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Shifting Sands: A Middle East in Conflict and Transition

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Contents

Editors' Note

The Middle East is undergoing a churn that began in October 2023 with Hamas's attack on Israel. Since then, Israel has mobilised a maximalist military campaign across the region, leading to a direct confrontation in February-end involving the United States (US) and Israel on one side and Iran on the other. In March, the US and Israel again targeted Iran, prompting Tehran to mobilise a strategy of striking neighbouring Gulf states to intensify the conflict and turn it into a global one, hoping it would shift the tide against Washington, DC, through international economic shocks.

Today the conflict resembles a new Cold War. A resumption of hostilities remains likely amid a precarious ceasefire, as the core drivers of these military exchanges—chief among them Iran's nuclear programme—remain unresolved. Instead, the closure of the Strait of Hormuz, through an Iranian blockade and a counter-blockade by the US, has disrupted maritime trade, energy supplies, and food security, with cascading effects on global economic outcomes. As economies absorb the impact of high prices and disrupted supply of essential commodities—from oil and gas to fertilisers—regional geopolitical dynamics continue to shift and realign, reinforcing a narrative of instability in the near term.

This report seeks to align these developments within a focused research scope, examining how the Middle East may be analysed in the coming weeks and months within global systems.

In the first chapter, **Mahdi Ghuloom** argues that the Iran-US-Israel conflict and its ramifications on the Gulf States have shaken the region's "oasis model" and pushed its foreign policy towards short-term economic recovery and hard security imperatives. While long-term strategic ambitions remain in place, the conflict has exposed vulnerabilities across the GCC, particularly around trade chokepoints, expatriate confidence, tourism, and defence. In response, the Gulf states are likely to prioritise investment reassurance, domestic stabilisation, alternative trade corridors, and deeper defence cooperation with the United States and its allies.

Samriddhi Vij and Akram Zaoui follow with a review of key aggregates to assess how non-Gulf economies in the Middle East and North Africa (MENA) differ in their ability to cushion their economies against shocks, and how the Middle East crisis both catalyses and reveals diverging trajectories. While energy exporters fare better—with North African producers positioned to benefit—the structural driver of resilience remains a commitment to better policymaking and reform which, in turn, is informed by more robust domestic institutions.

Focusing on chokepoints, energy, and connectivity, **Mannat Jaspal and Reem Sagahyyroon** argue in their chapter that the Strait of Hormuz crisis has triggered one of the world's most severe energy shocks in recent history, disrupting over 13 million barrels per day of supply and exposing the fragility of global energy systems. While prices remain temporarily contained due to reserves, alternative routes, and stockpiling, structural constraints—damaged infrastructure, limited pipeline capacity, and rising insurance risks—will prolong supply uncertainty.

The ceasefire offers limited relief, and energy shortages are far from over. Extending their view beyond energy, **Cauvery Ganpathy and Leigh Mante** examine the centrality of the Middle East to multiple global supply chains, apart from oil and gas, making it difficult to localise and limit the impact of the crisis. This essay explores the longer-term effects of supply chain upheavals and infrastructural damage on food, water, and economic security within the region and beyond.

Finally, sustainability and the protection of technological assets in conflict zones have expanded beyond military concerns into the civilian domain. **Elizabeth Heyes** investigates how technological infrastructure is increasingly exposed to geopolitical, climate, and cyber risks that are interconnected and difficult to contain. The report closes with an article by **Siddharth Yadav,** which considers how technological sovereignty may evolve and argues that recent developments in the Middle East have shifted the debate from an abstract policy concern to an immediate strategic priority.

1

The Gulf's Short-Term, Post-Conflict Foreign Policy Goals

Mahdi Ghuloom

The Iran-US-Israel conflict has shaken the "oasis" model of the Gulf states. Economic momentum has slowed, with damage to infrastructure, disrupted production, constrained exports, and a decline in tourism and business activity.[1] For the foreseeable future, Gulf foreign policy will prioritise economic recovery and hard security above all else. While long-term strategic goals remain intact, the crisis will temporarily reorient policy toward near-term economic and defence gains, potentially at the cost of other long-term priorities.

Priorities for Economic Recovery

The crisis has exposed the Gulf's economic vulnerability to political volatility—a surprise for a sub-region long accustomed to peace and stability. Estimates by the United Nations Development Programme (UNDP) suggest that the Gulf Cooperation Council (GCC) states could lose between 5.2 and 8.5 percent of their Gross Domestic Product (GDP) due to trade disruptions and energy market volatility.[2] Oxford Economics, meanwhile, downgraded aggregate GCC real GDP growth for 2026 by 4.6 percentage points, reflecting reduced oil production, exports, tourism, and domestic demand, with Qatar, Kuwait, and Bahrain most affected.[3] It considers Saudi Arabia and Oman as less affected, likely owing to their geographic positioning and relative insulation from direct attacks. Yet even these more sheltered states will draw lessons from the resilience and recovery efforts of their neighbours.

Investment promotion agencies and advisories across the Gulf are reassuring international firms of the sub-region's resilience despite a challenging economic backdrop.[4] To demonstrate such resilience, Gulf states will need to redouble efforts to attract inward investment, with promotion agencies working alongside diplomatic missions to sustain market appeal. An uptick in overseas

investment roadshows is likely, as the Gulf seeks to position itself as a capital destination despite damage to its security image. Gulf states are also supporting one another: the UAE and Bahrain, for instance, conducted a US$5.44-billion currency swap[5] that ended up enabling Bahrain to provide loan deferrals[6] and salary support[7] to the private sector.

Sustaining the flow of expatriates and tourists will be equally important to restoring the Gulf's economic value proposition. The continued resumption of flights, despite ongoing disruptions, reflects this imperative. Even Bahrain, which temporarily closed its airport, saw its national carrier maintain limited operations out of neighbouring Saudi Arabia.[8] Despite such efforts, the conflict has taken a psychological toll on foreign nationals, many of whom are reassessing whether the Gulf's appeal outweighs the risks of Iranian hostility.[9] To restore confidence among the risk-averse, Gulf states will need to rebuild trust through targeted outreach to sending countries, reassuring their populations that the region remains safe and resilient.

The inward turn to shore up the economy may come at the expense of the Gulf's outward investment ambitions—particularly those designed to accumulate political influence rather than deliver solid financial returns. Credible reports indicate that some Gulf states are considering reversing investment pledges, pursuing divestments, and re-evaluating global sponsorship deals. *Reuters* has reported that the reassessment extends across global holdings, not only US assets.[10] One illustration is the Saudi government's reported withdrawal from a US$200-million deal with New York's Metropolitan Opera, America's foremost opera company.[11] Yet, these reports likely tell only part of the story: US investments remain financially attractive, and many will stay in place. The logic underpinning any reversal is one of greater risk aversion—where the Gulf once tolerated financial uncertainty, the imperative of economic security now narrows that appetite. This reflects a broader recalibration of sovereign wealth strategy: from influence-building to domestic stabilisation.

Smaller Gulf states are more likely to redirect their sovereign wealth toward domestic economic security, given that the conflict's economic consequences have fallen unevenly across the GCC.[12] Larger states—Oman, Saudi Arabia, and the UAE—have alternative routes to circumvent the closure of the Strait of Hormuz, the principal source of economic disruption, via the East-West Pipeline in Saudi Arabia and the Habshan-Fujairah Pipeline. Smaller states—Qatar, Kuwait, and Bahrain—lack such alternatives, with Bahrain particularly exposed given its limited sovereign wealth buffer. This will likely generate momentum for channelling collective funds toward trade corridors that reduce dependence on chokepoints such as the Strait of Hormuz, enhancing Gulf economic security.[13] Overland infrastructure supporting freight transport is particularly relevant here—exemplified by the plans for the GCC Rail project and the India-Middle East-Europe Economic Corridor (IMEC). Saudi Arabia has already moved to establish trade corridors redirecting goods from its Eastern Region ports and other GCC hubs to Jeddah Islamic Port and other Red Sea outlets.[14]

Such bypasses connect Gulf exports to global markets without transiting the Strait of Hormuz, benefiting all economies reliant on Gulf energy and goods. These alternative economic corridors are likely to be framed as a shared global opportunity—and responsibility—particularly for partners in Asia and Europe who rely heavily on Gulf output. The conflict has made plain that when Gulf output suffers, the world suffers too—reinforcing the case for a foreign policy oriented toward securing economic resilience.

A Foreign Policy Calibrated for Hard Power

The Gulf States have long pursued a foreign policy centred on strategic diversification. While the US remains a cornerstone partner, there has been persistent speculation about Gulf hedging strategies involving Russia and China. That approach will now be reoriented toward what delivers immediate hard security and military capability—even at some cost to strategic autonomy—to build resilience against future threats.

All six GCC states faced a shared threat during the conflict and activated their national air defence systems in response.[15] The prospect of an integrated GCC air defence system has gained renewed salience, alongside a deepened commitment to joint military exercises such as Gulf Shield 2026.[16] Where integration stalls due to intra-GCC trust deficits, one course of action remains near-certain: intensified procurement of defence systems from the US and US partners.

