

Infrastructure Diplomacy and the Geo-Economics of Gulf Regional Order

Altyapı Diplomasisi ve Körfez Bölgesi Düzeninin Jeo-Ekonomisi

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Abstract

This article examines how infrastructure diplomacy is reshaping Gulf regional politics through the strategic deployment of transport, energy, and infrastructural networks. Moving beyond conventional analyses focused on hydrocarbons, security, and great-power alignments, it argues that infrastructures function as instruments of influence, interdependence, and competition. Adopting a geo-economic perspective, the study analyzes railways, ports, and cross-border energy systems as nested cases. Rail projects embody aspirations for Gulf unity yet remain constrained by national priorities; ports operate as arenas of competition and external engagement; and energy pipelines and grids sustain cooperation even amid crises such as the 2017–2021 blockade. By tracing these dynamics, the article advances a nuanced understanding of infrastructure diplomacy, showing how governance arrangements and material permanence determine whether infrastructures stabilize relations or intensify rivalries. The Gulf experience thus reveals how infrastructural architectures shape the stability and fluidity of regional order.

Keywords: Infrastructure diplomacy, Geo-economics, Gulf Cooperation Council (GCC), Connectivity, Regional Interdependence.

Öz

Bu makale, ulaştırma, enerji ve altyapı ağlarının stratejik kullanımını inceleyerek altyapı diplomasisinin Körfez bölgesi siyasetini nasıl yeniden şekillendirdiğini ele almaktadır. Hidrokarbonlar, güvenlik ikilemleri ve büyük güç hizalanmalarına odaklanan geleneksel analizlerin ötesine geçerek, altyapıların aynı zamanda etki, karşılıklı bağımlılık ve rekabet araçları olarak işlev gördüğünü savunmaktadır. Jeoekonomik bir perspektiften hareketle çalışma, demiryolları, limanlar ve sınır ötesi enerji sistemlerini iç içe geçmiş vakalar olarak analiz etmektedir. Demiryolu projeleri Körfez birliği arzularını simgelese de ulusal önceliklerle sınırlı kalmakta; limanlar rekabet ve dış ortaklık alanları olarak öne çıkmakta; enerji boru hatları ve şebekeleri ise 2017–2021 ablukası gibi kriz dönemlerinde bile işbirliğini sürdürmektedir. Bu dinamikleri izleyerek makale, altyapı diplomasisine dair incelikli bir kavrayış geliştirmekte ve yönetim düzenlemeleri ile maddi kalıcılığın, altyapıların ilişkileri istikrara mı kavuşturacağı yoksa rekabeti mi artıracağına yön verdiğini göstermektedir. Körfez deneyimi, altyapısal düzenlerin bölgesel düzenin istikrarı ve akışkanlığını nasıl şekillendirdiğini ortaya koymaktadır.

Anahtar Kelimeler: Altyapı diplomasisi, Jeoekonomi, Körfez İşbirliği Konseyi (GCC), Bağlantısallık, Bölgesel Karşılıklı Bağımlılık.

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Introduction

Diplomatic interactions among the Gulf Arab states (Bahrain, Kuwait, Iraq, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) are conventionally analyzed through a set of analytical prisms—most notably hydrocarbon rent distribution (Gray, 2011; Tok, 2021), persistent security dilemmas (Lawson, 2020; Møller, 1997), and patterns of great-power politics (Fulton, 2020; Fulton & Sim, 2019; Kim & Woods, 2016). Although these frameworks have generated substantial knowledge on regional diplomacy, alliance formation or regime durability (Amour, 2020; Gause III, 2009), they generally underplay a materially grounded process: the rapid expansion of cross-border infrastructures reshaping incentives for cooperation or coercion. Over the past two decades, Gulf capitals have mobilized vast financial and technical resources into transport hubs, ports, energy grids, pipelines, logistics platforms, and digital networks (Callen et al., 2014: 6; Schindler & Kanai, 2021; Ziadah, 2018). This infrastructural turn reframes Gulf diplomacy by highlighting how material statecraft generates influence, resilience, and interdependence across the region.

These investments are deployed pragmatically in foreign policy—as bargaining assets, instruments of status projection, and tools of competitive statecraft to reshape regional access and supply chains. Gulf states direct resources into ports, pipelines, and logistics platforms as part of diversification and integration strategies (Al-Rasheed, 2005). Such infrastructures function as diplomatic gateways, granting control over supply chains and supporting non-oil exports crucial for regional trade, thereby reducing hydrocarbon dependence and strengthening resilience (Majid et al., 2025). Examining infrastructure and connectivity as central objects of analysis highlights a logic of regional order where geo-economic integration, corridor diplomacy, and techno-spatial interdependence reshape incentives for cooperation and competition.

