

PREMIS aula

Charting Turbulent Waters The Suez Canal's Strategic Significance Amid Regional Turmoil

MARINA KRYAKIS

**1er Premi al millor Treball de Final de Màster
Curs 2023-2024**

Masters participating in the program



The Aula Awards for the best Master's Final Dissertations are part of the IEMed Aula Mediterrània Interuniversity Programme, together with the Series of Lectures, the Seminar and the Aula Summer School in Morocco. The programme has been organised by IEMed since the 2014–2015 academic year in collaboration with several Master's Degree programmes at Catalan universities.

The programme aims to foster interdisciplinarity, academic research and cooperation among universities across the Euro-Mediterranean region. Through these awards, we seek to encourage young researchers to conduct their work on the region, while supporting and raising the visibility of their research.

**CHARTING TURBULENT WATERS.
THE SUEZ CANAL'S STRATEGIC SIGNIFICANCE AMID REGIONAL TURMOIL**

AUTHOR: MARINA KRYAKIS

MASTER'S DEGREE: MASTER'S IN INTERNATIONAL SECURITY, IBEI

YEAR OF SUBMISSION:: 2024

DESIGN AND LAYOUT: NÚRIA ESPARZA

PROGRAMME MANAGER: ELISABETTA CIUCCARELLI

BARCELONA, 2026

CHARTING TURBULENT WATERS. THE SUEZ CANAL'S STRATEGIC SIGNIFICANCE AMID REGIONAL TURMOIL

Marina Kryakis

Abstract

Amidst mounting regional turmoil, this study examines how instability surrounding the Suez Canal affects its strategic significance as a global trade route. Employing a mixed-methods approach, the research integrates historical, security, economic and geopolitical analysis to investigate the impacts of insecurity on the Canal's operability, its role in global trade and geopolitical relevance.

The qualitative component explores domestic unrest, regional conflicts and asymmetric threats through document analysis, with a focus on Egypt's securitization efforts and evolving regional competition. The quantitative component assesses the economic repercussions of conflict-induced disruptions, employing regression modeling to test the hypothesis that Suez Canal disruptions are significantly associated with variations in global trade. Based on monthly data from 2023 to 2024, the findings reveal a statistically significant relationship: together, variations in Canal throughput and shipping times are strongly associated with fluctuations in global trade performance, offering evidence of the Canal's function as a vital artery in the international economic system.

Accordingly, while the waterway has largely withstood regional unrest, the Houthi maritime campaign stands out as a rare and measurable disruption with global ramifications. At the same time, growing militarization in the Red Sea, foreign strategic investment and the pursuit of alternative trade routes further reinforce the Suez Canal's enduring centrality in global power dynamics as a contested geopolitical arena where trade, strategy and state survival intersect within an increasingly multipolar world.

Keywords

Suez Canal, Red Sea security, maritime chokepoints, global trade disruption, maritime security, Houthi, regional instability, Egypt, Middle East, geopolitics, Cape of Good Hope

Introduction

Nestled between the lush Nile Valley and the rugged Sinai mountains, where the Mediterranean gives way to the Red Sea, the Suez Canal stands as more than a mere passageway, carving the shortest maritime route between Europe and Asia. As a lifeline of global trade, its strategic location has long placed it at the center of regional conflicts, serving as a stage where commerce and geopolitics have converged since its inception (Piquet, 2016).

Before the construction of the artificial waterway was completed in 1869, ships had to brave the perilous route around the Cape of Good Hope at Africa's southernmost tip, adding nearly 9,000 kilometers to their journey (Gordon, 2021; Hamzah, 2024). Today, the Canal stretches over a hundred miles from Port Said Harbor to the Gulf of Suez, its waters carving a natural divide between the African and Asian continents, shaving up to a month off the alternative route (Bhattacharya 1982; SCA 2025). As one of the world's most heavily trafficked shipping lanes, the Canal handles between 12% to 15% of global trade, amounting to a staggering trillion dollars annually, while facilitating approximately 30% of worldwide container traffic, cementing its status as the world's primary transportation route (Nandini, 2024; UNCTAD, 2024).

Yet the very trajectory that has rendered the Canal indispensable also exposes it to persistent security threats. To the west, Libya's instability casts a long shadow; to the south, Sudan's civil war undermines Egypt's role as a stabilizing force, while the volatile presence of Houthi rebels in Yemen further compounds maritime risks; to the east, the protracted conflict in Gaza continues to fuel regional turmoil while the ever-present specter of terrorism looms large. Against this complex backdrop, a critical question emerges: *How does regional instability affect the strategic significance of the Suez Canal as a global trade route?*

Methodology

To that end, the study adopts a mixed-methods design, combining qualitative geopolitical analysis with quantitative economic modeling to capture three core dimensions: (1) the effects of regional instability on the Canal's security and operability; (2) the impact of disruptions on maritime shipping flows and global trade performance; and (3) the evolution of its strategic value amid rising regional competition and alternative routes.

Building on the United Nations Development Programme (UNDP) definition, regional instability is understood here as the presence or risk of conflict, political unrest or security threats, whether state-based or involving non-state actors, that affect Egypt and its surrounding maritime environment (UNDP, 2005).

The qualitative component maps key regional threats, including domestic unrest, conflict spillovers and asymmetric risks, to assess their implications for Canal security. The quantitative strand combines descriptive statistics, correlation analysis and multiple linear regression to examine the relationship between Canal disruptions and global trade performance based on monthly data from January 2023 to December 2024, a period that

captures both the pre-escalation and escalation phases of Houthi maritime activity. *Global Trade Growth*, the dependent variable, is measured as the monthly percentage change in worldwide trade volume, while independent variables include *Suez Canal Traffic*, the monthly number of vessels transiting the canal, and *Transit Duration*, measured by the average number of days required to complete key trade routes to capture the effects of rerouting and logistical delays. Additional variables such as shipping costs (SCFI), *Cape of Good Hope Traffic* and *Global Oil Prices* were initially considered as controls but were ultimately excluded from the final model due to issues of multicollinearity and limited statistical significance in preliminary analyses. The regression model is expressed as $Global\ Trade\ Growth = \alpha + \beta_1 \times Suez\ Canal\ Traffic + \beta_2 \times Transit\ Duration + \epsilon$, with statistical significance determined by a p-value threshold of 0.05 to determine whether variations in Canal traffic and transit times are associated with changes in global trade performance.

