logistics. These facilities remain within sovereign jurisdictions and host-state political calculations. Base-politics research therefore directs attention to mission-specific authorization rather than assuming automatic use.¹⁸

A Wall Street Journal account, relayed by Reuters, reported that Saudi Arabia and Kuwait had restricted U.S. use of bases and airspace and lifted those restrictions in early May, allowing Washington to consider resuming Hormuz escort operations. A same-day *Washington Examiner* report, however, quoted a White House official denying that restrictions or a ban had existed.¹⁹ Neither account independently resolves the conflict. The episode is therefore the comparison's most specific reported and disputed access-policy change, not a confirmed implementation. Even if the reported change occurred, the sources do not establish mission resumption, delay, added cost, concession, or another attributable downstream effect.

Even if the reported restriction occurred, it would not establish absolute control. The United States retained other bases, naval assets, long-range platforms, and diplomatic options. A restriction could raise costs or delay operations without preventing them, but such effects are unquantified. A stronger leverage claim would require evidence of a resulting change in route, timing, force posture, mission scope, cost, or exposure.

If the reported Gulf restriction occurred, implementation would have been largely institutional: recognized authority, command coordination, air-traffic control, security agreements, and administrative communication could alter permission without physically blocking aircraft. This establishes a plausible mechanism, not verification of the disputed event. Portugal's reported conditional authorization of U.S. use of Lajes, including refusal of some requests, remains a supplementary illustration of function-specific access outside the two Gulf relationships.²⁰

Iranian attacks and threats against host-state facilities illustrate exposure, not failure of host access control. A June 2026 U.S. Senate amendment proposed assessing damage, hardening, counter-drone capability, cost sharing, and effects on relations with Gulf hosts.²¹ By September 7, Reuters also reported renewed threats, attacks on UAE assets, reduced Hormuz traffic, and UAE efforts to build alternative export routes.²² These developments show external pressure and adaptation; they neither verify Washington's response to a Saudi or Kuwaiti access condition nor establish its durability.

This exposure creates a dynamic bargaining problem. If hosts grant broad access, they may increase retaliation risk and domestic political costs. If they deny access, they may weaken external security guarantees or encourage relocation. If they impose narrow conditions, they may seek to retain alliance benefits while controlling mission-specific exposure. The reported May policy change, if implemented, would be consistent with selective and reversible access governance, but the event status, motives, and full bargaining process remain partly opaque.

18 Cooley (2008); Gresh (2015).

19 Reuters (2026b); Brest (2026). Reuters attributes the restriction report to the *Wall Street Journal*; Brest reports a White House official's denial.

20 Reuters (2026c).

21 United States Congress (2026).

22 Abdallah and Abouhassira (2026).

The Gulf case provides the most specific reported access-policy change in this comparison, but conflicting accounts leave its implementation status provisional. It cannot support a firm finding of implemented node-based agency without corroborating policy documentation, an attributable operational record, or a more authoritative official account. Mission-level evidence would still be required to assess substantive counterpart impact, bargaining benefit, magnitude, or durability.

5.3 Knowledge-Interface Access: Ukraine's Drone-Defense Expertise

The third case probes whether the framework extends beyond physical infrastructure. By 2026, Ukraine had accumulated operational experience against Iranian-designed Shahed drones used by Russia, including tactics, interceptor drones, training, detection, and command adaptation. This knowledge matched Gulf demand for counter-drone assistance, but value alone does not establish counterpart dependence or a weaker-provider relationship.

On March 20, Ukraine reported deploying 228 specialists to the United Arab Emirates, Saudi Arabia, Qatar, Kuwait, and Jordan. The teams were reported to intercept drones, advise on air defense, protect infrastructure, and use Ukrainian technology. Kyiv said it expected money and technology in return and sought longer-term agreements.²³ The deployment establishes purposeful delivery of personnel and expertise, but not receipt of the requested return.