This diplomatic evolution rests on three background conditions. First, the Gulf's post-1970s trajectory created both the means and incentives for significant capital projects: rents funded expansive transport, energy, and urban programs linking states and external partners (Ari et al., 2019). Second, key Gulf institutions—most notably the GCC—emerged as functional projects of economic integration, a genealogy often obscured by security-centered readings (Guazzone, 1988; Pasha, 2015). Third, the past decade has seen a shift to outward-looking corridor diplomacy (Ghanem & Thafer, 2025; Reisinezhad & Reisinezhad, 2025), with Gulf actors promoting interregional linkages such as IMEC that deepen connectivity while embedding the region in transcontinental competition (Inamdar, 2023, October 2). These geo-economic ventures—rail projects, power links, pipelines, digital corridors, and port expansions—generate dense interdependencies that shape diplomacy in ways security-only accounts miss.

The literature has addressed these themes in fragmented ways, linking them to distinct dynamics. Security studies depict the Gulf as an arena of military balances, patron–client ties, and regime survival (Gause III, 2009; Pinfari, 2009). Economic analyses emphasize trade, investment, and the GCC's functional initiatives (Alasfoor, 2007). Constructivist work highlights identity and norms in shaping cooperation (Glombitza & Ulrichsen, 2021; Karolak & Allam, 2020). Another strand explores megaprojects and global infrastructure politics, from corridor debates and BRI to port and logistics strategies.

Security scholars note how pipelines, grids, and railways affect threat perceptions (Glombitza & Ulrichsen, 2021: 6). The 2017–2021 Gulf crisis and subsequent reopening of routes underscored the costs of fragmentation, but remain weakly integrated into theories of Gulf infrastructure diplomacy (Kinninmont, 2019). More broadly, IR analyses of the region only partially reflect ongoing geo-economic shifts.

This article addresses that context by advancing a lens of infrastructure diplomacy within geo-economics. Infrastructure diplomacy denotes the strategic use of capital-intensive, spatially fixed physical and digital systems (ports, pipelines, rails, cables, grids) to generate leverage, embed interdependence, and shape regional order. Geo-economics emphasizes how states deploy investments, corridors, and platforms to pursue strategic aims in a competitive environment. Together, these perspectives ask how connectivity architectures reconfigure incentives for accommodation or rivalry in the Gulf, and under what conditions infrastructure becomes a vehicle of peace rather than contestation.

The study asks: *How does infrastructure diplomacy reshape Gulf politics, and under what conditions does it foster stabilizing interdependence rather than domination and rivalry?* The analysis examines infrastructural trajectories and key projects, including both cooperative and conflictual episodes—such as the 2017–2021 Qatar blockade—to show how infrastructure can promote cooperation or deepen mistrust. Methodologically, it traces three domains—rail, ports, and energy—as nested sectoral cases, drawing on project documents, company reports, trade and energy statistics, and press coverage. The remainder of the paper develops this argument empirically and theoretically, positioning the Gulf as a vantage point for understanding how connectivity practices are reconfiguring regional order in rentier and strategically significant polities.

Theoretical Framework: Infrastructure Diplomacy and Geo-Economics

Infrastructure as Diplomacy

Infrastructures have gained prominence in International Relations (IR) as more than technical backdrops to economic exchange (Bakonyi & Darwich, 2024). Far from neutral conduits for goods, energy, and information, they structure political relations by shaping how states interact with each other and global markets (Bueger, Liebetrau, & Stockbruegger, 2023; Petry, 2023). This growing scholarly attention to infrastructures reflects a broader IR turn toward materiality and technology as drivers of international order. Ports, pipelines, power grids, rail networks, and undersea cables are not only commercial assets but also diplomatic levers (Kardon & Leutert, 2022: 10), embedding states in webs of interdependence that demand coordination, negotiation, and at times contestation.

The concept of infrastructure diplomacy captures this logic. It denotes the strategic deployment of large-scale projects by state actors or enterprises to generate political leverage, cultivate alliances, and project influence (Grgić, Kolar, & Bašić, 2023: 232). Unlike economic statecraft, which emphasizes aid, sanctions, or trade policy, it highlights capital-intensive, spatially fixed systems that bind states over the long term. It also moves beyond functionalism and corridor diplomacy by underscoring infrastructures as diplomatic platforms in their own right. While connectivity politics often centers on

competing global visions (e.g., BRI, Global Gateway), infrastructure diplomacy focuses on how concrete projects reorder relations within regions.