Setting the Stage: Historical and Political Background

Strategically positioned at the crossroads of Asia, Africa and Europe, the Suez Canal has played a dynamic role within the broader mosaic of Egypt's geopolitical evolution. Its history, intertwined with Egypt's political and economic developments, is essential to understanding its significance as a global trade route.

The modern Canal completed on November 17, 1869, transforming global trade by drastically shortening maritime routes between Europe and Asia. In 1882, Egypt came under British protectorate, selling its shares amid financial difficulties, with Britain assuming control. The signature of the Convention of Constantinople in 1888 by European powers subsequently ensured the freedom of navigation for all vessels, regardless of conflict.

After the 1952 Free Officers' coup ousted the Egyptian monarch and ended colonial influence, President Gamal Abdel Nasser nationalized the Suez Canal in 1956, solidifying his leadership in Pan-Arab nationalism. As the move threatened British, French and Israeli interests, a secretly tripartite attack was launched by Israel, followed by Franco-British military interventions (Piquet, 2016). This conflict, known as the Suez Crisis, saw the United States and the Soviet Union intervene on two fronts: Washington devalued the British pound, while Moscow threatened nuclear retaliation. Under intense global pressure, Britain and France were forced to retreat, signaling the decline of European colonial dominance and the rise of the U.S. and USSR as the new superpowers. Most significantly, the crisis highlighted the Canal's vital importance, so crucial that nations were willing to go to war over it; once a symbol of colonial control, it had become a powerful emblem of Egypt's rise to regional leadership.

The canal's strategic value continued to be tested through the Israeli-Arab wars, fueled by the unresolved Palestinian issue. Following mounting tensions, Israel launched an attack on the Arab states in 1967, seizing Sinai, Gaza, the West Bank, Jerusalem and the Golan Heights in just six days (Doran, 2016). For Egypt, this was devastating: it lost Sinai, the Suez Canal was closed, and Israel gained control over access to the Red Sea. The waterway

became a militarized border, with each army holding one of its shores, while Egypt endured a 15-year occupation of Sinai and an eight-year canal closure crippled its economy.

However, in 1973, the October War allowed Egypt to regain control over the canal, with its reopening in 1975 marking a shift toward peace with Israel and a focus on economic revitalization, culminating in the Camp David Accords in 1978. While Egypt lost prestige among its Arab neighbors, it regained sovereignty over lost territories.

Today, the fate of the Canal is undoubtedly tied to Egypt's political and economic trajectory. Beyond serving as a vital source of government revenue, the Canal is a driving force of development: it not only strengthens the State's position as a regional geopolitical cornerstone but also fuels growth across the entire region east of Cairo. Yet, despite abundant resources as Africa's second-largest economy, Egypt's economic growth has lagged. The nation, with a rapidly growing population exceeding 115 million in 2024, faces land competition, inflationary pressures, currency depreciation and rising poverty levels, with GDP growth slowing to 3.8% in 2023 while inflation soared to 24% (African Development Bank Group, 2023; Raihan, 2023; World Bank, 2024).

Exploring Regional Instability: Security Implications

Domestic Instability

The Egyptian Revolution erupted on January 25, 2011 as part of the Arab Spring, sparked by widespread discontent with President Hosni Mubarak's authoritarian and corrupt regime amid economic hardships and rising poverty. Workers employed by the Suez Canal Authority (SCA) joined strikes, with violent clashes in Suez marking the first fatality of the uprising (Beinin, 2024; Dean, 2011). The protests led to his resignation on February 11, 2011, with power handed to the military (Saidin, 2024). Concerns about disruptions to the waterway's operations caused a temporary spike in oil prices, but fears proved largely unfounded as the military maintained security over the Canal (Rubin, 2013). Even at the height of the revolution, security measures remained stringent: no individual, whether Egyptian or foreign, could approach the canal without getting stopped by the police and questioned. In the end, the revolution had no noticeable effect on oil supply or transit flows through the Suez Canal (ACCORD, 2015).

In 2012, Mohamed Morsi, a former Muslim Brotherhood leader, came to power, leading to tensions between secularists and Islamists over Egypt's political future and culminating in massive protests and his ousting by the military on July 3, 2013. Despite widespread violence during the political transition, Canal security remained intact, as the military swiftly reassured global shipping and oil producers, with operations continuing uninterrupted. Security measures intensified, with increased military deployments in the Canal zone and the construction of a 65-kilometer security wall at the Canal's southern entrance.

From the severe political instability of 2011 to 2013, reflected in Egypt's lowest recorded political stability index of -1.64 in 2013, recent years have shown moderate improvement,

reaching -0.87 in 2023. While relative stabilization has occurred under Al Sisi, Egypt's political stability remains well below the global average (-0.06), with lingering risks of Islamist militancy (The Global Economy, 2023). Nevertheless, the Canal's centrality to Egypt's economy makes it unlikely that any political actors, including the now banned Muslim Brotherhood, would seek to disrupt it (CIMSEC, 2013).

Neighbors at War

On all fronts, Egypt is bordered by fragile neighbors, with all but Israel ranking among the world's most fragile states (Fund for Peace, 2024).

To the west, Libya's fragmentation since 2011 has left Egypt's western border chronically unstable. The rise of the Islamic State in Libya (ISIS-L) between 2014 and 2017 turned the country into a terrorist stronghold, launching attacks against Egypt, particularly targeting its Christian minority and security forces. Although the Canal has not been directly threatened, the porous 1,200-kilometer desert border facilitates smuggling, weapons trafficking and militant infiltration into Egypt. In response, Egypt intensified its military presence along the western frontier, implementing vehicle X-ray scanning systems to inspect cross-border traffic. Despite ISIS-L's decline following its defeats in Iraq and Syria by 2017, Libya remains divided between rival administrations supported by different foreign powers, creating persistent security pressures that divert substantial Egyptian resources away from efforts to protect the Suez Canal (Ibrahim, 2020; International Crisis Group, 2016).

To the south, Sudan's ongoing civil war has intensified humanitarian pressures and regional instability. Divided between the Sudanese Armed Forces and the Rapid Support Forces, both with foreign backing, Sudan has plunged into a violent civil war, with 3.4 million fleeing to neighboring countries, including Egypt, which hosts the second-largest number of refugees, further straining fragile economies and increasing the risk of organized crime and extremism. This has revived concerns about Sudan becoming a haven for groups like Al Qaeda and Al Shabaab, while its Red Sea coastline makes the conflict a significant threat to energy and maritime security, already disrupting oil exports from South Sudan (Bartlett, 2024; Kiros, 2024; Lindén, 2024). Nonetheless, the conflict has not directly affected Canal traffic or security.