Longstanding US-Gulf security cooperation, particularly in defence procurement, was put to the test during the Iranian attacks and proved its value. Defence procurement trends, reflected in an analysis by the International Institute for Strategic Studies, show that since 28 February 2026, the US has been joined by Australia, France, Italy, South Korea, Ukraine, and the United Kingdom in providing military assistance to Gulf states, ranging from the deployment of RAF Typhoons to anti-UAV specialist advisers.[17] Over the next two years, Gulf states anticipate deliveries of air defence systems from Spain, South Korea, France, and the United Kingdom, supplementing traditional US imports—including surface-to-air and air-to-air missiles. These partner nations share broadly compatible security and political architectures with the US, with one notable exception—Russia's weapon exports to Saudi Arabia.[18]

By turning to other US allies for military support, the Gulf states signal that their primary defence orientation remains firmly toward Washington. At the same time, given the US emphasis on burden-sharing, engaging allied partners serves to reduce friction with their main defence guarantor.[19] This extends beyond the examples above to potentially include India, Pakistan, and other Asian partners. Not all partners proved equally useful during the conflict, however, lending weight to the observation by Anwar Gargash, diplomatic adviser to the UAE President, that Abu Dhabi would reassess its regional and international relationships "with clarity and precision."[20] A new realism is thus taking shape in Gulf foreign policy—one that prizes diversity and pragmatism in interstate relations above all.

This dynamic allows the Gulf states to navigate an emerging paradox. Their close alignment with the US may have lent credibility to Iran's narrative that its attacks on Gulf countries are a direct consequence of their partnerships with Washington—and, in certain cases, with Tel Aviv. Yet that same proximity is widely regarded as indispensable, given the proven effectiveness of security cooperation with the US and its allies. The Gulf states increasingly reject the notion that distancing themselves from Washington would temper Iranian hostility, opting instead to prioritise deterrence through deeper strategic alignment.

Absent an assurance that Iran would refrain from aggression regardless of Gulf foreign policy choices, maintaining a US-aligned posture and investing in hard security capabilities remains the most reliable means of protecting the Gulf's home front against Iranian threats and other potential aggressors. That said, the degree to which individual states embrace this posture varies, shaped by each country's own calibration of its relationship with Tehran. Oman stands as the most notable exception, given its longstanding policy of maintaining cordial—perhaps pragmatic—ties with the Islamic Republic.

Conclusion

The Gulf's response to the conflict may prove temporarily transformative, giving rise to a foreign policy defined by urgency and shaped by the pursuit of immediate, tangible returns—whether economic inflows or hard security guarantees. This, however, carries inherent risks if it solidifies into a long-term posture, particularly as their most volatile neighbour appears poised to emerge from the conflict more dangerous and destabilising than before. An excessively short-term orientation risks narrowing strategic horizons, eroding diplomatic manoeuvrability, and diminishing long-term regional influence. The primary challenge for Gulf states, therefore, is to build resilience and insulation in the near term without compromising the very foundations of the "Gulf model" that have underpinned their stability and prosperity.

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2

The Economic Implications of the Middle East Crisis: Measuring Preparedness in the MENA

Samriddhi Vij and Akram Zaoui

The Arab region faces multiple acute fragilities. Seven countries are classified by the World Bank as fragile or conflict-affected.[1] Climate change is straining productive systems and societies, affecting agricultural output (and related employment) and putting pressure on infrastructure. Growth has been tepid and is failing to reduce persistently high youth unemployment rates, while food insecurity has deepened.

As a result, the region remains vulnerable to recent shocks, and the unfolding Middle East crisis could have serious implications to these economies. The April 2026 World Economic Outlook[2] and Regional Economic Outlook for the Middle East and Central Asia,[3] both by the International Monetary Fund (IMF), project a sharp decline in growth across the Middle East, North Africa, Afghanistan and Pakistan (MENAP) region, with forecasts revised down to 1.4 percent—2.3 percentage points decrease from projections made last October. But this accounts for sharp economic compressions in Gulf countries, particularly those most dependent on the Hormuz Strait for their exports, with expected downward revisions of up to 15 percentage points.

This article proposes a general, introductory framework to assess the preparedness of select non-Gulf, majority-Arabic-speaking countries in the MENAP region to cushion the unfolding shock. Deliberately, the article does not cover member states of the Gulf Cooperation Council (GCC): although they are in the eye of the storm, these high-income economies can arguably collectively weather the shock owing to their vast endowments in sovereign wealth.

Roughly, and despite disparities within each category, the analysis of select metrics justifies dividing studied countries into three categories: non-GCC member states of the Organisation of Petroleum Exporting Countries (OPEC); non-OPEC, conflict-affected countries; and non-conflict-affected, triple-deficit (energy, fiscal and current account) countries. Fundamentally, the authors' observations confirm the capital importance of expertise embeddedness, political stability, and reform-mindedness to adapt to multiplying shocks.

Measuring Preparedness

Table 1. Economic Preparedness Profiles in Select Arab Economies

	Economic Complexity Index (Score, 2024)	Total Reserves (Current US$, millions, 2024)	Net Energy Imports (% of Energy Use, 2022)	General Government Gross Debt (% of GDP, 2024)	General Government Net Borrowing (% of GDP, 2024)
Algeria	-1.06	83,007.11	-127	48.1	-10.2
Egypt	0.08	44,921.34	10	90.9	-6.6
Iraq	-1.55	100,690.95	-275	45.2	-6.4
Jordan	0.09	21,939.1	96	82.1	-5.5
Lebanon	0.39	33,301.28	97	157.9	3.3
Libya	-1.71	92,893.71	-250	Data unavailable	-20.9
Morocco	-0.06	37,133.91	94	67.7	-3.5
Sudan	-2.13	177.93 (2017)	19	262.6 (est.)	-4.4
Syria	Data unavailable	20,631.91 (2010)	61	Data unavailable	Data unavailable
Tunisia	0.55	9,346.6	53	85.7	-7.4
Yemen	-1.74	1,250.83	11	Data unavailable	-1.2

Sources: Atlas of Economic Complexity, IMF, World Bank [4]

The metrics proposed in the following paragraphs are not exhaustive but provide a useful overview. Typically, they could be complemented by data measuring exposure to certain categories of external financing (for instance, remittances from Gulf countries), fiscal flexibility (e.g., transfers to state-owned enterprises and subsidies, notably on fossil fuels), the quality of macroeconomic management (as expressed by inflation rates), or the overall trajectory of the studied economies (such as observed trends in growth or gross fixed capital formation).

Net Energy Imports as Share of Consumption

While the MENA region includes major energy exporters, it also includes countries that import the vast majority of their energy consumption (over 90 percent in three cases).[5] When the current account balance of net importing countries suffers from hikes in energy prices, net exporters can experience windfalls. Examining the current account deficit can serve as a complement, as it provides further insights into the additional stress that a higher energy bill can bring on the external financing needs, foreign currency reserves, and overall trade conditions of net importers.

General Government Gross Debt

Government gross debt-to-GDP ratios indicate fiscal discipline and provide a snapshot of a country's capacity for fiscal response during periods of stress. Importantly, whether levels decrease over time provides indications on the robustness of fiscal policy. Ratios were steep in Lebanon (157.9 percent), which defaulted on its sovereign debt in 2020, but stood below 50 percent in fuel-exporting Iraq and Algeria.

General Government Net Borrowing

General government net borrowing (i.e., fiscal balance) serves as an indicator of a country's ability to manage public spending. Containing spending, in turn, is an indication of the ability to rationalise it or direct it towards domains or sectors where possible returns can be highest. It is also how fiscal buffers are constituted, which allows for more flexibility in adverse circumstances. The fiscal balance should be read dynamically: if it decreases, it may be an indication of ongoing fiscal consolidation, a complex and high-stakes process which can speak of policy sophistication. Amongst the countries studied in this article, Morocco stands out for a relatively healthier fiscal position (3.5 percent fiscal deficit). Libya stands on the other end of the spectrum: its deficit (20.9 percent) indicates serious economic mismanagement.

Foreign Reserves

Total foreign reserves, as reported by the World Bank, serve as a sovereign economy's primary buffer against external shocks: financing import disruptions, stabilising exchange rates, and maintaining debt servicing when revenues fall.[6] Iraq (US$100.7 billion) and Libya (US$92.9 billion) hold the largest reserves; Algeria (US$83.0 billion) and Egypt (US$44.9 billion) offer meaningful, though more constrained, cover. At the extreme of vulnerability sit Sudan (US$178 million, last reported in 2017), and Syria, where reserves (US$20.6 billion in 2010) have collapsed to an estimated US$200 million by December 2024.[7]

Economic Complexity Index

The Economic Complexity Index (ECI), maintained by the Harvard Kennedy School's Growth Lab, measures the productive knowledge embedded in a country's export basket.[8] Higher values generally reflect more diversified, sophisticated economies, stronger technology embeddedness in domestic production, greater participation in complex global value chains driven by higher competitiveness, and more skilled employment and management. It also demonstrates the ability to conduct successful industrial policy—another indicator of policy sophistication. From this standpoint, countries like Tunisia (0.55) and Jordan (0.09) may still demonstrate adaptive capacity. Sudan (−2.13), Yemen (−1.74), and Libya (−1.71), all in the midst of conflicts, are the most acutely exposed.

Understanding Preparedness

Energy Exporters: The Liquidity Firewall

Iraq, Algeria, and Libya are in the best position to absorb the immediate shock. All three are net energy exporters: Iraq at −275 percent of energy use, Libya at −250 percent, and Algeria at −127 percent. Their reserves reinforce this position: Iraq holds the sample's largest cushion at US$100.7 billion, followed by Libya at US$92.9 billion and Algeria at US$83.0 billion. Debt burdens are comparatively the most manageable: Iraq at 45.2 percent of GDP and Algeria at 48.1 percent, the two lowest ratios with available data.

