A STUDY ON ECONOMIC COST OF WAR IN SHIPPING AND TRADE

Project Report Submitted in partial fulfillment for the award of the degree

of

Master of Business Administration

in

International Transportation & Logistics Management

by

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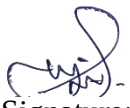
MAY 2024

DECLARATION

I, **Sujay Warude** bearing Register Number: **2203305037**, student of MBA – International Transportation & Logistics Management, at School of Maritime Management, Indian Maritime University, Chennai Campus, hereby declare that the project report titled **"A STUDY ON ECONOMIC COST OF WAR IN SHIPPING AND TRADE"** is my original work. This report is being submitted in partial fulfilment of the requirement for the award of the degree of Master of Business Administration (MBA) In International Transportation and Logistics Management (ITLM). The project report is output of my learnings and observations of my research under the guidance of Dr Lekha Ravi. Assistant professor School of Maritime Management, Indian Maritime University, Chennai Campus.

I declare that the information submitted is true and original to the best of my knowledge.



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Place: Chennai **2203305037**

Date: 10/05/23

CERTIFICATE

This is to certify that this project report entitled **"A STUDY ON ECONOMIC COST OF WAR IN SHIPPING AND TRADE"** submitted to the School of Maritime Management, Indian Maritime University, Chennai Campus in partial fulfilment of the requirement for awarding the degree, MBA in International Transport and Logistics Management is a genuine work of **SUJAY SANJAY WARUDE (Reg No. 2203305037)**.

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ACKNOWLEDGEMENT

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With great pleasure, I express my sincere gratitude to Dr Lekha Ravi, Assistant Professor, School of Maritime Management, Indian Maritime University, Chennai Campus for the valuable guidance and suggestions that enabled me to complete this report successfully.

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Last but the least my prayers and thanks to the “almighty” without whom the work would not have been materialized.

Place**:** Chennai **SUJAY WARUDE**

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EXECUTIVE SUMMARY

The research study "A STUDY ON ECONOMIC COST OF WAR IN SHIPPING AND TRADE" provides a comprehensive examination of the consequences of war on global trade. The study delves into the various ways in which war affects the cost of shipping and trade, such as the disruption of supply chains, increased costs, and the resulting freight rates. Additionally, the research investigates the impact of war on sea routes, including rerouting and the effect on global chokepoints. Furthermore, the study explores the consequences of trade flow disruptions, such as blockades, sanctions, and infrastructure damage, which hinder the movement of goods. The research project also considers the effects on essential commodity prices, such as food and energy. This research aims to provide a comprehensive analysis of the The financial burdens linked to conflicts. that disrupt shipping lanes, trade routes, and maritime infrastructure. The economic cost of war in shipping and trade is a complex challenge with far-reaching implications for global commerce. By understanding the interplay between geopolitical events, maritime logistics, and trade dynamics, stakeholders can proactively address disruptions, build resilience, and navigate the evolving landscape of international trade amidst geopolitical uncertainties.

TABLE OF CONTENT

Abbreviation

1. UNRWA- United Nations Relief and Works Agency for Palestine Refugees
2. IMF- International Monetary Fund
3. KTO - Kuwaiti Theater of Operations
4. USSR- Union of Soviet Socialist Republics
5. COMECON- Council for Mutual Economic Assistance
6. OEEC- Organization for European Economic Cooperation
7. OECD- Organization for Economic Cooperation and Development
8. GATT- General Agreement on Tariffs and Trade
9. IW- Iron Curtain a term used during cold war to describe ideological and physical boundary dividing Europe into two separate areas
10. NATO- North Atlantic Treaty Organization
11. MFN- Most-Favored-Nation
12. CAD- Current Account Deficit
13. INSTC- International North-South Transport Corridor
14. OHCHR- UN Office of the High Commissioner for Human Rights
15. EU- European Union
16. UNCTAD- United Nations Conference on Trade and Development
17. USAID- U.S Agency for International Development
18. NCFI- Ningbo Containerized Freight Index
19. NVOCC- Non-Vessel Operating Common Carrier
20. BSGI- Black Sea Grain Initiative
21. AIS- Automatic Identification Systems
22. DOTS- International Monetary Fund's Direction of Trade Statistics
23. SLOC- Sea Lines of Communication
24. NSR- Northern Sea Route
25. NEP- Northeast Passage
26. EEZ- Exclusive Economic Zone

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CHAPTER 1
INTRODUCTION

War is one of the most destructive and disruptive forces in human history. It not only causes immense human suffering, but also inflicts significant economic damage on the warring parties and the rest of the world. One of the main channels through which war affects the global economy is by disrupting shipping and trade, which are vital for the movement of goods, services, and people across borders.

Shipping and trade are the backbone of the globalized economy, accounting for about 80% of the volume and 70% of the value of world trade. They enable countries to specialize in their comparative advantages, access larger markets, diversify their sources of supply, and benefit from economies of scale. They also facilitate the transfer of technology, knowledge, and innovation, as well as the provision of humanitarian aid and development assistance.

However, shipping and trade are also vulnerable to the risks and uncertainties of war, especially in regions where major maritime routes and choke points are located. War can disrupt shipping and trade in various ways, such as:

- Damaging or destroying ships, ports, and infrastructure, which reduces the capacity and efficiency of the maritime transport system.
- Imposing security threats and costs on ships and cargo, which increases the insurance premiums and operational expenses of the shipping industry.
- Blocking or diverting shipping lanes and choke points, which forces ships to take longer and more expensive routes, or to avoid certain regions altogether.
- Imposing trade sanctions, embargoes, or restrictions, which reduces the volume and diversity of trade flows, and affects the prices and availability of goods and services.
- Creating political and economic instability, which reduces the demand and supply of trade, and affects the confidence and expectations of traders and consumers.

The economic cost of war in shipping and trade can be measured by various indicators, such as the loss of output, income, and welfare, the increase in prices and inflation, the decrease in trade openness and competitiveness, and the deterioration of fiscal and external balances. The magnitude and duration of these costs depend on several factors, such as the intensity and

location of the war, the characteristics and resilience of the shipping and trade sectors, and the policy responses and coping strategies of the affected countries and regions.

The aim of this paper is to provide a comprehensive and systematic analysis of the economic cost of war in shipping and trade globally. The paper will review the existing literature and empirical evidence on this topic, and present a conceptual framework and a quantitative model to estimate the direct and indirect effects of war on shipping and trade. The paper will also examine the historical and contemporary cases of war that have disrupted shipping and trade, such as the World Wars, the Gulf War, the War in Ukraine, and the Red Sea Crisis. The paper will conclude with some policy implications and recommendations for mitigating and preventing the economic cost of war in shipping and trade.

1.2 The Effect of War on Shipping and Trade Routes

The Devastating Impact of War on Shipping and Trade Routes: A Multifaceted Disruption

War casts a long shadow, and its effects aren't limited to the immediate conflict zone. Its tentacles reach far and wide, disrupting the intricate web of shipping and trade routes that underpin global commerce. Here's a breakdown of the key impacts:

Immediate Disruptions:

Blockades and sanctions: Warring nations may impose blockades on strategic ports or implement sanctions, severely restricting the movement of goods and people. This disrupts established trade patterns and creates bottlenecks, leading to shortages and price hikes.

Dangerous zones: Active war zones become perilous for shipping, forcing vessels to take longer, less efficient routes or avoid them altogether. These increases voyage times and operational costs, further impacting trade flows.

Infrastructure damage: Essential infrastructure like ports, bridges, and pipelines are often targeted during conflicts, creating physical barriers and hindering efficient transportation.

Ripple Effects:

Increased shipping costs: The combined effect of longer routes, war zone avoidance, and higher insurance premiums leads to a significant increase in shipping costs. This burden gets passed on to consumers, leading to higher prices for essential goods.

Trade flow disruptions: Disruptions to established trade routes create uncertainty and make it difficult for businesses to plan and deliver goods on time. This can lead to lost sales, production delays, and economic slowdown.

Commodity price fluctuations: War often disrupts the production and transportation of key commodities like food, fuel, and raw materials. This can lead to volatile price swings, impacting both producers and consumers, particularly in vulnerable regions.

Long-Term Consequences:

Shifting trade patterns: War can permanently alter trade patterns, as countries seek alternative routes and suppliers to avoid conflict zones. This can have lasting economic and political implications.

Slowed recovery: Rebuilding infrastructure and lost human capital hampers post-war economic recovery, leaving long-term scars on affected nations.

Increased uncertainty: The unpredictability of war creates an environment of uncertainty that discourages investment and international cooperation, further hindering economic growth.

Examples:

1.The ongoing war in Ukraine has significantly impacted global grain trade, with blockaded ports and damaged infrastructure, leading to rising food prices worldwide.

2.The ongoing missile and drone attacks by Houthi on vessels in Red Sea has caused major disruptions in global trade due to these attacks shipping companies are forced to avoid Suez Canal and reroute around cape of good hopes to reach Europe due to this reroute, fright rates has increase by 200%.

1.3 Research Questions

1. How do different types of war (civil war, regional conflict, global war) impact shipping costs?
2. To what extent do blockades and sanctions contribute to increased shipping costs during war?
3. What is the role of insurance premiums in driving up shipping costs during wartime?
4. How do changes in fuel prices due to war impact shipping costs across different sectors (e.g., containerized goods, bulk commodities)?
5. How does war-induced disruption to trade routes affect global supply chains and production costs?

1.4 Research Objective

1. Identify global and national economic losses in trade due to conflicts between nations.
2. Evaluate shipping bottlenecks, shortage of commodities, fall in trade volume and values and supply chain disruption caused by war and geo-political pressures.

1.5 Research Methodology

The research methodology planned for this project review is a qualitative research design, based on extensive secondary research. A systematic literature review is done to understand the context and provide insights to the discussion. This design involves identifying, selecting, and critically analyzing relevant literature on the topic of interest to gain insights and understanding from existing research. Using a cases study method of presenting findings, nine cases of war is explored and its impact on shipping and global trade. The data was collected from secondary sources, including scholarly journals, reports, books, and other relevant publications. A comprehensive search strategy was developed, including the use of online databases, search engines, and relevant keywords to identify relevant literature.

1.6 Limitations

While research on the economic costs of war in shipping and trade offers valuable insights, it's essential to acknowledge certain limitations:

Data Availability and Measurement:

1. Incomplete data: Quantifying the full economic impact is challenging due to limited access to data from war zones, particularly regarding infrastructure damage and indirect costs.
2. Access limitations: While collecting data some journal, research report was not Accessible due to paid Subscription.

1.7 Chapter Scheme

1.7.1 First Chapter

First chapter is an introduction to economic cost of war in shipping and trade how war/conflicts affect shipping and trade route. It outlines the study's objectives, research methodology, and limitations to give readers an understanding of how the research is being conducted.

1.7.2 Second Chapter

The second chapter presents a comprehensive review of literature, which encompasses academic papers, journals, and articles related to warfare. The literature review is intended to provide readers with an in-depth understanding of the current state of knowledge in the field.

1.7.3 Third Chapter

The focus of the third chapter is to examine the background of incidents of war, the nations directly and indirectly affected by it and its impact on shipping and trade. nine war/dispute has been taken as case studies to analyze their impact on shipping and trade routes. This chapter will provide an analysis of how increase in freight rates affect shipping and trade.

1.7.4 Fourth Chapter

The Fourth chapter focuses on the major sea routes and how their closure impacted shipping and trade, rerouting due to war, Shortage of commodities, fall in volume and trade, delay in supply chain.

1.7.5 Fifth Chapter

The fifth chapter of the study presents the findings and conclusions derived from the available information. It serves to summarize and the results of the research conducted in the preceding chapters and to draw insights that can inform future work in the Economic cost of war in shipping and trade.

CHAPTER 2

Literature review

Introduction

This review of literature delves into the intricate nexus between warfare and the shipping industry, shedding light on the manifold ways in which armed conflicts impose economic burdens and operational constraints on maritime activities. By synthesizing insights from diverse scholarly works, empirical studies, and industry reports, this section endeavors to delineate the direct and indirect costs incurred by stakeholders within the shipping ecosystem in times of war.

