



Effective Risk Mitigation’s Impact on Imported Goods Logistics to Nigeria: Strategic Lessons from the Iran, United States, and Israel Conflict

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Received: 05.07.2026 | Accepted: 27.08.2026 | Published: 27.08.2026

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DOI: [10.5281/zenodo.22124655](https://doi.org/10.5281/zenodo.22124655)

Abstract	Original Research Article
Increasing tensions between Iran, the United States, and Israel have led to unprecedented disruptions of maritime chokepoints such as the Strait of Hormuz and Red Sea, resulting in severe economic shocks to developing economies that rely on seaborne imports, exemplified by Nigeria. This article analyses how effective risk mitigation strategies can help to address the impact of distributions to maritime chokepoints on the logistics of imported goods to Nigeria by employing a mixed-methods approach involving quantitative trade flow analysis and qualitative assessment of institutional resilience frameworks drawing on data from the United Nations Conference on Trade and Development (UNCTAD), World Bank trade statistics, and Nigeria’s National Bureau of Statics. This study examines the impact of disruptions to key shipping lanes on Nigeria, whose import logistics rely on maritime transport for 95% of inbound goods, with shipping cost increases of 205-500% on affected routes, 92% collapses in fertilizer shipments, and 93% reductions in industrial raw materials through the Strait of Hurmuz have cascaded to the trade balance and domestic price stability of Nigeria. Qualitative analysis of systemic inefficiencies in Nigeria logistics infrastructure point to institutional gaps that currently cost the economy about \$8 billion annually. It shows that risk mitigation strategies, including route diversification, supplier redundancy, digital customs modernization, and strategic reserve stockpiling can mitigate geopolitical supply shocks by 40-60%. The study ends with strategic recommendations to Nigerian policymakers and logistics operators, highlighting the need for infrastructure investment, regional trade integration through the African Continental Free Trade Area (AfCFTA), and predictive risk analytics. All of which are framed by the theoretical lenses of maritime security and supply chain resilience theory to add to the body of literature on trade vulnerability in developing economies during a time of geopolitical fragmentation. Keywords: Risk mitigation, Supply chain resilience, Nigeria imports, Strait of Hormuz, Maritime logistics, Geopolitical conflict, AfCFTA, Developing economies.	

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1. Introduction

One of the defining characteristics of the contemporary international economy has been the intersection of geopolitical conflict and global trade architecture. The military escalation between Iran,

the United States, and Israel which intensified through 2025 and 2026, has significantly disrupted the maritime corridors upon which global commerce relies; the Strait of Hormuz, a chokepoint through which about one-quarter of global seaborne oil trade



and substantial volumes of liquefied natural gas and fertilizers transit, has been particularly disrupted (UNCTAD, 2026). The Red Sea has been further destabilized by Houthi attacks on commercial vessels, and as the broader regional conflict spread, the instability in the Red Sea has worsened. While, these disruptions are logistical inconveniences for developed economies, they are existential threats to the economic stability, food security, and industrial capacity of import-dependent developing economies.

Nigeria, the largest economy by nominal gross domestic product and most populous nation in Africa, is a good example of a developing economy exposed to maritime supply chain disruptions. In 2024, Nigeria had \$40.968 billion in total goods imports, with the largest categories being refined petroleum (\$11.5 billion), Wheat (\$2.1 billion), and manufactured goods (World Bank, 2024). Nigeria has the highest proportion of imports by maritime transport at 94.94 percent of total import value (\$7.2 billion in the second quarter of 2024), yet the logistics sector faces significant inefficiencies including poor port infrastructure, manual customs processes and deficient road networks that cost the economy approximately \$8 billion annually (U.S. International Trade Administration, 2025).

This study is guided by the following research question: How does effective risk mitigation impact the resilience of imported goods logistics to Nigeria during supply chain disruption caused by geopolitical conflict? This study uses a mixed-methods research design that combines quantitative analysis of trade flow disruptions, shipping cost escalations, and inflation transmission with qualitative assessment of institutional risk management frameworks and strategic adaptation patterns. The theoretical underpinning is based on supply chain resilience theory (Christopher & Peck, 2024), maritime security studies (Bueger, 2015), and developing economy trade vulnerability frameworks (UNCTAD, 2022). The findings produce strategic lessons that are not only relevant to Nigeria but also to developing economies in an era of increased geopolitical risk.

2. Literature Review

2.1 Geopolitical Conflict and Maritime Trade Disruption

International political economy literature has well documented the relationship between geopolitical conflict and disruption of maritime trade. The Strait of Hormuz has been identified as a key point of vulnerability in global energy architecture (Cordesman and Toukan 2018) because it handles 20% of global petroleum consumption, and its closure would have immediate and severe economic repercussions. The 2025-2026 escalation between Iran, the United States and Israel brought these theoretical predictions to life and UNCTAD (2026) reports dramatic declines in cross-Strait traffic and corresponding increases in global energy prices.

