

Hydropower, Resilience, and Infrastructural Diplomacy in the Nile Basin: Rethinking Strategic Agency in a Fragmenting Order

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Abstract: In an era of fractured multilateralism and resurgent resource nationalism, the Grand Ethiopian Renaissance Dam (GERD) stands as one of the most contested yet emblematic projects of the Global South's strategic agency. This study analyses how Ethiopia's pursuit of hydropower sovereignty reconfigures regional power relations and tests the limits of cooperative geoeconomics within the Nile Basin. Anchored in a mixed qualitative design, the research draws on field interviews conducted across Ethiopia, Sudan, and Egypt, complemented by policy documents and regional reports. The analysis reveals that the GERD represents more than an infrastructural endeavour; it embodies a shift in the balance of agency, where a lower-riparian power historically 'marginalised' in hydro-diplomacy leverages development finance and renewable energy transitions to redefine its geopolitical posture. While Ethiopian respondents framed the dam as an instrument of economic modernity and collective resilience, downstream perceptions shift between pragmatic adaptation and existential threat. Yet, across the Basin, a cautious recognition emerged that regional interdependence through electricity trade and cooperative dam management could convert hydro-political contestation into shared economic opportunities. The paper argues that the GERD illuminates a new mode of Global South agency: infrastructural diplomacy, where development megaprojects serve simultaneously as tools of domestic transformation and as a form of negotiation capital in fragmented global governance. Ultimately, the findings suggest that the future of Africa's geoeconomic sovereignty will depend not merely on resource control but on the institutionalisation of cooperative mechanisms that transform asymmetrical power into collective sustainability.

Keywords: *Geoeconomics, Global South, hydro-politics, infrastructural diplomacy, sustainable development.*

The contemporary international system is increasingly characterised by fragmentation rather than convergence. The erosion of liberal multilateralism, the diffusion of economic and political power toward multipolar configurations, and the resurgence of resource nationalism have collectively reconfigured how states pursue security and influence.^{1 2} In this unsettled order, the Global South is no longer merely a passive arena of great-power competition but an emerging site of strategic politicisation, where infrastructure, energy, and development finance are repurposed as instruments of geopolitical agency.³ This transformation is visible in the politics of transboundary rivers, where material scarcity intersects with historical hierarchies, colonial legal legacies, and contemporary struggles over sovereignty.

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The Grand Ethiopian Renaissance Dam (GERD) is situated within this fragmenting global order. While conventionally framed as a water dispute, the dam is better understood as part of a broader reordering of the global political economy, where control over infrastructure and energy has become central to statecraft. Scholars of geoeconomics have observed that states increasingly deploy economic assets as strategic tools through investment, market access, and infrastructural leverage, thereby avoiding the use of coercive military power.⁴ Simultaneously, Africa's position in global governance has shifted from structural marginality to selective agency, as states pursue autonomy through regionalism, development corridors, and infrastructure-led diplomacy.^{5 6} The GERD emerges as a hydropower project and critical node within this evolving landscape of geoeconomic power.

This study is grounded in a central research question: how can a single hydropower dam alter power relations in one of the world's oldest and most politically sensitive transboundary river systems? The Nile Basin has long been governed by asymmetrical arrangements institutionalised through colonial-era treaties, most notably the 1929 and 1959 Nile Waters Agreements, which entrenched Egypt's hydro-hegemony, alongside Sudan, while marginalising upstream states.^{7 8} Traditional hydro-politics theory explains basin dynamics largely through geographical positioning and military or diplomatic strength. However, the GERD challenges these frameworks. Ethiopia, historically excluded from formal Nile governance architectures, has mobilised domestic finance, national narratives of renaissance, and South-South partnerships to construct a project that materially alters both the river's physical flow and the symbolic architecture of power.

This paper argues that the GERD is more than a hydro-development intervention; it is also a geoeconomic instrument through which Ethiopia, and by extension, Africa, asserts strategic autonomy within an unequal global system. In this framing, the dam represents a form of infrastructural statecraft: hydropower generation becomes a mechanism for economic independence, regional bargaining, and political legitimacy. This interpretation builds on geoeconomic theory, which conceptualises infrastructure as a tool of influence,⁹ and on African political economy scholarship that emphasises how development projects are increasingly deployed as platforms for diplomatic leverage and sovereignty claims.^{10 11} Beyond treating GERD as an isolated technical undertaking, this study situates it within a wider pattern of Global South agency. Specifically, this paper focuses on efforts to convert developmental assets into geopolitical capital, and also as catalysts for peace and cooperation.

In this study, strategic agency refers to the capacity of states to use infrastructural, economic, and political resources to reshape bargaining relations and pursue developmental and geopolitical objectives within asymmetrical regional systems. While existing scholarship has examined the GERD primarily through legal, hydrological, and security lenses, far less attention has been paid to how the project functions as a geoeconomic instrument through which Ethiopia actively reshapes regional power relations. By reframing the GERD as a site of geoeconomic politics, not only a technical water dispute, this paper offers a critical intervention in debates on hydro-politics, infrastructural diplomacy, and Global South agency. It suggests that the politics of contemporary development megaprojects are not peripheral to global order, but central to how power is produced, contested, and redistributed.