Through a comprehensive examination of existing literature, this review aims to elucidate the complex dynamics that underpin the economic ramifications of war in the shipping industry, encompassing aspects such as heightened insurance premiums, increased security expenditures, disrupted supply chains, and infrastructure damage. Furthermore, it endeavors to explore the adaptive strategies adopted by shipping firms and maritime stakeholders to mitigate these challenges and navigate the turbulent waters of conflict-induced disruptions.

Review of Literature

2.1.1

Title Name: What Red Sea Disruption Means for Global Supply Chains[1]

Author: Antonia Colibasanu

Date of publication: 2024

Objective: The Red Sea is a vital waterway for commercial shipping that connects markets in Europe, Asia and Africa. In recent weeks, however, it has been the site of multiple attacks launched by Yemen's Houthi rebels in support of Hamas in its war with Israel. The group claims to target only ships leaving from or going to Israel, but others with no clear Israeli connections have been attacked while sailing through the sea.

[1] https://www.researchgate.net/publication/377230165_What_Red_Sea_Disruption_Means_for_Global_Supply_Chains

2.1.2

Title Name: U.S., U.K. Launch Strikes Against Houthi Targets in Yemen to Protect Red Sea Shipping[2]

Author: oren-liebermann

Date of publication: 2024

Objective and Findings: This article aims to inform readers about the recent military actions taken by the United States and the United Kingdom against Houthi targets in Yemen. The objective is to provide insight into the rationale behind these strikes and their implications for regional stability, particularly in safeguarding international shipping routes through the Red Sea.The United States and the United Kingdom, with support from other countries, launched strikes on Houthi targets in Yemen. The strikes were conducted from both air and surface platforms, including fighter jets.At least 30 targets were struck across at least 10 locations in Yemen. The targeted sites included command and control centers, an underground weapons storage facility, and other weapons utilized by the Houthi rebels to threaten international shipping lanes in the Red Sea. The military action underscores growing concerns over the security of vital maritime routes, particularly amidst escalating tensions in the region. The strikes reflect a concerted effort by the US and its allies to disrupt Houthi capabilities and protect commercial interests navigating through the Red Sea.

[2] https://edition.cnn.com/2024/02/03/politics/strikes-us-uk-houthi-yemen/index.html

2.1.3

Title Name: The Impacts of Russian Ukrainian War on the Global Economy in the frame of digital banking networks and cyber attacks[3]

Author: Muhammad Eid Balbaa

Date of publication: 2022

Objective and Findings: This research paper aims to analyze the impacts of the Russian-Ukrainian war on the global economy, focusing specifically on the implications within the framework of digital banking networks and cyber attacks. The objective is to provide insights into how geopolitical tensions and the conflict between Russia and Ukraine have affected global economic dynamics, particularly in the realm of digital banking infrastructure and cybersecurity. Russia's invasion of Ukraine in February 2022 heightened geopolitical tensions, leading to uncertainty and lowering global growth expectations. The conflict between Russia and Ukraine has generated significant concerns about its potential effects on the global supply chain, contributing to economic uncertainty.Western nations' imposition of sanctions on Russia has had a spillover effect on the global economy, impacting various sectors and regions.Energy supply shocks, commodities, and trade supply shocks have emerged as consequences of the conflict, resulting in rising prices of energy, food, and commodities globally.The economic fallout from the Russian-Ukrainian war has contributed to inflationary pressures in many countries, posing challenges to policymakers.This paper specifically examines the economic impacts in the month following the outbreak of the conflict, providing timely insights into the immediate repercussions of the war on the global economy. Within the context of digital banking networks and cybersecurity, the research delves into how the conflict may have influenced vulnerabilities and risks within digital financial systems, including potential cyber attacks and disruptions to banking infrastructure. Insights from this analysis can inform policymakers, financial institutions, and cybersecurity experts about the economic and cybersecurity implications of geopolitical conflicts on global financial systems.

[3] https://dl.acm.org/doi/fullHtml/10.1145/3584202.3584223

2.1.4

Title Name: Economic Consequences and Implications of the Ukraine-Russia War[4]

Author: Madina Khudaykulova

Date of publication: 2022

Objective and Findings: The objective of this research paper is to examine the economic consequences and implications of the ongoing war between Ukraine and Russia. The study aims to provide a comprehensive analysis of the economic impact of the conflict, considering factors such as sanctions, financial vulnerabilities, and the potential for cross-border disruptions. It also seeks to assess the broader implications of the war on both local economies in the region and the global economy as a whole.Since the end of the Cold War, the sanctions against Russia have been among the most severe and costly imposed on a major economy. These sanctions have been characterized by their speed, breadth, and global coordination. The current situation exacerbates concerns regarding cross-border financial and operational vulnerabilities, highlighting the heightened sense of danger associated with such vulnerabilities. Despite the possibility of future oil and gas embargoes, Russia's economy remains heavily reliant on its current export strategy, which may prove difficult to weaken significantly. Key considerations at the onset of the war include the opportunity cost of military investment, the humanitarian toll on the financial system, and the challenges of post-war reconstruction and recovery. The paper reviews the economic impact of the conflict, encompassing factors such as devastation, inflation, limitations on services, increased debt burdens, and disruptions to daily economic activities. Beyond the immediate economic consequences, the research also discusses the broader implications of the Russia-Ukraine war on local economies within the region and its potential ripple effects on the global economy. The human costs of war are highlighted alongside the adverse economic implications, emphasizing the multifaceted challenges faced by populations affected by conflict. Insights from this analysis can inform policymakers, economists, and stakeholders about the complex economic dynamics and challenges arising from the Ukraine-Russia war, aiding in the development of effective response strategies and policies.

[4] https://www.researchgate.net/publication/362057842_Economic_Consequences_and_Implications_of_the_Ukraine-Russia_War

2.1.5

Title Name: IMPACT OF THE ISRAEL-HAMAS CONFLICT ON GLOBAL ECONOMIES, INCLUDING INDIA - AN ASSESSMENT[5]

Author: Dr. G. YOGANANDHAM

Date of publication: 2022

Objective and Findings: The objective of this research paper is to assess the impact of the Israel-Hamas conflict on global economies, with a specific focus on India. The study aims to analyze the economic ramifications of the conflict, such as increased food and energy prices, and to evaluate the potential exacerbation of global economic effects, particularly in the Middle East. Additionally, the research explores how India is considering technology-driven trade finance options to mitigate these impacts. The Israel-Hamas conflict and Gaza assault have led to global economic issues, including increased food and energy prices.The conflict has the potential to exacerbate global economic effects, particularly in the Middle East, and could contribute to food insecurity. India is exploring technology-driven trade finance options to mitigate the economic impacts of the conflict.While Israel's GDP increased in Q2 2023, strained regional relations and diplomatic withdrawals have occurred due to the conflict. Geopolitical possibilities include Europe's recession, regional power struggles, the risk of war in Lebanon, and concerns about Iran targeting nuclear facilities. Overall, the paper highlights the critical importance of understanding the economic and societal implications of the Israel-Hamas conflict on global economies, including India, and underscores the need for proactive measures to address these challenges.

[5] https://www.researchgate.net/publication/376190234_IMPACT_OF_THE_ISRAEL-HAMAS_CONFLICT_ON_GLOBAL_ECONOMIES_INCLUDING_INDIA_-_AN_ASSESSMENT#:~:text=The%20conflict%20could%20exacerbate%20global,options%20to%20mitigate%20these%20impacts.

2.1.6

Title Name: Understanding The Nature of Trade and Economic Wars- Special Focus on The Us-China Trade War[6]

Author: Duong Anh Son

Date of publication: 2022

Objective and Findings: The objective of this research paper is to deepen understanding of the nature of trade and economic wars, with a special focus on the US-China trade war. The study aims to comprehend the evolution of the trade conflict between the world's two largest economies, exploring the motivations, strategies, and impacts from both Chinese and American perspectives. Additionally, the research seeks to analyze the effects of the trade war on developed and developing countries, considering the broader ramifications for global trade and economic stability. The US-China trade war has escalated significantly in recent years, driven by tensions over trade imbalances, intellectual property rights, and geopolitical rivalry. Both the US and China have employed tit-for-tat strategies, imposing tariffs and other trade barriers on each other's goods and services, leading to a broader economic cold war between the two countries. The trade war has had significant implications for the global economy, affecting supply chains, investment flows, and consumer prices across developed and developing countries.Developing and underdeveloped economies, in particular, have felt the consequences of the US-China trade war on multiple fronts, including reduced export opportunities, disrupted supply chains, and increased market volatility. Both the US and China have sought to protect their economic positions and advance their respective national interests through tariffs and other trade policy measures.The research underscores the importance of considering the perspectives of both China and the US in understanding the dynamics of the trade war and its broader implications for global trade and economic governance. Insights from this analysis can inform policymakers, businesses, and stakeholders about the complex nature of trade and economic wars, facilitating more informed decision-making and strategic planning in a rapidly evolving global economic landscape.

[6] https://www.researchgate.net/publication/342651063_US-China_Trade_War_A_Way_Out/comments

2.1.7

Title Name: War and international trade: Impact of trade disruption on international trade patterns and economic development[7]

Author: Oldrich Krpec

Date of publication: 2019

Objective and Findings: The objective of this research paper is to analyze the impact of trade disruption caused by military conflicts on international trade patterns and economic development. The study focuses on three major conflicts in modern history: the Napoleonic Wars, World War I, and World War II. It aims to explore how disruptions in trade flows during these conflicts led to changes in the economic structures of countries, alterations in trade policies, and shifts in established trade patterns. The research seeks to understand the lasting effects of trade disruptions on the position of countries within the international trade system, emphasizing the relative permanence of these changes irrespective of the outcomes of the conflicts for individual countries.Military conflicts such as the Napoleonic Wars, World War I, and World War II have caused significant disruptions in global trade flows.These disruptions have led to changes in the economic structures of countries involved in the conflicts, as well as in regions that did not directly participate in the wars. The alterations in trade policies, driven by the need to adapt to trade disruptions, have had long-lasting effects on international trade patterns. Changes in trade patterns resulting from disruptions during conflicts are relatively permanent, persisting even after the cessation of hostilities. The impact of trade disruptions on economic development extends beyond the duration of the conflicts, shaping the economic trajectories of countries and regions for years to come. Even countries that did not actively participate in the conflicts have been affected by changes in trade patterns and economic structures resulting from trade disruptions.The research highlights the importance of understanding the enduring effects of trade disruptions caused by military conflicts on the global economy and international trade system.

7 https://www.researchgate.net/publication/330901832_War_and_international_trade_Impact_of_trade_disruption_on_international_trade_patterns_and_economic_development

2.1.8

Title Name: The economic costs of military conflict[8]

Author: Ron P Smith

Date of publication: 2014

Objective and Findings: The objective of this research paper is to examine the economic costs associated with military conflict. The study aims to provide a critical analysis of the methods used to calculate these costs, including accounting procedures, statistical models, and event studies of stock market reactions to conflict-related news. Additionally, the research seeks to address key questions that underlie the calculation of conflict costs, including the purpose of the calculation, the comparison being made, the sources of data, and the methods of aggregation and valuation. The paper aims to highlight the importance of clarity and transparency in addressing these questions, as they are fundamental to the accuracy and validity of conflict cost calculations. The literature on the economic costs of military conflict employs various methodologies, including accounting procedures, statistical models, and event studies The answers to these questions are crucial for accurately assessing conflict costs and involve both technical considerations and underlying philosophical and ethical judgments. The literature often lacks clarity in addressing these questions, tending to take them for granted, which can undermine the accuracy and reliability of conflict cost calculations. Understanding the underlying objectives and ethical considerations is essential for conducting meaningful analyses of the economic costs of military conflict. The paper emphasizes the need for transparency and rigor in the methodology used to calculate conflict costs, as well as the importance of considering both costs and benefits in such analyses. Insights from this research can inform policymakers, researchers, and stakeholders about the complexities involved in assessing the economic costs of military conflict, facilitating more informed decision-making in conflict resolution and peacebuilding efforts.