To the east, the Israeli-Palestinian conflict, a long-standing source of instability at Egypt's eastern border, reignited on October 7, 2023 when Hamas launched a deadly attack on Israel, killing over 1,200 and taking 250 hostages. Israel's subsequent military operations in Gaza caused mass destruction, with over 48,000 Palestinian deaths and the displacement of three-quarters of Gaza's population (Byman, 2024; OCHA, 2025; UNSC, 2024). The humanitarian crisis intensified regional tensions, derailing Israel's normalization efforts with Arab states and drawing in Hezbollah, Iranian-backed militias in Iraq and Syria and the Houthis in Yemen, with Iran actively encouraging its proxies to escalate hostilities (Byman, 2024; Kali, 2024). Egypt, a historical mediator, strongly opposed any displacement of Palestinians into Sinai, fearing it would fuel jihadist insurgency, destabilize the country and make the peninsula a launchpad for attacks on Israel, leaving Egypt vulnerable to Israeli

reprisal. The war further strained Egypt's fragile economy, depleting foreign currency reserves due to disruptions in natural gas exports, tourism and Canal transit fees, the latter as a result of the Houthi maritime attacks.

Asymmetrical Threats

Beyond Gaza: Houthi Maritime Campaign

Yemen's civil war, which began in 2015, has escalated into one of the worst humanitarian crises, evolving from a domestic power struggle into a regional proxy conflict between Saudi Arabia and Iran (Bano, 2024). Initially a local threat, the Houthis, a militant group backed by Iran, gained international attention in October 2023 when they launched missile and drone attacks on Israel in solidarity with Gaza (UNCTAD, 2024). Their campaign escalated in November 2023, targeting commercial ships linked to Israel and Western allies in the Bab el Mandeb Strait, the Red Sea and the Gulf of Aden. While not directly targeting the Suez Canal itself, they have carried out over a hundred attacks below its southern entrance, severely disrupting global shipping and causing major companies like MSC, Maersk and Hapag-Lloyd to suspend Suez transits and reroute vessels (Reuters, 2024; UNCTAD, 2024; Vreÿ, 2024). Additionally, such attacks damaged critical submarine cables essential for military and diplomatic communications, disrupting 25% of data traffic between Europe, Asia and the Middle East (Delivorias, 2024; Gilead, 2024). Most concerning, the Houthis' attacks on Red Sea commercial shipping have posed direct risks to Suez Canal traffic, despite enhanced Egyptian military deployments and naval patrols (International Crisis Group, 2024).

Shadow of North Sinai: Terrorism

Bordering the Gaza Strip and the Suez Canal, North Sinai has long been a hub for terrorist groups due to its vast, sparsely populated terrain. Initially tied to smuggling networks funneling goods and weapons into Gaza, militant activity escalated into a jihadist insurgency following the 2013 ousting of Morsi and the criminalization of the Muslim Brotherhood, with 85% of all terrorist attacks in Egypt occurring in the region (Elkhosht, 2024; Farag, 2020; Starr, 2014).

The Al Furqan Brigades, an Al Qaeda-aligned group, targeted Egyptian security forces and the Suez Canal in 2013, launching failed rocket attacks on ships transiting the Canal. Despite this, shipping companies did not alter operations (Farag, 2020; Starr, 2014). As the group quickly faded, Islamic State in Sinai Province (ISIS-Sinai) emerged in 2014 as the dominant militant group, carrying out high-profile attacks, yet still without affecting Canal traffic (Birkett, 2022).

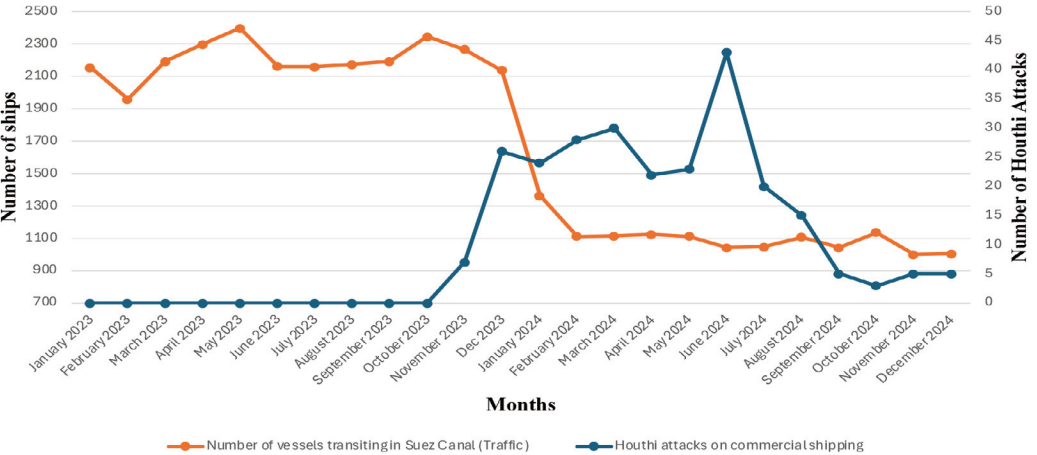
Despite its symbolic value as a target, the Canal remains difficult to disrupt due to strong security and vessel fortification (Lesser, 2016; Rubin, 2013; Strack, 2021). Egypt's counterterrorism strategy, combining military operations with development initiatives, has reduced terror incidents by 375.5% from 2015 to 2019 (Elkhosht, 2024). By 2023, fewer than ten attacks occurred, with none near the Suez Canal (al-Lami, 2023).

Global Fallout: Measuring Trade Disruptions

Unlike broader regional instability, Houthi attacks have directly disrupted maritime flows, presenting a unique opportunity to assess the economic implications for the Suez Canal's role in global trade.

