

Qatar's Energy and Food Supply Chains amid Geopolitical Risks

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Global supply chains have become increasingly vulnerable to geopolitical disruptions, particularly in regions where critical trade routes intersect with political and security tensions. Qatar occupies a unique position within these global trade networks. As one of the world's leading exporters of liquefied natural gas (LNG), the country plays a crucial role in international energy security. At the same time, Qatar depends heavily on international supply chains for essential imports, particularly food and industrial goods. This dual dependence creates structural vulnerabilities that may expose the country to disruptions affecting maritime transport routes and international logistics systems. The objective of this policy brief is to examine how geopolitical tensions in the Middle East may affect supply chain resilience in Qatar. Specifically, the brief analyzes the vulnerabilities associated with energy exports and food imports, explores potential disruption scenarios, and proposes policy measures to strengthen national resilience amid geopolitical uncertainty.

Rising geopolitical tensions in the Middle East have renewed concerns about the vulnerability of global supply chains, particularly those connected to critical maritime chokepoints such as the Strait of Hormuz. This narrow waterway connects the Arabian Gulf to the Indian Ocean and serves as a major corridor for the global trade of energy resources and commodities. Approximately one-fifth of global liquefied natural gas (LNG) shipments and a similar share of global oil exports pass through this route, making it one of the most strategically important maritime passages in the world.

Qatar plays a central role in global energy markets as one of the world's largest exporters of LNG. The country supplies a significant portion of LNG to major Asian and European economies, and its exports represent a key component of international energy security. At the same time, Qatar relies heavily on global trade networks for essential imports, particularly food products and industrial goods. Due to climatic and geographic constraints, domestic agricultural production remains limited, making international supply chains critical for meeting national food demand. This dual dependence on maritime trade routes creates structural vulnerabilities for Qatar. Disruptions affecting shipping routes or regional logistics networks could simultaneously influence both export flows and domestic supply chains.

This policy brief examines the potential implications of geopolitical instability for Qatar's supply chain system and proposes strategies to enhance resilience through diversification, infrastructure investment, and methodical policy planning by governmental and private entities in food and energy sectors.

Strategic Context: Global Trade and the Strait of Hormuz

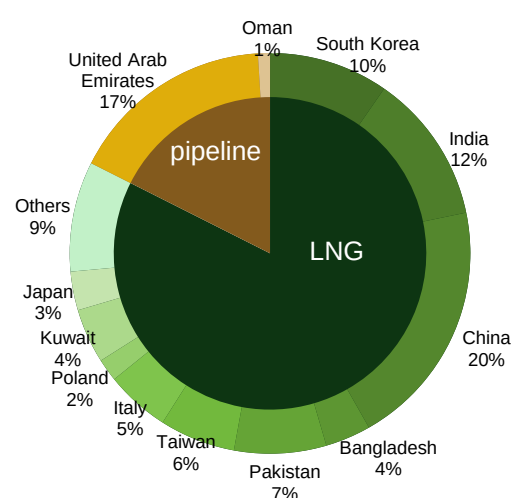
The Strait of Hormuz is one of the most critical chokepoints in the global energy system. Located between Iran and Oman, the strait forms the primary maritime exit point for oil and natural gas exports originating from Gulf countries. Every day, large numbers of oil tankers and LNG carriers travel through this corridor on their way to global markets. Because the strait is relatively narrow and geographically constrained, any disruption—whether caused by geopolitical tensions, security incidents, or military escalation—can have significant consequences for global trade.

For Qatar, the strategic importance of this route is particularly pronounced. Nearly all LNG exports depart from Ras Laffan Industrial City and travel through the Arabian Gulf before passing through the Strait of Hormuz on their way to major import markets in Asia and Europe. Countries such as

South Korea, China, and India (see Figure 1) rely heavily on Qatari LNG to meet their energy needs, while European states have increasingly turned to Qatar as part of their energy diversification strategies.

The concentration of energy flows through a single maritime corridor creates a structural vulnerability within global supply chains. Any interruption to this route would affect Qatar's export revenues and could also trigger broader disruptions in international energy markets.

