

Bank of Israel

Research Department

Research and Policy Analysis Notes



The Impact of Houthi Attacks on International Trade: Is Israel an Exception?

Authors: Haggay Etkes and Nizan Feldman

December 2024 Paper No. 2024.03



The Impact of Houthi Attacks on International Trade: Is Israel an Exception?¹

- The Houthi attacks on vessels in the Red Sea, which began in November 2023, have led to the rerouting of shipping lanes from Asia and Oceania to Europe and the Mediterranean. Instead of the shorter route through the Red Sea, ships are now taking the longer route around the Cape of Good Hope in Africa. Despite this change, there has been no exceptional impact on Israel's foreign trade, which typically transported through the Red Sea. Specifically, the decrease in imports to Israel from Asia, Oceania, and East Africa was similar to the decrease in imports from the rest of the world.
- In contrast, the rerouting of shipping lanes from the Red Sea to the Cape of Good Hope resulted in a temporary decrease in imports from Asia and Oceania to other OECD Mediterranean countries. Globally, this rerouting led to a temporary decrease of about 10% in the value of trade typically transported through the Red Sea.
- Following the Houthi attacks and the rerouting of shipping lanes, there was initially an increase in sea freight rates from China to Europe and the Mediterranean. Subsequently, there was also an increase in freight rates from China to the USA, coinciding with a moderation of the initial rise in freight rates from China to Europe and the Mediterranean. This dynamic aligns with the reallocation of maritime shipping capacity (ships and containers) from various regions of the world to the shipping lanes between China and Europe and the Mediterranean, to compensate for the longer shipping routes. This change in capacity also explains the recovery of trade that is usually transported through the Red Sea.

1. Introduction

Since late November 2023, the Houthis, an Shia military organization rebelling against Yemen's official government, have been attacking vessels in the Gulf of Aden and the Red Sea. Initially, these attacks targeted Israeli-related vessels to support Hamas in its fight against Israel. However, since December, the attacks have primarily targeted

¹ Written by: Haggay Etkes (Bank of Israel) and Nizan Feldman (University of Haifa).

The authors thank Shimon Vinikur (Central Bureau of Statistics), Yigal Maor (Institute of National Security Studies), Tzvika Shapira and Ofer Telkar (Shipping and Ports Authority), Moran Moshe (Ministry of Finance), Irit Samuel, Javier Destrio and Noam Nativ (ZIM) for their helpful discussions and comments. We also thank Uriel Faier for assistance in analyzing the data.



non-Israeli-owned vessels or those without direct ties to Israel. Between November 2023 and October 2024, over 130 targets, mostly vessels, were attacked (ACLED).

The Houthi attacks threaten a major international shipping route, which is the shortest route from South and East Asia, Oceania, and East Africa to the Mediterranean and Europe. In 2023, approximately 22% of the world's container shipping (by weight), 7–10% of maritime traffic of energy products, and about 4% of global bulk cargo traffic passed through the Suez Canal in the northern Red Sea (UNCTAD, 2024, p. 5).

In response to the attacks on commercial vessels, shipping companies rerouted cargo ships from the shorter route through the Red Sea to the longer route around the Cape of Good Hope in Africa. According to estimates by the International Monetary Fund, the average weight of cargo transported through the Suez Canal gradually decreased from about 5 million tons per day at the end of 2023 to about 1.5 million tons per day from April 2024 onwards, while the volume of cargo transported via the route around the Cape of Good Hope increased from about 4 million tons per day at the end of 2023 to about 7 million tons per day from May 2024 onwards. Total cargo transported through the Suez Canal and the Cape of Good Hope combined declined somewhat following the Houthi attacks. (see Figure 1).²

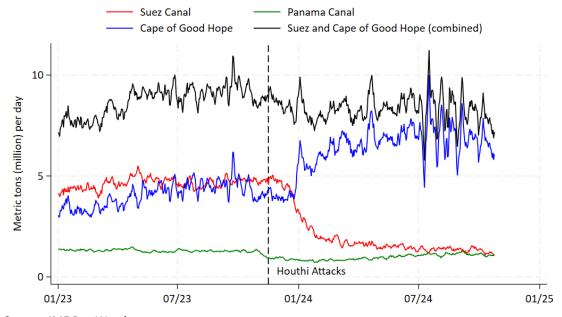
Preliminary analyses of the impact of rerouting shipping lanes raised concerns that this change would harm the volume of international trade, increase inflation, and threaten food security (UNCTAD, Feb. 2024). These concerns were mainly supported by the rise in freight and consumer prices during the COVID-19 crisis (2020–2022). Similarly, the blockage of the Suez Canal from 1967 to 1975 caused significant harm to international trade and economic growth over several years (Feyer, 2021). On the other hand, the chief economist at the Israeli Ministry of Finance estimated that the direct and indirect effects on Israel would be limited and that their contribution to the