Therefore, economic preparedness for this crisis exists despite their structural lack of economic sophistication. United by their status as fuel-exporting states, they share markedly lower ECI scores: Iraq (−1.55), Algeria (−1.06), and Libya (−1.71). However, in the acute phase of an exogenous shock, industrial diversification is secondary to brute liquidity and energy sovereignty.

However, the closure of the Strait of Hormuz reveals a stark geographic bifurcation within this cohort's resilience. For the North African producers, Algeria and Libya, a Hormuz blockade represents a pure macroeconomic windfall, as their hydrocarbon export infrastructure routes face no logistical disruption from an Arabian-Persian Gulf chokepoint closure.[9] Instead, they stand to reap immense financial benefits from the resulting catastrophic spike in global energy prices, heavily reinforcing their liquidity firewalls.

Conversely, Iraq faces acute physical vulnerability, as the overwhelming amount of Iraqi crude is exported via the Strait of Hormuz. Iraq exports approximately 93 percent of its crude through Basra's Gulf terminals.[10] As this maritime artery is severed, Iraq's primary revenue mechanism drops significantly. Despite this geographic divergence, they remain grouped together because their initial shock-absorption pattern is identical. In the face of this crisis, the "resource curse" is observed to reverse and present a "resource boon" instead.[11]

Non-Conflict Affected, Triple-Deficit Countries: Reform Means Protection

The group of non-conflict-affected, lower-middle income countries comprises Egypt, Jordan, Morocco, and Tunisia. These economies share

several structural features, including greater reliance on productive sectors and tourism for foreign exchange, employment, revenue, and trade, as well as relatively higher ECI scores, indicating strong economic fundamentals. Yet, the dynamics within the group diverge widely.

While relatively robust monetary frameworks and foreign exchange reserves provide some stability, Jordan faces several vulnerabilities. It is the most energy import-dependent of the four (96 percent) and has limited fiscal space, with the highest central government debt-to-GDP ratio (95.90 percent) and the second-highest fiscal deficit (5.45 percent).

Egypt and Tunisia import less energy (net imports were, respectively, about a tenth and half of total use for the year considered), but both display relatively high levels of government debt-to-GDP (between 85 and 90 percent). That said, their exposure markedly differs. Egypt has engaged the IMF and international partners, which have provided financial resources in exchange for a series of reforms, including fiscal consolidation and exchange regime liberalisation, which should help navigate the current shock. In contrast, rigid policymaking and a lack of substantial reforms (on energy subsidies, for instance) will weigh on Tunisia's budget, currency, and trade.

Last, Morocco appears to have the most robust policymaking, with ongoing fiscal consolidation driving the fiscal deficit to about 3 percent and the central government debt-to-GDP ratio below 70 percent. As a result, the country appears to be better endowed with fiscal buffers and therefore best prepared to absorb the shock.

However, despite having more complex economies indicated by relatively higher ECI scores, paradoxically and overall, this cohort remains relatively less prepared than the energy exporters to manage the immediate aftermath of the crisis, as its calculus demands raw liquidity and energy sovereignty.

Conflict-Affected States: The Insolvent Periphery

Yemen, Sudan, Syria, and Lebanon form a grouping defined not by their capacity to absorb shocks, but by their prior exhaustion of such capacity. Each has experienced compounding conflict, eroding all key preparedness metrics even before the current crisis began.

Reserve positions illustrate the extent of this erosion. Yemen's reserves stood at US$1.25 billion (2022); Sudan's at US$177.9 million, with 2017 the last reliable data point—reflecting severe state dysfunction. Syria's reserves, reported at US$20.6 billion in 2010, are estimated at US$200 million by end-2024.[12] Yemen scores −1.74 on the ECI (135th globally) and Sudan −2.13 (138th), the lowest in the sample. Sudan's debt-to-GDP of 271.98 percent and Lebanon's 164.1 percent are also the worst in the sample.

Lebanon merits distinction. Its ECI of 0.39 (54th globally) and reserves of US$33.3 billion reflect a historically sophisticated economy that is now regressing rapidly. The country has been engulfed in war since October 2023, with the new bout of hostilities costing it billions more in infrastructure.[13] The World Bank estimated that cumulative real GDP contraction since 2019

exceeded 38 percent by end-2024, with the 2024 conflict inflicting a further 6.6 percent decline.[14] Between 2019 and 2021, output shrank 58.1 percent, the steepest contraction across 193 countries.[15]

Similar patterns are evident elsewhere, Sudan's real GDP fell by 37.5 percent in 2023.[16] Syria's GDP in 2024 cumulatively contracted by over 50 percent since 2010. Claims that the state has attracted US$28 billion in foreign investments over a 10-month period are unlikely to turn the tide, not least as most of these deals are non-binding memoranda of understanding with no enforceable legal frameworks.[17] Similarly, Yemen also experienced a 54 percent decline in real GDP per capita between 2015 and 2023.[18] Therefore, these states are not experiencing a new economic decline in 2026, they are in fact facing a compounding of an existent economic crisis due to the regional conflict.

Conclusion

The 2026 conflict does not impose the same degree of stress across the MENA region. Algeria and Libya (and, to a lesser extent, Iraq) enter this crisis shielded by hydrocarbon revenues and substantial reserves, which, in the case of the two North African nations, stand to take a boost. Non-conflict-affected, middle-income importers occupy a contested middle ground, with resilience largely contingent on policy agility. Yemen, Sudan, Syria, and Lebanon face yet another shock exacerbating underlying fragilities: their reserve positions are exhausted, their debt burdens are massive, their productive bases have been hollowed by conflict, and their states can provide no safety net to their citizens.

To be sure, preparedness is not a regional condition, it is a state-specific calculus of fiscal buffers, liquidity, energy exposure, and structural adaptability. In a region marred with fragile states, the economic deterioration imposed by the conflict could erode the region's economic standing in a volatile global economy. In all likelihood, its impact will serve as a stark reminder of how a structural lack of reform can deepen strategic heteronomy. Windfalls and financial pressure alike could lead to more aggressive behaviour at the state or intra-state levels, increasing risks of collision and unrest. Sharpened economic asymmetries across the Arab region could thus lead to further strategic challenges in an already fraught geopolitical scene.

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3

The U.S.-Iran Ceasefire Illusion: Energy Shortages Far from Over

Mannat Jaspal and Reem Sagahyroon

The Strait of Hormuz crisis has sent ripples across global energy and commodity markets. Political posturing, primarily United States (US) President Donald Trump's grand proclamations, have driven sharp swings in oil prices—pushing Futures Brent crude to as high as US$126[1] down to US$95 following the ceasefire announcement on 7 April 2026.[2] Brent crude futures surged by more than 60 percent between late February and mid-March.[3] The tanker traffic through the Strait of Hormuz reduced by as much as 95 percent compared to pre-crisis levels,[4] becoming almost negligible at the time of writing and operating on an ad-hoc basis. Conflicting announcements from Washington and Tehran regarding the peace deal continue to leave the passageway dangerously contested and the markets increasingly wary.

Though global markets are desperately trying to decouple from the developments in the Middle East, their efforts are unlikely to hold. The structural consequences of the disruptions will far outlast the conflict itself. While diplomatic posturing can temporarily calm markets, it will not be able to repair damaged infrastructure, restore lost capacity, or eliminate the irreversible capital stock destruction and the endogenous risk premium in shipping insurance. The question is no longer whether the supply will return, but rather how economies will adapt to a period of constrained and uncertain availability.

Most Significant Energy Shock in History

The International Energy Agency has described the Hormuz conflict as the most significant oil shock in history, with damage to almost 80 energy facilities in the Middle East[5] amounting to at least US$25 billion,[6] and loss of more than 13 million barrels per day of exports.[7] Almost 35 percent of global crude oil and products, and 20 percent of natural gas supplies[8] pass through the Strait of Hormuz. Unlike the previous crises—the oil

shocks of 1973 and 1979, or the loss of Russian gas following Moscow's invasion of Ukraine in 2022—this episode extends beyond oil and gas. It represents multi-commodity shocks—on fertilisers, petrochemicals, and refined products—in turn triggering cascading effects across global supply chains.

Yet, despite the severity of the crisis, the price shocks have not been as pronounced as anticipated. This is due to an oversupply of pre-existing inventory at sea, strategic reserve release, overseas Gulf storage, external alternative pipelines available to Saudi Arabia and the United Arab Emirates, and anticipatory stockpiling by energy importing Asian countries. However, as reserves deplete and logistical constraints tighten, markets will be compelled to account for the true scale of the disruptions. The current short-term cushioning will therefore prove to be temporary, exposing the underlying long-term constraints yet to entirely unfold.