A fundamental characteristic of infrastructure is its permanence: once built, it is costly to abandon or bypass. This feature reshapes state behavior by raising the risks of disconnection and incentivizing compromise. Infrastructures also demand ongoing technical coordination—synchronizing grids, harmonizing rail gauges, managing ports, or negotiating digital standards (Dean, Sarma, & Rippa, 2024: 1185). Routine practices create diplomatic channels that differ from treaties or alliances, which states can more easily suspend. Infrastructure diplomacy thus complements traditional statecraft by embedding negotiation and interdependence in everyday material systems (Schindler, DiCarlo, & Paudel, 2022).

Infrastructures are not inherently pacifying. Their influence on diplomacy often reflects and reproduces existing hierarchies. Physical infrastructures allow dominant states to turn dependence into leverage, while weaker actors risk losing autonomy through the very networks meant to connect them. Infrastructure diplomacy thus operates along a spectrum of mitigating conflict or promoting new strategic vulnerabilities.

In the Gulf, this ambivalence surmounts as Cross-border pipelines, shared grids, and logistics corridors not only enable economic exchange but also reshape political relations by binding states into webs of reliance while exposing them to dominance at infrastructural chokepoints (Biygautane, Hodge, & Gerber, 2018). Viewing infrastructures as instruments of diplomacy highlights their constitutive role in political order: they are conduits of commerce and architectures of power, simultaneously fostering cooperation and embedding asymmetries.

Geo-Economics and Connectivity Politics

If infrastructure diplomacy highlights how projects generate long-term interdependence and embedded cooperation, the geo-economic perspective foregrounds how states mobilize infrastructures in competitive and strategic rivalry (Borchert, 2022: 18). Geo-economics refers to the deliberate use of economic instruments—such as trade policy, investment, sanctions, financial leverage, and large-scale infrastructure corridors—as tools of power projection and rivalry to realize strategic or political goals (Scholvin & Wigell, 2018:80). While traditional geopolitics emphasizes military force and territorial control, geo-economics operates through financial capital, market access, and infrastructural positioning, making it particularly salient in regions where material wealth and connectivity are central to state strategies (Scholvin & Wigell, 2018:76-80).

This perspective is particularly relevant in the Gulf. Historically dependent on hydrocarbon exports, Gulf monarchies have embarked on ambitious diversification agendas aimed at transforming their economies into hubs of logistics, finance, and technology (Al Naimi, 2022). This structural shift has turned infrastructures—ports, airports, pipelines, data cables, and renewable energy grids—from background assets into contested arenas where states accumulate, defend, and challenge influence (Khan, Iqbal, & Hameed, 2020).

Geo-economic strategies in the Gulf unfold through the interplay of capital, connectivity, and external competition. Massive financial resources, mobilized through sovereign

wealth funds and state-owned enterprises, underwrite infrastructure at home and abroad. These flows are more than diversification: they generate dependencies, elicit reciprocal commitments, and turn Gulf capital into both insurance against volatility and a tool of influence. Building on this foundation, Gulf states pursue connectivity strategies that anchor them in overlapping corridors linking Asia, Africa, and Europe. Such diversification cushions systemic shocks, hedges against great-power rivalry, and positions the region as an indispensable hub rather than a peripheral actor. These ambitions intersect with competing global projects—China’s Belt and Road, India’s IMEC, the EU’s Global Gateway, and U.S.-backed maritime initiatives—all converging in the Gulf. By engaging selectively, Gulf states exploit rivalries to secure concessions, reinforce recognition, and advance their role as regional and global nodes (Khan, Iqbal, & Hameed, 2020:34).

From a geo-economic standpoint, infrastructures are thus less about everyday cooperation and more about strategic positioning. They can stabilize relations by creating shared interests, but they also become sites of rivalry where states compete for dominance, draw in external powers, and reinforce regime-centered security strategies. For the Gulf, this paradox is especially acute: infrastructural integration fosters regional interdependence while simultaneously exposing local actors to global competition and access asymmetries. In this sense, Gulf infrastructure politics are not only mechanisms of stabilization but also arenas of contestation, where geo-economic competition produces hierarchies of hub status, influence, and vulnerability.

The Gulf as a Strategic Arena of Connectivity

As a crossroads linking Asia, Africa, and Europe, the Gulf has long been central to the global economy through energy flows and maritime chokepoints. More recently, it has gained prominence as a hub of finance, logistics, and infrastructure-led political projects. This shift reflects domestic imperatives—post-oil growth strategies under national visions—as well as external drivers, including intensifying great-power competition and changes in global trade.