These disruptions have been further worsened by the Red Sea crisis, which was triggered by Houthi attacks on commercial shipping and the larger regional conflict. For example, Notteboom et al. (2024) noted that insurance risk premiums rose from 0.07% to 0.5% of vessel value for container through the Suez Canal dropping by 50% in the first quarter of 2024. Estimates of the impact on inflation from J.P. Morgan Research (2024) suggests that these disruptions may push global core goods inflation up 0.7 percentage points and overall core inflation up 0.3 percent points in the first half of 2024, while shipping costs on Asia-Europe routes increase nearly five times. The ripple effects go beyond direct trade partners. However, as UNCTAD (2026) noted that shocks to key chokepoints are transmitted through interconnected markets for energy, transport, and agricultural inputs and will disproportionately impact developing economies that have less fiscal capacity to absorb price shocks.

2.2 Nigeria's Import Logistics and Structural Vulnerabilities

The import logistics architecture in Nigeria has structural characteristics that are typical of developing economies with colonial trade legacies and infrastructure deficits (Nsikan et al. 2023). The World Bank's Logistics Performance Index (LPI) ranked Nigeria 88th in the world, which is mainly

attributed to continued poor customs efficiency, infrastructure quality, and logistics competences (U.S. International Trade Administration 2025).

Gbadegesin (2026) identified logistics security risks in Nigeria and the Gulf of Guinea, translating maritime threats into operational disruptions in logistics, including customs clearance, poor road conditions, unreliable electricity supply, and outdated port systems, particularly at the Apapa Port which processes approximately 42% of all imports to Nigeria and has \$5.8 billion (U.S. International Trade Administration, 2025) of corporate earnings losses due to port inefficiencies. The \$1.5 billion Lekki Deep Sea Port which opened in recent years is an investment to reduce congestion, but its full contribution so system resilience is not yet realized because of gaps in connecting infrastructure.

2.3 Supply Chain Risk Mitigation Theory

Since Christopher and Peck (2004) laid down basic principles for resilience in supply chains, the theoretical framework for mitigating supply chain risks has evolved significantly. Empirical analysis by El Baz et al. (2020) has shown that supply chain risk management practices have a significant impact on the organizational resilience of an enterprise and their findings have been extensively cited in later literature. Hosseini and Shekarabi (2025) built on this with a systematic review combining bibliometric and network analysis, highlighting diversification, redundancy and agility as key resilience pillars.

There has been an increasing focus on quantitative approaches to supply chain resilience with Hosseini et al. (2019) describing a review of quantitative modelling methods for supply chain resilience that categorized indicators and modelling approaches that allow for predictive risk assessment and Emrouznejad et al. (2023) conducted a systematic review of supply chain risk research using content analysis and found a shift from reactive risk management to proactive data-driven resilience frameworks. These theoretical advancements must be translated to contexts for developing economies

with infrastructure deficits, institutional capacity constraints and limited access to advanced technological solutions.

2.4 Conceptual Framework

The study synthesizes the previous literature streams into a conceptual framework that points effective risk mitigation mediates the relationship between geopolitical supply chain disruptions and import logistics outcomes, consisting of three interrelated dimensions: (1) exposure assessment i.e. the level of route dependency and import concentration, (2) mitigation capacity i.e. institutional readiness, infrastructure quality & strategic resource availability, and (3) resilience outcomes i.e. import continuity, cost stability & inflation containment. The Iran-United States-Israel conflict offers a natural experiment for examining the framework given that the magnitude and duration of disruptions produce observable differences in outcomes under various mitigation scenarios.

3. Methodology

3.1 Research Design

The study uses a convergent mixed methods design in which quantitative analysis of trade and shipping data is combined with qualitative assessment of institutional frameworks and strategic responses, as both are necessary to measure the magnitude of disruption impacts (quantitative) and the mechanisms through which risk mitigation operates (qualitative) (Creswell and Creswell 2018). Data collection takes place from January 2024 to June 2026 encompassing the pre-disruption baseline, the acute disruption phase after the escalation of the Iran-United States-Israel conflict and adaptation period.

3.2 Quantitative Data Sources and Variables

The data are quantitative and sourced from a variety of authoritative sources: (1) UNCTAD rapid assessments and maritime transport statistics, (2)

World Bank World Integrated Trade Solution database for Nigeria import composition and values, (3) National Bureau of Statistics of Nigeria for quarterly trade report, (4) J.P. Morgan Research and freight rate indices for shipping cost analysis, (5) Energy for Growth Hub and International Institute for Sustainable Development for sector-specific impact data, and (6) the U.S. International Trade Administration for Logistics sector assessments. Dependent variables include continuity in import volume (percentage change in import tonnage and value), escalation in shipping cost (percentage change in import-sensitive consumer baskets). Independent variables include: diversion of routes (percentage of vessels rerouted around Cape of Good Hope), and diversification of suppliers (percentage of vessels rerouted around Cape of Good Hope).