Table 1: Share of Global Seaborne Commodity Flows Transiting the Strait of Hormuz in 2024 (Imports + Exports)

Commodity	Exports (%)	Imports (%)	Total (%)
Crude/Condensate	34.6	0.1	34.7
Minerals	22.4	5.1	27.6
NGLs (pLropane, butane, ethane)	25.7	0.1	25.8
LNG	19.5	0.7	20.2
Fertiliser	16.3	0.2	16.5
Chemicals	14	1.4	15.4
CPP*	13.6	1.6	15.2
DPP*	14.5	0.2	14.7
Softs	0.5	9.8	10.3
Petcoke	7.1	1.7	8.8
Cement/Clinker	7.5	0.5	8.0
Grains/Oilseeds	0	4.2	4.2

Source: Kpler[9]

Note: CPP (clean petroleum products such as naphtha, gasoline, jet fuel (A1), kerosene, and gas oil); DPP (dirty petroleum products such as crude oil, fuel oil, heavy fuel oil, and dirty condensate)

Triple Whammy: Logistical Disruptions, Storage Constraints, and Infrastructure Damage

Before the crisis, approximately 20 million barrels per day (mbpd) of crude oil and product exports would pass through the Hormuz Strait—primarily from Saudi Arabia, the UAE, Kuwait, Iraq, and Iran. The alternative routes bypassing the Hormuz have managed to offset some of the supplies but cannot compensate for complete loss of maritime flows. Saudi Arabia's 1,200 km long East–West Crude pipeline from Abqaiq to Yanbu in the Red Sea has an export capacity of around 5 mbpd,[10] with a parallel Petroline for natural gas liquids (NGLs). Even though overall Saudi crude exports fell 25 percent in March 2026 from the same time last year, the higher prices caused the value of those exports to balloon by roughly US$558 million,[11] partially substituting for lost Iraqi and Gulf supplies. This divergence reflects a classic terms of-trade gain for Riyadh but a welfare loss for the global economy. Essentially it is a transfer of wealth from consumers to producers that acts as a deadweight drag on global gross domestic product (GDP).

The UAE has also witnessed a decline of almost 30 percent in exports from last year. However, the 380-km Abu Dhabi Crude Oil Pipeline (ADCOP), running from Habshan to the Fujairah port and bypassing the Strait of Hormuz, offers a relatively secure alternative to move between 1.5–1.8 mbpd (roughly half of UAE's total daily oil export capacity) to the Indian Ocean[12], which has helped keep revenues around the same range.

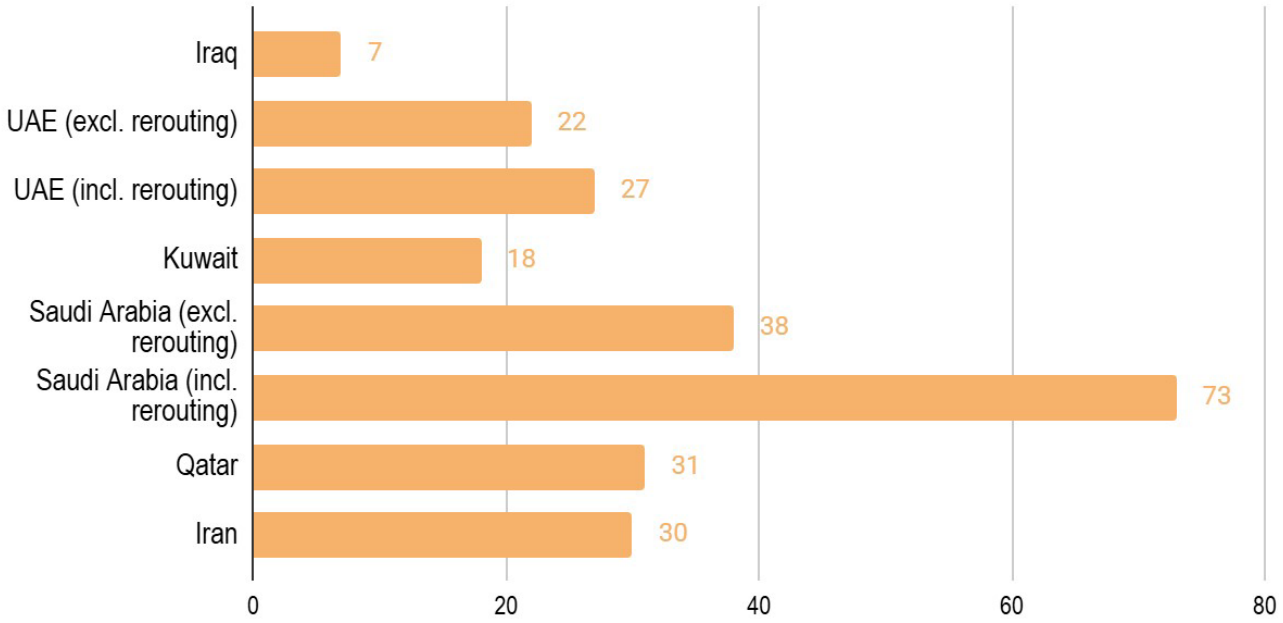
Table 2: Crude Oil Production, Export Volume, and Revenue Change for the Arabian Gulf Countries

	M-o-M (Feb '26 – Mar '26)	Y-o-Y (Mar '25 – Mar '26)	
Country	**Estimated Crude Oil Output/Production Change**	**Crude & Condensate Export Volume Change**	**Estimated Oil Revenue Change**
Saudi Arabia	-30.2%	-25.2%	4.31 %
Kuwait	-53%	-80.9%	-73.4 %
UAE	-34.8%	-30.1%	-2.66 %
Iraq	-65.6%	-82.9%	-76.2 %
Oman	5%	-9.2%	26.6 %
Qatar	-	-76.6%	-67.4 %
Iran	-1.4%	-1.8%	36.8 %

Sources: Reuters[13] & IEA[14]

In contrast, Iraq has recorded the steepest supply declines, suffering significant losses in export volumes and revenues. Pre-crisis production of 4.25 mbpd has plummeted to 875,000 barrels per day (bpd), while exports have declined by 83 percent in March 2026 compared to the same period last year, with limited diversion options and a constrained pipeline capacity of 200,000 bpd via the Kirkuk–Ceyhan northern pipeline between Iraq and Turkey.[15] Kuwait has also faced a similarly devastating outcome with no viable alternative route and mounting storage constraints. Without continuous shipments, production must halt once storage is exhausted forcing facility shut downs. Producers can, in theory, utilise floating storage, but in practice credit constraints and war-risk insurance costs prove onerous, reinforcing the financial dimension of supply disruptions.

Figure 1: Estimated Days Until Storage Tanks in the Gulf Countries Fill Up, Forcing Oil Field Shut-Ins



Note: Measured from Day 1 of conflict (28 February 2026)

Source: Reuters[16]

Natural gas supplies from the region, primarily from Qatar (as much as 93 percent) and the UAE (7 percent),[17] have been significantly curtailed. Following sustained kinetic attacks, the Ras Laffan facility in Qatar with normal capacity of 77 million tonnes per annum (mtpa)[18] declared *force majeure* (emergency halt) on some liquified natural gas (LNG) contracts for up to five years.[19] This has eliminated 17 percent of Qatar's LNG export capacity, with losses of 12.8 mtpa of LNG for three to five years until repairs are actualised.[20] Beyond LNG, Qatar's exports of condensate will drop by around 24 percent, while liquefied petroleum gas (LPG) will fall 13 percent, helium output will fall 14 percent, and naphtha and sulphur will both drop by 6 percent.[21] For the UAE, disruptions to shipping through the Strait of Hormuz has led to significant declines[22] in output at the country's sole LNG plant on Das Island, effectively halting most of its 5.8 mtpa of production capacity.[23] In parallel, damage to the UAE's gas infrastructure, particularly the Habshan facility, poses significant risk to the country's domestic gas supply[24].

Besides the logistical disruption and storage constraints, damage to oil fields and refineries, ports and pipelines, and gas facilities, will take many months – if not years in some cases – to repair, reopen and resume, further disrupting and prolonging supply disruptions in global markets.

Table 3: Key Disruptions to Arabian Gulf Oil and Gas Infrastructure (28 Feb - 15 Apr 2026)

Oil Refineries	• UAE: State-owned ANOC's Ruwais refinery, with a normal capacity of 922,000 bpd halted operations following targeted attacks. Multiple fires were caused by falling debris[25,26] • Bahrain: State-owned Bapco Energies declared *force majeure* on impacted operations following strikes on its Sitra refinery complex whose normal capacity is 405,000 bpd [27.28] • Kuwait: Mina Al-Ahmadi and Mina Abdullah refineries, with normal capacities of 346,000 bpd and 454,000 bpd respectively, reduced processing rates due to kinetic attacks and storage capacity constraints. Recovery will potentially take 3-4 months.[29,30,31,32]