[8] https://www.jstor.org/stable/24557419

2.1.9

Title Name: COLLATERAL DAMAGE: TRADE DISRUPTION AND THE ECONOMIC IMPACT OF WAR[9]

Author: Reuven Glick

Date of publication: 2010

Objective and Findings: The aim of this research paper is to analyze how war affects international trade economically, challenging traditional viewpoints by examining how conflicts between nations impact their trade relationships. Utilizing data since 1870, the study uses the gravity model to estimate how wars, both during and after, influence trade for countries involved in the conflict and those not directly engaged. It also considers other trade determinants and potential reverse causality effects. The goal is to gain a thorough understanding of war's economic consequences on trade, national income, and global economic welfare. The research reveals that wars have significant and enduring effects on international trade, disrupting trade relationships and affecting all involved nations. It emphasizes the need to account for various trade factors and potential causalities when assessing war's impact on trade. The disruption in trade extends beyond the war period, impacting national income and global economic welfare persistently. Through a comparative statics analysis, the study suggests that the economic costs of lost trade could be as substantial as direct war costs, like human capital losses. Case studies from World Wars I and II illustrate the substantial economic toll of trade disruption, highlighting the importance of understanding war's economic impact. The findings provide valuable insights for policymakers, economists, and stakeholders, aiding in decision-making regarding conflict resolution and strategies to mitigate war's disruptive effects on international trade and economic well-being.

[9] https://www.jstor.org/stable/25651393

2.1.10

Title Name: Northwest of Suez: The 1956 Crisis and the IMF[10]

Author: James M. Boughton

Date of publication: 2000

Objective and Findings: The objective of this research paper is to examine the role of the International Monetary Fund (IMF) during the 1956 Suez Crisis. The study aims to provide insights into the actions and decisions of the IMF during this pivotal historical event, shedding light on its response to the economic and financial challenges posed by the crisis. Additionally, the paper seeks to analyze the implications of the IMF's involvement in the crisis for international finance and economic governance.The research provides a detailed analysis of the IMF's role and response to the 1956 Suez Crisis, highlighting its efforts to address the economic and financial ramifications of the conflict. Through an examination of archival documents and historical records, the study offers insights into the IMF's decision-making processes and policy interventions during the crisis. The paper explores the IMF's engagement with member countries affected by the crisis, including Egypt, Israel, and the United Kingdom, among others. Insights from the research shed light on the IMF's broader role in managing financial and economic crises, highlighting its efforts to promote stability and support member countries facing economic challenges. The findings contribute to a deeper understanding of the complexities involved in navigating geopolitical tensions and economic disruptions within the framework of international financial institutions such as the IMF. The research underscores the importance of studying historical events like the 1956 Suez Crisis to draw lessons for contemporary economic and financial governance. By elucidating the IMF's actions and decisions during the crisis, the paper provides valuable insights for policymakers, economists, and scholars interested in international finance, crisis management, and economic history.The publication of this working paper serves to stimulate further discussion and debate on the IMF's role in responding to global economic challenges and crises, contributing to ongoing research and policy deliberations in the field of international finance and economic governance.

[10] https://www.imf.org/en/Publications/WP/Issues/2016/12/30/Northwest-of-Suez-The-1956-Crisis-and-the-IMF-3899

2.1.11

Title Name: The 1991 Persian Gulf War: Short Term Impacts on Ocean[11]

Author: EVELYN THOMCHIC

Date of publication:1992

Objective and Findings: The objective of this research paper is to examine the short-term impacts of the 1991 Persian Gulf War on ocean transportation and logistics. The study aims to explore the relationship between the military war effort and the commercial transportation industries, particularly focusing on how the war influenced ocean transportation and logistics operations during and immediately following the conflict. Additionally, the paper seeks to analyze the role of military logistics in shaping commercial transportation dynamics in the context of the Persian Gulf War. The research highlights the unique characteristics of the 1991 Persian Gulf War, including its designation as a "media" war with extensive live news coverage and a well-defined period of build-up and military operations. The Persian Gulf War provided an opportunity to observe military logistics operations at their best, offering insights into the efficient coordination of resources and transportation infrastructure during wartime. The study focuses on examining the impact of the war on commercial transportation industries, particularly ocean transportation, which played a crucial role in supporting military operations and supply chains in the Gulf region.

Insights from the research shed light on how the demands of the military war effort influenced commercial transportation operations, including shipping routes, port activities, and maritime logistics.

The publication of this article serves to stimulate further research and discussion on the impacts of wartime logistics on commercial transportation industries, contributing to ongoing efforts to enhance the resilience and efficiency of transportation networks in times of crisis.

[11] https://www.jstor.org/stable/20713195

2.1.12

Title Name: LOGISTICS FLOW DURING THE GULF WAR[12]

Author: Kent D.Algire

Date of publication: 1992

Objective and Findings: The objective of this research paper is to analyze the logistics flow during the Gulf War, particularly focusing on the role of logistics infrastructure in enabling the success of Operation Desert Storm. The study aims to highlight the significance of logistics in modern warfare and the critical role it played in supporting military operations during the Gulf War. Additionally, the paper seeks to examine the complexity of logistics support requirements for modern, high-technology weapons systems and the implications for military planning and operations. The research emphasizes the pivotal role of logistics infrastructure in facilitating the success of Operation Desert Storm during the Gulf War.

Logistics played a crucial role in supporting military operations by ensuring the timely and efficient movement of troops, equipment, and supplies to the Kuwaiti Theater of Operations (KTO). The study highlights the extensive logistics preparations and infrastructure built in the KTO in the six months leading up to combat, underscoring the importance of pre-combat logistics planning and preparation. Modern, high-technology weapons systems and highly-trained personnel have significant logistics support requirements, which necessitate robust logistics infrastructure and supply chain management capabilities.The success of military operations during the Gulf War was contingent upon the effective coordination and execution of logistics operations, including transportation, supply, maintenance, and support services.

Insights from the research shed light on the complexities of logistics flow during wartime and the critical role it plays in enabling military effectiveness and operational success.

[12] https://www.jstor.org/stable/pdf/resrep13777.4.pdf

CHAPTER 3

The Impact of Global Warfare and Disputes on Maritime Trade and Commerce

1. World War 1

Introduction and Background

World War I profoundly impacted international relations, politics, and culture, leading to the rise of communism, fascism, and ultimately World War II. Understanding its significance requires considering its connection to historical globalization. This era peaked in the early twentieth century but was abruptly halted by World War I, triggering the Great Depression, World War II, and the Cold War. Only recently have we begun to fully grasp its impact on contemporary history. Evaluating World War I in the context of globalization reveals its origins in international economic competition. While literature often emphasizes great power rivalries, economic factors were significant. Germany's late entry into imperial competition and peaceful resolutions before 1914 contrast with later conflicts.

1.1 World War I and Global Markets

Pre-WWI trade saw Britain heavily reliant on the "western offshoot" (US, Canada, New Zealand, Australia) for vital imports. These nations became primary suppliers, surpassing Eastern Europe and the Baltic. Britain still exported to Europe and its empires, while France and Germany protected their markets. Italy and Holland were active in empire-building, with varied trade policies. Smaller countries like Switzerland and Belgium adopted liberal trade policies, focusing on high-value goods.

	Austria--Hungary		France		Germany		Russia		UK	
	IMP	EXP	IMP	EXP	IMP	EXP	IMP	EXP	IMP	EXP
1913	100	100	100	100	100	100	100	100	100	100
1914	85	75	76	71	79	73	80	63	91	82
1915	110	48	131	57	66	31	83	27	114	73
1916	174	56	245	90	78	38	178	38	129	96
1917	145	61	327	87	66	35	169	31	151	100
1918	108	56	265	69	66	47	-	-	191	96
1919 *	-	-	425	173	-	-	-	-	222	152

Table 1: Trade during the Great War: 1913=100 (current prices)

North America exported food and raw materials while focusing on domestic industrialization. The US benefited from trade agreements regulating protection rates. Developing economies exported colonial goods under colonial administration conditions. Newly independent countries faced challenges due to unequal treaties. Japan rapidly industrialized despite forced integration into the "free" trade system, driven by political and economic factors. World War I aimed to disrupt trade significantly, shifting economies towards war-time industrial coordination. Japan increased industrial exports to Asia due to European disruptions, leading to a rise in its export share and decreased imports. This shift marked the start of lasting changes, with Japan achieving industrialization and gaining political and cultural independence. India and China raised tariffs to drive (re)industrialization, with China's cotton spindle numbers quadrupling due to decreased foreign imports during the war.

The conflict had significant consequences on global trade. European manufacturers sought protection due to excess defense production post-war. The US became more efficient as European industries shifted to import competition. This influenced trade policies, favoring free trade based on comparative advantage. European agricultural revival threatened domestic producers, leading to demands for market protection. Governments favored protecting markets to avoid spending scarce international funds on food and prioritize domestic industrial and capital goods.

	Argentina		Canada		US		India		Japan		China	
	IMP	EXP	IMP	EXP	IMP	EXP	IMP	EXP	IMP	EXP	IMP	EXP
1913	100	100	100	100	100	100	100	100	100	100	100	100
1914	65	78	74	101	84	94	100	88	84	94	100	88
1915	62	112	82	171	80	111	80	103	80	111	80	103
1916	74	110	137	259	111	172	91	120	111	172	91	120
1917	77	106	156	349	151	245	96	115	151	245	96	115
1918	101	154	149	279	239	302	97	121	239	302	97	121
1919	132	199	152	284	315	332	114	157	315	332	114	157

1.2 View of freight rates 1912-1920

Monthly indices for 13 outward coal trade routes from Britain and 7 inward trade routes were developed from January 1912 to December 1920. These indices, detailed in the appendix, cover UK coal imports and exports, reflecting the UK's dominance in global shipping. Inward trade routes include cross-trade routes like grain from North America to Europe, coal from Virginia to South America and Italy, and salt from the Red Sea to India, making the indices representative of global freight rate trends. The dataset comprises 65,236 freight rate observations, with steam ships dominating except for minor use of sailing ships in specific routes during WWI. Figure 1 depicts the substantial wartime increase in freight rates, peaking at about 10-12 times the 1913 average, followed by a post-war decline and subsequent rise during the international restocking boom of 1919-1920.

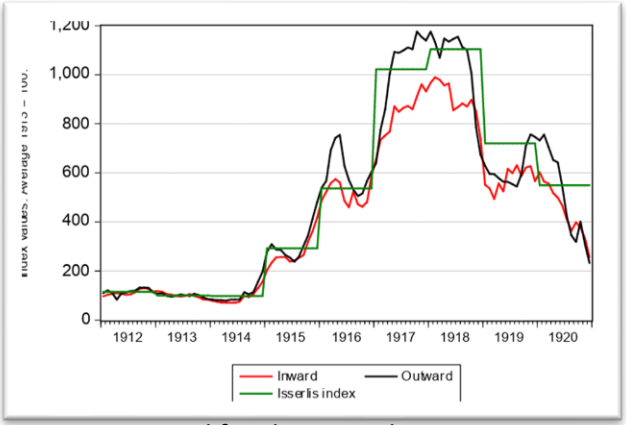

Fig 1: Aggregate nominal freight rate indices January 1912December 1920.[13]

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https://www.researchgate.net/publication/323974571_Navigating_Through_Torpedo_Attacks_and_Enemy_Raiders_Merchant_Shipping_and_Freight_Rates_During_World_War_I

Isserlis (1938) noted a significant increase in wartime freight rates, supported by Fig 1's annual freight rate index. The peak in 1918 was about 11 times the 1913 level, aligning with the new monthly indices' trends. These detailed indices offer insights into rate fluctuations, especially in the war's final years and aftermath. The 20 subindices enable a nuanced analysis of trade route differences. For instance, coal freights to Scandinavia surged 78 times in November 1917, contrasting with a six-fold increase to French Mediterranean and Italian ports. Post-1916, freight rate controls influenced British trade rates for neutral ships, differing from rates for British and Allied vessels. Examining specific inward and outward rates beyond aggregates is crucial for understanding the war's impact on ocean freight.

The shipping industry's wartime fluctuations in freight rates stemmed from various factors like international trade pace, merchant shipping tonnage, port congestion, reduced manning, and economic blockade. Control measures by authorities complicated freight rate determination, especially in 1917-1918, persisting until mid-1920.

Germany's maritime trade faced restrictions due to Allied examination services and neutral countries' regulations, limiting trade and posing risks. Despite British naval control, German cruisers sank Allied and neutral steamers. Fig 2 shows tonnage lost and cargo insurance rates, with premiums initially higher for routes where German commerce raiders were active, such as the East Indian Sea.