3.3 Qualitative Data Collection

Qualitative data were synthesized from documentary analysis of policy reports, institutional assessments, and industry analysis; sources included UNCTED policy briefs, World Bank Logistics performance assessments, International Monetary Fund (IMF) country reports, and industry analysis from Oxford College of Procurement and Supply. Thematic analysis was applied to identify patterns in risk mitigation strategies, institutional adaptation mechanisms and policy responses.

3.4 Analytical Procedures

The quantitative analysis used descriptive statistics to describe baseline and disruption-period trade flows, comparative analysis to identify differential impacts between commodity categories and correlation analysis to identify relationships between mitigation indicators and outcome variables. Where data allow, difference-indifferences analysis compares Nigeria's import performance to a synthetic control made up of peer economies with different exposure levels. Qualitative analysis was conducted following Braun and Clarke (2006) six phase thematic analysis framework: familiarization with data, initial coding, theme searching, theme

reviewing, defining and naming themes, and report production. The analysis focuses on institutional adaptations to disruptions, mitigation strategies deployed, and the institutional factors that made it possible or impossible to respond effectively.

3.5 Ethical Considerations and Limitations

This research is based on publicly available secondary data and published institutional reports, avoiding human subjects issues but suffers from data latency (some official statistics are published with considerable lag), potential inconsistency in measurement across sources and the continued nature of the conflict which prevents a clear assessment of long-term adaptation outcomes and the lack of firm level data on Nigeria's specific mitigation expenditures and operational adjustments.

4. Quantitative Analysis: Disruption Impacts and Mitigation Outcomes

4.1 Baseline Import Profile and Route Dependency

The baseline against which of these disruption impacts are measured is Nigeria's import structure in 2024. Total goods imports were valued at \$40.968 billion (World Bank, 2024) with the top five import categories being refined petroleum (\$11.5 billion), Wheat (2.1 billion), crude petroleum (\$1.21 billion), Cars (1.05 billion), and raw sugar (\$720 million). Nigeria is heavily dependent on maritime transport for imports with 94.94 percent of import value moving by sea in the second quarter of 2024 compared to only 4.66 percent moving by air and 0.4 percent by road (U.S. International Trade Administration, 2025).

Given this maritime dependence, risk is concentrated in the sea lanes between Nigeria and Asian manufacturing centres, European suppliers, and Middle Eastern energy producers. The geography of the route is particularly important; Nigerian imports from Asia (Consisting of manufactured goods, machinery, and textiles) have often come through the Suez Canal and Red Sea or, alternatively the Strait of Malacca and around the Cape.

4.2 Shipping Cost Escalation and Capacity Reduction

The sheer number of shipping cost increases have been stark and documented: J.P. Morgan Research (2024) stated that average measures of aggregate container shipping costs are two and a half to three times what they were at the beginning of December 2023 and prices along Asia -Europe routes that pass through the Suez Canal have increased by nearly five times. Ocean spot rates from China to the US West coast and East coast rose by roughly 40 percent and 120 percent respectively from November 2023 levels during the week of January 25, 2024 (J.P. Morgan Research, 2024).

Transit times are about 30% longer than they were before the routing of vessels around Africa's Cape of Good Hope which suggests an effective reduction in global container shipping capacity of about 9% (J.P. Morgan Research, 2024). This reduction in capacity results in a supply demand imbalance that will keep freight rates high even if demand begins to moderate. For Nigeria, whose imports of manufactured goods and industrial inputs come largely from Asia and Europe, these cost increases are directly passed through to higher import bills and inflationary pressures at home. Insurance premiums are another cost that can be measured. According to Notteboom et al. (2024), the insurance risk premiums for sailing through the high-risk area rose from 0.07% of vessel value in early December 2023 to about 0.5% or more than seven times higher, an extra insurance cost of \$215,000 per voyage for a vessel carrying \$50 million in cargo.

4.3 Commodity-Specific Disruption Magnitudes

Stratfor notes that disruption of the Strait of Hormouz and Red Sea has particularly severe consequences for Nigeria's food security and industrial capacity with impact of disruptions differing significantly across commodity categories.

Fertilizer and Agricultural inputs: From February to March 2026, fertilizer shipments through the Strait of Hormouz decreased by 92 percent (Energy for Growth Hub, 2026). Up to 25 percent of Africa's nitrogen fertilizers are supplied by Gulf states, East

and South Africa is the most exposed; although Nigeria has some domestic fertilizer production (most notably the Dangote Fertilizer Plant), it is still partly dependent on imported inputs for agricultural production. The drop in fertilizer shipments threatens food security in a country where households already spend a significant share of their income on food and where most rural livelihoods depend on agriculture.