Oil Fields	• Iraq: Southern oil fields with normal capacity of 4.3 million bpd have seen outputs fall by about 80 percent, to approximately 800,000 bpd, due to storage constraints. Recovery will take a week if conflict ends and Strait of Hormuz re-opens fully[33,34] • Iraq: State owned Basra Oil Company's Majnoon oil field with a capacity of 200,000 bpd attacked.[35] • Saudi Arabia: State-owned Safaniya (capacity 1.5 million bpd), Marjan, Zuluf (capacity 800,000 bpd) and Abu Safa shut operations. Largest refinery, Ras Tanura, with capacity 550,000 bpd, had halted operations temporarily following attacks, but has since resumed normal operations.[36,37,38,39] • Manifa Field with capacity of 900,000 bpd has seen production reduced by about 300,000 bpd of its production capacity due to targets.[40,41]
Gas Facilities	• Qatar: State owned Qatar Energy and US ExxonMobil's LNG trains at the Ras Laffan facility normally carrying 12.8 million metric tons per annum (mmtpa) forced to declare *force majeure* due to attacks. Recovery could take three to five years.[42] • Iran: All units of Iran's Select South Pars gas field – its largest, accounting for roughly 80 percent of its LNG supply, plus exports gas to Iraq – shut[43,44]. • Saudi Arabia: State-owned Aramco's Juaymah LPG terminal with normal shipping of more than 450,000 tonnes per month impacted due to fires.[45,46] • UAE: State-owned ADNOC's Habshan natural gas processing facility with a normal capacity of 6.1 billion standard cubic feet per day (bscfd), suspended operations following an attack. Operations have since resumed.[47,48,49] • ADNOC and US Occidental Petroleum's sour gas facility, with a capacity of 1.28 bscfd of gas and 4.2 million tonnes of sulphur, suspended operations following an attack[50,51]
Ports and Pipelines	• Saudi Arabia: State-owned East-West Pipeline, with a capacity of 7 million bpd and a major alternative route, attacked after the announced ceasefire, cutting flows by 700,000 bpd (this has since been restored).[52,53] • UAE: State-owned AD ports groups Fujairah port with a normal capacity of 720,000 TEUs/annum periodically shut down facilities and halted oil loadings due to air strikes before resuming operations.[54,55] • UAE: State-owned DP World and Canadian CDPQ's Jebel Ali port with a capacity of 19.4 million twenty-foot-equivalent units (TEUs) suspended operations during the early days of the conflict as a precautionary measure (operations have since resumed).[56,57] • Oman: Salalah Port with a normal capacity of 6 million TEUs/annum suspended operations following attacks[58,59]

Source: Authors' own, using various open sources.

Energy Shortages Far from Over

Energy shortages are unlikely to ease, even in the aftermath of a ceasefire or any semblance of normalisation. Alternative routes from Saudi, the UAE and Oman offer limited relief—these pipelines were designed to complement and not substitute maritime flows through the Strait. Their capacity falls way short of the scope of the disruption. At the same time, repairing damaged infrastructure, rebuilding strategic petroleum reserves, and regular stockpiling by importing countries, will keep prices elevated and unlikely to swiftly retreat to the pre-war USD 60-70 range.

Compounding this challenge are shipping and insurance constraints. Maritime insurers are repricing or suspending war risk coverage—currently 329 vessels are stranded in the Arabian Gulf requiring roughly US$352 billion in insurance coverage that private markets are no longer providing.[60] Traders price risk and not just physical supply, and insurance premiums will continue to factor in geopolitical stressors long after the hostilities are over. To illustrate, although the Red Sea Houthi attacks declined in 2025 relative to 2023-24 levels, transit volumes through the Bab-al-Mandab Strait remained 65-percent below pre-conflict baselines as of June 2025.[61] Even if physical risk subsides, the perceived risk of potential future disruptions may continue to affect pricing and shipping volumes through the Strait of Hormuz. Investments will remain highly sensitive and contingent on long term maritime stability. The role of expectations, speculative behaviour, and futures markets in shaping price trajectories is central to risk pricing. The inability of private markets to clear this risk is a classic market failure which will potentially need state intervention in the form of government-backed war-risk insurance mechanisms to restore both trust and trade flows.

Energy markets are inherently adaptive and nonlinear. Market adjustments are not purely supply driven—the marginal cost of storage and demand destruction in price-sensitive developing economies will act as a market clearing mechanism. At the same time, substitution effects and accelerated supply responses outside the Gulf will gather pace. Renewed oil and gas exploration in new geographies such as the North Sea, Africa, the Eastern Mediterranean, and the Arctic, could become economically feasible in the wake of recent geopolitical realities. These dynamics will act as important countervailing forces in restoring equilibrium at relatively lower volumes. Highers prices with slower growth will heighten stagflationary pressures in importing countries.

The crisis is also accelerating a broader structural transition. In the coming years, countries will increasingly prioritise diversification—both in terms of supply partnerships and transport routes. At the same time, higher fossil fuel prices are improving the viability of alternative technologies, including nuclear energy, hydrogen and solar plus storage. These shifts, however, involve significant fiscal, geopolitical and climate trade-offs, and their pace and direction will vary considerably across countries. The UAE's recent departure from the Organization of the Petroleum Exporting Countries Plus (OPEC+) alliance is also notable, as it could introduce greater supply flexibility while simultaneously contributing to heightened price volatility and weaker coordination among major producers.

It is clear that the energy security calculus for both energy exporting and importing countries is fundamentally shifting, emphasising resilience, system redundancy, and the endogenous role of risk in price formation. Whether this evolves into a permanent structural transformation or remains a cyclical adjustment will depend on the duration of the conflict, the extent of future disruptions, and persistence of current risk perceptions and policy responses.

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4

The Impacts of the Middle East Crisis on Food, Water, and Economic Security

Cauvery Ganpathy and Leigh Mante

The centrality of the Middle East to multiple global supply chains, apart from oil and gas, makes it difficult to localise and limit the impacts of the Israel-US and Iran conflict.[1] This article explores the longer-term impacts of the supply-chain upheavals and infrastructural damages caused by the crisis on food, water, and economic security in the region and beyond. By highlighting the ramifications across these three vectors, the authors underscore the conflict's lasting impact on human security and the potential pathways for integrating systemic resilience against future turmoil.

Supply chains that involve the countries of the Middle East are likely to remain volatile in the short to medium term, even with a cessation of hostilities. Three considerations support this inference: first, the improbability that any truce would resolve the underlying drivers of the conflict; second, that de-escalation will not necessarily prevent Iran from pursuing covert or overt economic warfare through asymmetric means; and third, the unlikely rapid reversal of physical damage to infrastructure and production disruptions. Consequently, while the prospect of conflict resolution may offer marginal relief, a return to business-as-usual (BAU) remains implausible in the foreseeable future. Structural bottlenecks are likely to persist, resulting in substantial duress across three broad non-oil categories—food security, water security, and economic security.

Enduring Non-Oil Impacts

Economic Security

Supply chain disruptions and the threat of kinetic attacks on infrastructure and logistics have impacted three specific verticals of economic activity in the region and beyond.

First, shortages triggered by the disruptions to petrochemical derivatives have had a cascading impact on global industrial capacity.[2] Supply bottlenecks involving products such as naphtha, aluminium, sulphur, ethylene and helium affect industrial cracking, textile and polymer manufacturing, mineral processing and

semiconductors.[3,4,5,6,7] These supply shortages can be expected to persist for a considerably long duration given production halts in plants like Ras Laffan.[8] The macroeconomic effects of the resultant production curtailments and gaps in production cycles could be significant. Inflationary pressures and revenue losses could lead to a recalibration of capital allocations and fiscal outlays. The potential relocation of production value chains could also directly impact industrial capacity and trade flows.

Second, sustained risks to maritime transport corridors are emerging as a major long-term fallout of the conflict. Beyond threats to freedom of navigation, countries and companies must contend with increased operational freight costs compounded by war risk insurance premiums, longer transit routes, and higher fuel costs. This volatility is most commonly reflected in elevated freight costs.[9],[10] Longer and costlier detours, worsened by container shortages, are exerting upward pressure on commodity prices while affecting vessel availability for transport and transit.[11] Consequently, maritime logistics are likely to face inflated surcharges in the short to medium term.[12] Global trade flows may increasingly be shaped not only by supply and demand dynamics, but also by the capacity of countries and companies to absorb higher shipping and logistics costs. Additionally, uncertainty surrounding the US blockade of the Strait of Hormuz and the scope and applicability of sanctions on Iran could further increase business costs, particularly through exposure to primary and secondary sanctions.

Third, although the physical damage has remained limited, attacks on the region's aviation infrastructure have triggered some of the most tangible disruptions.[13] They have led to a significant reduction in air traffic and a comparably severe impact on air freight.[14],[15] Pressure on the sector has been compounded by reduced jet fuel availability. The limited ability to substitute jet fuel at scale prolongs the industry's vulnerability to the broader supply chain crisis.[16] European and Asian aviation industries have faced particularly severe challenges in this regard.[17] War-risk premiums have also entered industry calculations and increased costs for airlines, which have in turn been passed on to consumers.[18] This could suppress demand and negatively affect the travel and tourism sectors.

Alongside losses to the energy sector, the reduction in demand is expected to weaken the region's GDP outlooks.[19] This, in turn, would potentially affect both inflows into the region's Sovereign Wealth Funds (SWFs) and their ability to channel capital into regional diversification agendas.

Food and Water Security

The prolonged blockade of the Strait of Hormuz has generated far-reaching and uneven consequences for the global food system. While countries in the Global North, such as the United States and Europe, remain comparatively insulated from fertiliser shocks, the crisis has severely exposed the food import dependencies and vulnerabilities of the Global South and the MENA region.