The Gulf offers a prime setting to examine the nexus of infrastructure and diplomacy, given its role in energy exports and shipping routes. State funds and public enterprises finance megaprojects that raise Gulf states’ visibility, while regional rivalries and crises—from the Iran-Iraq War to the 2017 Qatar blockade—demonstrate how infrastructure repeatedly serves political purposes. Since the 1970s, the region’s material landscape has undergone a significant transformation. The 1973 oil crisis boosted revenues, reinforced rentier structures, and enabled ambitious modernization programs (Al-Rumaihi, 2019:55). Resource wealth funded large-scale projects and urban development, allowing governments to modernize, absorb labor, and project competence. These investments reshaped the circulation of people, goods, energy, and information within and beyond the region.

What followed the rise in oil prices was a wave of projects that embedded resource wealth in concrete, steel, and circulation networks, laying the groundwork for later diversification. States centralized decision-making, established state-owned companies, and financed public works otherwise unattainable (Young, 2020). These developments produced an upgraded infrastructure base that anchored new economic functions and

reshaped regional geography. Crucially, these projects formed part of broader national ambitions: airports supported tourism and business travel; ports facilitated trade and re-export; and grids enabled urban growth.

From the late 1990s, and especially the 2010s, Gulf governments reframed such investments around diversification. National strategies—Saudi Vision 2030, Qatar’s development plans, and the UAE’s hub ambitions—placed infrastructure at the core of economic transformation (Ubaid & Gulrez, 2025). The goals were to turn cities into service and logistics hubs, attract foreign firms, and develop non-oil revenue streams. In practice, this linked infrastructure to finance, tourism, logistics, and tech, and mobilized sovereign wealth funds, public–private partnerships, and state-owned enterprises to push projects at home and abroad.

The region’s expansion falls into three categories, each with distinct logics. Transport infrastructures—ports, airports, and rail—embody hub ambitions, turning small states into global nodes for trade and travel. Energy infrastructures remain dominant, spanning pipelines, grids, renewables, storage, and cross-border interconnectors that reshape energy security calculations. Digital infrastructures—subsea cables, data centers, and fintech platforms—are less visible but increasingly vital, positioning the Gulf as a node in global data flows and services.

These projects that connect states economically, technically, and politically. In practice, infrastructure demands coordination through shared timetables, standards, and cross-border agreements. Economically, hubs generate trade flows and ecosystems of firms, suppliers, and customers. Financially, sovereign funds and state enterprises invest across borders, linking balance sheets and regulations. Politically, infrastructure creates stakes that can stabilize or destabilize: reliance on a neighbor’s port or grid may encourage cooperation but also provide leverage in crises. Under diversification agendas, Gulf investments in transport, energy, and digital sectors have produced a dense material network underpinning both economic life and regional diplomacy.

Infrastructure Projects and Regional Diplomacy in the Gulf

The Gulf’s large-scale projects illustrate how infrastructure diplomacy reinforces mutual dependence while also enabling strategic competition and external alignment. Four initiatives—railway integration, port and logistics rivalry, cross-border energy infrastructure, and digital corridors—show how states convert material investments into political influence.

Railway and Land Corridor Initiatives

Railways are often seen as important infrastructure because they connect markets, people, and sometimes militaries across large areas. The idea of creating a railway network across the Gulf is one of the most ambitious projects in the region’s recent history. Planned in the early 2000s under the Gulf Cooperation Council (GCC), the project aimed to build a 2,117-kilometer system linking Kuwait, Saudi Arabia, Bahrain, Qatar, the United Arab Emirates, and Oman (Bätzner & Stephenson, 2017; Lowe & Altrairi, 2013). The GCC Railway aimed to promote economic integration, enhance mobility, and offer a greener alternative to road transport (Narasimha, 2025; Vij, 2025). Political framings described

that Project as a symbol of regional cooperation and GCC unity (The Gulf Magazine, n.d.).

Initially, the project was presented as a step toward a common Gulf market (Martini et al., 2016: 26). Funding was to come partly from national budgets, coordinated through a GCC office in Riyadh, with each state financing its own section in proportion to route length (Smith, 2015: 28). The railway was expected to facilitate trade and labor flows, link industrial and logistics hubs, and support diversification through sustainable transport. Member states also saw distinct advantages: Oman could connect Arabian Sea ports to its interior and reduce reliance on the Strait of Hormuz (Madhuri, 2025); the UAE could expand its Etihad Rail network, linking Abu Dhabi, Al Ain, and Fujairah (Ahamed, Manakkancheri, & Kadooran, 2023); Saudi Arabia could integrate domestic lines, such as the North–South Railway, with regional corridors; and Qatar anticipated improved connectivity.