Geoeconomics as Contemporary Statecraft

The concept of geoeconomics has emerged as a central framework for understanding how power is exercised in an international system. States are formulating geoeconomic strategies through political instruments, infrastructural leverage, and control over critical networks of production and circulation. Blackwill and Harris¹² define geoeconomics as “the use of economic instruments to promote and defend national interests, and to produce beneficial geopolitical results”. Their argument reflects a broader scholarly consensus that roads, ports, pipelines, digital infrastructure, and energy grids have become the primary terrains on which contemporary geopolitical competition is conducted.

This shift is structural; as Farrell and Newman demonstrate,¹³ global economic interdependence itself has become a weaponisable architecture of power, allowing states to exercise influence without conventional force by exploiting their centrality within financial and production networks. The strategic manipulation of market access, sanctions regimes, and infrastructural chokepoints reflects the emergence of what they term “weaponised interdependence.” In this configuration, control over nodes and hubs matters more than territorial occupation, and infrastructure becomes a material expression of geopolitical hierarchies.

However, much of the early geoeconomic literature remains implicitly anchored in the strategic experiences of established Western and East Asian powers. The dominant analytical assumption is that geoeconomic instruments flow from core states outward, with peripheral regions functioning as arenas of contestation. While analytically sophisticated, this bias overlooks how non-Western states are increasingly utilising infrastructure and development finance as autonomous strategic tools. Scholarly critiques have highlighted how this Euro-Atlantic framing reproduces older dependency assumptions under the language of “connectivity” and “integration”.^{14 15}

Reframed more critically, geoeconomics should be understood not only as an instrument of dominant powers but as a field of contestation in which emerging and historically marginalised states strategically repurpose development projects to rewrite asymmetrical power relations.¹⁶ This is particularly evident in the arena of large-scale infrastructure, where decisions about financing, ownership, and technological control are also decisions about sovereignty and autonomy. Infrastructure is not politically neutral; it embodies long-term strategic commitments that reorder domestic political economies and reshape regional power geometries.¹⁷

The increasing centrality of energy infrastructure exemplifies this transformation. Energy is not only a commodity but the material foundation of industrial capacity, military readiness, and political legitimacy. Control over energy generation and transmission, therefore, becomes a core vector of state power. As Bridge argues,¹⁸ energy infrastructures are now key sites where geopolitical and geoeconomic logics converge, linking domestic development directly to regional and global power struggles. In this sense, dams, power grids, and transmission corridors are not simply development tools but embedded elements of strategic statecraft.

If geoeconomics is treated only as the practice of major powers, the analytical significance of large-scale southern infrastructure is reduced to reactions and dependencies. Yet when infrastructure is

understood as a site of strategic production, projects like the GERD can be approached as deliberate technologies of sovereignty. As Deyi, Dou, Zhu, and Cheng agree,¹⁹ they allow states to reposition themselves within global markets, reduce vulnerability to external financial conditionality, and assert control over development trajectories that were historically organised by colonial and post-colonial hierarchies. This study adopts a relational understanding of geoeconomics, in which economic strategies are shaped through interactions among states and institutions, not just unilaterally imposed by dominant actors. In this sense, infrastructure operates as a strategic tool through which states negotiate autonomy, legitimacy, and interdependence.

African Agency in Global Governance

Conventional international relations scholarship has long framed Africa as structurally constrained within global governance, portraying African states primarily as sites of extraction, intervention, or donor dependency. This analytic tradition, rooted in dependency theory and modernisation frameworks, produced a persistent narrative of African passivity in international politics.^{20 21 22} More recent scholarship has decisively challenged this framing by demonstrating how African states exercise strategic agency through diplomatic manoeuvring in international negotiations,²³ coalition-building within regional and multilateral institutions, and institutional entrepreneurship.^{24 25} Alden and Schoeman²⁶ argue that African actors are increasingly functioning as “rule shapers rather than rule takers,” selectively engaging with global governance regimes to expand their bargaining space and policy autonomy.

This shift is closely tied to transformations in the global political economy. The diffusion of power away from a unipolar Western core has created new diplomatic openings for African states to leverage South-South cooperation, emerging donors, and competitive multilateralism. As Acharya argued,²⁷ the erosion of Western dominance has not led to anarchy alone, but rather to a more pluralistic order in which regional actors can negotiate norms and institutional arrangements with greater leverage than in previous eras. African agency is therefore increasingly exercised not through formal parity with major powers, but through strategic positioning within fragmented institutional architectures.