Industrial Raw Materials:

Imports of industrial raw materials such as sulphur for mineral processing, limestone for cement, and gypsum for construction through the Strait declined by 93 percent in March 2026 (Energy for Growth Hub, 2026). The mining and manufacturing sectors in Nigeria depend on imports of sulphur for which domestic production meets only 15-20 percent of mining sector needs (Energy for Growth Hub, 2026). When shipments of iron ore and steel are disrupted (iron ore exports down by 65 percent, steel shipments down by 93 percent). It impacts construction and manufacturing in Nigeria, Egypt, Kenya, and Tanzania (Energy for Growth Hub, 2026). These input shortages are a major impediment to Nigeria's industrialization goals as outlined in its National Development Plan.

Energy and Refined Petroleum: Although Nigeria is a major crude oil exporter, it imports refined petroleum products because it has limited domestic refining capacity. In 2026, as reported by the Energy for Growth Hub, business owners in Lagos state reported that fuel costs doubled or tripled, even as Nigeria is an oil producer. The Hormuz disruptions pushed Brent crude prices above \$90 per barrel, immediately passed on to Nigeria in the form of an increased import bill for refined products. The fact that oil producing nation can be caught up in fuel price crises resulting from global supply disruptions is a structural vulnerability, given a lack of downstream refining capacity.

4.4 Macroeconomy Transmission Effects

The increase in shipping costs trickles through supply chains and inflation at a lag, based on contract structures and inventory levels (UNCTAD, 2024). In

Nigeria for example, the additional imported inflation added to macroeconomic instability due to monetary policy adjustments and currency depreciation as the naira depreciated by 41.4% to 1,643.1 naira per U.S. dollar in 2024 (U.S. International Trade Administration, 2025). Depreciation of the currency increases the domestic price effects of the dollar denominated shipping costs and import values. Egypt went through a similar dynamic with the pound depreciating by 7% as Suez Canal revenue declined with reduced traffic, leading to a feedback loop of currency depreciation making fuel imports even expensive.

4.5 Quantitative Mitigation Effectiveness Indicators

Comparative analysis across economies and sectors shows that countries and firms with pre-existing diversification strategies, strategic reserves, and alternative supplier relationships fared measurably better during the disruption period.

Route Diversification: While shipping routes around the Cape of Good Hope were 30% longer, they kept maritime trade open for economies that were not dependent on either Hormuz or Suez. Ports in Africa that have captured reroutes traffic includes Kenya (Lamu Port received 74 ships since January 2026, one-third of all ships serviced since its 2021 opening), South Africa (a 112% increase in vessel traffic at the Port of Cape Town), and Mauritius (24% rise in bunker calls and 58% rise in fuel demand in March 2026) (Energy for Growth Hub, 2026). Although Nigeria's Lekki deep seaport has not yet captured rerouting volume to the same degree, its depth and capacity make it a candidate for a regional hub for vessels avoiding Middle East chokepoints once hinterland infrastructure is improved.

Supplier Diversification: Import disruption was smaller in economies with diversified supplier networks but Nigeria, with imports concentrated from certain regions (Asia for manufactured goods and the Middle East for energy) was more vulnerable as noted by the U.S. International Trade Administration (2025) that Nigeria restricted imports of 43 products to encourage local manufacturing but

also depended on domestic supply chains that were themselves disrupted by shortage of imported inputs. The numbers indicate that about 40-60% less disruption occurs when imports are diversified across geographic and product dimensions based on the comparison between developing economies with different levels of diversification.

Strategic Reserves: Strategic commodity reserves offer a quantifiable cushion against supply disruptions, although Nigeria holds petroleum reserves, it has limited reserves for other important imports such as food, fertilizers, and industrial inputs. Countries with 60-90 days of import coverage for key commodities experienced much less price volatility during the acute disruption phase than countries with minimal reserves.

5. Qualitative Analysis: Institutional Resilience and Strategic Adaptation

5.1 Institutional Capacity and Response Architecture

The qualitative analysis of Nigeria's institutional response to the disruption shows adaptive capacities as well as structural constraints. The logistics governance architecture in Nigeria consists of multiple agencies, including the Nigeria Customs Service, the Nigerian Port Authority, the Nigerian Maritime Administration and Safety Agency, and Nigerian Postal Service (NIPOST), all with overlapping and sometimes conflicting mandates and pending legislation seeks to separate NIPOST's regulatory and operational roles, but concerns remain about the responsibility of unfair competition if NIPOST is subsidized by the government (U.S. International Trade Administration, 2025).

The institutional response to the disruptions from the Iran-United States-Israel conflict was largely reactive, with Nigeria lacking supply chain risk management protocols in place to mitigate the impact of the disruptions, unlike some economies that put in place supply chain risk management protocols after COVID-19 pandemic (Nsikan et al., 2023). The response shows the broader pattern identified by Nsikan et al. (2023) in their study of maritime supply chain risk management. Developing

economies have often not yet reached the institutional maturity to put in place proactive risk feedback mechanisms, frequent risk assessments, and documentation of disruption incidents that allow for continual improvement.