However progress in this project is slow due to the GCC’s limited institutional capacity, divergent national priorities, funding disputes, and bureaucratic delays. States increasingly advanced their own projects—Etihad Rail in the UAE, Saudi Arabia’s Landbridge, and Oman’s Muscat–Sohar line—while cross-border segments lagged. The GCC Railway thus shifted from a unified vision to a patchwork of national initiatives presented as regional integration (Harmon, 2024).

The railway project also became a tool of diplomacy, with both positive and negative sides. On the positive side, GCC members highlighted it as a shared purpose during their meetings. GCC members promoted it in their meetings as a symbol of shared purpose, yet the 2017 Gulf crisis derailed cooperation by excluding Qatar. The blockade ruptured diplomatic and economic ties, making cross-border construction politically and logistically impossible (Ulrichsen, 2018). Joint planning and funding stalled, with Saudi Arabia and the UAE prioritizing domestic links while Oman pursued alternatives through Iran and India. The railway ultimately mirrored broader regional tensions.

The project also gained meaning beyond GCC politics by linking to global connectivity plans. China included Gulf railways in its Belt and Road Initiative (BRI). India connected the Gulf to its International North–South Transport Corridor (INSTC) and later promoted the India–Middle East–Europe Corridor (IMEC). Gulf states used their railway plans in negotiations with outside powers, making the project a bargaining tool in their foreign relations. Even without full completion, the GCC Railway became part of wider competition for international partnerships, showing how infrastructure can serve as a tool of strategy.

Although the GCC Railway was never realized as a single system, individual national projects have remained significant. The UAE’s Etihad Rail launched commercial operations in 2023 and plans to add passenger services (Tolba, 2023). Saudi Arabia is advancing the Landbridge, linking the Gulf to the Red Sea. Oman pursues port connections mainly through bilateral agreements, while Qatar has concentrated on metro and light-rail systems, leaving its regional role uncertain. This fragmented progress reflects “layered integration”: a unified Gulf network has not materialized, but national lines still enhance connectivity unevenly. The idea persists in GCC declarations (General

Secretariat of the Gulf Cooperation Council, 2025, July 16), underscoring that railway diplomacy continues, even if it is incomplete.

Railway Projects in the Context of Infrastructure Diplomacy

The GCC Railway illustrates how infrastructure diplomacy in the Gulf embodies both unity and fragmentation. Presented in official statements as a symbol of shared purpose, the project has often been invoked to project a common Gulf vision, even during periods of political tension; however, in practice, progress has been uneven as what began as a regional plan splintered into parallel national projects, with states prioritizing their own agendas. This tension between collective aspiration and infrastructural nationalism exposes the fragility of Gulf integration.

At the same time, the railway extends beyond intra-Gulf politics by linking the region to global trade and transport networks. Its entanglement with initiatives such as China's Belt and Road and India's transport corridors situates the project within broader geopolitical strategies. Thus, the GCC Railway operates simultaneously as a symbol of unity, an arena of rivalry, and a platform for external engagement. It exemplifies how Gulf infrastructure serves not merely technical needs but also functions as a diplomatic instrument, shaping both regional cohesion and the Gulf's role in international relations.

Port Expansion and Logistics Hub Competition

Ports are among the Gulf's most consequential infrastructures, serving as instruments of geopolitical strategy. Since the 1990s, Gulf governments have poured substantial resources into expanding deep-water ports, free zones, and logistics hubs in an effort to capture global trade flows and reinforce their diversification agendas. Port development has unfolded primarily as a competitive arena, with states vying to establish themselves as indispensable nodes in maritime networks.

The rivalry among Dubai's Jebel Ali Port, Abu Dhabi's Khalifa Port with its adjacent Khalifa Industrial Zone (KIZAD), and Oman's Duqm Port and Special Economic Zone illustrates how infrastructure diplomacy in the Gulf often takes the form of competitive statecraft (Ziadah, 2018:671). These projects serve as instruments of statecraft, shaping regional hierarchies, signaling external alignments, and embedding Gulf states within wider connectivity schemes such as China's Belt and Road and India's corridor initiatives.