Figure 1. Qatar's Natural Gas Exports by Type and Destination, 2024



Source: U.S. Energy Information Administration (EIA)

Supply Chain Vulnerabilities in Qatar

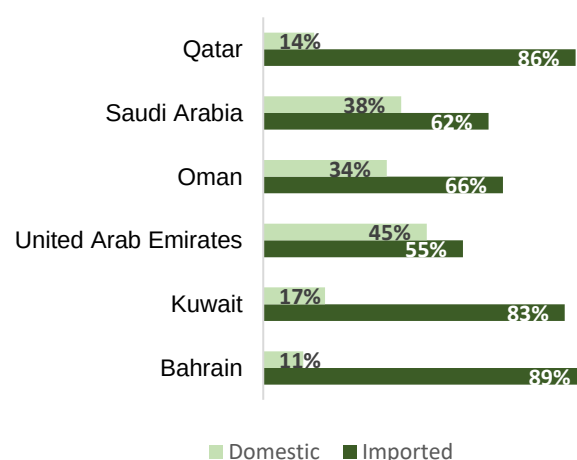
Qatar's economic structure amplifies the importance of secure and reliable supply chains. On the export side, LNG production and the international energy trade form a central pillar of the national economy. Any disruption to tanker routes could delay shipments, increase transportation costs, or raise maritime insurance premiums. Such disruptions would have implications not only for Qatar's economic performance but also for the global energy market.

On the import side, Qatar faces additional challenges related to food security and industrial

supply chains. The country's arid climate limits domestic agricultural production, making international food imports essential. Figure 2 highlights GCC's structural dependence on external supply chains. Qatar is among the most import-dependent countries, with 86% external food supply. Major suppliers include India, Brazil, Turkey, Australia, and several European countries. These imports typically arrive through maritime shipping routes and are processed through Hamad Port, which functions as the country's primary logistics hub.

Although Qatar has invested heavily in strengthening its logistics infrastructure since the 2017 Gulf blockade, maritime trade remains the dominant mechanism for the import of food and other essential goods. Therefore, any disruption affecting shipping routes could lead to delays, increased costs, and potential shortages.

Figure 2. Vulnerability of Gulf States to Imported Food, 2023



Source: Food and Agriculture Organization (FAO), United Nations

The Dual Exposure of Export and Import Supply Chains

One of the defining characteristics of Qatar's supply chain system is the simultaneous exposure of both export and import networks to geopolitical risk. Energy exports and food imports rely on the same maritime environment, meaning

that disruptions affecting shipping routes could influence both economic revenue and domestic supply security. This interconnected vulnerability highlights the need for a comprehensive policy approach to supply chain resilience. Policies designed solely to protect energy exports or food imports independently may not adequately address the broader risks associated with geopolitical instability. Instead, resilience strategies must consider the entire supply chain ecosystem, including trade partnerships, infrastructure capacity, logistics networks, and strategic reserves.

Table 1. Trade Flow of Imported Food Products in 2023, by Country

Partner Name	Import (Us\$ Thousand)
Turkey	83,711.83
India	78,755.67
Oman	77,401.12
United States	69,062.11
Netherlands	60,091.30
United Kingdom	49,487.07
France	43,890.20
Italy	38,852.51
Poland	34,180.35
Malaysia	32,607.13
Switzerland	30,217.55

Source: World Integrated Trade Solution (WITS), World Bank

The experience of the 2017 Gulf blockade provides an important example of supply chain adaptation. During that period, Qatar rapidly diversified its food import routes, expanded its logistics infrastructure, and invested in domestic food production initiatives. Although the main food exporters to Qatar in 2023 were Turkey, India and Oman (Table 1), the main origins of Qatar's food product imports in 2025 were the United Arab Emirates (QAR 462 million), Saudi Arabia (QAR 327 million), United States (QAR 261 million), India (QAR 248 million), and Turkey (QAR 218 million) (OEC, n.d). These patterns suggests a shift toward regional trade networks.

However, major food imports from the United States and India indicate that maritime shipping routes remain crucial to the flow of food products.