Empirical work on African political economy reinforces this interpretation. Taylor²⁸ demonstrates that Africa's engagement with rising powers such as China, India, and Gulf states has enabled forms of “diversified dependency,” in which external relations are strategically managed. This does not imply full autonomy; rather, it signals a constrained but real capacity to manipulate competitive external interests. Strategic agency, in this sense, is exercised through the choice of partners, the sequencing of reforms, and the tactical deployment of development priorities to extract concessions.

Within global governance, this agency increasingly materialises through infrastructure and development projects that function simultaneously as domestic economic tools and international bargaining chips. African states have learned to convert development imperatives into diplomatic capital, framing infrastructure, energy transition, and regional connectivity as global public goods while safeguarding sovereign control.²⁹ This practice represents an evolution in how African power is exercised: less through military or ideological alignment, and more through the strategic governance of development itself.

This conceptualisation provides the analytical bridge to the GERD case. Ethiopia's dam-building strategy is not an anomaly, but an intensified expression of this broader pattern of African strategic agency. In such instances, material development is deliberately mobilised to renegotiate hierarchical power relations within global and regional governance systems.

Ethiopia's Hydropower Strategy as Geoeconomic Statecraft

Ethiopia's hydropower strategy represents a deliberate shift from aid-dependent development to infrastructure-driven sovereignty. The Ethiopian state does not treat energy scarcity as a technical deficit; instead, it has reframed electricity generation as a foundational pillar of national autonomy, political legitimacy, and regional leverage. This approach aligns with Chen and Evers' conception of geoeconomics as the strategic use of economic instruments to achieve geopolitical objectives, where infrastructure becomes a tool of power and development.³⁰

Hydropower development, particularly through the GERD, exemplifies a logic of resource nationalism embedded within global green transitions. In an era where green development and sustainability projects are promoted, the construction of the GERD for energy production stands out. By positioning itself as a renewable energy hub, Ethiopia converts environmental discourse into diplomatic capital, in which the dam is both an internationally recognised green development and a structure for regional energy trade. This reflects what Huang and Nduneseokwu describe as "strategic African agency," whereby African states increasingly operate as agenda-setters instead of passive recipients within global governance structures.³¹

The geoeconomic significance of Ethiopia's hydropower strategy lies in its capacity to transform material capacity into bargaining power. Control over large-scale energy infrastructure enables Ethiopia to shape the terms of regional cooperation, particularly through electricity-export diplomacy and grid interdependence. Power interconnections with Sudan, Djibouti, and Kenya serve as technical linkages and also as political commitments embedded in market logic. Such strategies exemplify what Kaplan terms "infrastructure leverage," where physical assets become sources of long-term diplomatic influence through dependency relationships.³²

At the same time, this strategy exposes the contradictions of geoeconomic statecraft in the Global South. While hydropower strengthens Ethiopia's negotiating position, it also intensifies downstream insecurity, revealing how sovereignty-enhancing projects can generate new forms of regional vulnerability. Ethiopia's hydropower statecraft operates within a precarious balance between autonomy and interdependence, revealing the mutually constitutive relationship between national development and regional instability.

While hydropower expansion enhances Ethiopia's strategic leverage, it also raises questions about environmental governance, domestic inclusion, and the securitisation of development. The GERD is a geopolitical message that African states can mobilise domestic resources, alternative financing, and infrastructure nationalism to renegotiate their position in an unequal international system.

Theoretical Framing: Geoeconomics and Resilience

Recent debates in International Relations and political economy increasingly show that infrastructure, energy, and regional connectivity can no longer be treated as purely developmental concerns. They are now deeply tied to questions of power, strategic influence, and geopolitical positioning. Within this shift, the concept of geoeconomics has become particularly important for understanding how states use economic and infrastructural instruments to pursue political objectives. Blackwill and Harris³³ define geoeconomics as “the use of economic instruments to promote and defend national interests, and to produce beneficial geopolitical results”. Their argument challenges the traditional separation between economics and geopolitics by showing that trade, finance, energy, and infrastructure increasingly function as instruments of market statecraft. Scholars of African regionalism have also argued that strategic agency is not exclusive to dominant global actors. Power³⁴ contends that African states increasingly pursue influence through non-military regional bargaining, institutional negotiation, and economic diplomacy. Likewise, Söderbaum³⁵ argues that African regionalism should be understood beyond economic integration, as a political strategy through which states seek legitimacy, development, and external leverage within an unequal global order.

These arguments are particularly relevant to the politics surrounding the GERD, as Ethiopia historically remained central to the Nile's hydrology but marginal within its governance structure.³⁶ The GERD attempts to alter this historical imbalance through energy infrastructure, as the project is not only about electricity generation, but also about repositioning Ethiopia within the regional political economy of the Nile Basin. Through hydropower production, electricity exports, and regional grid interconnection, Ethiopia seeks to convert upstream geography into strategic leverage. In this sense, the dam fits within broader geoeconomic logics in which infrastructure becomes a mechanism for expanding bargaining power, developmental autonomy, and regional influence.

