

The Impact Of Trade Conflicts On The Global Economy: A Case Study Using The Red Sea Trade Disruption.

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I. Introduction

Trade conflicts have been a significant factor in shaping the global economy in recent years. The escalation of trade tensions between major economies has led to disruptions in supply chains, increased tariffs, and heightened market uncertainty. The attack of Hamas on Israel of October 7, 2023, and the military response of the latter in Gaza have made news headlines for much of the last quarter of 2023 and early 2024. Despite international efforts, a major security situation emerged in mid-November in the Red Sea and the Strait of Bab al-Mandeb more specifically when Houthi Rebels based in Yemen started to target international shipping transiting through the region. In a matter of weeks, the situation escalated, adversely affecting both shipping and trade.

The critical importance of the Suez Canal and the Bab-el-Mandeb strait in world trade is determined by the need to connect trade routes between the Far East and Northern Europe, Indian subcontinent and Asia, as well as between Europe and America, are significant, as are those between the Middle East and Europe. Before the first ship made its way through the newly constructed Suez Canal in 1869, global trade navigated treacherous routes around Africa around the Cape of Good Hope. The Bab-el-Mandeb strait which acts a vital artery of world trade, connecting Asia and Europe by acting as an entrance to the Suez Canal handles more than 30% of the container traffic worth trillions of Dollars and now stands restricted and blocked due to attack by the Houthi rebels of Yemen as an act of protest against Israel's attack on Gaza (Stanly Johny, 2023).

The current crisis in the Red Sea has been brewing for some time, with its origins in the ongoing civil war in Yemen between the internationally recognized government, operating out of Saudi Arabia, and the Houthi militia. The Houthi movement emerged in northern Yemen in the 1990s, in part, as a reaction to rising Saudi financial and religious influence (Glenn, 2015). In 2014, the Houthi rebellion seized power over the northern part of Yemen and the capital city of Sana'a.

When Israel started its military action against Hamas in Gaza in mid-October 2023, Houthi rebels who control the west of Yemen including most of its Red Sea coast near. In early November 2023, the Houthis fired long-range ballistic missiles towards Israel from the Bab-el-Mandeb Strait in support of Gaza, but all of them were intercepted by the combined efforts of the US and Saudi military. In mid-November 2023, the Houthi militia started to focus more on attacking merchant vessels. Initially, hijacking actions were conducted such as on the vessel *Galaxy Leader*. This was soon followed by attacks on merchant vessels traveling through the lower Red Sea and the Strait of Bab-el-Mandeb, using drones, missiles, and gunmen on speedboats.

While the Houthi initially claimed they were only targeting merchant vessels traveling to or from Israel or of Israeli ownership, it soon became evident that also ships of countries supportive of Israeli actions in Gaza were being attacked. By mid-December 2023, security threats escalated to the point where Maersk, MSC, BP, and other shipping groups suspended canal passages or started to reroute traffic via the Cape of Good Hope. The situation escalated further in early January 2024, with a massive Houthi attack on January 10, followed on January 12 by the first counterstrike by air on Yemen territory by US and UK military forces. Between mid-November and mid-February, some 40 Houthi attacks have been carried out on vessels transiting the southern Red Sea and the Gulf of Aden (Peter Graff, 2024).

II. Literature Review

Kamali et al. (2024): Impact on Global Shipping and Logistics Landscape:

Recent disruptions in the Red Sea, particularly due to Houthi attacks, have significantly affected the global shipping and logistics landscape. Kamali et al. (2024) highlight a 50 percent decrease in trade passing through the Suez Canal and a 32 percent decrease through the Panama Canal. Such disruptions have forced shipping companies to reroute vessels, leading to longer delivery times, supply chain disruptions, and distortions in key macroeconomic indicators. The repercussions of these disruptions have the potential to hamper supply chains, increase shipping costs, and create upward pressure on inflation.

Bragagni and Xhaferraj (2024): Broader Economic Ramifications of Red Sea disruptions:

Bragagni and Xhaferraj (2024) emphasize the broader economic ramifications of the Red Sea trade disruptions, including potential economic challenges in Egypt and negative spillover effects on other emerging countries in the region. The authors also draw attention to the inflationary impact and potential long-term global economic repercussions resulting from increased shipping costs and disruptions to supply chains.