Supply Chain Risk Assessment Framework

To better understand national vulnerability to geopolitical disruptions, this policy brief proposes an adapted conceptual formula for the Supply Chain Risk Index (SCRI). This index combines several indicators that capture structural exposure to supply chain risks (Vimal & Nayanthara, 2026).

SCRI Formula:

SCRI = 0.30E + 0.25F + 0.20S + 0.15L + 0.10R

Where:

- E = Energy export exposure
- F = Food import dependence
- S = Shipping route vulnerability
- L = Logistics capacity
- R = Strategic reserves

Higher SCRI values indicate greater supply chain vulnerability.

Scenario Analysis

Three potential scenarios illustrate how geopolitical developments could influence Qatar's supply chains. In a low-risk scenario (SRCI=0-0.3), regional tensions remain manageable and shipping routes continue to operate normally. Supply chains remain stable, though operational costs may increase slightly. In a moderate disruption scenario (SRCI=0.3-0.6), periodic security incidents affect maritime traffic, causing delays in LNG shipments and food imports. Insurance costs rise and logistics networks experience temporary bottlenecks. In a high-impact disruption scenario (SRCI=0.6-1), significant geopolitical escalation restricts shipping through the Strait of Hormuz. Such a disruption could lead to major delays in energy exports and food imports, creating substantial economic and logistical challenges.

Conclusion

Geopolitical tensions in the Middle East highlight the importance of resilient supply chains for Qatar's economic stability and national security. Continued investment in infrastructure, diversification, and technological innovation will help ensure that the country remains resilient in an increasingly uncertain global environment.

Supply chain resilience should be integrated into broader national development strategies. Qatar's National Vision 2030 emphasizes economic diversification, sustainability, and knowledge-based development. Strengthening logistics infrastructure and supply chain monitoring systems directly supports these objectives.

Further research should focus on developing quantitative models for assessing supply chain vulnerability in the Gulf region and evaluating the role of emerging technologies in improving logistics monitoring and risk forecasting.

References

1. Christopher, M., Peck, H. (2004). Building the Resilient Supply Chain. *The International Journal of Logistics Management*, Vol. 15 No. 2 pp. 1–14, doi: <https://doi.org/10.1108/09574090410700275>
2. Food and Agriculture Organization (FAO). FAOSTAT: Food Balances (2010-) (n.d.). United Nations. <https://www.fao.org/faostat/en/#data/FBS>
3. Observatory of Economic Complexity (OEC). Foodstuffs in Qatar (n.d.). <https://oec.world/en/profile/bilateral-product/foodstuffs/reporter/qat>
4. U.S. Energy Information Administration (EIA). Qatar – Overview (20 October 2025). <https://www.eia.gov/international/analysis/country/QAT>
5. World Integrated Trade Solution. Country Profile – Qatar (n.d). World Bank. <https://wits.worldbank.org/CountryProfile/en/Country/QAT/Year/LTST/TradeFlow/Import/Partner/by-country/Product/>
6. Vimal, P. S., Nayanthara, K. T. (2026). Developing a supply chain resilience index using risk, ESG and supplier concentration metrics: Evidence from Bloomberg supply chain data. <http://dx.doi.org/10.2139/ssrn.6400041>

Policy Recommendations

1. Strengthening supply chain resilience requires coordinated policy measures. Expanding strategic food reserves represents one of the most immediate policy tools available to governments.
2. Increasing storage capacity for staple foods can help stabilize domestic supply during temporary disruptions.
3. Diversifying trade partnerships is another critical strategy. Expanding supplier networks across multiple regions can reduce dependence on any single trade corridor and improve supply flexibility.
4. Investing in domestic food production technologies can also reduce long-term vulnerabilities. Advances in hydroponics, vertical farming, and controlled-environment agriculture have already demonstrated potential for increasing agricultural productivity in arid environments.
5. Finally, digital monitoring systems could significantly enhance supply chain management. Integrating satellite tracking, shipping analytics, and commodity market data would allow policymakers to identify potential disruptions early and respond more effectively.