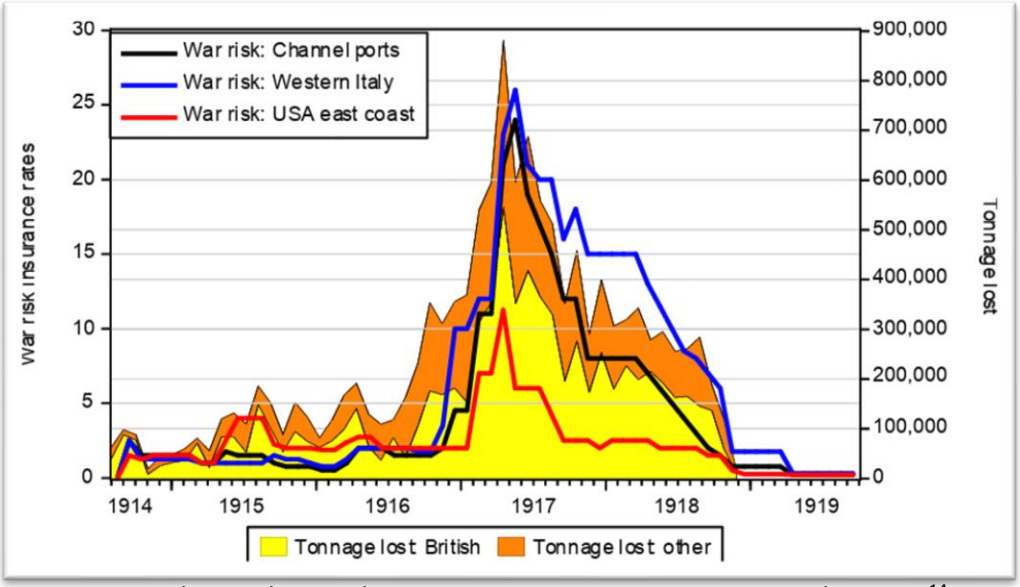

Fig 2: Tonnage lost and war risk insurance rates, August 1914 September 1919[14]

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https://www.researchgate.net/publication/323974571_Navigating_Through_Torpedo_Attacks_and_Enemy_Raiders_Merchant_Shipping_and_Freight_Rates_During_World_War_I

Mid-1916 saw escalating losses due to enemy action, peaking in April 1917 with Germany's unrestricted submarine warfare declaration. Merchant shipping suffered, with 1.5-2% of world tonnage sunk monthly from winter to spring. Table 3 shows soaring insurance rates during this period, reaching up to 26% in the Mediterranean and UK waters. Despite the convoy system's introduction in late 1917, losses persisted until October 1918, impacting freight rates with increased voyage costs and reduced tonnage.

1.5 Wartime controls and acute tonnage shortage

Based on the information provided, it is apparent that enforcing freight rate limitations, trading direction, and requisitioning of tonnage could help keep freight rates in check to a certain extent. However, this approach only applies to British ships and the transportation of controlled commodities.

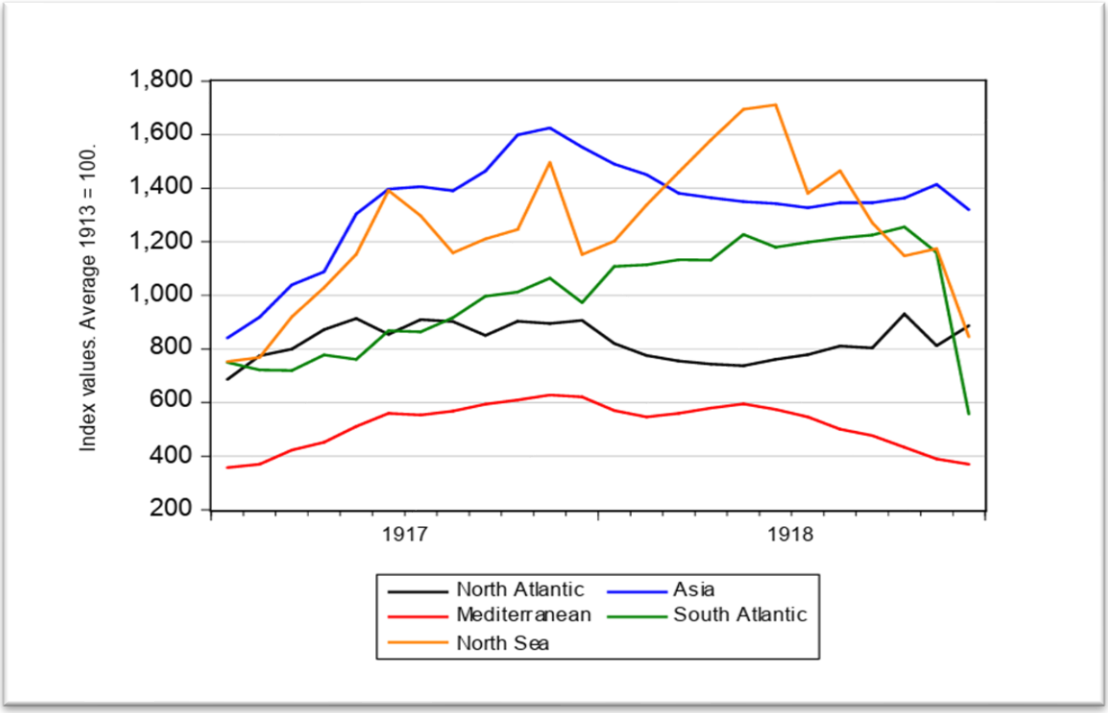

Fig 3: Nominal inward freight rate indices January 1917- December 1918.[15]

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https://www.researchgate.net/publication/323974571_Navigating_Through_Torpedo_Attacks_and_Enemy_Raiders_Merchant_Shipping_and_Freight_Rates_During_World_War_I

Export of grains, sugars, ores, and coal to Allied countries faced fierce competition from uncontrolled freight markets due to scarce free tonnage in 1917. The Liverpool Steam Ship Owners Association proposed stricter import license control in 1916 to address tonnage shortages, but British government measures were not implemented until 1917, reducing non-essential imports. Before 1917, most world shipping remained uncontrolled, except for defense-related navigational restrictions. Some British ships were requisitioned at below-market rates, with enforced shipping direction in certain trades like sugar and iron ore. Neutral shipping, including the American fleet, sailed mostly without direct controls, but indirect controls like bunker pressure directed neutral ships to carry coal to France and Italy and return with ore from Spanish ports.

2. World War II

World War II was a global conflict that lasted from 1939 to 1945, involving the majority of the world's countries, including all the great powers, which fought on two opposing sides: the Allies and the Axis. Many participating countries devoted all their economic, industrial, and scientific resources to this total war, blurring the distinction between civilian and military resources. Aircraft played a significant role in the war, enabling strategic bombing of population centers and the delivery of the only two nuclear weapons ever used in warfare. It was the deadliest conflict in history, resulting in 70-85 million fatalities, including millions of deaths due to genocides, such as the Holocaust, starvation, massacres, and disease. Following the defeat of the Axis powers, Germany, Austria, and Japan were occupied, and war crime tribunals were conducted against German and Japanese leaders.

2.1 World War II: a conflict with major economic consequences

World War II had devastating consequences, including loss of life, infrastructure damage, and increased debt for many countries. Post-war changes included greater social protection and the rise of the welfare state in Europe. The Marshall Plan and the establishment of organizations like the OEEC and later the OECD aimed to rebuild European economies and foster international cooperation.

The international trade system relied on currency devaluation and subsidies to protect markets, posing challenges for indebted European countries. Colonial producers restructured economies, while Latin American exporters protected their economies with tariffs and quotas.

The US enforced strong protectionist policies, transforming into the world's largest exporter of industrial goods and using trade agreements for market access.

Britain and Commonwealth countries protected domestic markets, with Britain targeting Commonwealth markets for industrial growth. Japan expanded in Asia through aggressive measures, partly due to protectionist actions by Britain and the US. The war disrupted trade, leading to state-controlled economies and forced resource transfers within German influence.

2.3 The Post War World

The Most Destructive War in History

By the end of World War II, much of Europe and Asia, and parts of Africa, lay in ruins. Combat and bombing had flattened cities and towns, destroyed bridges and railroads, and scorched the countryside. The war had also taken a staggering toll in both military and civilian lives. Shortages of food, fuel, and all kinds of consumer products persisted and in many cases worsened after peace was declared. War-ravaged Europe and Japan could not produce enough goods for their own people, much less for export.
What was needed to pull Europe and Asia back into the international economy? The answer was *money* - but what kind? The currencies of war-torn countries? Gold? Dollars?

The Most Expensive War in History

In addition to the toll in human lives and suffering, countries spent more money on World War II than in all previous wars put together. By 1945, exhausted countries faced severe economic problems that frustrated reconstruction efforts:

- Inflation
- Debt (mostly owed to the United States)
- Trade deficits
- Balance of payments deficits
- Depleted gold and dollar supplies

The growth in international trade has been substantial since the conclusion of World War II. In fact, trade has typically expanded at three times the rate of global economic growth, a phenomenon commonly known as the globalization of the economy.

Fig 4: World Exports[16]

Trade has been made increasingly intricate by the changing nature of global commerce. In the past, it was common for a country to exchange its finished goods with those of another country, such as the United States trading wheat with Germany for automobiles. However, this traditional form of trade is only a small part of the picture today. Now, many of the end products that we see are the result of coordinating inputs from various locations around the world, assembling them in another country, and distributing them to numerous countries. This is a remarkable accomplishment in many respects, but it has also raised concerns about the potential consequences of globalization on both people and the environment.

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https://www.imf.org/external/np/exr/center/mm/eng/mm_dr_01.htm#:~:text=The%20Most%20Expensive%20War%20in,owed%20to%20the%20United%20States

3. The Cold War

Introduction and Background

During the Cold War (1947-1991), the US and the Soviet Union engaged in geopolitical tension through proxy wars, ideological struggles, and indirect means like propaganda and technological competitions. The Truman Doctrine marked the start in 1947, while the Sino-Soviet split in 1961 signaled a gradual winding down, ending with the Soviet Union's collapse in 1991.

The Western Bloc, led by the US and capitalist democracies, aligned with authoritarian Third World states. The Eastern Bloc, led by the Soviet Union, had a command economy and Communist regimes in satellite states. The US supported anti-communist dictatorships, while the Soviet Union funded left-wing movements. Newly independent Third World nations often became battlegrounds during this era.

3.1 The Early Cold War and the Establishment of Rival Trade Organizations

During the late 1940s, the economic Cold War began, leading to the division of the global economy into two systems: capitalist and communist. As Soviet Politburo member Georgi Malenkov stated during his speech at the Nineteenth Party Congress in 1952, the world market had disintegrated into two separate markets. Consequently, rival trade organizations emerged on both sides. This section offers a comprehensive overview of these organizations, starting with the GATT, which was established before the economic Cold War.

3.2 American-Soviet Trade

An effort has been made to suggest, in a qualitative manner, the potential for substantial US-Soviet trade, while simultaneously acknowledging the obstacles that exist. Another approach is to assess the current levels of US-USSR trade and predict future possibilities by considering the implications of removing man-made barriers to trade. This approach, however, seems unlikely in the near future, given the Soviet invasion of Afghanistan. The tables below summarize major categories of US-Soviet exports and imports for 1974. These tables also highlight categories where there is potential for trade, despite little actual bilateral trade in 1974. The dozen or so categories of commodities presented in each of the two tables comprise nearly 90 percent of the bilateral trade, which amounted to $612 million in US exports and

$250 million in imports in 1974. Additionally, about 80 percent of US exports fall into just two categories: cereals and non-electrical machinery. Conversely, two categories—petroleum and products and non-ferrous metals—account for about 80 percent of US imports from the USSR. In total, US-USSR trade represented an extremely small fraction of the global trade between the two nations

U.S. Exports - U.S.S.R. Imports: Selected Commodity Groups - 1974
(In millions of U.S. dollars)

SITC Categories	(1) Total U.S. Exp.	(2) U.S. Exp. to the USSR	(3) Col. 2 / Col. 1 x 100	(4) USSR imports from IW	(5) Col. 2 / Col. 4 x 100
01 Meat and meat preparations	381	0	0.0	75	0.0
04 Cereals and cereal prep.	10,331	278	2.7	364	76.3
26 Textile fibers & their waste	1,782	3	0.2	42	7.3
51 Chemical elem., compounds	3,618	14	0.4	287	5.0
53 Dyes, tanning, color prod.	304	1	0.2	58	1.2
58 Plastic, materials, etc.	1.618	8	0.5	250	3.0
61 Leather, dressed, furs, etc.	164	1	0.9	45	3.2
65 Textile yarn, fabric, etc.	1,795	6	0.3	311	1.9
67 Iron and steel	2,560	8	0.3	1,947	0.4
71 Machinery, non-electric	16,669	188	1.1	1,663	11.3
72 Electrical machinery	7,019	28	0.4	293	9.4
85 Footwear	28	0	0.0	21	0.0

Source: Elias, 1976.