² In parallel, a drought that affected Central America in the fall of 2023 led to a decline in the water levels of the lakes used for navigation in the Panama Canal, resulting in a reduction in the canal's transit capacity. However, the volume of goods transported through the Panama Canal and the impact on its transit were lower than the volume of goods transported through the Suez Canal and the Cape of Good Hope route until the beginning of the Houthi attacks. It is worth noting that some vessels on the Shanghai-East Coast USA route were rerouted from the Panama Canal route to the Red Sea route, thereby increasing traffic on the Red Sea route, which was subsequently attacked by the Houthis.



consumer price index in Israel would not exceed one percentage point (Ministry of Finance, 2024).

Figure 1:
Cargo shipping traffic in the Suez Canal, Cape of Good hope, and Panama Canal 2023–2024 (millions of tons)



Source: IMF PortWatch

To the best of our knowledge, this study is the first to empirically examine the actual effects of rerouting shipping lanes on the international trade of Israel and other countries. The next section presents findings on changes in Israel's foreign trade and that of other countries, as well as the increase in freight rates following the Houthi attacks on vessels in the Red Sea. The third section uses econometric methods to analyze the impact of the Houthi attacks on trade and freight Rates , and the final section summarizes the findings.

2. The Impact of Houthi Attacks on International Trade and Shipping Costs

2.1 Impact on Israel's Foreign Trade

The potential damage from rerouting shipping from the Red Sea to the Cape of Good Hope is significant, especially in the Mediterranean region. First, the shipping distances between Asia and the Mediterranean, particularly its eastern part, have



doubled, while the distances to Western Europe have increased to a lesser extent. For example, the distance between China and Israel has increased by 114% due to the rerouting around Africa, while the distance between China and the Netherlands has increased by only 35%.³ Second, the Mediterranean has shifted from being a "main stop" on the major shipping routes between Asia and Europe to a "side alley," reducing the availability of shipping means in the region.⁴

However, an examination of Israel's foreign trade composition⁵ (Figure 2) indicates that the impact on Israeli exports might be limited. Most of Israel's goods exports are transported by air (about \$35 billion), and only about \$3.4 billion, which is about 5% of Israel's total goods exports, are shipped by sea to Southeast Asia, Oceania, and East Africa, whose shorter shipping route passes through the Red Sea. However, Israel's imports are more severely exposed to the blockage of the Red Sea: Maritime imports from Southeast Asia and Oceania to Israel amounted to about \$20 billion in 2023, which is about a quarter of total civilian imports.

Yet, although Israel's total civilian imports (civilian, excluding energy products) decreased after the outbreak of the war in October 2023, total Israeli imports from Southeast Asia and Oceania decreased at a similar rate to the decrease in Israeli imports from the rest of the world. Therefore, there is no noticeable unusual decrease in Israeli imports from Eastern countries, despite the extended shipping distances or disruptions in maritime transport schedules following the Houthi attacks (Figure 3). Import prices to Israel, which include transportation and insurance costs, remained stable in the first half of 2024 (CBS), despite the significant increase in transportation and insurance costs following the Houthi attacks. As a result, the impact of the Houthi

³ On the Red Sea shipping route, vessels traveling from China to the eastern Mediterranean exit the Suez Canal and reach their destination relatively quickly. In contrast, on the Cape of Good Hope route, vessels must circumnavigate Africa and then sail eastward through the Strait of Gibraltar along the Mediterranean. The distance between China and Israel increases from approximately 13,600 kilometers via the Suez Canal to about 29,100 kilometers via the Cape of Good Hope. For comparison, the distance between China and the Netherlands increases from about 19,900 kilometers to approximately 26,800 kilometers

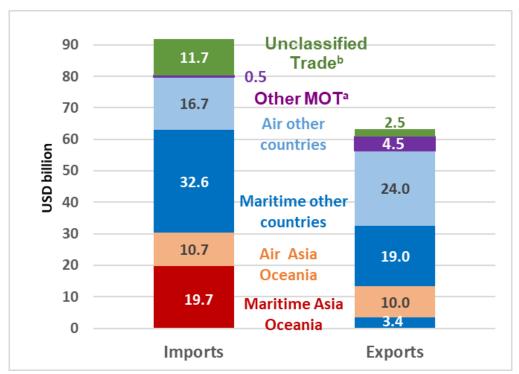
⁴ This analysis does not address the loss of revenue from transshipment services at Mediterranean ports, which were likely affected by the rerouting of shipping from the Red Sea to the Cape of Good Hope.

⁵ Excluding trade from countries that are not identified in the Central Bureau of Statistics data.



attacks and the subsequent rerouting of shipping lanes on Israel's foreign trade seems limited.⁶

Figure 2:
Composition of Israeli Foreign Trade in Goodsa by Region and Shipping Lane
2023 (\$ million)



^a Land transport, post, and self-shipment.