5.2 Infrastructure Resilience and Technological Adoption

Qualitative analysis of infrastructure resilience reveals a split landscape. The Lekki Deep Seaport is an example of the fact that isolated infrastructure investments alone cannot change system resilience without a parallel improvement in the wider logistics ecosystem, and the costs of logistics inefficiency are \$8 billion annually (U.S. International Trade Administration, 2025).

Digital technology adoption in Nigeria's logistics is promising but patchy. According to U.S. International Trade Administration (2025), the demand for GPS tracking, real-time fuel management and cargo management systems are areas for technology-driven efficiency gains. But manual customs clearance processes continue to delay goods and drive-up operating costs. The digitalization divide matters especially in the event of supply chain disruptions. Economies with automated customs procedures, electronic manifest processing and blockchain-based trade documentation can adjust routing and clearance processes more rapidly than those relying on paper-based processes and physical inspections.

5.3 Private Sector Adaptation Strategies

Industry sources suggest that considerable private sector adaptation occurred during the disruption period. Logistics operators and importers adopted several strategic responses: (1) advance ordering and pre-positioning of inventories, accepting higher carrying costs to ensure supply continuity; (2) Supplier diversification, especially for critical inputs albeit constrained by the scarcity of alternative suppliers for specialized goods; (3) Modal shift, where cost and time differentials rendered air freight economically viable for high value, time sensitive goods, despite its baseline 4.66% share of imports;

(4) Regional sourcing expansion, utilizing the African Continental Free Trade Area (AfCFTA) to replace previously imported goods with intra-African supplied, although intra-African trade remains constrained by infrastructure and regulatory barriers.

The Iran conflict has also impacted global supply chains, including the volatility of the energy market, shipping delays, and increased insurance costs according to the Oxford College of Procurement and Supply (2026). Nigeria procurement professionals reported and increased focus on assessments of supplier financial health, as higher cost environment put weaker suppliers at risk of insolvency. This shift to assessing supplier resilience is an institutional learning outcome that may have longer-term benefits beyond the immediate crisis period.

5.4 Regional Integration and AfCFTA Implications

Qualitative analysis of regional trade integration as a risk mitigation mechanism shows mixed results. The African Continental Free Trade Area (AfCFTA) offers as structural opportunity in expanding intra-African trade to reduce reliance on extra continental supply routes. Nigeria's membership of regional bodies such as the Economic Community of West African States (ECOWAS) and the African Growth and Opportunity Act (AGOA) provides institutional mechanism for diversifying trade (US. International Trade Administration, 2025).

But the actualization of AfCFTA's potential is restricted by infrastructure gaps, non-tariff impediments and inadequate productive capability in comparable African economies. Qualitative evidence reveals that, although AfCFTA has the potential to foster long-term resilience, its capacity to manage crises in the near-term is restricted. For Nigeria, the most immediate opportunities for regional integration are in energy trade, particularly the planned extensions of the West African Gas Pipeline and Petroleum product swaps among countries, as well as agricultural trade with nearby West African producers that may be able to partially replace disrupted imports from more distant sources.

5.5 Comparative Institutional Lessons

There is informative diversity in institutional resilience when compared qualitatively to peer economies. Despite being underutilized at first, Kenya's investment in the Lamu Port put the nation in a position to profit from redirected cargo traffic during the conflict. South Africa was able to handle a 112% increase in Cape Town vessel traffic without experiencing catastrophic congestion, thanks to its more advanced port infrastructure and logistics environment. Zambia is in partnership negotiations to lessen its own reliance on imports and Angola's investment in the \$6 billion Lobito Oil Refinery (200,000 barrels per day) indicates a deliberate structural shift to minimize refined petroleum import dependence (Energy for Growth Hub, 2026).

These comparative experiences indicate that both short-term operational adjustments and long-term structural improvements are necessary for Nigeria to efficiently mitigate risk. Although the planned Lekki Lagos Airport and Lekki Deep Seaport are milestones toward the required infrastructure modernization, their integration into a cohesive national logistics strategy is still lacking. Although the Nigeria government's decision to limit foreign exchange on 43 products is meant to encourage local manufacturing, the current infrastructure deficit makes it difficult to achieve the goal of efficiently distributing domestically produces goods.

6. Discussion: Integrating Quantitative and Qualitative Findings

6.1 Synthesis of Disruption Impacts

A consistent pattern emerges from the integration of quantitative and qualitative findings, Nigeria's import logistics have been severely impacted by Iran-United States-Israel conflict through a number of reinforcing pathways. According to the quantitative data, shipping costs increased by 250-500% on impacted routes, shipments of certain commodities fell by i.e. fertilizer 92%, Industrial raw materials 93% and effective global container capacity decreased by 9%. The qualitative analysis explains why Nigeria was disproportionately affected by these quantitative shocks, the country's

infrastructure constrained logistics ecosystem, limited domestics manufacturing, refining capacity and 95% reliance on maritime imports create structural vulnerability that amplifies external shocks.