Iran, Qatar, Saudi Arabia, and Oman are among the leading nitrogenous fertiliser exporters, supplying 30-35 percent of global urea and 20-30 percent of ammonia.[20] In January 2026, some European suppliers acquired significant fertiliser

stockpiles, providing buffer stocks to mitigate impacts, yet they also face high production costs inhibiting increased domestic fertiliser production.[21],[22] Likewise, many US farmers secured fertiliser for the growing season prior to the conflict, but this relief may be short-lived given the country's lack of strategic fertiliser reserves.[23]

Conversely, countries heavily dependent on imports of urea, ammonia, and sulphur face dual pressures from rising fertiliser and fuel costs, impacting crop planting decisions, irrigation, and transport. India, for instance, imports 20-30 percent of its urea, 30 percent of its diammonium phosphate, and 50 percent of the LNG (to produce urea) from the Gulf region.[24] With the Kharif planting season approaching in June, the government is deploying subsidies and diversifying imports from Russia and Morocco and seeking new partnerships with Indonesia.[25] However, alternative exporters face their own restrictions. For example, as the second leading phosphorus fertiliser exporter, Morocco imports more than 48 percent of its sulphur from the Gulf.[26,27] The coinciding rise in fertiliser and fuel prices may ultimately lower crop yields or trigger shifts away from fertiliser-intensive towards efficient crops or biofuel production.[28],[29] Even if the Strait of Hormuz were to reopen indefinitely, several important agricultural decisions have already passed, which will likely be reflected in higher future food prices.[30]

Any continuous deployment of short-term fertiliser subsidies to reduce farmer cost burdens may also risk long-term development delays.[31],[32] Resource-poor farmers, particularly those in sub-Saharan Africa with previously low yields, will experience the most pressure on future harvests and household food consumption. Subsidy expansions in these or conflict-ridden contexts may result in fiscal strain and reduced funding for rural development initiatives.

In MENA, import-dependent GCC states have insulated themselves from food shortages, while their neighbours face a protracted food crisis. Importing 72-89 percent of food, the crisis has exposed 100 percent food supply chokepoint exposure across all GCC states except Saudi Arabia, whose Red Sea access reduces its exposure to 59 percent.[33] GCC states are leveraging strategic grain reserves, financial capacities, and alternative logistical corridors through Oman's Port of Duqm, Saudi Arabia's Red Sea ports, and the UAE's Fujairah port, yet these options remain structurally uneven and incapable of absorbing Hormuz trade capacity.[34,35] Meanwhile, ongoing displacement, damaged logistics infrastructure, and food inflation layered on top of prior crises threaten regional food insecurity.[36]

Threats to water infrastructure have elucidated new security considerations for water management and distribution. Water infrastructure has been attacked in Bahrain, Kuwait, Iran, and Lebanon, posing existential threats to Middle Eastern states.[37,38,39,40] The Gulf Cooperation Council relies on seawater desalination for 18-61 percent of its total water supply.[41] Although Iran relies considerably less on desalination, the country nonetheless faces day-zero prospects due to compounding water pressures arising from systemic resource mismanagement.[42] Bombings throughout the region have resulted in toxic releases, contaminating agricultural zones and

water supplies.[43] However, threats of groundwater contamination may be diluted by surface and deepwater currents but also depends on proximity to contaminants.[44]

Cumulative Impact on Human Security

The supply and access disruptions triggered by the conflict are likely to evolve from shortages into acute scarcity in the short to medium term. The resulting nexus of pressures on water, food, and economic security will cumulatively undermine human security indicators long after wartime operations cease. UN estimates suggest that nearly 32 million people could be pushed into poverty as a direct consequence of the crisis. Job and remittance losses arising from production stoppages in the region, alongside the broader impact of the conflict on the global economy, are expected to reduce household earnings and worsen food insecurity.[45,46] Simultaneous inflationary pressures on essential commodities further accentuate this duress and aggravate global poverty levels. Rampant scarcity commonly leads to migration, which may in turn exert pressure on infrastructure not equipped to handle increased demand. Similarly, delays in commercial shipping have destabilised crucial agricultural timelines and compromised future crop yields, causing further economic hardships to marginalised populations that depend on agrarian earnings.

Attacks on civilian infrastructure have also exacerbated environmental stress across the region through increased carbon emissions while threatening to destabilise water and public health security. The potential fallback on coal and firewood due to the lack of adequate access to LPG sourced from the region can also be expected to have an impact on health security globally.

Notably, the conflict would lead to increased defence expenditures by countries. Any analysis of the long-term impact of this conflict would need to consider whether the reallocation of the funds required for expanded defence budgets infringes on spending on human development markers.

Forging Resilience

The volatility introduced into global supply chains is likely to outlast the duration of the conflict. Recovery will depend on regional and global governance efforts to build systemic resilience through several pathways.

Improving supply-chain resilience through the development of redundancies must become a policy prerogative. A shift from just-in-time to just-in-case models, in which governments invest in industrial inventories, alternative supply sources, and diversified trade routes, could serve as a pre-emptive safeguard. Economic diversification beyond hydrocarbon sectors must also become central to long-term resilience strategies. Furthermore, localising manufacturing and production across sectors could better insulate the region from future global supply-chain disruptions.

Similarly, medium-term proposals for mechanisms to facilitate the transit of essential goods such as food and fertiliser, modelled on the Black Sea Grain Initiative, may alleviate global food security pressures, though they also risk creating uneven control over trade flows.[47,48] With pivotal sowing windows approaching, maintaining open trade remains crucial. Longer-term measures could include bolstering regional fertiliser storage reserves and investing in alternative or inorganic fertiliser pathways.

In response to potential water disruptions, GCC countries have actively scaled wastewater reuse, bolstered strategic water storage reserves, and regulated water oversight.[49] Despite this progress, regional collaboration remains constrained by the logistical challenges of establishing an interregional water cooperation system and by concerns over national sovereignty. Although severe disruptions to water distribution have not yet materialised, growing discourse around the weaponisation of water to pressure governments into negotiations prompts the need for new safeguards in international law, revised warning systems, and protective measures accounting for kinetic water infrastructure attacks.[50] The 2026 UN Water Conference, co-hosted by Senegal and the UAE, may provide an opportunity to advance regional cooperation on these issues.

The lessons drawn from this conflict will shape the Middle East's recovery trajectory and determine the region's ability to prevent future disruptions of a similar scale. Investing in resilience across food, water, and economic security, while recalibrating traditional notions of defence preparedness, may prove to be the conflict's most enduring lesson.

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5

Who Pays for Digital Risk? Insuring Tech Infrastructure in an Unstable World

Elizabeth Heyes

Digital infrastructure is increasingly exposed to geopolitical, climate, and cyber risks that are more interconnected and harder to contain. While traditional insurance mechanisms continue to absorb many physical and supply chain disruptions, cyber risk presents deeper structural challenges due to attribution difficulties and systemic exposure. As disruptions begin to cascade across systems, the question of who ultimately bears the cost becomes more difficult to answer, pointing to growing gaps in how risk is currently understood and insured.

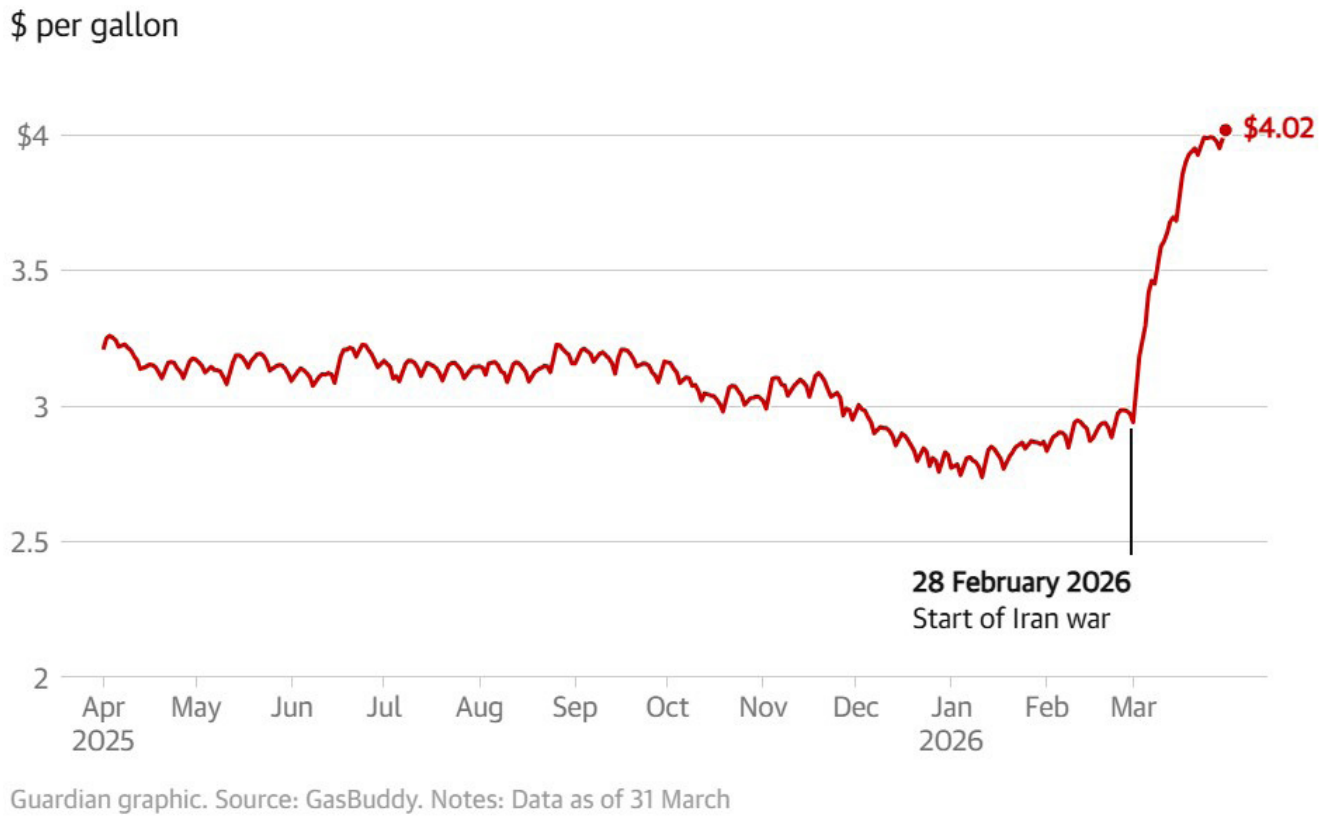
Digital infrastructure has become the backbone of the global economy, yet it is increasingly exposed to a widening spectrum of risks. From geopolitical tensions resulting in tariffs and sanctions, to climate-driven or natural disasters, to cyber or kinetic attacks, the systems underpinning modern connectivity—data centres, undersea cables, cloud networks, and energy grids—are being tested in unprecedented ways. Given the central role of digital infrastructure in national development strategies across the region, the current situation in the Middle East further underscores the need to develop insurance frameworks that account for potential regional instability.