Within eight days, Ukraine had signed ten-year defense-cooperation agreements with Saudi Arabia and Qatar and agreed on security and defense cooperation with the UAE; Kyiv also reported a one-year diesel arrangement and talks on co-production, energy, and fuel. Late-April reporting described long-term partnerships with all three but noted export-license and delivery constraints.²⁴ This is partial institutional follow-through and a possible material return, not proof of direct exchange or completed delivery.

The case presents plausible specialized criticality. Ukraine was not central to Gulf geography, but its experience against Shahed-type systems matched an urgent regional problem. Reporting supports recipient interest and deployment, not a comparison of alternative providers. Ukraine's functional importance is therefore a grounded possibility rather than a measured dependence relationship, illustrating why node position may be functional rather than geographic.

Ukraine exercised selection and authorization by sending teams to five recipients. For a knowledge service to count as node-based agency rather than ordinary assistance, the provider must govern and implement a consequential condition such as eligibility, timing, scope, or usable access. Reporting establishes selection and delivery, but not individualized conditions or bargaining use of withheld content. Panke's account of expertise-based influence offers an analogue; influence beyond the service remains unproven.²⁵

Substitutability cannot be ranked confidently. Gulf states possessed other air-defense systems, and other suppliers could offer equipment or training. Reporting does not establish whether those options were slower, costlier, less reliable, or inferior. The deployment shows that recipients accepted Ukraine's contribution, not that they depended on it or lacked comparable substitutes.

Durability remains only partly observed. Ten-year agreements indicate intended institutional continuity, but delivery constraints and the absence of systematic mission evidence leave repeated performance unverified. The July Caspian attack and Ukrainian allegations about Iran-Russia cooperation illustrate cross-

23 Hunder and Dysa (2026).

24 Reuters (2026d); Flynn (2026).

25 Panke (2011).

theater coupling and external military action.²⁶ They do not establish recipient compliance with Ukrainian conditions or resilient control of the knowledge interface.

The case therefore establishes purposeful provision through a nonphysical interface, recipient selection, and partial institutional follow-through. The diesel arrangement is a reported prospective material return, but direct reciprocity, recipient dependence, individualized access conditions, durable bargaining effects, and Ukraine's relative weakness against each recipient remain unverified. The case extends the framework's possible domain without fully validating the claim that a weaker controller used a dependent interface to influence a stronger counterpart.

5.4 Cross-Case Findings

Table 2 identifies each event, focal relationship, and evidentiary status rather than assigning an agency score. The Caspian case mainly establishes structural potential. The Gulf contains a specific but disputed access report. The Ukraine case establishes purposeful provision and partial follow-through, but not the relational conditions needed for a weaker-state leverage claim.

Table 2. Event evidence and analytical status

Event and focal relationship	Reported control or action	Reported or observed result	Evidentiary limit and analytical status
Reported March 2026: Kazakh barley interface → Iran within northern Caspian logistics	Temporary shipment interruption reported; partial rights over wider ports, customs, rail, and transshipment are plausible	Flow interruption reported within a corridor of situational importance	Decision-maker, intent, implementation, counterpart dependence, and response are unverified; structural potential only
Reported 7 May 2026: Saudi and Kuwaiti host access → U.S. basing and airspace use	WSJ-derived reporting said restrictions were lifted; a White House official reportedly denied any restriction or ban	Access expansion and possible Hormuz escort consideration were reported	The access change itself is disputed; implementation is provisional and downstream effect, benefit, and durability unverified
Reported 20 March–29 April 2026: Ukraine knowledge interface → five Middle Eastern recipients	Kyiv deployed 228 specialists; long-term defense partnerships with Saudi Arabia, Qatar, and UAE were later reported	Services delivered; a one-year diesel arrangement reported; delivery constraints remained	Partial follow-through; direct exchange, dependence, individualized conditions, relative weakness, and durable leverage unverified
External events reported 25 and 30 July 2026: attacks on Caspian-linked shipping and CPC export infrastructure	Casualties and a contested cargo link reported; later loading suspension and tanker rerouting	Exposure, limited substitutes, and network adaptation illustrated	External intervention, not a controller-counterpart relationship, agency observation, or resilience test