Fig 5: U.S Exports- U.S.S.R Imports[17]

[17] https://www.britannica.com/event/Cold-War

In 1974, US trade had approximately $100 billion in exports and imports, as shown by the low percentages in column 3 of Table 6 and column 5 of Table 7. Cereals, the largest US export category to the USSR, made up only 2.7% of total cereal exports that year, while non-electric machinery, the second-largest export category, accounted for only 1.1% of total exports. While US reliance on specific imports from the USSR was higher, it was still not significant, with 4.8% of non-ferrous metal imports and 3% of hides, skins, etc. coming from the USSR. In contrast, mutual trade was more important to the USSR, with Soviet exports and imports totaling approximately $25 billion each in 1974, of which $8 billion was with the IW. Cereal and non-electric machinery exports made up only 2.7% and 1.1% of American exports but accounted for 76.3% and 11.3% of Soviet imports from the West, respectively. The corresponding relationship for individual Soviet export items is illustrated in Table 2 by comparing columns 3 and 5. For instance, non-ferrous metal exports to the US accounted for 22% of Soviet exports to the IW but only 4.8% of US imports.

3.3 Aftermath of cold war

The Cold War's aftermath, spanning from the late 1980s to the 1990s, reshaped global politics and relations significantly. The Soviet Union's dissolution in 1991 marked the end of bipolarity, leading to a unipolar world dominated by the United States. New states emerged in Eastern Europe and Central Asia, with the Warsaw Pact dissolving and NATO expanding. Economic transitions from planned to market economies in these regions caused turmoil, social upheaval, and the rise of oligarchs, contributing to economic hardship and poverty. These changes also brought new security challenges, including terrorism and weapons of mass destruction proliferation.

4. The 1991 Persian Gulf War

Introduction and Background

The 1991 Persian Gulf War, commonly known as Operation Desert Storm, was a pivotal event in modern history that transformed the geopolitical landscape of the Middle East and the world. This conflict started when Iraq invaded Kuwait on August 2, 1990, which received widespread condemnation from the international community. The United Nations Security Council passed several resolutions demanding Iraq's immediate withdrawal from Kuwait and implementing

economic sanctions. Despite diplomatic efforts to resolve the crisis peacefully, military action became inevitable.

4.2 Impact of Gulf War

The Persian Gulf War had a significant impact on maritime security in the region, leading to increased efforts to protect shipping lanes and vessels from potential attacks. The United States played a crucial role in clearing mines from shipping lanes, providing escorts for commercial vessels, and enhancing maritime security measures. This conflict also disrupted global oil trade and transportation, causing a drop in oil exports from the region and a surge in oil prices. The vulnerability of oil transportation routes to attacks highlighted the need for greater security measures, including naval protection for oil tankers and the development of new technologies. Iraq's economy suffered greatly due to damage to its oil sector, leading to a sharp reduction in oil production and exports during and after the war.

The impact of the war on oil production and exports

The most severe blow to Iraq's economy as a result of the war was undoubtedly the damage inflicted on the oil sector. Within days of the war's start, the Iraqi refinery at Basra, off-loading facilities at Fao, Khor al-Amaya, and Mina al-Bakr, as well as the critical K-1 pumping stations in the Kirkuk field in the north, were rendered inoperable. Consequently, Iraq was compelled to suspend nearly all of its oil exports within a week of the conflict's outbreak. The considerable reduction in oil production and exports can be clearly seen in table 3.1 and figure 3.1, which document the volume of oil produced and exported during the 1973-85 period. As depicted, oil production decreased by 24 and 66 percent between 1979/80 and 1980/1, plummeting from 170,300 thousand tonnes in 1979 to 130,000 thousand tonnes in 1980 and then drastically to only 43,900 thousand tonnes in 1981. While the situation improved somewhat after 1982, it did not return to pre-war levels. By 1985 and 1986, oil production had increased to 68,778 and 82,665 thousand tonnes. On average, each year from 1979 to 1986, oil production declined by 9.7 percent. In contrast, the pre-war period of 1973-9 experienced a 9.4 percent increase.

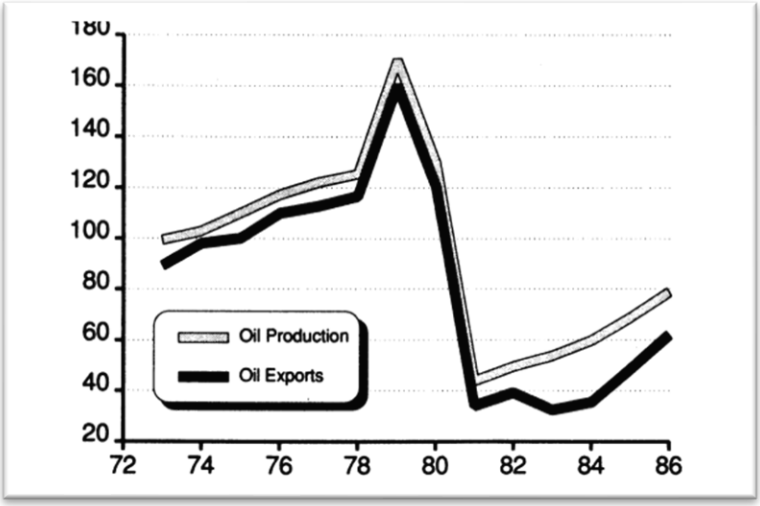


Fig 6: Oil production and exports: Iraq, 1973--86 (million tonnes)[18]

Global Trade Routes:

The Persian Gulf War had a far-reaching impact on global trade, affecting not only the immediate region but also trade patterns and maritime security. The disruption in oil transportation and the subsequent increase in oil prices and supply shortages had a negative impact on businesses and consumers, and highlighted the vulnerability of global trade routes to geopolitical tensions and conflicts. The conflict also increased tensions in the Persian Gulf and disrupted oil supplies, Highlighting the importance of broadening energy resource options. and developing alternative trade routes to reduce dependence on vulnerable regions. In response to these challenges, there was a greater focus on enhancing maritime security measures and finding new sources of energy and trade routes.

4.3 Post Gulf War

The Persian Gulf War of 1991 significantly impacted shipping and trade, both locally and globally. It disrupted oil and commodity movements, resulting in increased insurance premiums, altered shipping routes, and economic sanctions that affected regional and global trade. The conflict led to a surge in oil prices, escalating transportation costs and inflation worldwide, which in turn influenced trade dynamics. Economic sanctions imposed on Iraq post-war hindered its trade, leading to a decline in GDP, increased poverty, and reduced economic activity in neighboring countries. The destruction of infrastructure in Kuwait and

[18] https://www.britannica.com/event/Persian-Gulf-War

Iraq disrupted regional trade routes and capacity, impacting trade relations within the Middle East. These consequences highlight the war's profound effect on global trade, including disruptions in oil production, increased insurance costs for shipping, and a broader decline in economic activity globally.

5. Northwest of Suez: The 1956 Crisis and the IMF

Introduction and Background

Egypt took control of the Suez Canal Company on July 26, 1956, prompting joint military action by France, Israel, and the United Kingdom to regain authority. The canal had been under international consortium management for nearly a century. After diplomatic efforts failed, Israel invaded the Sinai on October 29, followed by France and Britain conducting an air assault on Egypt from the Mediterranean two days later. A cease-fire was established following a United Nations resolution on December 3, leading to the gradual withdrawal of the British Government over subsequent weeks. Egypt reopened the canal in April of the following year, reclaiming control after the crisis. The Suez Crisis marked a pivotal moment in Egypt's quest for independence and the establishment of Israel as a sovereign state, carrying significant geopolitical ramifications. It strained relations between European and Middle Eastern powers and highlighted the growing influence of the Soviet Union. In Britain, the crisis resulted in the downfall of Anthony Eden's government and the ascent of Harold Macmillan. The loss of control over the Suez Canal dealt a blow to British imperial ambitions, while bolstering Gamal Abdel Nasser's leadership in the Middle East and fostering aspirations for Arab unity. While the crisis had economic repercussions such as increased costs, delays, and trade redirection for involved parties, normalcy was largely restored within six months.

5.1 CONVENTIONAL FINANCING: EGYPT, ISRAEL, AND FRANCE

During September and October 1956, the International Monetary Fund (IMF) received funding requests from three countries affected by the Suez Crisis. In each instance, there was a traditional deficit in current account payments, with no convertible currency available and minimal speculative pressures. Despite political complexities, the IMF managed these cases without getting embroiled in the crisis.

Egypt

On September 13, Egypt faced heightened economic challenges as European boat pilots went on an abrupt strike, leading the government to assume control of canal operations to underscore the importance of international oversight. Egypt quickly replaced European pilots with local ones to keep the canal running. Within eight days, Egypt formally approached the International Monetary Fund (IMF) for assistance due to escalating costs and declining revenues. Egypt had previously borrowed from the IMF in April 1949, repaying a $3 million loan the following year. This time, Egypt sought access to its full gold tranche, equivalent to 25% of its quota or $15 million, to ease pressure on its balance of payments resulting from disrupted international trade. The request coincided with the IMF and World Bank Governors' meetings in Washington, prompting a special Saturday session at the Sheraton-Park Hotel convened by the Executive Board. Egypt's Executive Director, Ahmed Zaki Saad, presented the case, receiving support from the U.S. and French Directors while the British and Netherlands Directors abstained from voting. The IMF's official decision, which expressed no opposition to Egypt's request, marked the approval of the first financing related to the Suez Crisis, with an agreement to maintain confidentiality about the transaction.

Israel

David Horowitz, the Governor of the Bank of Israel, traveled to Washington for the Annual Meetings and inquired about increasing and using Israel's quota in the International Monetary Fund (IMF). Initially, his request was turned down for economic and political reasons. Transactions typically occurred at an exchange rate of 1.8 Israeli pounds per dollar, but various bilateral trade agreements, subsidies, and multiple exchange rates complicated assessing the sustainability of this rate. However, on October 22, the staff position shifted to accepting the 1.8 exchange rate for Israel, despite concerns about its long-term viability. Gabriel Ferras, the Director of the European Department, agreed with the government's argument that fixing the rate would help in wage negotiations and stabilize prices.

Accessing Fund resources would be advantageous for Israel by increasing foreign exchange reserves, and establishing a par value would facilitate this process. The Acting Managing Director, Merle Cochran, planned a discussion on this issue for October 31st. However, Israel's incursion into the Sinai on October 29th led to postponing the discussion due to anticipated political ramifications, highlighting concerns about political impacts rather than technical considerations.

France

During the 1956 Annual Meetings, Wilfrid Baumgartner, the Governor of the Bank of France, proposed a stand-by arrangement due to France's dwindling reserves. The French Executive Director, De Largentaye, requested a stand-by arrangement for 50 percent of France's quota, totaling $262.5 million, which would be the largest commitment in IMF history. Despite France's prior inability to access Fund resources in 1948, the request was processed promptly. The staff quickly recommended approval following a recent review of the French economy and financial situation, although the assessment focused on issues unrelated to the Suez Crisis. Factors such as the conflict in Algeria and agricultural difficulties were key influences on France's balance of payments. The Executive Board unanimously granted approval for the stand-by arrangement request on October 17, 1956.