SOURCE: Central Bureau of Statistics.

In contrast to Israel, the Houthi attacks had a significant impact on the volume of imports from Southeast Asia, Oceania, and East Africa to other Mediterranean-OECD countries (Greece, Turkey, Italy, France, and Spain). The decrease in imports usually transported through the Red Sea shipping route is evident in the total import data of Greece, Turkey⁷, Spain, Italy, and France in December 2023 and early 2024 (Figure A1). It is noteworthy that maritime imports to Turkey, Greece, and Spain showed a significant decline (Figure A2). However, imports usually transported through the Red

^b Trade with unclassified counties.

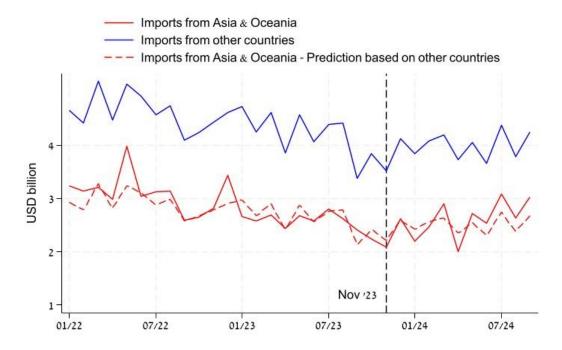
⁶ It should be noted that maritime traffic at the Port of Eilat was almost completely halted following the Houthi attacks. However, the practical shutdown of the Port of Eilat has only a limited impact on imports to Israel, as the weight of goods unloaded at this port accounted for only about 0.7% of the total weight of goods unloaded at Israeli ports in both 2022 and 2023. The main exception is car imports, with approximately 48% of vehicles imported to Israel in 2022 being unloaded at the Port of Eilat (Shipping and Ports Authority, 2024).

⁷ The series on imports to Turkey were irregular even before the Houthi attacks, likely due to the economic instability in the country.



Sea recovered in March–April compared to imports from other countries (data for France for April–May are not yet available). The next section documents that the adverse impact of Houthi attacks on trade was not limited to Mediterranean economies – excluding Israel – but rather they harmed for a few months global trade typically transported though The Red Sea.

Figure 3: Imports^a to Israel from Asia-Oceania, and Imports from Other Countries 2022–2024 (US\$ billion)



^a Civilian imports, excl. energy products, by country of origin.

SOURCE: Based on Central Bureau of Statistics.

2.2 Impact of Rerouting Shipping on International Trade and Freight Prices

The Houthi attacks on vessels in the Red Sea, an important shipping route that handles about one-fifth of the world's maritime container traffic, have affected not only the maritime trade of Mediterranean countries but also affected other global shipping routes. Initially, the rerouting of shipping from the Red Sea to the Cape of Good Hope in December 2023 led to a decline of about 10% in the trade value between country pairs that typically use the shorter route through the Red Sea. This decline in nominal trade value was observed both in absolute terms and compared to the "control" trade value between other country pairs whose shorter shipping route does not pass



through the Red Sea (Figure 4).⁸ It appears that the decline in trade value is due to the effects on maritime trade rather than air or land trade, at least according to a partial sample of countries that report trade by transportation mode. Essentially, the decline in maritime import value between country pairs that usually rely on the Red Sea route was about 20%, compared to a decline of about 10% in total imports in the full sample (Figure A3).

In parallel with the rerouting of shipping from the Red Sea route to the Cape of Good Hope route (Figure 1) and the decline in trade value between country pairs whose shipping route passes through the Red Sea (Figure 4), there was a sharp increase in freight rates from Shanghai to Rotterdam (Netherlands) and Genoa (Italy) in December 2023 and January 2024 (marked by red lines in Figure 5). The freight rate hike was partly affected by the higher sailing costs in the longer route.

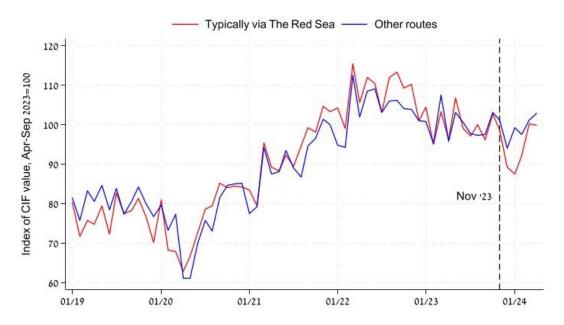
In the second phase, in February–March 2024, there was an increase in freight rates on routes that do not usually pass through the Red Sea (such as from Shanghai to Los Angeles and New York in the US, marked by blue lines in Figure 5), while in February–April 2024, the price increases on the Shanghai-Rotterdam and Shanghai-Genoa routes moderated. Additionally, the initial gap created in the trade value between countries whose maritime trade is usually transported through the Red Sea and countries whose maritime trade is not transported through it (Figure 4) narrowed, with a notable recovery, especially in maritime trade, as reflected in trade data by transportation mode (Figure A3). As a result, in the second phase (February–March 2024), the initial gaps created in the first phase (December 2023–January 2024) in freight rates and trade value between countries that usually rely on the Red Sea and other shipping routes were reduced.