Source: Author's analysis based on Popova and Stolyarov (2026) (Kazakh shipments); Reuters (2026b) and Brest (2026) (Gulf access); Hunder and Dysa (2026), Reuters (2026d), and Flynn (2026) (Ukraine deployment and follow-through); and Reuters (2026a) and Light (2026) (Caspian-linked attacks).

The comparison does not validate every link in the framework. Functional importance appears in all three settings, but the Gulf implementation claim is disputed, the Ukraine case does not establish a dependent or stronger counterpart, and the Caspian evidence does not cross the state-specific implementation threshold. None supplies a complete observation of control attempt, confirmed implementation, attributable substantive counterpart effect, negotiated benefit, and durable control. The comparison's value lies in exposing rather than filling those gaps.

²⁶ Reuters (2026a).

6. Discussion

6.1 Centrality Is Not Agency

The principal theoretical claim is that centrality is neither sufficient nor self-executing. Network structure and counterpart dependence create an opportunity; control rights and political discretion determine whether an actor can attempt to vary access; and implementation determines whether the decision changes effective use. Farrell and Newman's emphasis on jurisdiction and institutional capacity points in this direction.²⁷ The proposed increment is to make partial control rights, function-specific authorization, temporary dependence, and durability explicit for asymmetric relationships in which a smaller state may control only one interface. This is an integrative extension, not evidence that established network or small-state theories are generally incomplete.

The framework identifies three logical limits. Centrality without relevant control rights or discretion does not by itself establish node-based agency. A control attempt without verified implementation remains attempted control. Implementation without evidence of continuity establishes no more than the observed duration. Brief duration does not determine effect magnitude, and an observed response does not establish leverage unless attribution, material consequence, and direction are specified. The cases illustrate these distinctions but do not verify necessity or sufficiency. The Caspian attack demonstrates exposure, not failed resilience after successful control.

6.2 Agency Is Relational, Temporal, and Layered

Node-based agency is not a fixed national attribute. It exists in a controller-function-counterpart relationship: who governs the interface, who relies on it, for what purpose, at what moment, and with which alternatives. Caspian shipping became more important when southern routes were disrupted; Gulf permissions were reported as relevant to escort planning; Ukrainian expertise matched a counter-drone need. These observations do not by themselves prove dependence or relative weakness.

Authority is also layered. States rarely choose only between complete opening and complete closure. An access condition must be indexed to an actor, function, direction, and time: a port may remain commercially usable while a cargo class is denied; a base may support one mission while another use is restricted; a training package may include tactics while excluding particular technology. These examples identify possibilities, not actions established in every case. Granting, conditioning, throttling, restricting, and denying are control actions. Adjustment, noncompliance, or substitution is a counterpart response; rerouting, bypass, and rewiring are forms of network adaptation that may occur during or after an access change.

6.3 The Exposure Feedback

The cases suggest an exposure feedback that should be investigated without assuming causation. A consequential node or interface may attract coercion, attack, acquisition, or bypass investment whether or not its controller has successfully exercised agency. The July CPC disruption and September Gulf reporting strengthen the evidence of targetability and adaptation, while Ukraine's new agreements indicate intended institutional continuity. None shows that a specific smaller-state control action caused an attack or that knowledge diffusion had already eroded Ukrainian leverage.

Node-based agency is consequently best understood as a managed conversion problem, not a strategy of maximizing indispensability. To sustain node-based agency over time, a state would need sufficient functional importance, relevant control rights, discretion, implementation capacity, and the ability to maintain a policy under pressure. Excessive concentration may increase potential leverage while also increasing exposure or incentives for bypass.