What makes these risks more challenging is not just their scale, but their interconnected nature: disruptions rarely remain contained, instead cascading across supply chains, financial systems, and physical infrastructure. This raises the question of who ultimately bears the cost, and whether existing systems that insure against disruption are equipped to absorb it.

Risks to Digital Infrastructure: Supply Chain, Physical Damage, and Cyber Attacks

In recent years, a convergence of shocks has highlighted the fragility of interconnected technological systems. Geopolitical conflict has had immediate and cascading effects on infrastructure and trade. Amid regional instability in the Middle East, fuel prices for cars and aeroplanes have risen by between 30 and 50 percent compared to the start of 2026.[1] Transportation costs and associated delays affect the construction and maintenance of technology infrastructure globally, with effects extending through supply chains and the timelines of data centres and other digitally critical real estate projects.

Figure 1: Petrol Price Hikes Amid the Middle East Crisis



Source: The Guardian[2]

Beyond construction, disruptions to supply chains of digital components in the manufacturing of critical technologies have increased the fragility of technology industries. These include the drawn-out back-and-forth export control measures between AI superpowers, the US and China, which have taken turns restricting access to key inputs and technologies. Most notably, restrictions on advanced semiconductor chip sales under the Biden administration in 2022 led China to impose export controls on gallium and germanium in July 2023.[3] Trump's tariff orders of up to 100 percent in April 2025 similarly prompted China to tighten export controls in October on rare-earth elements and magnets used in consumer electronics, cars, jet engines, and radar systems.

At the same time, natural disasters and kinetic security risks underscore the extent to which digital infrastructure is physically situated and exposed to disruption. Extreme weather events such as rising temperatures, flooding, and storms are already placing strain on energy grids, data centres, and connectivity hubs, particularly in climate-exposed regions.[4] These assets are also vulnerable to deliberate physical targeting in conflict settings. Indeed, the recent escalation has exposed the vulnerability of energy facilities and data centres across the Middle East, with multiple sites affected since February 2026.[5]

Cyber risk adds another layer of vulnerability to digital infrastructure, often arising from hidden weaknesses in code or basic operational failures. The SolarWinds hack in 2019, for example, involved attackers inserting malicious code into trusted Orion software updates, which were then distributed to customers and used to gain access to the computer systems of many international companies and organisation including Microsoft, Intel, Cisco, and even US government agencies. This lasted months before the malware was discovered.[6]

In addition to software vulnerabilities, basic human error can create entry points for major cyberattacks. The Colonial Pipeline ransomware attack in May 2021, which disrupted fuel supplies across the US East Coast, was traced to a single compromised password that did not have multi-factor authentication.[7] These dynamics underscore how overlapping physical, supply chain, and digital vulnerabilities can drive systemic disruption, raising challenges for how such risks are understood by insurers.

Insuring Risk: Increase in Exposure, Increase in Claims

The financial consequences of the increasing frequency and severity of disruptions are already visible in insurance markets. Global insured losses from natural hazards reached approximately US$137 billion in 2024, surpassing the previous year's record.[8] Supply chain disruptions have also translated into notable insured losses, with global insurance broker Aon finding that business interruption—often driven by supply chain breakdowns—and cyberattacks are among the top global risks causing losses for companies.[9]

Figure 2: Top Global Risks in 2025

Rank	Top 10 Current Risks	Compared to 2023
1	Cyber Attack or Data Breach	–
2	Business Interruption	–
3	Economic Slowdown or Slow Recovery	–
4	Regulatory or Legislative Changes	↑ 1
5	Increasing Competition	↑ 5
6	Commodity Price Risk or Scarcity of Materials	↑ 1
7	Supply Chain or Distribution Failure	↓ 1
8	Damage to Reputation or Brand	–
9	Geopolitical Volatility	↑ 12
10	Cash Flow or Liquidity Risk	↑ 1

Source: Aon[10]

Insurance plays a crucial role in distributing and managing risks associated with technological infrastructure. At the physical level, property insurance and business interruption coverage protect against damage to facilities and resulting income loss. Where infrastructure is affected by conflict, natural disasters, or accidents, these policies support recovery, as seen in the aftermath of Hurricane Ida in August 2021, which generated approximately US$36 billion in insured losses.[11]

For more complex scenarios, specialised forms of coverage are increasingly important, particularly in regions exposed to geopolitical risk. Supply chains and physical security issues are critical to insure where infrastructure and trade routes are directly exposed to conflict-related disruption. Contingent business interruption insurance helps firms manage supply chain disruptions, while political risk and political violence insurance cover losses arising from conflict and government action. However, while these traditional lines have shown relative clarity and reliability in responding to such events, coverage in the digital domain—particularly for cyber risk—remains far less certain.

The Limits of Insurability: Cyber Risk in a Grey Zone

In the digital domain, cyber insurance covers data breaches, ransomware, and outages, including operational and recovery costs. However, unlike more established lines of coverage, cyber insurance remains contested and underdeveloped: insurers have increasingly introduced exclusions for war and state-backed cyberattacks due to the potential for losses to exceed market capacity, while attribution of attacks to specific actors remains difficult and legally untested.[12]

Despite its importance, insurance is not a comprehensive solution to cyber risk, with many policies excluding high-impact scenarios. Insurers often exclude war or state-backed attacks, citing the potential for systemic losses. Since coverage often depends on whether an attack is classified as state-backed, claims become difficult to resolve, particularly where attribution is technically complex and politically contested. This was seen in the Mondelez–Zurich dispute following the 2017 NotPetya attack, where a US$100-million claim was initially denied under a war exclusion clause before being settled in 2022.[13]

Events affecting multiple policyholders simultaneously, such as widespread cyberattacks or supply-chain disruptions, can generate losses beyond insurers' capacity. The problem is compounded by adverse selection: firms with the greatest cyber exposure have the strongest incentive to buy coverage, skewing the insured pool toward higher-risk clients.[14]

Without mechanisms to incentivise robust security practices, insurance alone may not reduce underlying vulnerabilities. In practice, this requires firms to move beyond risk transfer and invest in risk reduction. Given that many cyber incidents can be traced back to human error or misconfiguration, strengthening internal processes is also critical. These constraints suggest that cyber risk is beginning to outgrow traditional insurance models, pointing to the need for a broader approach to managing digital disruption.

Conclusion: Towards a More Resilient System

As digital infrastructure becomes more central to economic and societal functioning, the question of who pays for disruption will grow more urgent. Ongoing instability in the Strait of Hormuz shows that while insurance remains an essential mechanism for absorbing and redistributing risk, its effectiveness is uneven across different categories of disruption. Physical damage and supply chain shocks are, to a large extent, still insurable within existing frameworks, but cyber risk exposes deeper structural limitations.

A key lesson is that the increasing interconnectedness of digital infrastructure is blurring the boundary between isolated incidents and systemic events, making losses harder to contain and model. At the same time, the prevalence of human error and operational weaknesses as entry points for cyber incidents underscores that risk cannot be fully transferred through insurance alone. Instead, resilience depends as much on internal practices and preparedness as it does on external financial protection.

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6

Technology Sovereignty After Conflict: Lessons for Middle Powers

Siddharth Yadav

Technological dependency in peacetime can appear efficient. However, in times of crisis, it resurfaces as a strategic consideration, and the current Middle East crisis has stress-tested this dynamic. Overlapping with the US-Israel-Iran conflict, the confrontation between the American AI company Anthropic and the United States (US) Department of Defense illustrates this transformation.

The confrontation started as a contractual disagreement over acceptable use but devolved into a federal lawsuit, a supply-chain risk designation, and a meeting in the West Wing of the White House.[1] Michael Froman, President of the Council on Foreign Relations, framed the tension as "whether a sovereign power is truly sovereign if a private firm can constrain the use of what could be a decisive military technology."[2] The dispute was only a preview of the terrain every other state with AI ambitions will have to navigate, but without the advantages of jurisdiction and political proximity.