⁸ It should be noted that in the data we are analyzing, there is no significant substitution in terms of trade value between maritime imports and imports by other transportation modes. However, an OECD report (2024, p. 33) found signs of a certain shift in China-Europe trade, in terms of weight, from



Figure 4:

Value of Reported Global Trade^a by Typical Shipping Lane: Red Sea or Other 2019–2024 (index of import value, March–September 2023 avg. = 100)

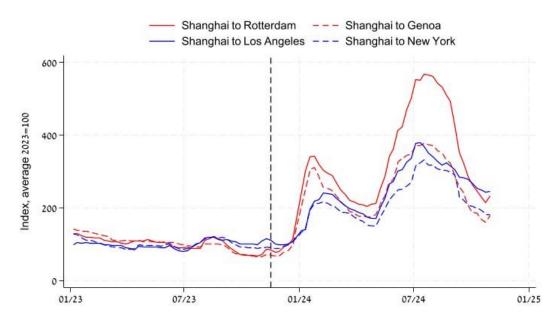


^a Based on reports from 65 countries reporting on their foreign trade up to April 2024 to Comtrade. **SOURCE:** Based on Comtrade data.

The decline in the value of trade usually transported through the Red Sea and the increase in freight rates from Asia to Europe and the Mediterranean (December 2023–January 2024) can be explained by the contraction of the effective supply of transportation services on these shipping routes. This contraction resulted from rerouting the shipping from the shorter Red Sea route to the longer Cape of Good Hope route as the longer sailing time decreases the number of trips vessels can make between Asia and Europe within a given time period. For example, the sailing time from Shanghai to Rotterdam increased from about 30 days to about 47 days, reducing the number of trips vessels can complete by about a third. Furthermore, maritime shipping costs have risen due to increased distances, fuel and insurance costs, and longer sailing times, resulting in higher crew wages and other expenses. Finally, the longer sailing time delays the arrival of imports to destination countries, even when goods are shipped from export ports at a regular frequency.



Figure 5:
Freight Rates for a 40-Foot Container from Shanghai to Europe and the US
2023–2024 (Index, average 2023=100)



Source: Authors' calculations based on Drewry World Container Index

The increase in freight rates from Asia to the United States during the second phase (February–March 2024), the moderation of shipping price increases from Asia to Europe, and the recovery of trade usually transported through the Red Sea align with the rerouting of maritime transportation means, such as ships and containers, from the trans-Pacific route and possibly other routes to the Asia-Europe and Mediterranean routes. This rerouting aimed to offset the reduced effectiveness of shipping capacity on these routes and balance the profitability of shipping companies in different regions of the world. This was reflected in the statement by Maersk's CEO, Vincent Clark, in July 2024: "Today, all ships that can sail and all ships that were not efficiently utilized elsewhere in the world have been rerouted to close the gaps" (Maersk, 2024).

This argument—that different transportation markets influence each other—contradicts the traditional approach in international trade research, which assumes that trade costs are determined exogenously. Gravity regressions, in particular, use distance as a proxy for trade costs (Benedictis and Taglioni, 2011). For example, Fayrer (2021) documented that the blockage of the Suez Canal in 1967 and the subsequent



rerouting of shipping lanes to the Cape of Good Hope led to a prolonged decline in trade between countries whose shipping routes were lengthened, an effect that lasted about six years.

The processes of globalization and continuous improvements in maritime transportation in recent decades—including the deregulation of the maritime transportation market, the expansion of container usage, and the digitization of transportation information (Ganapati and Wong, 2023)—make it easier for shipping companies to respond more flexibly to changes in transportation markets. This situation is reflected in the expanding literature on endogenous trade costs. In particular, Brancaccio et al (2020) proposed a trade model with endogenous trade costs, where the transportation sector mitigates shocks in economic markets that are in general equilibrium. This argument aligns with the central argument of this study: that interconnections between different maritime transportation markets helped mitigating and reducing the impact of the Houthi attacks on international trade.

3. Did Global Shipping Markets Mitigate the Impact of Houthi Attacks on International Trade? Econometric Findings

This section briefly presents econometric findings on the interrelationships between freight rates from China to Europe and those from China to the United States, and the transient impact of the Houthi attacks on international trade. These evidence support the claim that global shipping markets mitigated the negative impact of the Houthi attacks on international trade typically transported through the Red Sea.