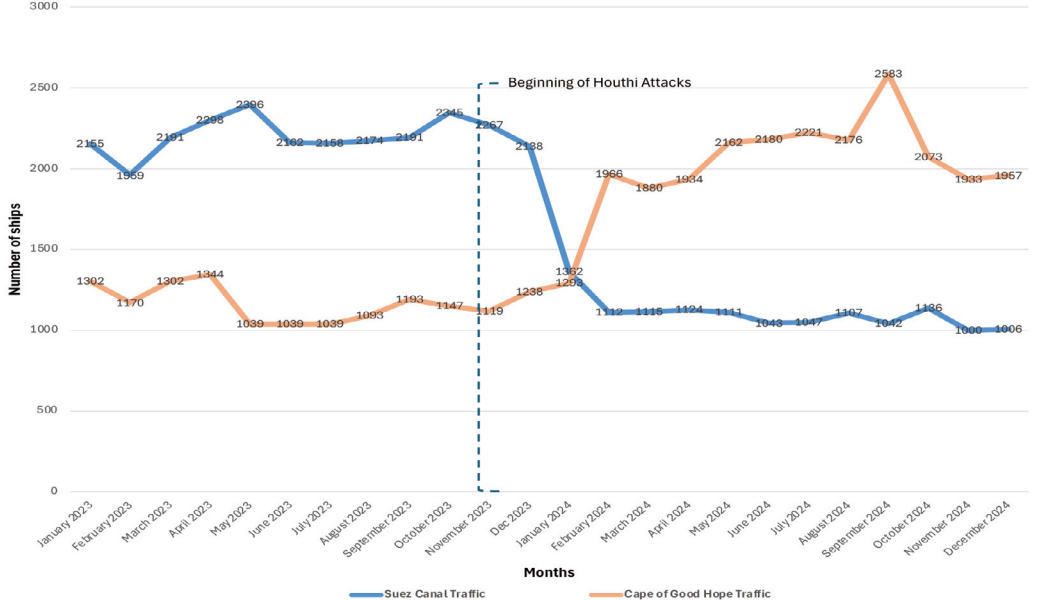
Since the onset of the Houthi campaign in late 2023, maritime trade flows have shifted dramatically. The Suez Canal saw total traffic plummet from 1,568.3 million net tons in 2023 to just 524.5 million in 2024, representing a staggering 66.55% decline (SCA, 2024). Container and liquified natural-gas (LNG) shipping were hit hardest, with traffic virtually collapsing, likely due to the vulnerability and strategic value of these cargoes (Rodriguez-Diaz, 2024; SCA, 2024). In contrast, traffic via the Cape of Good Hope surged, with vessel counts increasing from 14,025 in 2023 to 24,358 in 2024.

Impact of Houthi Attacks on Suez Canal Traffic



Source: Author's dataset compiled in Table A.1.

Global Shipping Rerouting



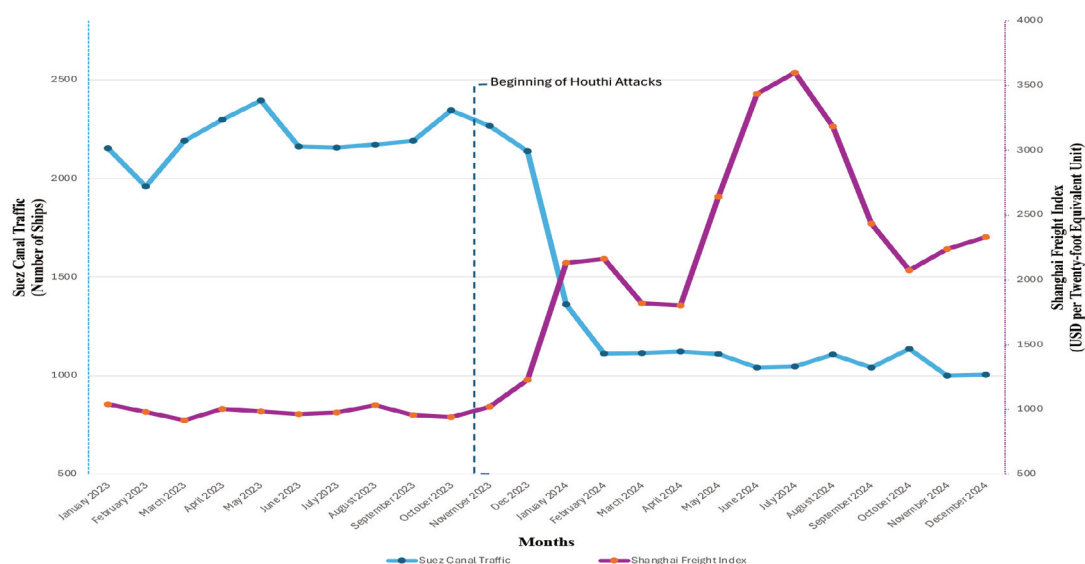
Source: Author's dataset compiled in Table A.1.

What is more, heightened maritime insecurity led underwriters to classify the Red Sea as a high-risk zone, requiring an additional breach premium (Dyson, 2024). War risk insurance for ships transiting the Red Sea surged from just 0.07% in October 2023, to as much as 2% by early 2024, representing an increase of over 2,700% (Economist Intelligence Unit, 2024; IUMI, 2024; Notteboom 2024; Townsend 2024). Some vessels, particularly those with links to Israel or western allies, struggled to secure coverage at all (Dyson, 2024). While premiums briefly eased during the Israel-Gaza ceasefire to around 0.5%, rates surged again in February 2025 due to renewed threats, deterring major carriers like Equinor, BP and Shell from transiting the route (Economist Intelligence Unit, 2024; IUMI, 2024; Notteboom, 2024; Townsend, 2024).

All the while, rerouting via the Cape adds roughly 4,000 miles and 30-50% more shipping time, driving up fuel costs and CO₂ emissions by 40% per voyage, eroding climate gains from slow steaming (Bogetić, 2024; Freightos, 2024; UNCTAD, 2024). By the end of 2024, the average shipment duration had increased by eight days, forcing supply chains to adjust through higher inventories and operational costs (E2open, 2025). While avoiding Suez Canal tolls helps reduce the cost difference, longer journeys introduce their own risks, including cargo contamination, onboard fires, accidents and extreme weather, further raising the overall risk profile (Dyson, 2024).

Longer transit times increase fuel costs for carriers, driving up freight rates for shippers, particularly in container shipping for consumer and manufactured goods (UNCTAD, 2024). The Shanghai Containerized Freight Index (SCFI) remained stable in 2023 but surged following the Houthi attacks and the resulting decline in Suez traffic. By July 2024, SCFI rates had increased by nearly 250%; even after partial stabilization, rates remained approximately 150% higher than pre-crisis levels by the end of 2024 due to longer transit times, higher fuel consumption and increased logistical costs (UNCTAD, 2024).