²⁷ Farrell and Newman (2019).

The analytical levels must remain distinct. None of the local events establishes systemic power, which would require attributable capacity to produce durable changes in rules, interoperability, control-right distributions, architecture, or functional reproduction across networks. Rerouting after a denial shows adaptation; only persistent rewiring or rule change supports a claim of system transformation.

6.4 From Buffer Geography to Network Position

The framework does not claim that geography has disappeared. Geography still shapes distance, infrastructure, military exposure, and the cost of alternatives. The shift is analytical: buffer-state logic asks between whom a state is located; node-based agency asks what consequential connection it can govern. The first highlights constraint; the second explains conditional conversion. Used together, they produce a more balanced account of middle and small states in networked conflict: territorial exposure restricts choices, while functional control may create bounded opportunities within those restrictions.

7. Implications and Recommendations

For middle and small states, strategic location should not be confused with usable power. Governments should identify the control-rights bundle, preserve access decisions, invest in implementation, build redundancy and protection, and assess substitutes from the counterpart's perspective. Port capacity without customs coordination, basing rights without mission-specific authority, or expertise without delivery institutions is unlikely to yield durable leverage.

States should also avoid maximizing irreplaceability at the expense of resilience. Concentrated nodes can attract attack, coercive capture, or bypass investment. Distributed infrastructure, a diversified commercial base, legal clarity, and limited functional cooperation can preserve value without creating an isolated point of failure. The goal is defensible relevance, not permanent monopoly.

Major powers should not treat smaller states as passive buffers, transit territory, or automatic access providers. Planning must include host-state discretion, domestic politics, infrastructure capacity, retaliation exposure, and substitute costs. Pressure may secure short-term compliance while undermining the legitimacy and resilience on which continued access depends.

For researchers, node-based agency offers a provisional mid-range framework for comparison across logistics, military access, technology, data, energy, and knowledge systems. Future work should separately code control rights, preexisting access, purposeful action, effective-use change, counterpart effect, negotiated benefit, durability, external intervention, and adaptation. Paired successful and failed conversion cases are needed before necessity, sufficiency, or relative causal weight can be assessed.

8. Conclusion

This article began with a limitation in buffer-state logic. Geography remains strategically important, but contemporary conflict is conducted through connections whose strategic functions do not always coincide with territorial position. Middle and small states may acquire bounded opportunities when they hold relevant rights over routes, facilities, permissions, or interfaces needed by stronger actors. Whether those opportunities become agency is an empirical question.

The framework separates structural potential, control attempt, implemented node-based agency, attributable counterpart impact, negotiated benefit, and resilience. Criticality, dependence, and substitution describe opportunity; control rights and discretion permit action; and a verified change in admissible or effective use establishes implementation. Realized strategic leverage requires an attributable, substantive effect in a specified direction. A concession or return supports bargaining benefit, while duration and repetition support resilience. External intervention remains separate.

The evidence produces differentiated conclusions. Northern Caspian shipping had situational logistics importance and potential distributed control rights, but purposeful smaller-state conversion is not established; July attacks and rerouting add evidence of exposure and adaptation, not agency. The Gulf provides the most specific reported access-policy change, yet conflicting accounts leave implementation provisional; September escalation does not resolve that dispute. Ukraine's deployment of 228 specialists, long-term Gulf agreements, and reported diesel arrangement establish purposeful provision and partial institutional follow-through. Direct reciprocity, dependence, individualized conditions, relative weakness, and durable leverage remain unverified, so the case still falls short of a complete demonstration of weaker-state leverage.

These findings do not validate necessity, sufficiency, or systemic power. They show why centrality, intent, implementation, counterpart effect, negotiated return, durability, external intervention, and adaptation should not be collapsed into a single claim that a smaller state exercised control over a node. The framework's value lies in identifying which claim the evidence supports and which remains provisional.

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