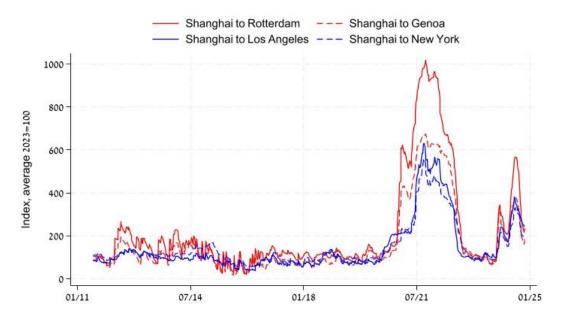
3.1 Interrelationships Between the Maritime Shipping Market from China to the United States and the Maritime Shipping Market from China to Europe

This section uses time series estimations to examine the interrelationships between maritime freight rates from China (Shanghai) to Europe (Rotterdam and Genoa) and freight rates from China (Shanghai) to the United States (Los Angeles and New York) from 2012 to 2024. Freight rates from China to Europe and the United States rose



sharply during two periods—during the COVID-19 crisis and the recovery thereafter, which disrupted supply chains, and following the Houthi attacks—after nearly a decade of relative price stability. These series appear to be stationary and correlated (Figure 6).

Figure 6:
Freight Rates for a 40-Foot Container from Shanghai to Europe and the US
2011–2024 (Index, average 2023=100)



Source: Authors' calculations based on Drewry World Container Index

The section compares long-term interrelationships (co-integration) with short-term interrelationships (Error Correction Model) from 2012 to 2022 and from 2023 to 2024 to examine whether these interrelationships between these freight markets have strengthened over time. The econometric analysis is based on weekly freight rate series, reflecting the spot rate⁹ for transporting a 40-foot dry cargo container. The data were collected and processed by Drewry and made accessible via Bloomberg.

Table 1 presents the estimation results of long-term interrelationships (upper panel) and short-term interrelationships (lower panel) of the freight rates of a container from Shanghai to Los Angeles (Columns A–B) and from Shanghai to New York (Columns C–D) with the freight rates of a container from Shanghai to Rotterdam, the largest

⁹ The price indices do not include prices set in long-term, individual, and confidential agreements between shipping companies and exporters.



container port in Europe. Columns A and C examine the interrelationships from 2012 to 2022, while columns B and D examine the interrelationships from 2023 to July 2024.

Table 1:
Long Run (Co-Integration) and Short Run (ECM) Relations between Time Series of Freight Rates of Transporting Container from China to The US and to Europe weekly data, 2011-2024

	a. Long-term (co-integration) relationships			
Period	2012–2022	2023-	2012–2022	2023-
		10/2024		10/2024
Dependent Variable	Log of freight rate from		Log of freight rate from	
·	Shanghai to Los Angeles		Shanghai to New York	
Log of freight rate from Shanghai	0.71	0.72	0.59	0.65
to Rotterdam	(0.01)***	(0.02)***	(0.02)***	(0.02)***
Interceptor	2.13	2.4	3.6	3.3
	(0.11)***	(0.11)***	(0.10)***	(0.12)***
Observations	595	95	595	95
R ²	0.82	0.90	0.79	0.95
ADF test of the remainder	-6.10***	-5.95***	-5.86***	-6.03***
ADI test of the remainder	0.10	5.55	5.00	0.05
ADI test of the remainder			и) relationship	
Dependent Variable	b. S		И) relationship	
	b. S Difference i	hort-term (ECN	И) relationship	n the log of
	b. S Difference i the freight	hort-term (ECN n the log of	A) relationship Difference i the freight	n the log of
	b. S Difference i the freight	hort-term (ECN in the log of crate from Los Angeles 0.38	A) relationship Difference i the freight Shanghai to 0.10	n the log of rate from
Dependent Variable	b. S Difference i the freight Shanghai to	hort-term (ECN in the log of rate from Los Angeles	A) relationship Difference i the freight Shanghai to	n the log of rate from New York
Dependent Variable Difference in the log of freight	b. S Difference i the freight Shanghai to 0.18 (0.02)***	hort-term (ECN in the log of crate from Los Angeles 0.38	A) relationship Difference i the freight Shanghai to 0.10	n the log of rate from New York
Dependent Variable Difference in the log of freight rate from Shanghai to Rotterdam	b. S Difference i the freight Shanghai to 0.18 (0.02)***	hort-term (ECN in the log of rate from Los Angeles 0.38 (0.05)***	(0.01)***	n the log of rate from New York 0.39 (0.04)***
Dependent Variable Difference in the log of freight rate from Shanghai to Rotterdam Residual from the co-integration	b. S Difference i the freight Shanghai to 0.18 (0.02)***	hort-term (ECN in the log of rate from Los Angeles 0.38 (0.05)***	O) relationship Difference i the freight Shanghai to 0.10 (0.01)*** -0.06	n the log of rate from New York 0.39 (0.04)***
Dependent Variable Difference in the log of freight rate from Shanghai to Rotterdam Residual from the co-integration regression	b. S Difference i the freight Shanghai to 0.18 (0.02)*** -0.06 (0.01)***	hort-term (ECN in the log of trate from Los Angeles 0.38 (0.05)*** -0.10 (0.04)***	O) relationship Difference i the freight Shanghai to 0.10 (0.01)*** -0.06 (0.01)***	n the log of rate from New York 0.39 (0.04)*** -0.24 (0.05)***
Dependent Variable Difference in the log of freight rate from Shanghai to Rotterdam Residual from the co-integration regression	b. S Difference i the freight Shanghai to 0.18 (0.02)*** -0.06 (0.01)***	hort-term (ECN in the log of rate from Los Angeles 0.38 (0.05)*** -0.10 (0.04)***	O) relationship Difference i the freight Shanghai to 0.10 (0.01)*** -0.06 (0.01)***	n the log of rate from New York 0.39 (0.04)*** -0.24 (0.05)***