Rising Global Shipping Costs Amid Suez Canal Disruptions



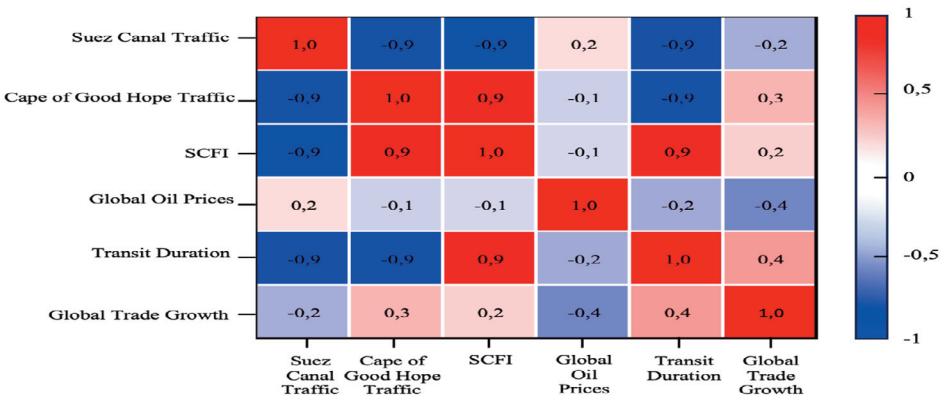
Despite a peak success rate of 29% in February, successful attacks remained low, dropping to just 7.9% in March 2024. Many experts suggest that attacks were more performative than strategic, aiming to display force rather than achieve specific targets; regardless of success, the threat itself has disrupted global maritime flows (Paes, 2024).

Freight rate volatility filters through supply chains, driving global consumer prices up by an expected 0.6% in 2025 (UNCTAD, 2024). For Egypt, already grappling with a deepening crisis, the fallout has been severe, with Suez Canal revenues plummeting 60.7% in 2024, resulting in \$800 million in monthly losses (Reuters, 2025a). Given that the Canal generated \$9.4 billion in 2023 and contributes approximately 2.3% of GDP, this collapse has major implications for the country's foreign reserves and budget stability (UNCTAD, 2024).

Correlation and Regression Analysis

Pearson correlation analysis provides an initial overview of both the strength and direction of relationships between key variables. First, *Suez Canal Traffic* is strongly negatively correlated with both *Cape of Good Hope Traffic* and *SCFI* ($r = -0.9$), confirming that disruptions drive rerouting and increased global shipping costs. Second, *Transit Duration* is similarly negatively correlated with *Suez Canal Traffic* ($r = -0.9$), reflecting longer shipping times associated with Red Sea avoidance. Third, *Global Trade Growth* shows moderate positive correlations with *Transit Duration* ($r = 0.4$) and *Cape of Good Hope Traffic* ($r = 0.3$), suggesting that as routes lengthen, trade continues but at a slower pace, while weak correlations with *SCFI* ($r = 0.2$) may signal a smaller role in influencing global trade growth. *Global Oil Prices* exhibit weak and inconsistent correlations, except for a moderate negative correlation with global trade growth ($r = -0.4$), indicating that higher oil prices are linked to slower trade growth.

Pearson Correlation Heatmap



Source: Author's dataset compiled in Table A.1.

A multiple linear regression model confirms a significant association between Canal disruptions and global trade performance. The final model retaining *Suez Canal Traffic* and *Transit Duration* as the sole independent variables achieves an adjusted R^2 of 0.411. Both

predictors are statistically significant at the 1% level, with an overall model p-value of 0.0015, indicating a high level of confidence in their estimated effects. Although the coefficient for *Transit Duration* appears numerically larger, this reflects differing units of measurement: *Suez Canal Traffic* is measured in thousands of ships, whereas *Transit Duration* is measured in days.

Regression Results

	Coefficient (β)	Standard Error	t-Statistic	p-Value	95% Confidence Interval
Intercept (α)	-120.62	30.76	-3.92	0.0008	[-184.60 ; -56.65]
Suez Traffic (β_1)	+0.0086	0.0026	3.27	0.0037	[0.0031 ; 0.0141]
Transit Duration (β_2)	+1.6704	0.4194	3.98	0.0007	[0.7981 ; 2.5426]
<i>Model based on 24 monthly observations</i>					
<i>R</i>²		0.463			
<i>Adjusted R</i>²		0.411			
<i>Standard Error of Model</i>		2.39			
<i>F-Statistic (df = 2, 21)</i>		9.04			
<i>Model p-value</i>		0.0015			

Source: Author's database compiled in Table A.1.

Considering the complexity of macroeconomics factors, such as global demand pressures and recovery dynamics, the positive association between *Transit Duration* and *Global Trade Growth* may be influenced by omitted variables, warranting cautious interpretation. While the model does not claim to explain all global trade variation and causality is not established, the evidence supports the conclusion that Suez Canal disruptions, including reduced traffic and increased transit times, are significantly associated with shifts in global trade growth during the study period.

Shifting Currents or Enduring Relevance?

Domestic and International Responses

Amid intensifying regional turmoil, Egypt has adopted a comprehensive strategy to safeguard the Suez Canal and preserve its global relevance. Since 2014, President Al Sisi has combined military reinforcement, infrastructure development, international cooperation and economic diversification (Bridger, 2013; Department of State, 2023).

Following the 2011 and 2013 upheavals, Egypt rapidly fortified the Canal zone, deploying army, navy and air force units alongside intensified counterterrorism operations in North Sinai, supported by advanced surveillance and international partners (Bridger, 2013; Department of State, 2023). Egypt also invested in two major naval bases: Berenice in the Red Sea in 2020 and Mohamed Naguib near the western border in 2017, the largest in Africa and the Middle East, to secure coastlines, project power and secure maritime

navigation (Keshk, 2022). While global actors launched naval operations in response to Houthi attacks, most notably the U.S.-led Operation Prosperity Guardian and the European Union's EUNAVFOR Aspides, these efforts have had limited success, with Egypt maintaining a more indirect but cooperative role (Africa Risk, 2025; Paes, 2024; Terdiman, 2024; Vreĳ, 2024).

Alongside security measures, Egypt has pursued diplomacy, particularly regarding the Gaza conflict, while positioning itself as a reliable maritime partner (International Crisis Group, 2024). President Al Sisi has framed the Canal as a symbol of sovereignty and economic resilience, promoting ambitious expansion projects like the 2015 New Suez Canal, which enabled two-way traffic, and a 10-km southern extension trialed in December 2024 (Español, 2025; Strategic Forum, 2024). Further upgrades, including dredging and widening under the 2030 National Strategy, aim to boost capacity, reduce risks and preserve the Canal's global competitiveness (Strategic Forum, 2024). To offset toll revenue losses, Egypt has accelerated economic diversification in the Suez Canal zone, attracting \$6.3 billion in investments across 164 new projects over two years. Such efforts aim to reposition Egypt as a hub of value-added production and logistics, with Gulf states such as the UAE financially contributing to the investment drive (Lewis, 2024).