Port development in the Gulf is usually driven by state-owned or controlled enterprises, combining national oversight with international collaboration. Sovereign wealth funds provide capital, while foreign operators and construction firms bring expertise, technology, and global access. This hybrid model makes ports diplomatic interfaces linking Gulf states with external powers. Unlike pipelines or electricity grids, ports rarely require collective governance; instead, they operate as national champions, with states competing to build rival hubs.

This rivalry has created indirect interdependencies. For decades, Dubai's Jebel Ali dominated container traffic and served as the main regional transshipment hub. Its success, however, spurred neighbors to build alternatives to reduce reliance on Dubai and capture a greater share of global trade (Ardemagni, 2018). While Jebel Ali remains the largest container port, Abu Dhabi's Khalifa Port—opened in 2012 near industrial zones

and Etihad Rail links—was designed to diversify the UAE economy and lessen dependence on Dubai ("Abu Dhabi's Khalifa Port," 2017).

Oman pursued a different course with Duqm Port, positioned outside the Strait of Hormuz. Marketed as a neutral, secure alternative, it has attracted foreign investment and reflects Oman's strategy of staying outside Gulf rivalries ("Mideast Port Building," 2019). The outcome is a crowded landscape of competing hubs: while competition creates redundancy and reduces efficiency, it enhances the Gulf's weight in global trade and draws external powers deeper into its commercial and diplomatic affairs. Ports thus serve not only as economic assets but also as tools of strategic engagement.

Port competition in the Gulf demonstrates how infrastructure diplomacy functions as competitive statecraft. Abu Dhabi's investment in Khalifa Port challenged Dubai's dominance through Jebel Ali, fueling intra-UAE tensions over trade leadership. Oman's Duqm Port positioned itself as a neutral alternative, aiming to secure an autonomous role in regional commerce. These rivalries are reinforced by external alignments. China has invested in both Duqm and Khalifa under the Belt and Road Initiative, while India views Duqm as part of its westward strategy.

Port development also carries symbolic meaning. Each major hub represents a national vision of strategy and identity. For Dubai, Jebel Ali continues to stand as the emblem of commercial modernity and global integration. For Abu Dhabi, Khalifa Port expresses long-term resilience, supported by sovereign wealth and industrial diversification. For Oman, Duqm reflects independence and hedging diplomacy, signaling its intent to remain outside direct Gulf rivalries. Taken together, Gulf ports are more than logistical sites. They serve as stages for diplomatic signaling, where choices about infrastructure communicate alignment with global powers, national ambitions, and regional competition.

The external dimension of Gulf ports shows how infrastructure diplomacy links local ambitions with global capital and connectivity. Chinese firms such as COSCO Shipping and China Merchants Port have invested in Khalifa and Duqm, embedding them in the Belt and Road Initiative and securing China's trade routes while strengthening ties with Gulf states (Akhter, 2023). Europe also plays a role: Belgium's Port of Antwerp supports Duqm, and European firms dominate regional container flows. India, meanwhile, sees Duqm as central to bypassing Pakistani ports and improving Gulf access. Port investments thus serve as diplomatic tools for external powers, while Gulf states use such partnerships to hedge, diversify, and assert autonomy in a competitive global environment.

Ports as Arenas of Rivalry in the Context of Infrastructure Diplomacy

Port expansion in the Gulf illustrates the dual nature of infrastructure diplomacy as both cooperation and competition. Ports are gateways to the global economy and symbols of national prestige, enabling states to diversify beyond hydrocarbons, attract trade, and secure foreign partners—from Chinese shipping firms to European port authorities and Indian strategists. Heavy investment in capacity and connectivity thus integrates the Gulf into global supply chains while generating opportunities for diplomatic engagement.

Yet ports also intensify regional rivalries. The UAE, Saudi Arabia, and Oman market their facilities as hubs, competing to outpace neighbors with superior logistics and

privileged access for global actors. Unlike pipelines and power grids, which foster interdependence, ports provide independent platforms that sharpen competition over market share, investment, and influence. In this sense, they embody the paradox of Gulf diplomacy: integration into global networks paired with rivalry over regional leadership.

More than physical infrastructure, ports function as instruments of diplomacy and arenas of contestation. Their dual role—facilitating cooperation while fueling competition—explains why logistics hubs have become central to Gulf international relations in the twenty-first century.

Cross-Border Energy Pipelines and Power Grids

Energy infrastructures are another political instruments of Gulf infrastructure diplomacy. The Dolphin Gas Project, launched in 2007, transports 2 billion cubic feet of Qatari gas daily to the UAE and Oman ("Dolphin Gas Project," 2017). Despite political ruptures, including the 2017–2021 blockade, gas deliveries continued uninterrupted, highlighting the stickiness of infrastructural interdependence (Kinninmont, 2019: 22). Energy infrastructures are the Gulf region's key sites of diplomacy and strategic positioning and are often more challenging to suspend because they are governed by long-term commercial contracts with clear penalties and payment flows, they are also economically costly to suspend, and they are often embedded in corporate governance structures that insulate them from political ruptures.