The estimations reveal that the long-term interrelationships in both periods were of similar strength, both for freight rates to Los Angeles and for freight rates to New York (compare Columns A and B and Columns C and D in the upper panel). In contrast, the short-term interrelationship estimates indicate that the mutual response between the markets was faster in 2023–2024, during the Houthi attacks, compared to the previous decade (2012–2023). Specifically, both the response of changes in freight rates to the United States to changes in freight rates to Rotterdam and the response to deviations from long-term equilibrium (residual from the co-integration equation) were two to



three times larger in 2023–2024 than in the previous decade (compare Columns A and B and Columns C and D in the lower panel).

These findings suggest that throughout the examined period (2012–2024), there were interrelationships between the China to Europe and China to US shipping markets. However, the response speed of the Shanghai to the US shipping market to changes in the Shanghai to Europe shipping market was higher in 2023–2024, during the Houthi attacks on vessels in the Red Sea shipping route. The increased response speed between these shipping markets helped mitigating the impact on trade usually transported through the Red Sea and even accelerated its recovery.

3.2 Estimating the Transient Impact of Houthi Attacks on International Trade

This section uses econometric tools to estimate the dynamics of the decline and recovery in trade between country pairs whose trade is usually transported through the Red Sea, compared to trade transported through other shipping routes. The estimation of average changes in foreign trade between country pairs is performed while controlling for fixed effects (FE) for each country pair and each time period. Some estimations distinguish between maritime and other trade. These estimations support the claim that the decline and subsequent recovery in international trade are directly related to the Houthi attacks on vessels and not to changes in trade composition or other global changes.

The database used in this analysis includes monthly trade data on goods with various trade partners, as reported to the UN by national statistical authorities. ¹⁰ We use import value data based on the country of origin where the products were manufactured (as opposed to the country of purchase). The value of imported goods includes the goods' transportation and insurance costs (CIF), so the increase in transportation costs due to the extended shipping route somewhat mitigates the decline in the value of the goods themselves (FOB value, excluding transportation costs). Some countries report imports by transportation mode, allowing us to

¹⁰ Statistical offices omit data considered sensitive, such as unofficial trade partners or strategic products like energy and goods with security importance.



determine whether changes in trade value in this subsample are due to changes originating from maritime transportation.

The main explanatory variable in the empirical trade analysis is a dummy variable that distinguishes between trade between country pairs whose shortest shipping route passes through the Red Sea (e.g., Italy and India) and country pairs whose trade does not pass through the Red Sea (e.g., the Netherlands and the United States). The classification of countries into these groups was based on an analysis of the CERDIseadistance database.

The empirical strategy of analyzing trade data is based on comparing the import value between country pairs whose shortest shipping route passes through the Red Sea and other country pairs that do not rely on the Red Sea. The figures present the total imports in various categories, sometimes distinguishing between maritime imports and imports by other transportation modes (Figures 4, A2–A4). The regressions track the average changes in the log of total imports or maritime imports between country pairs whose shortest distance passes through the Red Sea and other country pairs. The baseline reference period of the regression is September–October 2023. The regressions include dummy variables for country pairs and dummy variables for each month.