Foreign Investment and Military Competition

Global powers have expanded their military presence around the Red Sea basin, with permanent bases established in Djibouti, Eritrea and Somaliland (Halim, 2018; Muss'id, 2023b). The U.S., China, France and Japan all maintain military installations in Djibouti; the UAE operates bases in Eritrea and Somaliland; Saudi Arabia is developing port infrastructure in Djibouti; Turkey opened its largest overseas military base in Somalia in 2017; while Israel has secured access to several Eritrean islands and continues to strengthen ties across Africa (Muss'id, 2023b). This growing militarization reflects not only strategic positioning but a broader competition for influence, energy security and maritime control (Abaad, 2023; Strategic Forum, 2024). Officially framed as protecting freedom of navigation and combating piracy, many of these military presences also serve less overt aims: monitoring rivals, projecting power and securing geopolitical footholds (Muss'id, 2023b). Iran's use of Houthi proxies, UAE-Israel coordination and Turkey's Somali presence reflect how rivalries now play out across interconnected maritime spaces. The Suez Canal, situated at the northern edge of this contested region, is both a beneficiary of international interest and a potential flashpoint for escalation (Muss'id, 2023a).

Meanwhile, China's Belt and Road Initiative, a key component of its future international trading network, has reinforced the Canal's significance, with strategic investments into Egypt's Suez Canal zone, including \$2 billion in direct investment and a \$15 billion cooperation package, as part of the Maritime Silk Road connecting China to various regions in Asia, Africa and Europe via the waterway (Lutmar, 2024). These projects are expected to transform the zone into a major logistics hub, potentially increasing Canal traffic by 23%. However, China's dual-use infrastructure strategy, civilian ports with military potential, raises geopolitical concerns: while Chinese capital supports Egypt's economy, it also expands Beijing's strategic reach across maritime chokepoints (Lutmar, 2024).

Can Alternative Routes Rival the Suez Canal?

Recent disruptions have renewed interest in alternative routes, though none currently rival the Canal.

First, the Northern Sea Route, once largely impassable, has become seasonally accessible due to climate change, offering a shorter Asia-Europe path that could halve travel times and eventually absorb up to two-thirds of Suez Canal volume. However, it remains limited to summer months, requires specialized vessels and costly icebreaker escorts and traverses Russian-controlled waters (Lutmar, 2024).

Then, there is the India-Middle East-Europe Corridor (IMEC), announced at the 2023 G20 Summit, which aims to link India to Europe via Gulf states using a mix of maritime and rail transport (Hamzah, 2025). Goods would move from India to the UAE by sea, then by rail through Saudi Arabia, Jordan and Israel, before crossing the Mediterranean to Greece (Pandya, 2024). While promising increased connectivity, IMEC faces major challenges: funding gaps, infrastructure constraints, complex transshipment logistics and divergent political agendas (Hamzah, 2025; Pandya, 2024). Until regional instability is resolved, and normalization progresses between Saudi Arabia and Israel, the corridor is unlikely to pose a serious alternative to the Suez Canal (ELDoh, 2023; Pandya, 2024).

The last potential alternative is the \$27 billion Israeli infrastructure plan approved in 2023 for a high-speed rail corridor from Eilat to Ashdod, allowing cargo to move between Asia and Europe via land. However, this overland route lacks the Suez Canal's scale, continuous flow and global integration, while the need for transshipment, environmental constraints at Eilat Port and political sensitivities, particularly normalization with Saudi Arabia, limit its feasibility (Fadlon, 2021; Fisher 2021; Surkes, 2023).

While alternative trade routes may gain relevance over time, none currently match the Suez Canal's capacity, reliability, year-round accessibility or integration into global logistics, each facing substantial challenges that prevent them from effectively supplanting the Suez Canal for the foreseeable future.

Conclusion

Overall, this study set out to examine how regional instability affects the Suez Canal's strategic significance, combining empirical analysis with a neorealist lens to understand the interplay between security, economic function and global power competition. As such, it is time to take stock of three key findings.

First, the Canal has demonstrated remarkable resilience to regional instability: from Egypt's own uprisings to Libya's fragmentation, Sudan's collapse and Gaza's war, the Canal has remained consistently operational. Even during Egypt's most destabilizing episodes in 2011 and 2013, the military retained control over the waterway, illustrating its role as a core pillar of state power. Only the Houthi maritime campaign, though confined to adjacent waters,

produced measurable disruptions, offering a rare empirical case of conflict-induced impacts on Canal operations and global trade.

Second, the regression analysis confirmed a statistically significant association between disruptions and global trade performance, with both traffic volume and transit duration emerging as strong predictors of variations in trade growth, displaying how chokepoint instability can reverberate across global markets.

Third, the Canal's importance is not merely economic but fundamentally strategic, as it remains a focal point of power projection and rivalry in a multipolar system. Military expansion by global and regional powers across the Red Sea basin, coupled with Egypt's own investments and diplomacy, reflect neorealist dynamics where the waterway serves both as a tool of statecraft and an object of competition. While emerging alternative routes carry symbolic weight, none yet rival the Canal's capacity, reliability or global integration, though their symbolism fuels Egypt's strategic anxieties and reinforces the increasingly competitive environment.

Just as the 1956 Suez Crisis marked the decline of European colonial dominance and the rise of new superpowers, today's Red Sea insecurity signals a shift toward multipolar competition, as states assert influence and vie for maritime control. Amid regional instability, the Canal's significance endures: driven by the ambitions of states, it remains a channel through which global rivalries and aspirations flow. After all, even in turbulent waters, control over space remains inseparable from power.