The Sovereignty Question

The dispute is instructive precisely because it unfolded within the country that dominates the global AI ecosystem. For the Gulf and the broader Global South, however, it carries an additional dimension. The Pentagon brought to the dispute every advantage a state could plausibly hold over a vendor. It leveraged domestic jurisdiction, contract law, security-designation authority, the courts, and the political weight of being the model's biggest customer. However, none of it was sufficient to settle the question of acceptable use unilaterally. A foreign government procuring the same class of technology inherits the unresolved question with substantially less leverage. Whatever ambiguity Washington could not resolve, other states must navigate through commercial contracts with vendors whose terms are shaped by another state's politics.

Two implications follow. First, the use-case discretion exercised by frontier AI labs travels with the technology across borders. Restrictions imposed on military, security, or commercial applications domestically apply by default to foreign deployments, and foreign customers have even less standing to contest them than the lab's home government. Second, the supply-chain designation episode is more consequential than the lawsuit itself. It established that vendors can be pressured through tools not constrained by jurisdiction alone. The same toolkit that produced the designation could produce conditional foreign-deployment requirements under a different political climate. For instance, which governments can be served and under what guardrails. Dependencies on frontier AI are therefore not merely commercial; they are also shaped by the politics of the vendor's home state, a reality becoming increasingly visible.

Since only the US and China come close to operating near full-stack AI ecosystems, most other states are left to "manage dependencies" rather than eliminate them.[3] Countries pursuing AI readiness risk vendor lock-ins and path dependencies tied to foreign architectures, hardware, and export-controlled technologies. While Middle Eastern economies have invested substantially in AI-driven modernisation and ambitious national strategies, the current crisis has stress-tested these efforts. For states integrating such technologies at scale while building indigenous alternatives, the situation warrants a reassessment of what AI sovereignty means in practice.

Exposed Dependencies

The crisis highlights how AI data flows can become vulnerabilities during periods of instability. As AI is integrated into healthcare, public services, and energy management, the strategic value of the data moving through them increases accordingly.[4] Under stable conditions, processing such data through foreign-owned platforms may appear to be an operational choice; in times of crisis, however, it becomes a vector for intelligence exposure.[5] The 2025 bans on the Chinese AI model DeepSeek across several governments registered these concerns.[6] The current conflict, which saw Anthropic's AI being used in military operations, has sharpened it.[7]

The same porousness is visible at the commercial-military seam. Private vendors now build systems that are operationally embedded in security architectures,[8] and the boundary between frontier commercial technology and military capability is no longer doing the regulatory work it once did. The pattern is not just confined to AI. Starlink's role in Ukraine and the September 2022 episode in which a unilateral commercial decision temporarily halted Ukrainian army access showed that a vendor's discretion can produce battlefield-scale consequences. [9] In the current conflict, commercially acquired satellite systems were reportedly used to monitor military assets across the Gulf, challenging foundational assumptions about territorial security.[10] The broader lesson is that vendors can be treated as parties to a conflict whether or not they choose to be, as their commercial decisions acquire strategic weight overnight.

Existing frameworks, such as export controls, arms-trade treaties, and data protection regimes, were designed for a world in which commercial and military domains were more clearly separated. The United Nations 2025 Military AI, Peace and Security Dialogues acknowledged as much in recognising AI as inherently dual-use and context-dependent.[11] The task for governance is no longer to police a category distinction the technology has already dissolved. Instead, it is to regulate the transition between commercial and military use as it happens.

Building the Stack

The structural exposures revealed by the conflict are not being met with inaction. The United Arab Emirates has emerged as a leading sovereign AI investor, leveraging energy, capital, and a permissive regulatory environment. Its Falcon and K2 Think models reflect maturing open-source capabilities. [12] Saudi Arabia, meanwhile, has pursued sovereign cloud partnerships with Amazon Web Services, Google Cloud, and Microsoft, while the Public Investment Fund has committed to large-scale AI infrastructure alongside HUMAIN's Arabic-language model programme.[13] These are genuine achievements, but they remain concentrated at the deployment and application layers of the AI stack.

Frontier models trained across most of the world still rely on chips designed by NVIDIA in California, fabricated by TSMC in Taiwan, on lithography systems supplied by ASML in the Netherlands, using critical minerals processed largely in China. Each represents a near-monopoly position built over decades through accumulated capital, knowledge, and ecosystem effects, and none can be on-shored by any single economy in a relevant timeframe. NVIDIA's grip on AI compute, TSMC's lead in advanced fabrication, ASML's exclusive position in EUV lithography, and China's dominance in mineral processing are not market positions awaiting competition,[14] but structural facts. Even the United States has not managed to dissolve them despite the most ambitious industrial-policy effort of a generation.

For middle powers, this means sovereignty at the foundation layer is not on offer in any near-term horizon. What is on offer is reliable access to it, secured through diversified supply, durable political relationships, and a careful avoidance of single-vendor exposure. The practical solution is to focus on securing sovereignty at the layers above: where the data is hosted and processed, how models are deployed and fine-tuned, and who governs their use.

Looking Ahead

The conflict has compressed what might once have been a decade-long policy evolution into an immediate strategic necessity. Three lessons extend beyond the region: no commercial vendor remains fully outside a conflict once its technology becomes embedded within it; data flowing through foreign-owned AI systems constitutes a form of strategic exposure, accumulating into intelligence the host state cannot retrieve; and the line between civilian and military technology has eroded faster than the frameworks built to govern their separation.

The window for acting on them may be favourable, with open-weight ecosystems maturing into a credible alternative at the deployment layer. The goal is sovereignty at strategic layers, and partnership on terms the host state can enforce. States that manage this deliberately will be better equipped to withstand the next disruption and to shape the regional order that follows it.

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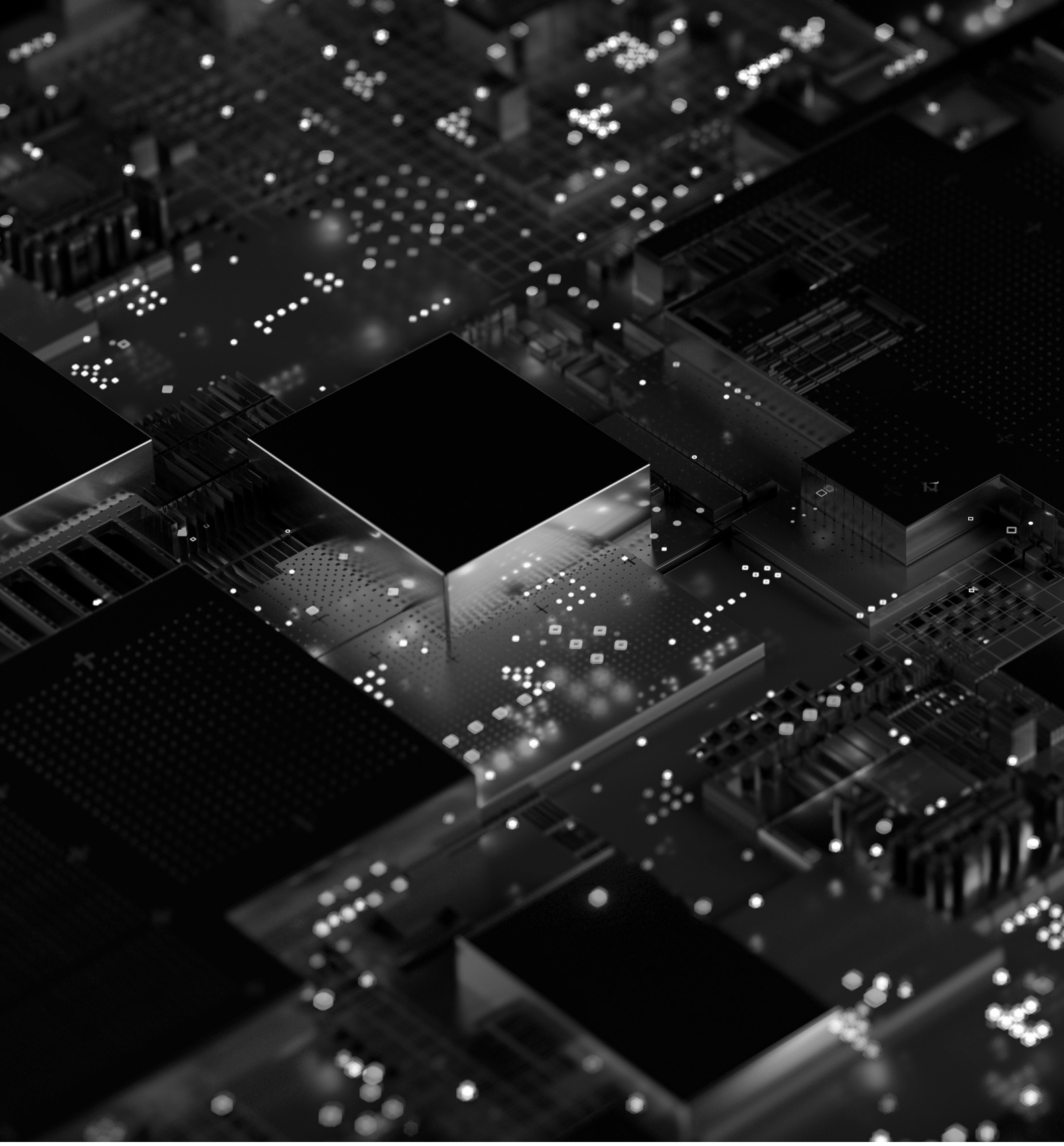

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