At the same time, geoeconomic explanations alone do not fully capture the contradictions surrounding the dam, and this is where the concept of resilience becomes analytically important. Critical resilience scholarship moves beyond the conventional understanding of resilience as simple recovery from crisis. Chandler³⁷ argues that resilience is better understood as the management of vulnerability and uncertainty within complex political systems where risks cannot be fully eliminated. Within energy politics, Apergi et al.³⁸ similarly show that attempts to strengthen energy security often redistribute risks and create new forms of dependence, tension, and geopolitical exposure.

Applying this perspective to the GERD reveals a more complicated regional reality than either celebratory or conflict-centred accounts usually suggest. For Ethiopia, the project represents an effort to reduce structural energy insecurity, expand industrialisation, strengthen export capacity, and enhance long-term developmental resilience. Yet the same infrastructure simultaneously generates fear in Sudan and Egypt over water availability, ecological vulnerability, and future dependence on upstream hydrological management. Although the GERD may strengthen Ethiopia's geopolitical influence within Africa, especially through regional energy markets, it may also complicate cooperation between Ethiopia and Egypt despite their recent BRICS+ alignment. Regional instability, particularly in Sudan, further demonstrates that infrastructure alone cannot resolve historically embedded political distrust.

This study approaches the GERD through the lenses of geoeconomics and resilience. Geoeconomics helps explain how hydropower infrastructure can function as a strategic instrument for regional influence and developmental autonomy. Resilience, however, foregrounds the uncertainties, contradictions, and vulnerabilities embedded within such projects, especially in contested transboundary systems. Taken together, these perspectives allow the paper to move beyond binary interpretations of the GERD as either a developmental breakthrough or a source of regional instability. Instead, the dam is understood as a resilience-oriented geoeconomic project whose political effects remain simultaneously transformative, contested, and uncertain within a fragmenting regional order.

Methodology

This study adopts a qualitative research design to examine how the GERD operates as an instrument of geoeconomic statecraft and strategic agency within the Nile Basin. Given the paper's focus on power, sovereignty, and meaning-making in a politically sensitive and asymmetrical transboundary context, a qualitative approach is particularly suited to capturing how different actors interpret development, risk, and cooperation beyond formal policy positions.

The empirical analysis draws on eighteen semi-structured key informant interviews conducted between August and October 2025 across Ethiopia, Sudan, Egypt, and other regions. Interviewees were selected through purposive and snowball sampling to include government officials, water and energy sector experts, academics from universities and research institutes, and representatives of international organisations engaged in transboundary water governance. This elite-focused sampling prioritised analytical depth over numerical breadth, allowing the study to examine strategic reasoning, institutional logics, and positional perspectives that shape Nile Basin politics.

To complement elite interviews, focus group discussions were conducted with civil society actors and community representatives in affected upstream and downstream contexts. These discussions provided insight into collective perceptions of legitimacy, environmental risk, and anticipated socio-economic impacts that are often absent from official and expert narratives. Where political sensitivity or access constraints limited in-person engagement, interviews were conducted remotely. All participants provided informed consent, and data were anonymised to ensure confidentiality.

Interview guides were semi-structured and organised around core themes including energy sovereignty, national development priorities, regional power relations, environmental sustainability, and prospects for cooperation. The study also undertook a documentary review of policy documents, regional agreements, African Union and Nile Basin Initiative reports, and relevant secondary literature to contextualise interview findings and trace how sovereignty and cooperation are formally articulated. Data analysis followed a thematic interpretive approach, combining inductive coding with engagement with the paper's geoeconomic framework. Triangulation across interviews, focus groups, and documentary sources enabled the identification of convergences and tensions between upstream and downstream perspectives, elite and community narratives, and policy discourse and lived experience. While the qualitative design does not aim at statistical generalisation, it provides analytically robust insights into how infrastructure-mediated power and agency are constructed and contested in a fragmented regional order.

Findings and Discussion

This section presents and interprets empirical findings derived from 18 key informant interviews (KIIs) conducted across Ethiopia, Sudan, Egypt, and other regions, institutions, and organisations. These were triangulated with documentary evidence from official policies, regional agreements, and secondary literature. The analysis is structured around three interconnected themes: (1) Energy Sovereignty as Strategic Agency, (2) Hydro-politics and the Reordering of Regional Power, and (3) Towards Cooperative Geoeconomics. The discussion goes beyond descriptive accounts to examine how the GERD functions as a geoeconomic instrument within a fragmenting global order, highlighting novel insights into African strategic agency.

Energy Sovereignty as Strategic Agency

Across interviews conducted in Ethiopia, the GERD was consistently framed as an assertion of energy sovereignty and a corrective to Ethiopia's historically constrained position within the regional and global political economy. Respondents rarely described the dam as a conventional hydropower project; rather, it was articulated as a strategic intervention designed to recalibrate Ethiopia's developmental trajectory and political autonomy. Sovereignty, in this context, is not narrowly understood as territorial control but as the capacity to govern energy production, development pathways, and external dependence.