THE BRITISH FINANCIAL CRISIS

The United Kingdom became the fourth country affected by the Suez Crisis to seek assistance from the International Monetary Fund (IMF), although its circumstances differed significantly from the other nations involved. France's current-account situation deteriorated by $1.1 billion in 1956, shifting from a surplus of $409 million to a deficit of $700 million, while Israel's deficit increased by $75 million to $358 million. Although Egypt had not experienced a decline in its current account balance at that point, its outlook was severely impacted by the loss of canal revenues and substantial internal expenditures by the Suez Canal Company. In contrast, the United Kingdom reported a current-account surplus of £159 million in the first half of 1956, with authorities anticipating a small surplus in the second half as well. Ultimately, the surplus for the entire year totaled £245 million in 1956.

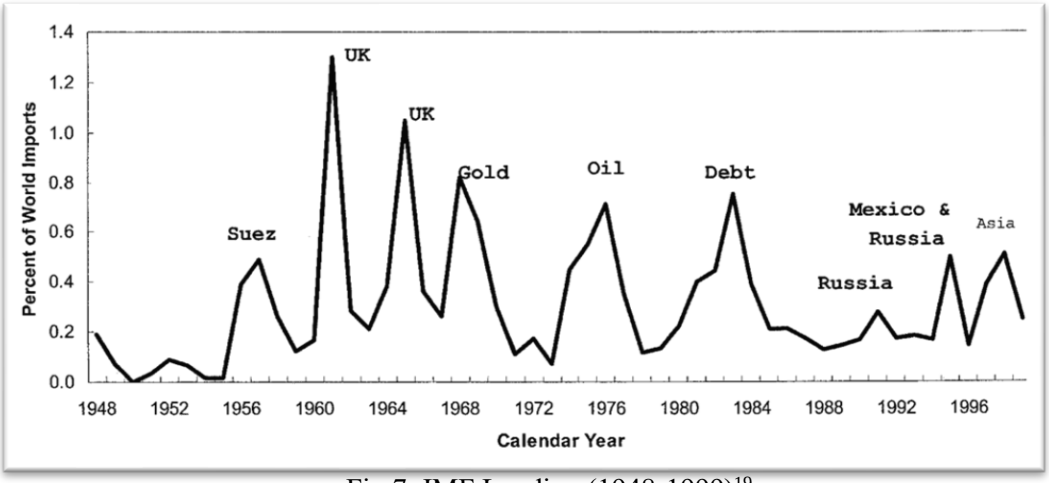


Fig 7: IMF Lending (1948-1999)[19]

5.3 CONSEQUENCES

The IMF's involvement in the Suez crisis marked its emergence as a global lender during periods of crisis. This event showcased the Fund's importance in assisting countries dealing with financial turmoil, leading to its recognition for playing a crucial role in managing financial crises. Subsequently, the IMF was called upon to address other crises such as the sterling and gold pool crises in the 1960s, the oil shocks in the 1970s, the debt crisis in developing countries during the 1980s, and financial crises in Mexico, Russia, and Asia in the 1990s. While the Fund regularly provided loans to countries facing temporary payment imbalances, these activities were relatively minor compared to the larger-scale lending during major financial crises.

The two crises stemmed from conflicting policy objectives: maintaining a stable exchange rate and advocating for open currency markets. In 1956, the UK aimed to achieve full convertibility for its currency, while Mexico, which had already attained this status, faced the potential reintroduction of exchange controls to prevent a severe devaluation of its currency. The impact of this conflict on emerging economies and non-reserve currencies was a new development in the 1990s. During the 1950s, the potential effects of market speculation were relevant only for a few countries. In both instances, a significant commitment was required to reassure investors, dissuade speculators from betting against the currency, and make a strong impression on financial markets. During the tequila crisis, the IMF had to increase its commitment by $10 billion after the U.S. Congress turned down the Clinton administration's request for a loan guarantee package. Market expectations had centered on a comprehensive multilateral package

[19] https://www.imf.org/en/Publications/WP/Issues/2016/12/30/Northwest-of-Suez-The-1956-Crisis-and-the-IMF-3899

totaling $40 billion. and the only way to prevent a resurgence of panic selling was to provide commensurate financing. The British government's commitment to maintaining at least $2 billion in reserves in 1956 established a psychological floor for the Fund, and the required package size in both situations was determined by market psychology rather than economic factors. Despite the difference in their approaches, both cases eventually saw the return of private investment, though it was spontaneous in one case and delayed for years in the other. The British and Latin American experiences show that it is possible to manage financial crises effectively, with recent experiences showing a more normal and viable approach with a longer focus. In the 1980s, Latin American debt crises were handled through tightly controlled measures such as concerted lending, multi-year rechedulings, and complex debt restructuring menus.

The IMF's intervention was crucial as the U.S. declined to offer adequate bilateral resources, despite having a vested interest in resolving the crisis. Although the U.S. government yielded to American political pressures, it provided only a small loan from the Export-Import Bank in 1956. Likewise, in 1995, the U.S. government pledged only $20 billion in short-term credits to Mexico through the Exchange Stabilization Fund. In both cases, a more substantial multilateral package was needed to address the crisis, and the IMF was deemed the most suitable institution to deliver it.

The Suez Crisis had a significant impact on global trade and maritime transportation. The closure of the crucial Suez Canal route forced ships to take longer and more expensive detours around the Cape of Good Hope, resulting in substantial increases in shipping times and costs. This particularly affected countries like Britain and France, which heavily relied on the canal for trade. Furthermore, the crisis temporarily disrupted oil deliveries, leading to a surge in oil prices and shortages in Europe. This highlighted the vulnerability of global oil supplies and prompted efforts to diversify shipping routes. The conflict also had broader economic repercussions, including a reduction in British and French influence in the Middle East, a loss of confidence in their currencies, which contributed to the devaluation of the British pound and the French franc, and increased inflation in both nations. Additionally, the crisis had a negative impact on the global economy, leading to a decline in international trade and investment.

6. US- CHINA Trade War (2018-23)

Introduction and Background

The United States and China's ongoing trade war, which started in 2018, has had a noticeable effect on global shipping and trade. This conflict has its roots in longstanding trade imbalances, intellectual property disputes, and concerns about China's industrial policies. The trade war has resulted in both countries imposing tariffs on billions of dollars' worth of goods, causing disruptions to global supply chains and impacting industries worldwide.

OVERVIEW OF MEASURES

The US and China started to increase tariffs on each other's imports in March 2018, and the response from the Chinese government followed soon after. Table 10 shows the value of trade affected by each round of tariff increases, the evolution of the average tariff rates on US imports from China and Chinese imports from the US. The US imposed additional tariffs of 10% on about $200 billion of Chinese imports on September 24, 2018, which increased to 25% on May 10, 2019. As a result, the average tariffs imposed by the US on imports from China increased significantly, from a 2.6% MFN tariff rate to 17.5% on September 1, 2019. The US initially announced further tariff increases that would have raised average tariffs to 24.4% on December 15, but this increase was never implemented due to the truce in the trade conflict. Instead, as part of the Phase 1 Agreement between the US and China, average tariffs fell to 16%. The tariffs on about $120 billion of consumer goods that were increased by 15% on September 1, 2019, will be halved to a 7.5% increase. Meanwhile, Chinese tariffs on imports from the US increased from 6.2% in January 2018 to 16.4% in September 2019.The 20.7% tariff increase initially planned for December 2019 was not implemented. However, China did reduce MFN tariffs on other trading partners, resulting in an average reduction of approximately 5% in tariffs. The average tariff rates reported differ slightly from those reported in Bown (2019) due to differences in weighting schemes. While Bown (2019) weights the tariff averages based on US exports to the world and China's exports to the world in 2017, we base our weights on bilateral imports. As a result, our averages only account for trade affected by tariff increases. We employ a similar reference group weighting method as Bown (2019) based on US total imports from the world and China's total imports from the world. Figure A1 confirms the sensitivity of the averages to the weighting scheme. The US trade conflict initially targeted intermediate goods but later expanded to include tariffs on almost all goods, including

consumer goods. Notably, the US imports fewer intermediate goods from China than the rest of the world and more final goods.

bilaterally weighted average tariff rates tend to be lower for the first tariff measures in 2018 and higher for the tariff measures at the end of 2019 compared to tariff rates weighted by reference groups.

US imports from China

Measure	Mar. 23, 2018	Jul. 6, 2018	Aug. 23, 2018	Sep. 24, 2018	May 10, 2019	Sep. 1, 2019	Dec. 15, 2019
Trade in US$ billion	3.60	33.44	14.31	198.87	-	130.15	161.88
Cumulative trade in US$ billion	3.60	35.81	49.52	237.07	237.07	336.36	487.35

Chinese imports from the US

Measure	Apr. 2, 2018	Jul. 6, 2018	Aug. 23, 2018	Sep. 24, 2018	Jun. 1, 2019	Sep. 1, 2019	Dec. 15, 2019
Trade in US$ billion	2.97	42.52	14.11	53.39	52.85	28.67	44.80
Cumulative trade in US$ billion	2.97	45.37	57.45	107.91	107.74	110.96	113.59

Fig 8: Trade Coverage of Tariff Increases[20]

Trade Diversion

The decrease in US-China trade has led to trade diversion, with increased trade with third countries. This analysis focuses on changes in imports of goods affected by tariffs in 2018, comparing the first two quarters of 2019 with the same period in 2018. The US experienced trade diversion effects of approximately $21 billion, compensating for a $35 billion decrease in imports from China. Mexico benefited the most, with an additional $6.8 billion in exports to the US, mainly in motor vehicles and computers/electronic devices. The EU (excluding Germany) followed with $6 billion in additional exports, primarily in transport equipment and machinery. Taiwan increased exports by $4.5 billion in electrical equipment/machinery, and Viet Nam by $2.8 billion in the same sectors.The trade war has had several key impacts on shipping and trade:

[20] https://www.cfr.org/backgrounder/contentious-us-china-trade-relationship

1. Disruption of Global Supply Chains: The imposition of tariffs by both the United States and China has disrupted global supply chains, particularly in industries where both countries are major players, such as electronics, machinery, and automotive. This has led to increased uncertainty and higher costs for companies, as they have had to find alternative suppliers and shipping routes.
2. Impact on Shipping Routes: The trade war has also affected shipping routes, as companies have had to find alternative routes to avoid tariffs. For example, some companies have shifted production from China to other countries in Southeast Asia, such as Vietnam and Thailand, leading to increased demand for shipping services in these regions.
3. Increased Costs: The trade war has led to increased costs for companies, as they have had to pay higher tariffs on imported goods. This has had a ripple effect on global trade, as companies have passed on these higher costs to consumers, leading to decreased demand for goods and services.
4. Impact on Trade Volumes: The trade war has also had an impact on trade volumes, as companies have reduced their imports and exports in response to higher tariffs. This has led to a decline in global trade, particularly in regions heavily reliant on trade with the United States and China.

7. ISRAEL-HAMAS CONFLICT (2023)

Introduction and Background

The Israel-Hamas conflict is a long-standing and complex geopolitical struggle that has its roots in the Israeli-Palestinian conflict. It is characterized by frequent outbreaks of violence and tensions between Israel, a sovereign state, and Hamas, a Palestinian militant group that controls the Gaza Strip. The conflict has its origins in the Israeli-Palestinian conflict, which dates back to the late 19th and early 20th centuries. The establishment of the state of Israel in 1948 led to the displacement of hundreds of thousands of Palestinians, who became refugees. This led to a series of conflicts between Israel and its Arab neighbors, including the 1948 Arab-Israeli War, the 1967 Six-Day War, and the 1973 Yom Kippur War.

On October 7, Hamas launched a surprise assault on Israel, killing an estimated 1,200 people and taking nearly 200 more hostage. Israel's response has been intense, with extensive air strikes on Gaza and a sweeping ground invasion aimed at destroying Hamas.

Urban warfare in Gaza has been devastating; thousands of Palestinians, including many civilians, have been killed. Many observers fear that a protracted conflict is ahead.

7.1 Decoding the impact of Israel-Hamas war on global and Indian economy

The impact of the Israel-Hamas conflict on the global economy may take time to manifest, especially if it escalates to involve other Middle Eastern countries like Iran, a significant oil producer and supporter of Hamas. The potential for rising oil prices, reaching around $90 per barrel, is concerning, particularly if the conflict expands to affect more oil-producing nations in the region or evolves into a proxy confrontation involving the US and Iran.