Jones et al. (2021): Houthi Irregular Warfare Campaign:

According to Jones et al. (2021), the Houthis have intensified their irregular warfare campaign against Saudi Arabia, utilizing sophisticated weaponry such as cruise and ballistic missiles, UAVs, and stand-off weapons. The escalation of Houthi attacks against targets in the Red Sea has raised concerns about the security of maritime trade routes and has further exacerbated tensions in the region.

Haralambides and Merk (2020): Trade Flow Impact and Economic Consequences of the blockage:

Haralambides and Merk (2020) discuss the impacts of trade blockages on global maritime trade flows, highlighting the interconnectedness of trade routes and the vulnerability of key chokepoints such as the Red Sea. The disruptions in the Red Sea underscore the potential risks associated with over-reliance on specific maritime routes and the need for diversified transportation networks.

Findings

The Red Sea serves as a crucial trade route connecting two oceans, facilitated by two main passages: the Suez Canal to the north and the Bab al-Mandeb Strait to the south. According to recent data from the US Energy Information Administration (2023), approximately 8.8 million barrels of oil are transported through the Bab al-Mandeb strait daily, constituting 8.7% of the global demand of 101.7 million barrels per day as of December 2023 (International Energy

Agency, 2024). Furthermore, approximately one-third of global container traffic relies on the Suez Canal, constituting 12–15% of global trade in goods (MDS Transmodal, 2024).

Despite uncertainties surrounding the full extent of the Red Sea crisis on maritime activities and global supply chains, efforts are being made by businesses and shipping companies to minimize potential disruptions. This study aims to assess the impact of the Red Sea Blockage through the examination of the following aspects:

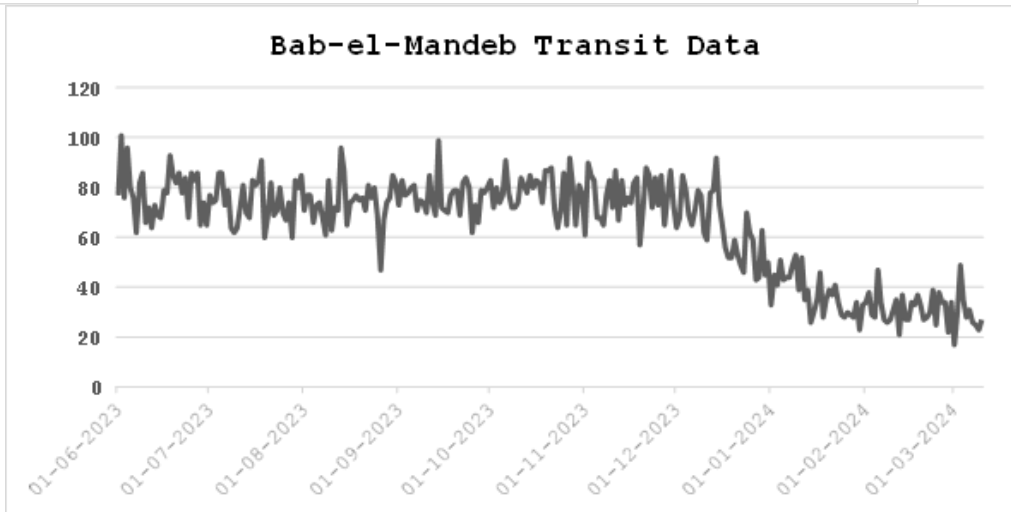
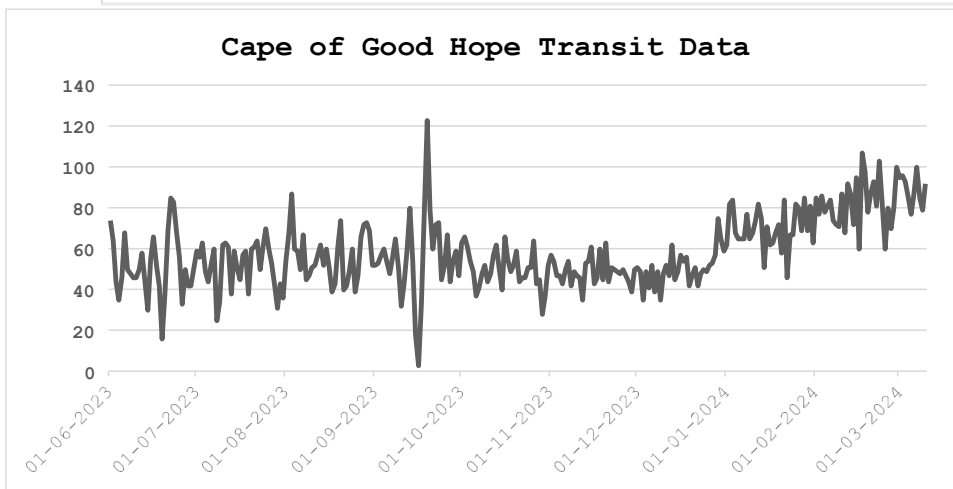
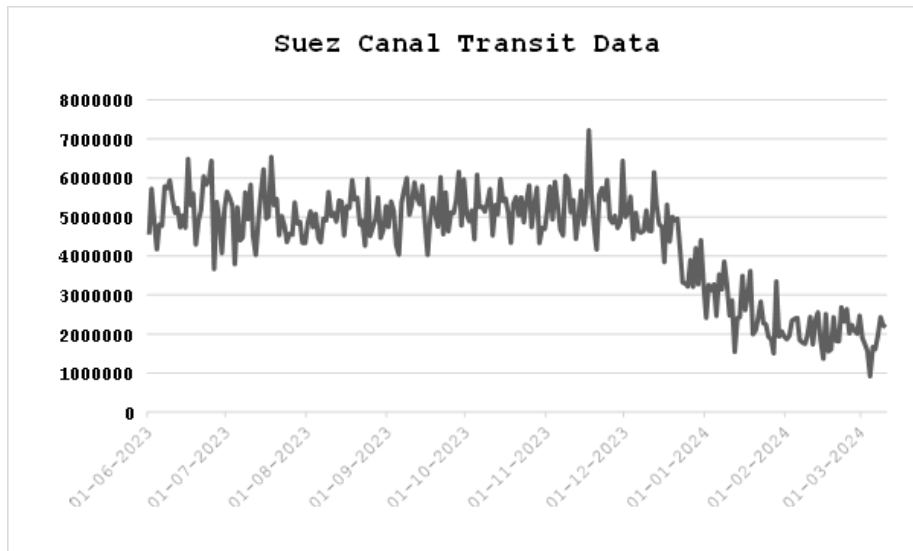
1. Alterations in ship traffic patterns along the Suez Canal and the Bab-el-Mandeb Strait compared to routes via the Cape of Good Hope.
2. Changes in shipping and freight costs resulting from the blockage.
3. Environmental consequences and increased fuel consumption due to rerouting from the Suez Canal to the Cape of Good Hope, which extends the voyage distance by approximately 30% or 7000 nautical miles.