REFERENCES

- ACCORD. (2015). Egypt in the Aftermath of the Arab Spring. *Conflict Trends*, 1.
- AFRICAN DEVELOPMENT BANK GROUP. (2023). Arab Republic of Egypt. Accessed January 30, 2025.
- AFRICA RISK COMPLIANCE LIMITED. (2025, January 22). ARC Weekly Report.
- ABAAD STUDIES & RESEARCH CENTER. (2023, August 10). Implications of the Growing US Military Presence in the Red Sea and Arabian Gulf.
- ABDEL HALIM, A. (2018, January). Military Bases in the Red Sea: Changing Balance of Power. *Al-Ahram Center for Strategic Studies*.
- BANO, M. (2024). Clash of Ideologies, Civil War and the Rise of Houthis in Yemen. *Journal of Social Sciences*, 17(1), 78–103.
- BARTLETT, P. (2024, September 2). Suez Canal Faces New Threat, Warns *The Economist*. *Seatrade Maritime News*.
- BEININ, J. (2011, July 20). What Have Workers Gained from Egypt's Revolution? *Foreign Policy*.
- BHATTACHARYA, S. S. (1982). Strategic Importance of the Suez Canal. *Strategic Analysis*, 5(12), 686–93.
- BIRKETT, D. J. (2022). Another Hole in the Wall? *Netherlands International Law Review*, 69(1), 83–114.
- BOGETIĆ, Ž., & KRAMBECK, H. (2024, May 16). Navigating Troubled Waters: The Red Sea Shipping Crisis and Its Global Repercussions. *World Bank Blogs*.
- BORER, L. (2022, August 24). Middle East: Threats near Suez Canal and Sinai Region This Summer. *Risk Intelligence*.
- BORDAS, M. (2024). Hamas-Israel War: A Brief Analysis of First Two Phases of War. *European Scientific Journal*, 20(11), 1–15.
- BRIDGER, J. (2013, August 15). Egyptian Instability and Suez Canal Security (Part I). *Center for International Maritime Security*.
- BYMAN, D. (2024). A War They Both Are Losing: Israel, Hamas and the Plight of Gaza. *Survival*, 66(3), 61–78.
- DEAN, L. (2014, February 18). In One Egyptian City, the Arab Spring Spirit Has Not Been Snuffed. *The New Republic*.

- DELIVORIAS, A. (2024, March 27). Recent Threats in the Red Sea: Economic Impact on the Region and on the EU. *European Parliamentary Research Service*.
- DORAN, M. (2016). *Ike's Gamble: America's Rise to Dominance in the Middle East*. New York: Free Press.
- CIMSEC. (2013, August 15). Egyptian Instability and Suez Canal Security (Part I). *Strategic Outlook*.
- DYSON, B. (2024, October 22). Marine, Aviation War Cover Tightens as Insurers Monitor Middle East Escalation. *S&P Global Market Intelligence*.
- E2OPEN. (2025, January 31). E2open Ocean Shipping Index Shows Geopolitical Tensions.
- ECONOMIST INTELLIGENCE UNIT. (2024). *Global Economic Outlook: June 2024*. London: Economist Intelligence Unit.
- ELDOH, M. (2023, September 26). The India-Middle East-Europe Corridor: Challenges Ahead. *Geopolitical Monitor*.
- ELKHOSHT, M. O., & M. MAHMOUD. (2024). A Proposed Strategy to Encounter Extremist Ideology on Egypt's Frontier Governorates: North Sinai Case. *NEU Journal of Social Sciences*, 17(1), 83–102.
- ESPAÑOL, MARC. (2025, January 13). The Suez Canal Crisis: How Houthi Attacks Are Crippling Egypt's Revenue. *El País*.
- FADLON, T., WINTER, O., & EVEN, S. (2021). The Blocking of the Suez Canal: Lessons and Challenges. *Institute for National Security Studies*.
- FARAG, M. (2020). Egyptian National Security and the Perils of Egyptian-Libyan Border Management: Military Strength versus International Assistance. *Contemporary Arab Affairs*, 13 (1), 23–45.
- FISHER, I. (2021, April 1). Can Israel's Eilat Become an Alternative to Suez Canal? *Haaretz*, 2021.
- FREIGHTOS. (2024, October 30). The Impact of the Red Sea Crisis on Global Shipping and Trade.
- GILEAD, A. (2024, February 26). Houthis Hit Underwater Communications Cables. *Globes*.
- GORDON, M. A. (2021). The Connection between History and Economy in the Suez Canal. *Journal of Central and Eastern European African Studies*, 3(2), 201–204.
- HAMZAH, S. A., & SENIWATI, S. (2024). Palestinian-Israeli Conflict on International Trade in the Suez Canal. *WISSEN: Jurnal Ilmu Sosial Dan Humaniora*, 3(1), 51–71.

- HINNEBUSCH, R. (2017). Revisiting the 1967 Arab-Israel War. *British Journal of Middle Eastern Studies*, 44(4), 593–609.
- IBRAHIM, A. (2020). *The Rise and Fall of ISIS in Libya*. Carlisle, PA: Strategic Studies Institute and U.S. Army War College Press.
- INTERNATIONAL CRISIS GROUP. (2016). *The Prize: Fighting for Libya's Energy Wealth*. Middle East & North Africa Report 165, Brussels.
- INTERNATIONAL CRISIS GROUP. (2024, May 16). Egypt's Gaza Dilemmas. *Middle East & North Africa Briefing* No. 91, 4–24.
- INTERNATIONAL MONETARY FUND. (2025). Monthly Port-Level Traffic Flows at Risk from Trade Disruption in the Red Sea. *PortWatch*. Accessed March 31, 2025.
- INTERNATIONAL UNION OF MARINE INSURANCE. (2024, October). *IUMI Stats Report 2024*.
- KESHK, A. M. (2022). *Maritime Security of the Arab Gulf States: Analysis of Current Threats*. Singapore: Springer.
- KIROS, K. (2024, October 12). The Ongoing War in Sudan and Its Implications. *Policy Center for the New South*.
- LESSER, I. (2016, June 21). Terrorism and Mediterranean Security: A Net Assessment. *German Marshall Fund of the United States*.
- LEWIS, A. & WERR, P. (2024, November 5). Suez Canal Economic Zone set for rapid expansion - chairman. *Reuters*.
- LINDÉN, K. (2024). Civil War in Sudan. *FOI Studies in African Security*, FOI Memo 8661. Stockholm: Swedish Defence Research Agency (FOI).
- LUTMAR, C., & RUBINOVITZ Z. (eds). (2023). *The Suez Canal: Past Lessons and Future Challenges*. Cham: Palgrave Macmillan.
- MUSS'ID, F. (2023a, December 3). Impact of the War on Gaza on Regional and International Security in the Southern Red Sea. *Abaad Studies & Research Center*.
- MUSS'ID, F. (2023b, August 31). Regional and International Powers in Bab al-Mandab and the Gulf of Aden: Between Competition and Conflict. *Abaad Studies & Research Center*, 2023.
- NANDINI, N., MAARIF S., SYAMSUNASIR, S., & P. WIDODO. (2024). The Red Sea Crisis. *International Journal of Humanities Education and Social Sciences (IJHESS)*, 4(1), 151–158.