Any retaliatory actions against Iran could disrupt shipping through the Strait of Hormuz, which Iran has threatened to block. This would lead to increased shipping and insurance costs, adding to the already rising oil prices. While Brent crude briefly surpassed $90 per barrel before retracting, this threshold serves as an indicator of potential trouble for the global economy.

The rise in crude oil prices contributes to higher inflation, impacting countries like the US, India, and China that heavily rely on oil imports. This increase in energy costs affects various industries and households, driving overall inflation rates higher. The persistence of high energy prices and emerging inflationary trends could challenge central banks' efforts to manage inflation, potentially leading to prolonged periods of elevated interest rates.

What is the impact of the above on the Indian economy?

India is currently experiencing relative macroeconomic stability, but it faces a significant risk related to potential disruptions in crude oil supply and resulting price spikes due to escalating conflicts. High crude oil prices can negatively impact India in several ways: it can affect currency stability by making imports more expensive, potentially worsen the government's

fiscal deficit as it might need to cut excise duty to absorb higher prices, widen the Current Account Deficit (CAD) further, and impact the profit margins of various sectors like aviation, paints, tyres, and chemicals. These implications could lead to a short-term negative impact on economic growth due to high inflation and reduced profitability in different sectors, affecting disposable incomes and discretionary spending.

Although the conflict has not immediately affected India's trade with Israel, an escalation could lead to supply-side challenges. India's exports to Israel primarily consist of petroleum products, making up 1.8% of its merchandise exports. Israel, on the other hand, imports refined hydrocarbons worth $5.5–6 billion from India. In the fiscal year 2023, India's exports to Israel totaled $8.4 billion, including equipment, pearls, diamonds, and other precious and semi-precious stones. In return, India imported goods worth $2.3 billion from Israel in 2023.

The 'De-globalisation effect'

Unfortunately, there is another factor to consider at the moment. The escalation of the Israel-Palestine conflict has happened alongside the realignment of various global alliances. This slow creep of "deglobalisation" can be seen in a shift in trade policies in recent years. Countries such as the US and UK are relocating economic activity including sourcing or manufacturing products from different countries out of concern about relying on suppliers in potentially hostile regions, as well as the impact of imports from low-wage countries on struggling local labour markets At the moment, these shifts can also be seen in the reactions to the Hamas attack on Israel. A two-state solution to the Israel/Palestine conflict was initially laid out by the United Nations in 1947 and reaffirmed in 1974, with almost unanimous support around the world. But there has been some nuance in the international reactions to the attack. With most western countries quickly voicing support for Israel's right to defend itself, while countries like China and Russia called for a ceasefire without taking a stance on Hamas. This suggests that the issue of Israel-Palestine could tie in with the broader trend towards the new geopolitical divisions that were already starting to emerge before Hamas's attack. A prolonged conflict between Israel and Palestine, especially with the involvement of major regional powers, could further accelerate this global realignment and have detrimental consequences for global economic growth. Under these circumstances, investors are already bracing for increased financial volatility across the board – from stocks and government bonds to commodity markets. So-called safe-haven assets like gold are typically used as protection against overwhelming

economic uncertainty. The price of gold has shot up following the latest escalation in the Israel-Palestine conflict.

Financial markets will continue to monitor the conflict between Israel and Hamas for signs of escalation. Anything that pushes oil prices up further will reignite fears of higher inflation. Unfortunately, this is happening just as many countries were starting to see inflation slow again after two years of persistently high consumer prices.

7.2 The Impact of the Israel-Hamas War on Global Logistics and Supply Chain

The Israel-Hamas conflict is a long-standing geopolitical issue characterized by periodic flare-ups of violence and tensions. Considering that its proximity to crucial trade routes and energy resources renders the region a strategic importance, any escalation of the conflict can have ripple effects on the global logistics and supply chain industry, including a primary impact in the Middle East. Fracht LOGISTICS MARKET REPORT Fracht News contains the same great ocean freight news, but now also includes Air freight & Rail freight. Fracht News Now Offers More! Global Market The Impact of the Israel-Hamas War on Global Logistics and Supply Chain.

The Israel-Hamas conflict has also raised concerns about the International North-South Transport Corridor (INSTC) corridor's stability. The INSTC is a vital trade route for several locations – a multimodal network of shipping, rail, and road routes that connects India, the Middle East, and Europe. According to reports, the INSTC is a lifeline for many countries in the region, including India, Iran, and Russia, and any disruptions in this corridor can impact trade and logistics in the said nations. Furthermore, this situation highlights the vulnerability of global supply chains to geopolitical events that occur thousands of miles away. The Israel-Hamas conflict has also prompted the maritime shipping industry to reassess its operations. The maritime trade route through the Suez Canal, which is used for the transportation of goods between Europe and Asia, passes through the Middle East region. Any disturbances in this area can affect shipping schedules and create bottlenecks in the global supply chain. Maritime experts have been closely monitoring the situation. Container x Change's analysis suggests that the Israel-Palestine conflict has already caused the maritime industry to adjust its routes and

schedules to mitigate potential risks. From an Israeli economic perspective, air cargo volumes have already reduced considerably due to the fact that much capacity has already left the market, mostly belly. Businesses are also under urgent crisis mode and have shuttered operations temporally with employees remaining at home. However, the shipments of humanitarian relief are increasing as a response to the damage and suffering impacted on both sides.

Impact on Red Sea vessel shipped crude oil exports caused by the Israel-Hamas conflict from October 7th 2023 to February 9th 2024

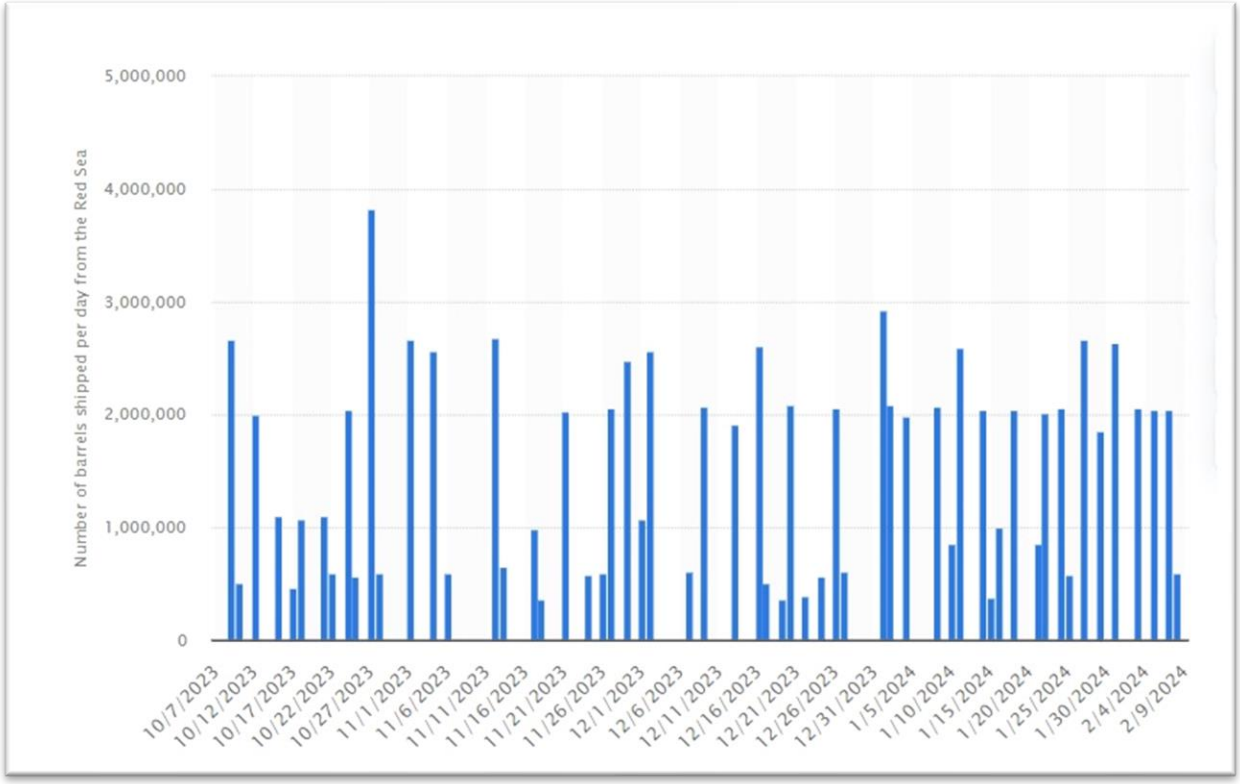


Fig 9: Red Sea vessel shipped crude oil exports caused by the Israel-Hamas conflict[21]

8. Russia- Ukraine War

Introduction and Background

The Russia-Ukraine War: A Complex and Devastating Conflict

[21] https://www.statista.com/statistics/1450000/impact-on-red-sea-vessel-shipped-crude-oil-exports-caused-by-the-israel-hamas-conflict/

The Russia-Ukraine War is a complex and ongoing international conflict that began in February 2014. However, its roots lie deeper in historical tensions and political disagreements. Here's a brief introduction:

Early Stages (2014):

- **Revolution of Dignity:** Ukraine's pro-Russian president was ousted after mass protests.
- **Crimea Annexation:** Russia seized and annexed the Crimean Peninsula from Ukraine.
- **Donbas War:** Pro-Russian separatists in eastern Ukraine clashed with the Ukrainian military.

Full-Scale Invasion (2022):

- **February 24th:** Russia launched a full-scale military invasion of Ukraine, escalating the conflict significantly.
- **Wider Impact:** The war has caused widespread devastation in Ukraine, with thousands of casualties and millions displaced.
- **Global Repercussions:** The conflict has triggered severe economic sanctions against Russia and a major international response.

Current Situation (February 2024):

- **Stalemate:** The war has reached a somewhat stalemated stage, with ongoing fighting concentrated in eastern Ukraine.
- **Negotiations:** Attempts at peace talks have been unsuccessful so far.
- **Humanitarian Crisis:** The war continues to cause immense human suffering and displacement.

What's the global economic impact of Russia's invasion?

Putin's aggression towards Ukraine has caused widespread poverty and economic hardship, while sanctions against Russia have further strained its economy. The conflict has the potential to create a global economic disaster, with experts from the Economics Observatory providing insights on the implications of the war. This roundup of analyses highlights the effects of the conflict on both the economies of Ukraine and Russia, as well as the negative impact on households and businesses worldwide.

How has Ukraine's economy been affected by the war?

Ukraine, once considered one of the Soviet Union's poorest republics, has made considerable progress since gaining independence in 1991, despite some challenges. However, the ongoing

war has caused severe damage to the country's economy, reversing its development and reducing its economic output to a fraction of what it was before the conflict. Ukraine experienced a 30-35% loss in GDP in the first year of the war, leading to the largest recession in its history. Although there is a projection for a 0.5% growth in GDP in 2023, it is far from pre-war levels.

Poverty and food insecurity

The decline in income and rise in poverty have become major issues in Ukraine. According to the World Bank, poverty increased from 5.5% of the population to 24.2% in 2022, which translates to 7.1 million more people living in poverty, wiping out 15 years of progress. Food insecurity has also become a major issue, with one in three Ukrainian households struggling to access food, and numbers rising to one in two in some areas of the east and south. The country's economic struggles can be attributed to job losses due to Russia's destruction of infrastructure, such as ports and manufacturing plants, as well as a slowdown or cessation of economic activity, including agriculture. Additionally, the deaths among household earners have contributed to the deprivation, with the UN Office of the High Commissioner for Human Rights (OHCHR) recording 26,717 civilian casualties in Ukraine as of August 2023, including 9,511 killed and 17,206 injured since the conflict began. However, these figures are likely an underestimation due to the difficulties of obtaining accurate information from areas affected by intense hostilities. Official figures from the US indicate a much higher number of casualties, with nearly half a million reported across Ukraine and Russia as of August 2023, with around 60% being Russian.