Impact on Ship Traffic, Distance and Shipping Volumes:

The attacks conducted by the Houthi militia have significantly decreased trade activity through the Suez Canal, leading shipping companies to choose longer routes around the Cape of Good Hope instead. With no stopovers along the way, circumnavigating Africa as an alternative to the Suez Canal increases sailing distance by 4575 nautical miles between Shanghai and Rotterdam, along with an additional 12 days of travel time assuming an average speed of 16 knots, according to Seadistance.net (2024). This diversion raises the total sailing distance by 29% and extends the overall round voyage time by 17%. Based on the data from (Clarksons Research, 2024), estimates a 42% reduction in trade volume passing through the Suez Canal over the past two months. The rerouting via longer paths also demands more vessels and shipping capacity. For instance, a round trip between India and Europe, which normally takes 56 days and 8 vessels, would require an extra vessel if the journey extends to 63 days (P Manoj, 2024). Container ships are particularly affected by the rerouting away from the Suez Canal and around the Cape of Good Hope. As of the second week of February 2024, 586 container vessels had been redirected (Clarksons Research, 2024).

The daily volume of transit trade through the Suez Canal has seen a significant decline in the last six months. From May to December 2023, the average transit volume stood at 5,143,990, but with increased Houthi attacks since December, the average transit volume from December 14th to March 10th dropped to 2,698,903, marking a decrease of approximately 47.5% (IMF PortWatch, 2024). The Houthis have effectively disrupted trade in the Red Sea region, as evidenced by the decrease in ship transit through the Bab-el-Mandeb strait from 88 ships per day to 17 ships per day. According to UNCTAD, transit through both major canals, the Panama Canal and the Suez Canal, has nearly halved, while transit through the Cape of Good Hope has risen by an estimated 74% compared to last year (IMF, 2024). The Suez Canal serves as a crucial global chokepoint and maritime thoroughfare, facilitating the movement of energy, commodities, consumer goods, and components between the Indian Ocean, the Mediterranean, and the Atlantic. The extent of trade exposure to disruptions in the Suez Canal depends on its reliance on this strategic maritime passage. Given that container trade dominates the Canal's

traffic, the response has been swift, with container ships avoiding the Suez and opting for routes around the Cape of Good Hope. By the first half of February 2024, container tonnage crossing the Canal had plummeted by 82% (IMF PortWatch, 2024).