Four interviewed policymakers and experts emphasised that the GERD is central to Ethiopia's effort to reduce reliance on imported energy, donor-driven infrastructure finance, and externally imposed development conditionalities. One Ethiopian journalist remarked that "from Ethiopia's point of view, the dam is something that really unites Ethiopians. I have never seen a voice against it" (KII, Addis Ababa, 2025). While this claim signals broad domestic legitimacy, it also illustrates the consolidation of a state-centred narrative that frames hydropower as a unifying national project, potentially marginalising criticism surrounding environmental risk, displacement, or regional diplomacy. These findings highlight how infrastructural megaprojects can function as instruments of symbolic nation-building, reinforcing state authority while narrowing the space for contestation.

The strategic framing of energy sovereignty extended beyond Ethiopia's domestic context to its regional positioning. Respondents linked the GERD to Ethiopia's capacity to redefine its role within the Nile Basin, shifting from a historically marginalised upstream state to a pivotal regional energy actor. A respondent from the Intergovernmental Authority on Development (IGAD) noted that while the dam generates fear in Egypt, Sudanese actors increasingly view it pragmatically, particularly as a potential source of electricity to meet growing demand. This perception underscores a crucial empirical insight: hydropower simultaneously alters material flows and regional interdependence, introducing electricity trade as a parallel logic to zero-sum water allocation. With an installed capacity of 5,150 MW, the GERD is Africa's largest hydroelectric project and is expected to generate approximately 15,700-16,153 GWh annually once fully operational. This scale matters geopolitically because it enables Ethiopia to convert upstream hydrology into a tradable asset. Ethiopia has already concluded electricity trade arrangements with Djibouti, Kenya, and Sudan, and has pursued wider connection plans with Tanzania and other East African states. In this emerging configuration, Ethiopia's

historically marginalised upstream position becomes a source of geoeconomic leverage, as downstream and neighbouring states acquire material incentives through cheap energy trade.

Interviewees repeatedly emphasised anticipated benefits such as industrialisation, expanded electrification, and employment generation. As the IGAD staff member observed, “for Ethiopia, the Renaissance Dam generates power not just to sell electricity but also to improve living standards and industrial development, which has economic implications beyond just hydro-related issues.” Similarly, a former technology development specialist at the Ethiopian Ministry of Water and Energy argued that the GERD would attract manufacturing investment by reducing electricity costs and improving access, noting that national electrification levels remain among the lowest in Africa. These claims demonstrate how energy sovereignty is framed not merely as control over infrastructure, but as productive capacity, linking hydropower to broader ambitions of economic transformation.

However, the findings also complicate celebratory accounts of infrastructure-led sovereignty. While respondents framed hydropower as a pathway to autonomy, this autonomy remains contingent on regional stability, grid interconnection, and political cooperation, factors beyond Ethiopia's full control. Several Ethiopian interviewees noted that despite the dam's inauguration, electricity transmission infrastructure remains incomplete in many surrounding communities, and the promised developmental dividends have not yet reached the estimated 60% who still lack reliable access to electricity. Moreover, escalating regional instability, particularly in Sudan, alongside Egypt's continued opposition, is likely to delay institutional outcomes such as the establishment of a Nile Basin Commission, undermining the cooperative governance mechanisms necessary for long-term sustainability.

Importantly, the findings show that Ethiopian actors do not treat the GERD as a technocratic energy project, but as a vehicle for redefining Ethiopia's place in the regional order. A former Technology Development Specialist at the Ethiopian Ministry of Water and Energy argued that “The GERD is also expected to drive industrial growth... multinational companies engaged in manufacturing are likely to benefit from cheaper electricity” (KII, 2025). Hydro-power sovereignty is both developmental and geopolitical: by scaling energy production, Ethiopia anticipates domestic transformation and also a stronger bargaining position vis-à-vis downstream states. Interview evidence indicates that the GERD functions as a strategic instrument through which sovereignty is performed, institutionalised, and projected outward, illustrating how Global South agency in a fragmented order increasingly operates through infrastructural development.

These findings resonate with Blackwill and Harris's conceptualisation of geoeconomics as the strategic use of economic instruments to achieve geopolitical objectives.³⁹ Yet the GERD case advances this literature by illustrating how geoeconomic statecraft in Africa is pursued not through sanctions or market coercion, but through developmental infrastructure embedded in renewable energy transitions. Unlike traditional hydro-hegemony frameworks that foreground conflict and domination, the data suggest that Ethiopia's strategy reflects a hybrid form of agency: one that simultaneously seeks domestic legitimacy, regional influence, and international recognition within a fractured global order. Energy sovereignty, as articulated by Ethiopian actors, functions as a form of strategic agency adapted to conditions of global fragmentation. Global South states increasingly leverage infrastructure not only

to meet developmental needs but to renegotiate their position within unequal regional and global systems. The findings, therefore, complicate linear assumptions that infrastructure necessarily produces shared resilience. While the GERD strengthens Ethiopia's energy and developmental ambitions, downstream actors frequently interpreted the same project as a source of ecological uncertainty, political asymmetry, and long-term vulnerability.