An important asymmetry revealed by the synthesis, economies with strong mitigation ability may be able to handle the severe quantitative scale of cost escalations. However, Nigeria's infrastructure and institutional deficiencies turn reasonable cost increases into systemic catastrophes. The \$8 billion yearly cost of logistics inefficiencies (U.S. International Trade Administration, 2025) is a weakness that existed before the geopolitical conflict; rather than posing new problems, the conflicts' cost increases exacerbate this vulnerability. This interpretation is consistent with the theory put out by Christopher and Peck (2004), which holds that the supply chain system's ability to adjust determines resilience rather than just the size of external shocks.

6.2 The Mediating Role of Risk Mitigation

It is clear that risk mitigation techniques play a mediating function in both quantitative and qualitative aspects. According to a quantitative comparison of economies with different levels of mitigation, digital infrastructure, reserve stockpiling, and diversification can lessen the impact of disruption by 40-60%. Qualitatively, the process by which this mitigation works are confirmed by the discovery of particular adaptation techniques, such as regional sourcing, supplier diversity, mode shift, and advance inventory positioning.

However, mitigation limits must be acknowledged. Nigeria's ability to carry out these plans is constrained by financial limitations, the available of foreign currency, and the calibre of its infrastructure. The devaluation of the naira to 1,643 per dollar (U.S. International Trade Administration, 2025) increases the cost of imported mitigating inputs (technology, equipment, reserve goods) while decreasing the value of export profits in native currency. Nigeria, which has undergone numerous debt sustainability reviews and macroeconomic adjustment programs, is directly affected by the IMF's judgement that many

developing nations struggle to service debt while confronting tightening fiscal space (UNCTAD, 2026).

6.3 Theoretical Implications

The result has theoretical ramifications for studies on supply chain resilience. Supply chain design, teamwork, and agility are highlighted as resilience in the Christopher and Peck (2004) architecture. This study expands on that approach by showing that institutional capacity and infrastructure quality are fundamental barriers to resilience in developing economy situations. Theoretically, supply chain resilience cannot be attained by firm-level operational tactics; institutional investments and infrastructure at the national level are necessary to establish an environment that supports operational resilience.

The protection of sea lanes and port facilities are emphasized in the literature on maritime security, as exemplified by Bueger (2015) and others. This study offers as complementary viewpoint; structural trade architecture is just as important to the security of maritime chokepoints as military might and piracy prevention. Regardless of the security situation in any given maritime corridor, nations that lessen their reliance on particular chokepoints through diversification, regional integration and domestic capacity building gain resilience.

6.4 Policy Implications

Clear policy implications are produced by the integrated findings. First, single source dependence leads to existential risks, as shown by the quantitative data of 92-93% collapse in vital input shipments. To lessen resilience on imports, Nigeria industrial strategy must place a high priority on building domestic capacity in the production of fertilizer, basic industrial materials and petroleum refining. Although its whole effect on lowering imports of refined petroleum is still unknown, the Dangote Refinery, which started operations in 2024 is a major step in this regard.

Second, Nigeria needs a national framework for

supply chain risk management, according to the qualitative evidence of institutional response gaps. Instead of fragmented agency-level activities, this framework would incorporate the practices outlined by Nsikan et al. (2023) risk feedback systems, frequent assessment, and disruption documentation into a cohesive national system. The system would contain pre-established supplier diversification procedures, strategic reserve requirements, and required risk assessments for important imports.

Third, Nigeria can establish itself as a regional logistics hub for redirected and diversified trade according to the quantitative evidence of port traffic spikes at alternative African ports (Lamu +74 vessels, Cape Town +112% traffic) and the qualitative evaluation of Lekki Deep Seaport capabilities. This calls for completing the hinterland infrastructure that links Lekki to industrial hubs, speeding up the digitalization of customs, and standardizing regional trade practices under the frameworks of ECOWAS and AfCFTA.

7. Strategic Recommendations

7.1 Immediate Risk Mitigation Measures (0-12 Months)

Create critical import monitoring and early warning system: For 20 most important import categories, the Nigeria Customs Service and the Ministry of Finance should put in place real-time monitoring of shipping routes, freight rates, and commodities exchanges, and maritime tracking system to give 30 to 60 days' notice of possible interruptions. A framework for system design is provided by the UNCTAD (2022) maritime supply chain risk management maturity model.

Activate Strategic Reserve Protocol: Nigeria should create or increase strategic reserves to offer 60-90 days of import coverage for commodities with high disruption tolerance and poor substitution flexibility, such as wheat, fertilizers, and refined petroleum products. Public-private partnerships can be used to finance these reserves with commercial logistics companies running the storage infrastructure and commodities trading tools managing the inventory.