At the heart of Gulf energy diplomacy, the Dolphin Gas Project is the first and only cross-border gas pipeline in the GCC. It delivers Qatari natural gas via subsea pipeline to the UAE and Oman. The project was envisioned in the 1990s as a step toward regional energy integration, offering reliable supply to fuel power plants in the UAE's rapidly growing cities and industries (Dargin, 2008: 18). Its symbolic importance as the first tangible energy corridor linking Gulf states cannot be overstated: it embodied a recognition that shared resources could underpin shared prosperity.

Parallel to Dolphin, the GCC Electricity Interconnection Grid (GCCIA) was launched in 2001 as a flagship integration initiative (ECA, 2010: 13). Connecting Saudi Arabia, Kuwait, Bahrain, Qatar, the UAE, and Oman through high-voltage transmission lines, it allows states to share excess capacity, meet peak demand, and stabilize national grids during outages. The grid reflects both functional interdependence and a vision of collective energy security, although its use has been more limited than expected due to political frictions and uneven pricing mechanisms.

Saudi Arabia, meanwhile, has sought to expand its role as a regional energy hub through cross-border electricity interconnections with Iraq, Jordan, and Egypt, extending the Gulf's infrastructural diplomacy beyond the GCC. These linkages aim to project influence and diversify energy diplomacy at a time when global energy transitions are reshaping demand for oil and gas.

The governance of energy infrastructures in the Gulf combines commercial contracts, joint ventures, and intergovernmental institutions. The Dolphin Gas Project is managed by Dolphin Energy Ltd., a joint venture between Abu Dhabi's Mubadala Investment Company, Occidental Petroleum, and TotalEnergies (Daya, 2008, June 17). Its operations

are governed not by the GCC as an institution but by long-term contractual obligations, thereby insulating it from the turbulence of regional politics.

The GCCIA, by contrast, represents a rare example of a GCC-wide institution with a mandate to build and operate collective infrastructure. Headquartered in Dammam, it embodies the aspiration of the GCC as a political bloc to provide of tangible public goods (Baakeem et al., 2017:32). The limited utilization of the grid underscores the constraints of regional institutionalism: member states have preferred bilateral energy deals or domestic capacity expansion over reliance on a shared mechanism. This pattern illustrates a core trait of Gulf energy diplomacy: institutional governance often falters amid sovereignty concerns and rivalries. The 2017–2021 Gulf crisis made this clear. Even as Saudi Arabia, the UAE, and Bahrain cut ties with Qatar, the Dolphin pipeline continued uninterrupted (Cochrane, 2017, June 27). The UAE relied on Qatari gas to avoid shortages, while Qatar gained revenue and diplomatic leverage. Infrastructure thus acted as a disciplining force, constraining escalation despite political hostility.

The GCC grid, meanwhile, has been underused precisely because of political sensitivities. Some states fear dependency on rivals for critical electricity supply, while others use participation as a bargaining chip in wider disputes. At the same time, Saudi Arabia's push to export electricity to Iraq and Jordan positions infrastructure as an instrument of influence, strengthening cross-border dependencies that extend beyond the GCC and aligning energy diplomacy with regional geopolitics. Infrastructure vulnerability also heightens its diplomatic salience. The 2019 attacks on Saudi Aramco's facility highlighted how energy infrastructures could become also strategic targets (Cordesman, 2019). This vulnerability has encouraged Gulf states to explore redundancy through renewables, hydrogen corridors, and interconnections, further entangling infrastructure diplomacy with questions of security.

Energy Networks in the Context of Infrastructure Diplomacy

Energy infrastructure in the Gulf demonstrates how material networks and diplomacy are deeply intertwined. Pipelines and electricity grids create interdependence that constrains conflict: severing links would harm both provider and recipient, making escalation costly and encouraging pragmatic cooperation even in times of strain. Nevertheless these same networks also operate as tools of influence. Saudi electricity exports and Qatar's indispensable gas flows show how energy supplies extend leverage beyond borders, transforming commercial exchanges into strategic assets.

The diplomatic value of these infrastructures further depends on governance. The underuse of the GCC electricity grid highlights the weakness of regional institutions, whereas the Dolphin gas pipeline, managed through contractual mechanisms, has proven more resilient. This contrast suggests that hybrid or corporate frameworks often provide sturdier foundations for cooperation than intergovernmental schemes.