Formally, the estimated regression is:

$$(*)ln(import_{i,j,t}) = \sum_{t} \delta_{t} + \theta_{i,j} + \sum_{t} \beta_{t} \cdot \delta_{t} \cdot d_{i,j}^{Red Sea} + \varepsilon_{i,t}$$

where: $imports_{i,j,t}$ is the import value from origin country i to destination country j in month t; δ_t is a dummy variable for month t; and $\theta_{i,j}$ is a vector of dummy variables for imports from origin country i to destination country j (a separate variable is defined for imports from j to i). The analysis focuses on β_t , the coefficients for the interaction between the monthly dummy variable δ_t and the dummy variable for country pairs whose shortest shipping route passes through the Red Sea $d_{i,i}$ $^{Red Sea}$

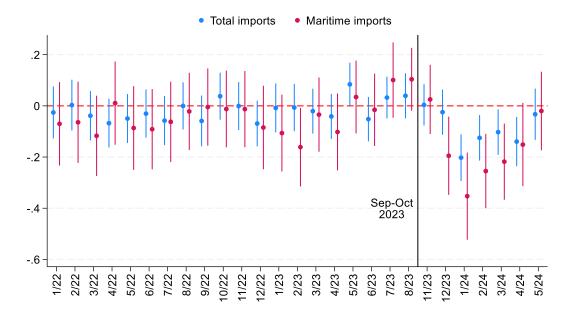
The empirical estimations using a difference-in-differences approach imply a causal impact of the Houthi attacks on trade value: a decline followed by a recovery in trade value between country pairs that usually transport goods through the Red Sea,



compared to the trade value between other country pairs. Figure 7 presents the regression coefficients of the examined interaction β_t in the equation where the dependent variables are the total import value (blue) and the maritime import value (red). The base period is September–October 2023, before the Houthi attacks began in November 2023.

Figure 7:
Impact of Houthi Attacks on Trade: Regression Coefficients of Trade Usually
Shipped Through the Red Sea, Compared with Other Imports in the Import Value
Equation^a

by Month, 2022-2024



^a The sample of total imports includes 74 countries that reported on their foreign trade at least up to March 2024, while the sample of maritime imports includes 31 countries that reported on their foreign trade.

SOURCE: Based on Comtrade data.

It is evident that there were no significant economic or statistical gaps between trade usually transported through the Red Sea and other trade in the two years preceding the Houthi attacks (in 2022 and almost all of 2023). The regression coefficients for early 2024 indicate that due to the Houthi attacks, the average import value between countries whose shortest shipping route passes through the Red Sea declined by about 19% in January 2024, compared to imports between other country pairs.

An estimation using a subsample of countries that reported trade by transportation mode indicates that the maritime import value declined by about 35% in January 2024,



but there was no corresponding decline in air and land imports (not reported in this study). The sharp decline in maritime imports usually transported through the Red Sea, compared to the decline in total import value, and the absence of a corresponding decline in air and land imports, supports the claim that the decline in trade is directly related to the Houthi attacks and not to some other unidentified factor.

The relative decline in imports began to moderate in February 2024 and dissipated by May 2024. It is important to note that the differences in response patterns to the Houthi attacks in Figures 4 and 7 are due to both the control for country characteristics using dummy variables and the fact that Figure 4 presents the total import value in each category, while the regression shown in Figure 7 analyzes the average percentage change in imports for each country pair in each category.

4. Conclusion

This analysis presents preliminary findings regarding the actual impact of the Houthi attacks and the rerouting of shipping on freight prices and the value of international trade. To the best of our knowledge, this is the first publication that analyzes the impact of the Houthi attacks and the rerouting of shipping from the Red Sea on trade using detailed 2024 trade data. The analysis found that rerouting shipping from the shorter Red Sea route to the longer Cape of Good Hope route around Africa, initially led to a temporary decline in trade for OECD countries bordering the Mediterranean and in global trade usually transported through the Red Sea. This change also led to an increase in freight rates from China to Europe, a route that usually transports through the Red Sea. In the second stage, there was an increase in freight rates from China to the United States, and trade that normally is transported through the Red Sea began to recover.

The proposed explanation for the recovery of trade usually transported through the Red Sea and the increase in freight rates between China and the United States is the rerouting of transportation capacity from shipping lanes not threatened by the Houthi attacks, including the trans-Pacific route, to the trade between Asia on one hand and Europe and the Mediterranean on the other hand. This explanation aligns with the



developing research literature on endogenous transportation costs, and is supported by econometric findings that demonstrate the short-term and long-term interrelationships between freight rates from China to Europe and freight rates from China to the United States.