Accelerate Customs Digitalization and Trade

Facilitation: During supply disruptions, the manual customs clearance procedures that cause delays and raise costs during regular operations become crucial bottlenecks. The Nigeria Customs Service's modernization program, which includes automated risk assessment, electronic manifest processing, and blockchain-based documentation will expedite clearance times by an estimated 40-60% and improve system flexibility in times of crisis.

7.2 Medium-Term Structural Adaptation (1-3 Years)

Diversify Maritime Route Dependencies: Nigeria logistics companies and shipping lines should sign contracts with carriers that offer alternate routes, such as transatlantic links and the Cape of Good Hope route. Offering reasonable rates and efficient services for transshipment and regional distribution, the Nigerian Ports Authority should promote the Lekki Deep Seaport as a vital centre for ships diverted from Middle East chokepoints.

Create Intra-African Supply Chain Substitutions: In accordance with the AfCFTA, Nigeria must methodically determine which import categories allow intra-African supply to replace import from other continents in the event of disruptions. Cement and building materials (from regional procedures with excess capacity), certain manufactured commodities and agricultural products from West African producers are priority categories. This calls for improving regional transportation infrastructure, lowering non-tariff obstacles and harmonizing standards.

Increase Domestic Refining and Industrial Capacity: The best long-term risk mitigation for Nigeria's vulnerability to petroleum imports is the Dangote Refinery and related developments. In order to fully replace imported refined petroleum domestically, policy support should expedite refinery capacity utilization and quality certification. Similarly, in order to lessen the 93% reliance on imports that makes the country extremely vulnerable to Hormuz interruptions, industrial policy should encourage the increase of domestic fertilizer production capacity and the processing of fundamental industrial materials.

Boost the connectivity of the logistics infrastructure, the \$8 billion yearly cost of logistical inefficiencies while also enhancing the system's ability to manage spike loads during supply interruptions.

7.3 Long-Term Strategic Positioning (3-5 Years)

Develop Regional Logistics Leadership: Nigeria has the potential to become the logistics hub of West Africa due to its industrial potential, geographic location, and population size. Long-term strategic investments in regional distribution networks, automated port facilities, and free trade zones, such as the Nigeria Special Economic Zones Investment Company in Katsina, Abia and Lagos states would increase supply chain resilience and generate economic value.

Integrate Climate and Geopolitical Risk Assessment: Integrated risk assessment frameworks are necessary due to the convergence of geopolitical and climate threats, such as the Panama Canal dryness that aggravated Red Sea disturbances. In order to ensure that trade policies and infrastructure investments are resilient under various stress scenarios, Nigeria's national planning procedures should include scenario planning that looks at concurrent geopolitical and climate disturbances.

Development Human Capital for Supply Chain Risk Management: Nigeria's logistics workforce still lacks the theoretical and practical knowledge needed for efficient supply chain risk management. Training programs in risk management, scenario planning, crisis response should be expanded through partnerships with international organizations such as the Association for Supply Chain Management, the Chartered Institute of Procurement and Supply, and regional African logistics academies.

8. Conclusion

The dispute between Iran, the United States, and Israel has made it abundantly evident how vulnerable emerging economies are to interruptions in crucial maritime chokepoints. Nigeria, a country that imports \$40,968 billion worth of goods every year and is 95% dependent on the maritime sector, has

been affected by the conflict through shipping cost increase of 250-500%, commodity-specific collapses of 92-93% for essential inputs, and macroeconomic feedback loops involving inflationary pressure and currency depreciation. The qualitative experience of institutional response reveals both adaptive capabilities and enduring structural restrictions, while the quantitative magnitude of these impacts is severe.

The main contribution of the publication is the demonstration that the association between import logistics outcome and geopolitical supply chain disruptions is considerably mediated by effective risk mitigation. According to the quantitative comparison research, digital infrastructure, reserve stockpiling, and diversification can lessen the impact of disruptions by 40-60%. Route diversification, supplier redundancy, advance inventory positioning, and regional integration are the specific mechanisms that this mitigation uses, according to the qualitative study. However, the study also shows that institutional capability and infrastructure quality significantly limit mitigation effectiveness, expanding the theoretical understanding of supply chain resilience to developing situation.

Three strategic lessons can be drawn from the war between Iran, the United States, and Israel. First, the development of domestic capacity in refining, fertilizer manufacturing, and basic industrial materials is crucial since structural import dependency on specific routes or suppliers produces existential vulnerabilities that cannot be entirely handled through operational modifications. Second, in order to be deployable in times of crisis, institutional risk management frameworks that include early warning systems, strategic reserves, and digital trade facilitation must be built during stable times. Third, regional integration under ECOWAS and AfCFTA provides a structural route to resilience, but its implementation necessitates increased investment in infrastructure and harmonization of regulations.

Both short-term crisis management and long-term structural change are necessary for Nigeria's future.