Taken together, these dynamics make energy interdependence the most durable anchor of Gulf diplomacy. Unlike railways or ports, which remain fragmented and contested, pipelines and grids embody material entanglements that both stabilize fragile relations and serve as bargaining resources in wider geopolitical disputes.

Comparative Insights and Patterns of Infrastructure Diplomacy in the Gulf

Considering the three large-scale infrastructure areas examined from the perspective of infrastructure diplomacy (railways, ports, energy logistics), shows how infrastructure works as a tool of diplomacy in the Gulf. Taken together, they reveal opportunities and the limits of using physical connections to manage relations in a region with deep political divisions.

In the Gulf region, infrastructure extends beyond its economic role and also shapes diplomacy in main patterns such as competitive projection, and material interdependence. Railway and land corridor projects represent the vision of Gulf unity. They are often promoted in GCC statements as proof of a shared destiny. Progress has been slow and uneven. While the idea of a connected regional rail network symbolizes integration, each country has advanced its own national projects rather than the collective plan. As a result, railways function more as political symbols than as instruments of practical diplomacy.

Ports and logistics hubs illustrate the opposite dynamic. Instead of fostering integration, they have become arenas of competition. Each state seeks to position itself as the region's main gateway for trade, expanding port capacities and logistics zones to attract global partners. This rivalry has also drawn in external powers such as China, India, and the European Union, turning ports into both local assets and tools of international influence. Energy infrastructures presents a different kind of diplomatic relationship by binding countries together through shared supply and demand and being harder to break. Disruption would be costly, making cooperation the pragmatic choice. The Dolphin gas pipeline, for instance, continued operating even during the 2017–2021 Gulf crisis, showing how energy links endure where other forms of connectivity fail. Here, governance through contracts and joint ventures has been more effective than reliance on regional institutions.

Comparing these cases reveals important insights. Energy systems prove the most resilient, sustaining cooperation even during political crises. Railways and ports, by contrast, remain fragmented by national ambitions and rivalries. Governance arrangements also shape outcomes: private agreements in the energy sector provide stability, while GCC-led projects like railways often stall due to concerns over sovereignty. Each infrastructure, therefore, carries a different diplomatic meaning—railways as symbols, ports as competitive arenas, and energy as anchors of stability.

Conclusion

The Gulf experience demonstrates that infrastructures perform a dual role in regional politics: they embed states in durable webs of interdependence that help stabilize relations, while simultaneously serving as arenas of competition where states and external powers struggle for influence and hub status. The evidence surveyed here makes this tension clear. Energy pipelines and electricity grids have anchored pragmatic cooperation even through political crises, whereas ports, logistics hubs, and corridor projects often function as zero-sum platforms for rivalry. Such variation underscores the need to take infrastructures seriously in the study of international relations—not as background conditions but as instruments that actively shape diplomacy and order.

The Gulf case demonstrates that infrastructures shape politics through their material permanence, their modes of governance, and their diverse diplomatic functions. Physical networks such as pipelines or ports cannot easily be dismantled by governments and bind states into patterns of interdependence that speeches or treaties alone rarely produce, yet their durability does not necessarily guarantee stability. How infrastructures are managed—whether through joint ventures, binding contracts, or weak intergovernmental bodies—determines whether cooperation persists in moments of crisis. Just as important is recognizing that not all infrastructures operate in the same way. Railways often remain symbolic promises of unity, ports function as competitive platforms for influence, and energy networks anchor the practical routines of regional interdependence. Taken together, these dynamics highlight the need for a more materialist and differentiated understanding of geo-economic statecraft, one attentive to both the stabilizing and divisive capacities embedded in infrastructure.

Practically, successful infrastructure diplomacy requires governance arrangements that combine binding commercial contracts with institutional oversight, building redundancy into supply chains and grids, preparing crisis-management protocols to prevent political ruptures from disrupting essential flows, and managing external partnerships to avoid overdependence on any single patron. Equally important is ensuring that infrastructure strategies link to local economies and incorporate environmental and social safeguards, thereby making them more resilient and politically sustainable. Attention to non-traditional risks—from cyber vulnerabilities in digital corridors to climate stresses on ports—should also be integrated into regional planning. Finally, while the Gulf provides a particularly revealing case, broader comparative research is essential. Contrasting its dynamics with other connectivity projects—whether in Southeast Asia, East Africa, or Europe—would help clarify when infrastructure fosters cooperation and when it sharpens competition.

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