- NOTTEBOOM, T., & CULLINANE, K. (2024). The Red Sea Crisis: Ramifications for Vessel Operations, Shipping Networks, and Maritime Supply Chains. *Maritime Economics & Logistics*, 26, 1–20.
- OCHA (United Nations Office for the Coordination of Humanitarian Affairs). (2025, March 4). Reported Impact Snapshot | Gaza Strip.
- PAES, W.-CH., ET AL. (2024, December 2024). Navigating Troubled Waters: The Houthis' Campaign in the Red Sea and the Gulf of Aden. *International Institute for Strategic Studies*.
- PANDYA, D. (2024, March). IMEC: The Road That Should Not Be Taken. *European Centre for International Political Economy*.
- PIQUET, C. (2016). Le canal de Suez : une route stratégique au cœur des conflits du Moyen-Orient au XXe siècle. *Guerres mondiales et conflits contemporains*, 262(2), 73–92.
- RAIHAN, A., & MUHTASIM, D. A. (2023). Dynamic Impacts of Economic Growth, Energy Use, Tourism, and Agricultural Productivity on Carbon Dioxide Emissions in Egypt. *World Development Sustainability*, 2.
- REUTERS. (2024, December 26). Regional Challenges Cost Egypt around \$7 bln of Suez Canal Revenues in 2024, Sisi Says. 2024.
- REUTERS. (2025a, March 17). Egypt Suez Canal Monthly Revenue Losses at Around \$800 Million, Sisi Says. *Reuters*.
- REUTERS. (2025b, March 18). Red Sea Insurance Rates to Stay Firm Amid Attack Fears. *Arabian Gulf Business Insight*.
- ROBINSON, K. (2024, October 17). What Is Hamas? *Council on Foreign Relations*.
- RODRIGUEZ-DIAZ, E., ALCAIDE, J. I., GARCIA-LLAVE, R. (2024). Challenges and Security Risks in the Red Sea: Impact of Houthi Attacks on Maritime Traffic. *Journal of Marine Science and Engineering*, 12(11), 1900.
- RUBIN, MICHAEL. (2013, July 4). What Will Happen to the Suez Canal? *AEIdeas* (blog). American Enterprise Institute.
- SAIDIN, M. I. S., & STORM, L. (2024). The Challenges of Regime Change and Political Transition. *Cogent Arts & Humanities*, 11(1).
- STRACK, C., & KENNEDY, J. A. (2021, April 1). Suez Canal Security Risks. *S&P Global Market Intelligence*.

- STRATEGIC FORUM FOR PUBLIC POLICIES AND DEVELOPMENT STUDIES. (2024, May 9). Houthi Attacks and their Impact on Red Sea and Suez Canal's Security. *Draya*.
- SUEZ CANAL AUTHORITY. (2024). *Suez Canal Traffic Statistics Annual Report 2024*. Planning & Research Department, Information Center. Accessed February 10, 2025.
- SUEZ CANAL AUTHORITY. (n.d). Canal History. Accessed January 30, 2025.
- SUEZ CANAL AUTHORITY. (n.d). About Suez Canal. Accessed December 30, 2025.
- SURKES, S., & STAFF T. (2023, July 30). PM unveils planned Kiryat Shmona-Eilat fast rail, says could link to Saudi Arabia too. *The Times of Israel*.
- TERDIMAN, MOSHE. (2024, May 10). Israel in the Red Sea during the War in Gaza: Strategic Insights. *Middle East Institute*.
- THE FUND FOR PEACE. (2024). Fragile States Index 2024. Accessed March 30, 2025.
- THEGLOBALECONOMY.COM. (2023). Egypt: Political Stability. Accessed January 30, 2025.
- TOWNSEND, S. (2024). Cost of Red Sea Shipping Insurance Rises 2,700%. *Arabian Gulf Business Insight*. Accessed January 25, 2025.
- U.S. DEPARTMENT OF STATE. (2023). *Country Reports on Terrorism 2023: Egypt*. Washington, D.C. Accessed January 25, 2025.
- U.S. DEPARTMENT OF STATE, BUREAU OF COUNTERTERRORISM. (2016). *Country Reports on Terrorism 2015*. Washington, DC. Accessed January 25, 2025.
- U.S. ENERGY INFORMATION ADMINISTRATION. (2024, February 1). Red Sea Attacks Increase Shipping Times and Freight Rates. *Today in Energy*. Accessed January 25, 2025.
- U.S. ENERGY INFORMATION ADMINISTRATION. (2024). *U.S. Crude Oil First Purchase Price: Monthly Data*. Accessed March 31, 2025.
- UNCTAD. (2024, October 22). High Freight Rates Strain Global Supply Chains, Threaten Vulnerable Economies.
- UNCTAD. (2024, February). Navigating Troubled Waters: Impact to Global Trade of Disruption of Shipping Routes in the Red Sea, Black Sea and Panama Canal.
- UNDP. (2005). *Human Development Report 2005: International Cooperation at a Crossroads*, New York.

UNSC. (2024, December 18). The Situation in the Middle East, Including the Palestinian Question. *UN Document S/PV.9819*.

VREÏ, F., & BLAINE, MARK. (2024, April 9). Red Sea and Western Indian Ocean Attacks Expose Africa's Maritime Vulnerability. *Africa Center for Strategic Studies*.

WORLD BANK. (2024, January 25). Arab Republic of Egypt Poverty and Equity Brief: October 2024, Washington.

APPENDIX

Table A.1. Dataset Sources

Variable	Unit of Measurement	Source
Cape of Good Hope Traffic	Number of ships per month	IMF (Portwatch) 2025
Global Oil Prices	US dollars per barrel	U.S. Energy Information Admin.
Global Trade Growth	Percentage change per month	UNCTAD 2024
Suez Canal Traffic	Number of ships per month	Suez Canal Authority Report 2024
SCFI	Index points measured with price per twenty-foot equivalent unit	UNCTAD 2024 (Clarksons)
Transit Duration	Number of days	E2open Report 2024

Table A.2. Summary Statistics

Variable	Mean	Median	S.D.	Min	Max	N
Cape of Good Hope Traffic	1599.292	1323	492.495	1039	2583	24
Global Oil Prices	75.305	74.965	5.363	68.05	87.96	24
Global Trade Growth	-0.413	-0.380	3.119	-4.420	6.810	24
Suez Canal Traffic	1651.63	1660.5	572.283	1000	2396	24
SCFI	1746.517	1516.69	868.58	915.896	3599.743	24
Transit Duration	63.458	62.5	3.596	59	68.5	24