Hydro-politics and the Reordering of Regional Power

The construction of the GERD has precipitated a profound reconfiguration of hydro-political relations within the Nile Basin. This is achieved by altering material water flows and reshaping how power, risk, and cooperation are perceived and negotiated across riparian states. Interview data reveal that the dam has destabilised long-standing upstream-downstream hierarchies, producing differentiated responses that reflect each state's historical position, institutional capacity, and strategic vulnerability. Sudanese respondents largely articulated a pragmatic and conditional orientation toward the GERD, recognising both its potential benefits and associated risks. Unlike Egyptian narratives that framed the dam primarily as an existential threat, Sudanese perspectives were more ambivalent, emphasising opportunities for regulated water flows, flood control, and access to affordable electricity alongside concerns over dam safety and coordination. One respondent noted that while the project has tested diplomatic relations, it has also “created an unprecedented space for technical and political negotiations,” cautioning that mismanagement could escalate tensions between Ethiopia and Egypt. This reveals a critical empirical insight: for Sudan, the GERD is less a zero-sum contest over water sovereignty than a bargaining platform, where risk mitigation and benefit-sharing coexist uneasily.

This perspective demonstrates strategic recalibration. Sudanese actors appear to navigate between competing upstream and downstream interests, leveraging their intermediate position to extract technical and economic gains while avoiding full alignment with either Ethiopia or Egypt. This challenges conventional hydro-hegemony models that portray downstream states as uniformly resistant to upstream infrastructure and suggests instead a more fluid landscape of situational cooperation shaped by energy demand, infrastructure complementarities, and political pragmatism.

In contrast, Egyptian respondents consistently articulated deep-seated anxieties regarding water security, reflecting both material vulnerability and historically entrenched expectations of control over Nile flows. Interviewees repeatedly emphasised the risks posed by uncoordinated filling and operation, particularly for agriculture, urban water supply, and already-strained public infrastructure. One former senior official from the Egyptian Ministry of Water Resources and Irrigation underscored that about 25% of Egyptians did not have access to high-quality drinking water, or any drinking water at all. This situation preceded construction of the Ethiopian dam, highlighting how visible reductions in river levels symbolised a broader fear of systemic scarcity. These accounts illuminate that hydro-political concerns in Egypt encompass future projections and the amplification of pre-existing structural vulnerabilities.

Yet, even within this discourse of existential threat, the data reveal important fractures. Several Egyptian respondents acknowledged that unilateral opposition has diminishing returns and that institutionalised cooperation remains the only viable pathway to long-term stability. As one participant

noted, the Nile must ultimately be understood as “something that connects, something that should be managed in harmony.” This shift does not signal acceptance of Ethiopia’s actions, but rather an emerging recognition that power asymmetries codified under earlier legal and diplomatic regimes are no longer tenable in the face of infrastructural realities.

Taken together, these findings demonstrate that the GERD has reordered regional power not through coercion but through structural leverage embedded in infrastructure. Ethiopia’s control over hydropower generation has repositioned it from a historically peripheral upstream actor to a central node in regional negotiations, capable of shaping both diplomatic agendas and future energy markets. This supports Cascão and Nicol’s argument that upstream infrastructure transforms bargaining dynamics, but the empirical evidence extends this literature by showing that such reordering is neither linear nor deterministic.⁴⁰

Rather, power in the Nile Basin emerges as contingent, relational, and negotiated, mediated by stakeholder perceptions, historical grievances, and institutional trust deficits. In a fragmented regional order marked by weak enforcement mechanisms and competing development priorities, the findings show that the GERD has simultaneously destabilised old hierarchies and exposed the fragility of new ones. The dam thus functions not simply as a source of conflict or cooperation, but as a catalyst that renders the political economy of the Nile more visible, contested, and fluid.

Crucially, these findings reveal that hydro-politics and geoeconomics in the Global South cannot be understood solely through binary frameworks of upstream domination versus downstream resistance. Instead, the GERD case illustrates how infrastructure reshapes power, creating overlapping spaces of contestation and coordination that reflect the complexities of governance in a fragmented global and regional order.

Towards Cooperative Geoeconomics

Despite persistent tensions over water allocation and sovereignty, the interview data reveal the gradual emergence of cooperative geoeconomic logics within the Nile Basin, centred not on water redistribution but on shared infrastructure and energy interdependence. Across interviews in Ethiopia, Sudan, and Egypt, respondents repeatedly identified electricity trade, grid interconnection, and coordinated dam management as practical mechanisms through which hydro-political contestation could be reconfigured into economic cooperation. These findings suggest that cooperation is not premised on resolving deep-seated legal or historical disputes, but on reframing the object of negotiation itself, from water volumes to energy flows and developmental gains.