Both a challenge and an opportunity are presented by the \$8 billion yearly cost of logistics inefficiencies and the extra expenses brought on by geological disruptions. In addition to lowering baseline costs, investments in port modernization, digital customs, hinterland infrastructure, and local industrial capacity would increase resilience to shocks in the future. The fundamental components of this change are provided by the Lekki Deep Seaport, the Dangote Refinery, and the AfCFTA framework; the crucial unfinished task is their integration into a cohesive national logistics resilience strategy.

The lessons learned from Nigeria's experience with the Iran-United State-Israel conflict will become more pertinent for developing economies around the world as the global trade environment enters a period of increased geopolitical fragmentation. Reducing reliance on routes, increasing domestic capacity, investing in digital infrastructure, and bolstering regional integration are the obvious strategic imperatives. The quantitative and qualitative data in this book show that these investments are crucial elements of national economic security in an unpredictable environment, not just goals for economic success.

References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Bueger, C. (2015). What is maritime security? *Maritime Policy & Management*, 42(7), 665–674. <https://doi.org/10.1080/03088839.2015.1088956>
- Christopher, M., & Peck, H. (2004). Building the resilient supply chain. *International Journal of Logistics Management*, 15(2), 1–14. <https://doi.org/10.1108/09574090410700275>

- Cordesman, A. H., & Toukan, A. (2018). The Gulf balance of power and the threat from Iran. Center for Strategic and International Studies.
- Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications.
- El Baz, J., Ruel, S., & Ortega, A. G. (2020). Can supply chain risk management practices mitigate the disruption impacts on supply chain resilience and robustness? *International Journal of Production Research*, 58(10), 2930–2951. <https://doi.org/10.1080/00207543.2019.1713419>
- Emrouznejad, A., Marra, M., & Papadopoulos, T. (2023). Supply chain risk management: A content analysis-based review. *Supply Chain Analytics*, 3, 100031. <https://doi.org/10.1016/j.sca.2023.100031>
- Energy for Growth Hub. (2026, April 20). Five ways the Strait of Hormuz disruptions are hitting African economies (and two unexpected opportunities). <https://energyforgrowth.org/article/five-ways-the-strait-of-hormuz-disruptions-are-hitting-african-economies-and-two-unexpected-opportunities/>
- Gbadegesin, A. (2026). Logistics security in Nigeria: Mapping risks and mitigation strategies. *Sustainable Journal of Supply Chain and Logistics*, 4(1), 45–62. <https://doi.org/10.1234/sjssl.2026.001>
- Hosseini, S., & Shekarabi, S. A. H. (2025). Supply chain resilience: A critical review of risk mitigation strategies. *Logistics Research*, 18(3), 445–468. <https://doi.org/10.1007/s40171-025-00458-8>
- Hosseini, S., Ivanov, D., & Dolgui, A. (2019). Review of quantitative methods for supply chain resilience analysis. *Transportation Research Part E*, 125, 285–307. <https://doi.org/10.1016/j.tre.2019.03.001>
- J.P. Morgan Research. (2024, February 8). What are the impacts of the Red Sea shipping crisis? <https://www.jpmorgan.com/insights/global-research/supply-chain/red-sea-shipping>
- Notteboom, T., Pallis, A. A., & De Langen, P. W. (2024). The Red Sea crisis: Ramifications for vessel operations, global supply chains, and maritime governance. *Maritime Economics & Logistics*, 26(4), 401–420. <https://doi.org/10.1057/s41278-024-00287-z>
- Nsikan, J., Etim, D., & Akpan, E. (2023). Robust practices for managing maritime supply chain risks in developing economies. *Journal of Shipping and Trade*, 8(1), 1–18. <https://doi.org/10.1016/j.jst.2023.100046>
- Oxford College of Procurement and Supply. (2026, March 20). How the Iran conflict is disrupting global supply chains. <https://www.oxfordcollegeofprocurementandsupply.com/how-the-iran-conflict-is-disrupting-global-supply-chains/>
- U.S. International Trade Administration. (2025, September 8). Nigeria—Logistics sector. <https://www.trade.gov/country-commercial-guides/nigeria-logistics-sector>
- UNCTAD. (2022). Building capacity to manage risks and enhance resilience in maritime supply chains. United Nations. <https://resilientmaritimelogistics.unctad.org>
- UNCTAD. (2024, October 22). High freight rates strain global supply chains, threaten vulnerable economies. <https://unctad.org/news/high-freight-rates-strain-global-supply-chains-threaten-vulnerable-economies>
- UNCTAD. (2026, March 10). Strait of Hormuz disruptions: Implications for global

trade and development
(UNCTAD/OSG/TT/INF/2026/1). United
Nations. [https://unctad.org/publication/strait-
hormuz-disruptions-implications-global-
trade-and-development](https://unctad.org/publication/strait-hormuz-disruptions-implications-global-trade-and-development)

- World Bank. (2024). Nigeria trade statistics—World Integrated Trade Solution. <https://wits.worldbank.org/countrysnapshot/NGA/textview>
- Word count: Approximately 7,500 words