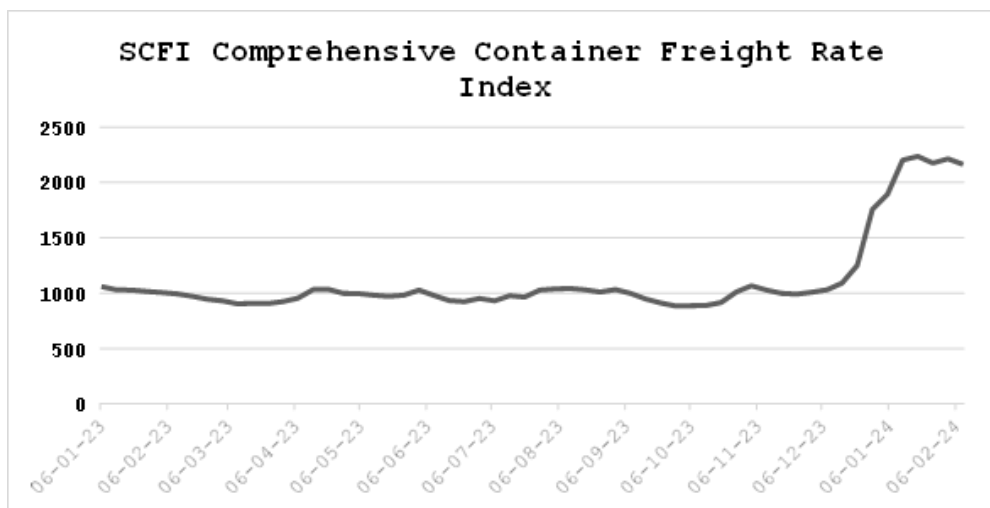
Source: (IMF PortWatch, 2024), (IMF, 2024)

Impact on Shipping Rates, the Container Business and the Supply Chain:

The disruptions in the Red Sea have caused a significant upheaval in the container industry in the short term. Particularly, the Asia–Europe route experienced notable disturbances in late December 2023 and early January 2024 due to the uncertainty surrounding carriers' decisions regarding Red Sea transits and rerouting options via the Cape. Some vessels departing from Asia were delayed, while others altered their routes, sometimes multiple times, or experienced ad hoc changes in port schedules. Eventually, the majority of major container carriers opted to suspend operations through the Red Sea, leading to clearer logistics parameters such as expected transit times and vessel availability. For instance, in late January 2024, Maersk and MSC, partners in the 2M alliance, announced schedule adjustments for container services between Asia and the USEC until the end of March, diverting via the Cape route, signalling a potential long-term shift to round-Africa routes (Marcus Hand, 2023).

Rates for container shipping from Asia–Pacific to Europe routes surged significantly since November 2023. In the last week of December 2023, average spot freight rates for containers spiked by \$500, marking the highest weekly increase on record. Spot rates from Shanghai more than doubled (+122%) between early December 2023 and early February 2024, with rates to Europe jumping by 256%, more than tripling (SCFI, 2024). For example, the Shanghai

Container Freight Index (SCFI) reported rates of \$2,648 per TEU for the Shanghai–Northern Europe route on February 9, 2024, marking a 3 time increase from early November 2023. The Drewry World Container Index for transporting an FEU from China to North Europe surged to USD 4,406 in mid-January 2024 (+282% compared to mid-November 2023) (Drewry, 2024). Data provided by Xeneta indicates that ocean freight rates from the Far East to North Europe have surged by 124% since the escalation of the crisis in mid-December 2023 (Drewry, 2024). Freight rate increases are also in part a result of growing fears of insufficient shipping capacity and containers.



Source: SCFI

The higher freight rates are a combined result of capacity being absorbed by the longer Cape route, which reduces available slots per unit of time, by the additional fuel costs involved in this route due to the longer distance, and by the negative shipper expectations about the (un)availability of capacity going forward. Ancillary costs such as insurance have also increased.