Ethiopian respondents consistently described regional electricity exports as both a domestic development strategy and a diplomatic tool. Interviewees highlighted ongoing and planned power transmission links to Sudan, Djibouti, Kenya, and other East African states, presenting the GERD as an infrastructural anchor for regional energy markets. As one respondent from Addis Ababa University noted, while the dam was built primarily to serve Ethiopian developmental needs, its impacts extend beyond national borders, creating opportunities for shared benefit. The data reveals how Ethiopia’s

geoeconomic strategy operates through selective inclusion, offering material incentives that encourage cooperation without relinquishing sovereign control over the infrastructure itself.

However, the data also underscore the conditional nature of this emerging cooperation. A senior Ethiopian energy expert observed that while the dam remains a flashpoint in regional relations, even limited institutional coordination, through joint management frameworks, electricity markets, or climate adaptation initiatives, could transform the GERD into a catalyst for stability. This conditionality is crucial: cooperation is envisioned not as a normative commitment to collective governance, but as a strategic calculation shaped by mutual dependence and risk mitigation.

Sudanese participants echoed this pragmatic orientation, emphasising the tangible benefits of coordinated operation, including flood regulation, energy access, and reduced reliance on fossil fuels. A regional coordinator at the Global Water Partnership highlighted how the dam could function as a source of trade and agricultural stability, reinforcing the idea that energy interdependence introduces positive-sum dynamics into a historically zero-sum hydro-political system. Importantly, Sudanese narratives positioned cooperation as a means of enhancing national resilience, illustrating how geoeconomic interdependence can coexist with strong sovereignty claims without sacrificing autonomy.

Egyptian respondents remained more cautious, consistently stressing the need for transparency, monitoring, and binding operational guarantees. Yet even within this scepticism, the data reveal an emerging recognition that electricity trade represents a concrete pathway to shared benefit. This marks a subtle but significant shift from opposition rooted exclusively in water security toward a more differentiated assessment of risk and opportunity. Cooperative geoeconomics is perceived as a mechanism for risk management, contingent on credible institutional safeguards, but not a resolution to Egypt's structural vulnerabilities. This ambivalence is significant because opposition to the GERD is not purely rejectionist; rather, Egyptian respondents simultaneously recognised the inevitability of regional interdependence while remaining deeply sceptical of asymmetrical upstream control.

Triangulated with existing literature, these findings extend geoeconomic theory beyond its traditional focus on coercive instruments such as sanctions or trade restrictions.⁴¹ Instead, interview evidence positions the GERD as a form of geoeconomic practice grounded in infrastructural inducement, in which development assets are leveraged to create interdependence without formal supranational governance. This aligns with African regionalism scholarship that conceptualises cooperation as flexible, interest-driven, and institutionally thin,^{42, 43} yet the empirical evidence advances this literature by showing how large-scale infrastructure operationalises such cooperation in practice.

Crucially, cooperative geoeconomics in the Nile Basin remains fragile and uneven. The findings suggest that the GERD does not dissolve asymmetries of power; rather, it redistributes them across new domains. Electricity markets, grid control, and operational coordination become new sites of negotiation and potential contestation. These findings challenge optimistic narratives of infrastructure-led integration and highlight the political work required to sustain interdependence in a fragmented regional order.

Interview evidence indicates that the GERD exemplifies a novel mode of Global South agency, where sovereignty and cooperation are not oppositional but strategically intertwined. Through what this study conceptualises as infrastructural diplomacy, Ethiopia leverages hydropower development to assert autonomy while simultaneously offering pathways for regional engagement. African states navigate fragmented global governance not by retreating into isolation or relying on external guarantors, but by converting developmental infrastructure into diplomatic capital. This contribution reframes transboundary hydro-politics as a site where geoeconomic strategy, regional ordering, and post-liberal forms of cooperation intersect.

Conceptual Contribution: Infrastructural Diplomacy in a Fragmenting Order

Infrastructural diplomacy has emerged in critical political economy and international relations scholarship as an analytical lens for understanding how large-scale material systems operate as instruments of power, governance, and negotiation beyond formal diplomatic channels. Infrastructure is not a passive outcome of political decision-making, as is often thought; this paper instead conceptualises infrastructure as constitutive of political order, structuring relations of dependence, shaping strategic horizons, and redistributing agency across scales.^{44 45} The core assumption underpinning infrastructural diplomacy is that material connectivity itself has diplomatic effects: infrastructure embeds political bargains into physical systems whose operation generates enduring patterns of cooperation, constraint, and leverage.