Israel, despite being the declared target of the Houthi attacks, stands out as an exception. The value of Israeli imports from Asia-Oceania, usually transported through the Red Sea, declined before the Houthi attacks at a similar rate to the decline in the value of imports from the rest of the world. Import prices to Israel also remained stable and did not appear to be affected by the rerouting of shipping. There are several possible reasons for Israel's exceptional situation. First, total imports to Israel (excluding unreported security imports) from both Asia-Oceania and other countries declined following the outbreak of the war, so the decrease in imports from Asia-Oceania may have been masked or absorbed by the overall decline in import value. Another possible explanation is that the "ZIM" maritime shipping company, whose home port is in Haifa, preemptively rerouted its vessels to an alternative route around Africa in November 2023 before other maritime shipping companies did in December 2023, resulting in a more gradual decline in imports to Israel compared to the decline recorded in other countries. An additional partial explanation can be attributed to the share of maritime imports as a percentage of total imports to Israel from the Asia-Oceania region, which stands at 65%. This figure is slightly lower than the corresponding share for Turkey and Spain (68%) but considerably lower than the figures for Portugal (78%) and Greece (89%; Figure A4). A comprehensive analysis of the reasons for Israel's exceptional situation is beyond the scope of this analysis.



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DATABASES

Trade data:

- Israel: Detailed files from the Central Bureau of Statistics
- Other countries: UN Comtrade (Link)

Shipping distances:

 Simone Bertoli, Michaël Goujon, Olivier Santoni. The CERDI-seadistance Database, 2016 (halshs-01288748) <u>Link</u>

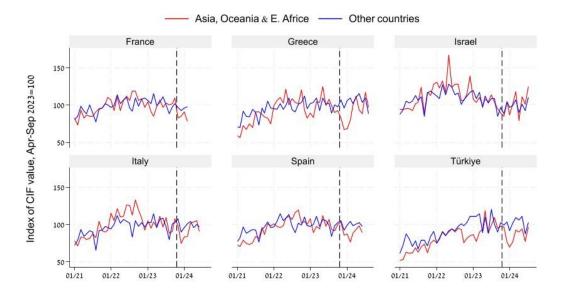
Freight Rates:

 Shipping price indices processed by Drewry and accessed through the Bloomberg service.



Figures appendix

Figure A1:
Imports to Mediterranean OECD Members From Asia, Oceania, and East Africa through the Red Sea, and Other Imports 2021-2024

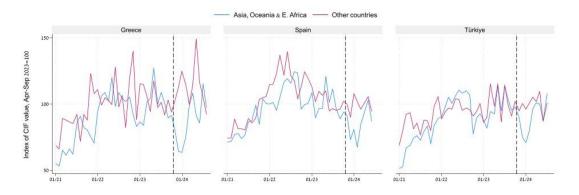


SOURCE: Based on Comtrade data.

Figure A2:

Maritime Imports to Greece, Turkey, and Spain from Asia, Oceania, and East Africa through the Red Sea, and Other Maritime Imports

2021–2024



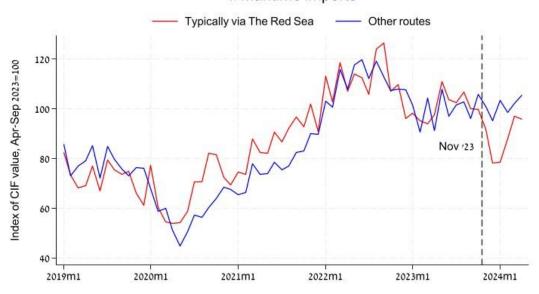
SOURCE: Based on Comtrade data.



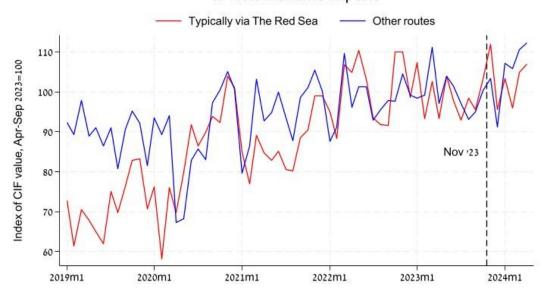
Figure A3:
Imports Typically Shipped Through the Red Sea and Other Trade by Shipping
Means

2019–2024 (index of import value, March–September 2023 avg. = 100)

I. Maritime imports



II. Non-maritime imports



 $^{^{\}rm a}$ Based on reports from 25 countries reporting on their foreign maritime trade up to April 2024 to Comtrade.

SOURCE: Based on Comtrade data.

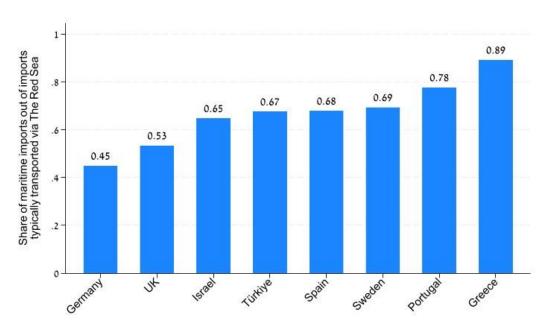


Figure A4:

Maritime Imports as a Share of Total Imports From Countries Whose Maritime

Trade Typically Crosses The Red Sea

2023



SOURCE: Based on Comtrade data.