War risk insurance premiums for shipments through the Red Sea are climbing due to heightened attacks by Yemen's Houthi movement on merchant vessels, particularly those with UK or U.S. affiliations. Extended voyages also result in increased fuel expenses and losses for time-sensitive cargo. Security concerns, including the risk of piracy off the Horn of Africa, are contributing to a surge in insurance and legal claims for delayed vessels, disrupted shipments, and damaged or spoiled cargo. War risk premiums have doubled from mid-October to early February 2024, reaching approximately 1% of a vessel's value (EIU, 2024). Insurance premiums for navigating the high-risk area rose from 0.07% of the ship's value in early December 2023 to about 0.5% to 0.7% in mid-January 2024, according to Economist Intelligence Unit (2024). Bloomberg (2024) reports that vessel insurance for transiting the Bab-El-Mandeb Strait has increased to 0.75–1% of the vessel's value by the third week of January 2024 (Alex Longley, 2024). This translates to USD 1.1 to 1.5 million in insurance costs for a 20,000+ TEU container vessel valued at USD 150 million.

Several companies, such as IKEA, anticipate delays in product deliveries and are exploring alternative freight options, while Danone disputes reports of short-term supply chain disruptions (Sarah Butler, 2023).

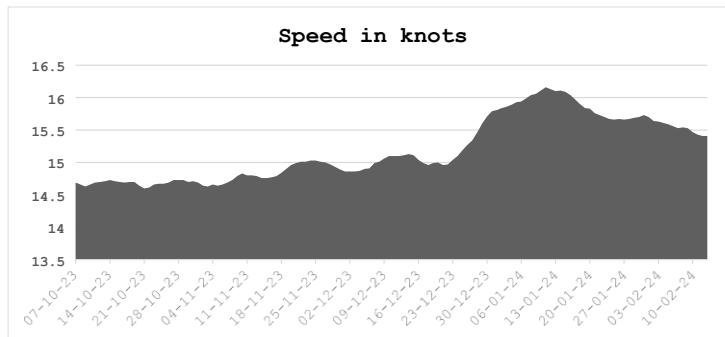
Ocean freight prices soared within hours due to increased vessel diversions from the Red Sea, reaching \$10,000 per 40-foot container from Shanghai to the U.K. Truck rates in the Middle East have more than doubled. As of Thursday morning, 158 vessels are rerouting away from the Red Sea, carrying over 2.1 million cargo containers valued at an estimated \$105 billion. Between January 29 and February 11, Tesla halted production at its Gigafactory Berlin–Brandenburg due to a disruption in the regular supply of components from Asian suppliers to the German plant caused by changes in vessel routes, as reported by Reuters in 2024. Volvo Cars in Ghent (Belgium) ceased production for three days in mid-January, also due to a shortfall of components (Reuters 2024b). Suzuki Motor suspended production at its plant in Hungary between 14 and 21 January 2024 (AP, 2024).

Sea Port Country	Freight Rates in November/Mid-December	Current Freight Rates
European Base Ports	USD 450-500	USD 2100-2200
Mediterranean Base Ports	USD 500-550	USD 2200-3500
US East Coast Base Ports	USD 1250-1350	USD 2000-2700
West Africa Base Ports	USD 900-1000	USD 2500-2800
East/South Africa Base Ports	USD 450-500	USD 1300-1400

Source: Alltime Shipping, freight rates are per TEU (Twenty Foot Equivalent Unit)

Shipping Speed increase due to rerouting and its impact on fuel consumption and the environment:

For over ten years, the shipping sector has adopted decreased sailing speeds as a strategy to reduce fuel expenses and address the greenhouse gas emissions associated with ships. Beginning in January 2023, adherence to newly implemented technical and operational regulations, overseen by the International Maritime Organization, has become obligatory for vessels engaged in international shipping. However, the recent rerouting of ships around the Cape of Good Hope and the resultant increase in sailing distances have led to a rise in total bunker fuel consumption and ship emissions.