The findings from this study refine infrastructural diplomacy in three important respects. First, they show that infrastructural diplomacy in the Global South is a strategy of agency under conditions of fragmented global governance, where states cannot rely on robust multilateral enforcement or neutral arbitration. Infrastructure becomes a means of stabilising strategic claims by embedding them in long-term material arrangements. Second, the data show that infrastructural diplomacy operates through strategic ambiguity: the same project can assert sovereignty, produce leverage, and invite cooperation without resolving underlying political disputes. This ambiguity is not a failure of diplomacy but a constitutive feature of how infrastructure governs over time. Third, infrastructural diplomacy is relational and contingent, shaped by perceptions of risk, historical memory, and institutional trust.

Within this literature, infrastructure is understood to function as a modality of statecraft that operates through inducement and interdependence, not coercion. Cowen⁴⁶ demonstrates how logistical and infrastructural systems reorganise sovereignty by privileging corridors, nodes, and flows over territorial control, while Easterling⁴⁷ shows how infrastructure spaces act as quasi-governance mechanisms that reshape authority outside conventional institutional frameworks. In regional studies, particularly in the Global South, scholars have observed how energy pools, transport corridors, and connectivity projects increasingly serve as platforms for regional ordering in contexts where formal multilateralism is weak or contested.^{48 49}

This study advances the concept of infrastructural diplomacy by situating it within the hydro-politics of the Nile Basin and by analytically integrating it with geoeconomic and hydro-political debates. Existing hydro-hegemony frameworks have been instrumental in revealing how power asymmetries shape transboundary water relations, particularly through control over flows, narratives, and

institutional agendas.⁵⁰ Yet, the GERD case demonstrates that contemporary infrastructural power does not operate solely through domination or denial. Instead, infrastructure reconstitutes the terrain of politics itself by shifting the locus of bargaining from water allocation to energy production, grid interconnection, and regional development trajectories. In this context, power is exercised less through exclusion than through selective incorporation into material systems, which generate dependence and opportunity simultaneously.

By grounding infrastructural diplomacy in the empirical dynamics of the GERD, this paper extends the concept beyond abstract discussions of connectivity and development. It shows how infrastructure functions as a form of geoeconomic statecraft through which Global South states actively negotiate asymmetry, rework regional orders, and convert developmental assets into power. In doing so, the paper contributes to broader debates on sovereignty, regionalism, and power in international relations by demonstrating that, in a fragmenting order, diplomacy is increasingly exercised through the politics of material systems, in this case, shared resources.

Conclusion

The contest surrounding the Grand Ethiopian Renaissance Dam reveals more than a dispute over water allocation; it exposes a deeper reconfiguration of power, agency, and governance in a fragmenting global order. This study has shown that the GERD operates as a geoeconomic instrument through which Ethiopia seeks to reassert sovereignty, recalibrate regional hierarchies, and negotiate its position within an increasingly multipolar and institutionally weakened international system. In doing so, the dam unsettles long-standing assumptions embedded in Nile hydro-politics, particularly the notion that structural power in transboundary river basins remains firmly anchored in downstream dominance and legal precedent.

The findings complicate prevailing hydro-hegemony frameworks by demonstrating that material control over water flows alone no longer exhausts the sources of influence in contemporary river basin politics. Instead, Ethiopia's strategic leverage derives from its ability to convert hydropower infrastructure into multiple forms of capital: domestic legitimacy, regional energy indispensability, and bargaining power in diplomatic arenas where enforcement mechanisms are thin and norms are contested. This shift reflects a broader transformation in Global South statecraft, where large-scale development projects increasingly substitute for formal multilateral guarantees, allowing states to exercise agency under conditions of institutional fragmentation.

The reordering of power produced by the GERD remains profoundly contingent, mediated by historical grievances, uneven institutional capacities, and deeply asymmetrical perceptions of risk. While Ethiopian narratives emphasise renaissance, autonomy, and developmental justice, Egyptian anxieties foreground vulnerability and existential insecurity, revealing how infrastructural power can simultaneously enable integration and entrench mistrust. Sudan's pragmatic ambivalence further underscores that regional alignment is not predetermined but negotiated, shifting with perceived material gains and governance assurances. In this sense, the GERD exemplifies how infrastructural agency in a fragmented order generates new political possibilities while reproducing new forms of uncertainty.

Crucially, the paper advances the concept of infrastructural diplomacy to capture this duality. Infrastructural diplomacy operates through ambiguity; it allows states to assert sovereignty while leaving cooperation open-ended, to generate leverage without foreclosing integration. Yet the findings also caution against reading infrastructural diplomacy as inherently stabilising or transformative. The GERD demonstrates that infrastructure can generate new forms of dependence and geopolitical vulnerability even as it expands developmental capacity and regional influence. In transboundary systems marked by historical distrust and uneven power relations, resilience remains politically uneven: the same infrastructure that strengthens sovereignty claims for one state may deepen insecurity for another. The future of regional cooperation in the Nile Basin, therefore, depends on energy integration and economic interdependence, as well as the ability of regional institutions to manage uncertainty, asymmetrical risks, and competing political imaginaries surrounding the river.

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