Source: Marine Benchmark

The world’s largest furniture company, IKEA has rerouted its more than 100 container ships towards the Cape route joining the likes of the major freight firms Evergreen, OOCL, Maersk, CMA CGM, Hapag-Lloyd and the Mediterranean Shipping Company in halting activities in the crucial water route connecting the Indian Ocean to Europe (Sarah Butler, 2023). The necessity of rerouting has compelled ships to elevate their speeds. For large container vessels, even a modest 1% increase in speed typically corresponds to a 2.2% surge in fuel consumption. For instance, elevating the speed from 14 to 16 knots would escalate the ship's fuel consumption per mile by 31% (Robert Wright, 2024). Consequently, the extended distances travelled due to bypassing the Suez Canal in favour of the Cape of Good Hope imply a substantial surge in greenhouse gas emissions for each round trip, potentially exceeding 70% (Robert Wright, 2024).

These emerging patterns pose a significant challenge to the environmental progress achieved through the adoption of slow steaming practices. While initially intended to reduce emissions, the current necessity for increased speeds to accommodate rerouting may ultimately undermine these environmental gains. Therefore, while the shipping industry grapples with operational adjustments to navigate through geopolitical and logistical challenges, it also faces the imperative to address the environmental repercussions of such adaptations.

Stats for an Average Asia-North Europe Voyage along the Red Sea vis-à-vis the Cape of Good Hope				
	Red Sea	Cape of Hope	Good	Change (%)
Heading				UoM
Total round voyage sailing distance	24000	31000		Nautical Miles 29%

Total round voyage time	77.8	91.3	Days	17.30%
Total sailing time	62.5	76	Days	21.60%
Average sailing speed	16	17	Knots	6.00%

Economic Consequences for the World and Egypt:

The recent attacks on cargo ships in the Red Sea have caused significant disturbances to Indian businesses, particularly those involved in exporting and importing. This has resulted in a sharp increase in container costs, longer transit times due to rerouted shipping routes, and heightened uncertainty. The surge in container costs, extending up to 400%, and the need to redirect routes around Africa have led to challenges for exporters in absorbing the increased expenses (Shivangini, 2024). Importers are also contending with rising costs of imported goods, potentially leading to inflationary pressures and reduced consumer demand. This crisis has implications for planning and budgeting transportation costs, potentially impacting the overall economic growth of India.

Following the Houthi attacks, global air freight rates have risen for the first time in seven weeks. The Baltic Air Freight Index, increased by 6.4% (Lisa Barrington, 2024). A sharp rise in demand for air freight tracked due to the rising anxiety among companies and shippers about the Red Sea crisis, air cargo volumes on the major apparel route from Vietnam to Europe spiking 62% in the week ending January 14 (CNBC, 2024).

The decline in Suez Canal transits has led to a sharp decline in revenues for the Egyptian government which owns the Suez Canal. Revenues collected from the Suez Canal account for 2% of Egypt’s GDP and the total revenue collected during the fiscal year 2022-23 amounted to USD 9.4 billion. According to the Egyptian president Abdel-Fattah al-Sisi, the revenues from the Suez Canal have dropped around 40-50% which affects an already crisis ridden economy of Egypt (Adam Lucente, 2024). The delay in shipments around the world may create a supply chain issue and put inflationary pressure on the global economy especially among the nations heavily dependent on the Red Sea for their shipments.

The increase in the price of crude oil due to the trade disruption will increase energy costs for businesses and individuals both. Higher oil prices may lead to reducing individual incomes, affecting standard of living and stagnating economic growth in developing countries. Trade disruptions can result in economic challenges, potentially leading to job losses, especially in industries closely tied to international trade. This could in turn raise unemployment rates, contributing to social and economic instability within the affected countries.

III. Conclusion

The crisis in the Red Sea highlights the need for greater flexibility in the global transportation network. The presence of bottlenecks like the Bab al-Mandeb and the Red Sea has prompted various initiatives to bypass them due to concerns about navigation security and naval activities. Prolonged interruptions in the Suez gateway, especially for container shipping, pose direct threats to global supply chains, potentially resulting in delays, increased expenses, and inflation. The recent disruptions in maritime trade routes, particularly in the Red Sea, have presented significant challenges for the global shipping industry and supply chains. The blockade and attacks by the Houthi militia have compelled vessels to reroute, leading to higher shipping costs, security risks, and environmental consequences. If the security situation in the Red Sea does not notably improve by the second quarter of 2024, there could be an increased risk of inflationary pressures, depending on the duration of the disruption and potential emergence of additional disruptions. Developing nations are especially susceptible to shipping network disruptions and shifts in trade patterns, which can elevate costs and alter connectivity and market access. Collaborative efforts among governments, international organizations, and industry stakeholders are crucial to bolster security measures, mitigate risks, and ensure smooth maritime trade operations.

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