Agriculture

War consequences in Ukraine, known as the ‘breadbasket of Europe,’ include soil erosion and farmer displacement. Prior to war, 55% of Ukraine’s land was utilized for farming, accounting for 45% of its export revenue. While exports have increased slightly since the Black Sea Grain Initiative, they remain below pre-war levels. If the war persists, Ukraine may not regain its pre-war agricultural production, leading to a decline in exports.

Refugees

The ongoing conflict in Ukraine has led to the displacement of over six million individuals, accounting for approximately 15% of the country's pre-war population, resulting in a significant void in Ukraine's workforce. This displacement, however, can offer an economic lifeline to those affected by war, providing not only essential shelter and safety, but also opportunities for children to continue their education and adults to learn new skills to adapt to their new environment.

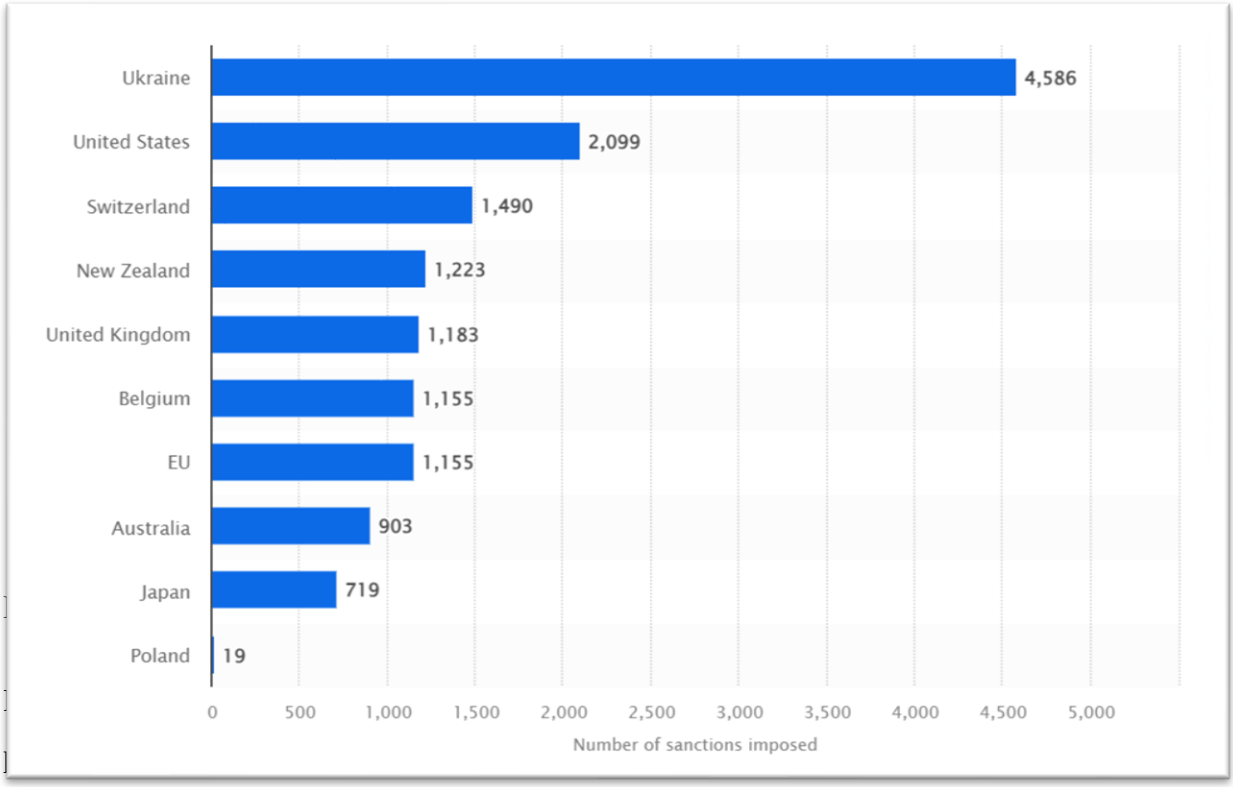
How might Ukraine’s economy be rebuilt?

The economic outlook for Ukraine remains uncertain, primarily due to the ongoing conflict. However, there is a possibility for recovery, as Ukraine has demonstrated its resilience. Although approximately 79% of Ukraine's businesses were either idle or on the verge of shutting down in March 2022, this figure had reduced to 32% by the end of the year, thanks to the country's high level of digitalization, which has been accelerated since the Covid-19 pandemic. Ukraine's government must make unprecedented efforts and demonstrate creativity to achieve a successful recovery, such as implementing low-carbon production, improving the energy intensity of the economy, and utilizing advancements in information technologies and fintech to enhance government services. Although Ukraine submitted an official request to join the EU in February 2022, just days after the Russian invasion started, it remains unclear whether Ukraine will become a member state of the EU. Nonetheless, if granted membership, it would bring economic benefits to Ukraine. The impact of sanctions on the Russian economy remains unclear, as trade accounted for almost 50% of Russia's GDP prior to the war. The extensive trade sanctions were expected to significantly weaken Russia's economy and put an end to its aggression against Ukraine, but it is uncertain whether the sanctions have had the desired effect.

The Implementation of Sanctions on Russia by Western Countries?

Sanctions have had significant repercussions on both the global economy and supply chains, particularly impacting sectors like energy and agriculture. Although the resolve of sanctioning nations may waver over time, the analysis indicates a substantial impact on Russia's economy, despite initial projections being exaggerated. For instance, in 2022, the World Bank revised its GDP decline estimate for Russia from 11% to 4.5% and inflation from 22% to 13.9%. The IMF also adjusted its forecast for Russia's real GDP decline downward. To gauge the economic ramifications accurately, it's crucial to compare actual GDP growth with a hypothetical

scenario where sanctions weren't in place, termed the 'counterfactual.' The evidence suggests that sanctions and trade restrictions have significantly damaged Russia's economy since mid-2022, leading to a substantial federal budget deficit by the first quarter of the current year.



January-February 2023, production of goods used in the war, like metals, textiles, and medical supplies, has increased significantly. Despite facing trade restrictions, Russia's ability to manufacture simple products remains strong due to its abundant resources and capabilities. However, the war has had a devastating impact on human lives, with an estimated 120,000 Russian troops killed, according to US government estimates. The government's decision to redirect funds towards military demands may also have negative consequences on public services, as seen in the 2022 budget where a third of funds were allocated to the military and 'internal security.' In response to Western policies, the government plans to increase security

[22] https://www.statista.com/statistics/1294752/sanctions-imposed-on-russia-by-actor/

spending by 50% compared to 2022, while making cuts of 9% in health spending, 2% in education spending, 24% in infrastructure spending, and 19% in industrial spending.

What is the impact of the war on countries around the world?

The sharp cost of living

Although some might argue that war is never desirable, Russia's extensive attack on Ukraine in February 2022 seemed particularly harsh given that the world was still recovering from the pandemic. Businesses were already dealing with disrupted supply chains and rising production costs, which they passed on to customers. The attack exacerbated the shortage of essential commodities like food and energy due to reduced production and sanctions against Russia, leading to inflation rates that outpaced wage growth. This cost-of-living crisis has had a negative impact on people's health and well-being, particularly those who are less fortunate, and increased the risk of famine.

The conflict between Russia and Ukraine has triggered a global food security crisis. These nations were major wheat exporters, accounting for a significant portion of the world's wheat and sunflower oil exports. Their role was crucial for developing economies reliant on these imports. The Food Security Information Network attributes the worsening food insecurity to conflicts, extreme weather, and the pandemic. In 2022, a record 258 million people in 58 countries faced food crises or acute insecurity, up from 193 million in 2021.

Despite efforts like the Black Sea Grain Initiative, which boosted Ukrainian grain exports, data shows that wealthier nations received most of these exports. Low-income and lower-middle-income countries received less than 20%, raising concerns about Ukraine potentially using food as a form of payment.

Soaring energy prices

The increase in global energy prices can be directly linked to economic sanctions against Russia, resulting in higher costs across the supply chain, from production to transportation. Brent prices, a key oil benchmark, surged by more than 25% in the war's initial weeks, while European gas prices spiked by about 580% by March compared to the previous year. Efforts by European countries, such as the UK, to reduce reliance on Russian energy have led to challenges in finding alternative sources, often resorting to more expensive options like US liquefied natural gas (LNG).

While the UK's direct import of Russian gas is limited, its connection to the European market means any disruptions there can affect UK prices. The EU was a major buyer of Russian oil, further illustrating the impact of the conflict on energy markets. However, the crisis could spur faster adoption of cleaner energy sources like renewables, as rising fossil fuel costs may curb consumption and drive investment in sustainable alternatives. This unintended consequence aligns with the urgency of addressing the climate crisis.

The ongoing conflict in Ukraine has led to an increase in global shipping costs and a decline in trade.

UNCTAD reports that the ongoing conflict in Ukraine has negatively impacted trade and logistics in the country and surrounding Black Sea region. This has resulted in increased global demand for vessels, higher shipping costs, and transportation challenges in the region. Disruptions in regional logistics, halted port operations in Ukraine, and the destruction of vital infrastructure are among the factors contributing to the problem. Moreover, trade restrictions, increased insurance costs, and higher fuel prices are exacerbating the situation. As a result, shipping distances have increased, along with transit times and costs. The report highlights that grains, which play a crucial role in global agrifood markets and food security, are of particular concern due to their importance in reducing poverty. The escalating shipping costs are causing food prices to rise, as fewer grain shipments are being made over longer distances. Between February and May 2022, the price paid for transporting dry bulk goods such as grains increased by nearly 60%. This increase in grain prices and freight rates is expected to lead to a 3.7% increase in consumer food prices globally. Furthermore, the Russian Federation's prominent role in the global market for fuel and fertilizer, which are crucial inputs for farmers worldwide, is noteworthy. Disruptions in their supply may lead to lower grain yields and higher prices,

with serious consequences for global food security, particularly in vulnerable and food-import-dependent economies.

The suspension of the activities of Ukrainian Black Sea ports has also led to an **increase in seaborne activities of neighboring countries** including Romania, the Republic of Moldova as well as Georgia. The port of Constanta, Romania, was at 98% capacity in March 2022, and has seen an increase of about 25% in number of port calls between 2021 and 2022, going from 4,010 port calls in 2021 to 5,033 in 2022.

Indirect Impacts

Russia's war against Ukraine has also **led to indirect impacts on shipping and shipbuilding markets**, for example through sanctions imposed by the international community and an increasing use of the black fleet.

International sanctions against Russia

Table 2. **Selected sanctions affecting Russia's shipping and shipbuilding industries following its large-scale aggression against Ukraine**

Economy	Description of sanctions
European Union	**- 25 February 2022 (2nd package of sanctions)** The EU has prohibited the sale, supply, transfer or export to Russia of specific goods and technologies in oil refining and has introduced restrictions on the provision of related services. **- 15 March 2022 (4th package of sanctions)** Trade restrictions for iron, steel and luxury goods **- 8 April 2022 (5th package of sanctions)** Bans on imports from Russia of coal and other solid fossil fuels; **on all Russian vessels from accessing EU ports**; imports of other goods such as wood, cement, seafood and liquor **- 3 June 2022 (6th package of sanctions)**

Economy	Description of sanctions
	Ban on the purchase, import or transfer of crude oil and certain petroleum products from Russia into EU. **- 6 October 2022 (8th package of sanctions)** Price cap related to the maritime transport of Russian oil for third countries additional restrictions on trade and services with Russia **- 4 February 2023** The EU agrees on level of price cap for Russian petroleum products. **- 23 June 2023 (11th package of sanctions)** Vessels which engage in ship-to-ship transfers, in breach with the Russian oil import ban, are prohibited from accessing EU ports
Korea	**- 26 March 2022** Export control on non-strategic items including marine equipment
United Kingdom	**- 1 March 2022 (2022 No. 203)** Prohibition of the registration of ships owned, controlled, chartered, or operated by designated persons or persons connected with Russia on the UK Ship Register **- 15 July 2022 (2022 No. 792)** The export of maritime goods for the placing on board of Russian-flagged vessels is prohibited
United States	**- 8 March 2022** Bans on import of Russian crude oil and certain petroleum products. **- 21 April 2022** Prohibition of Russian-affiliated vessels (flagged, owned, or operated) from entering U.S ports

International sanctions primarily concentrate on the maritime industry in relation to Russia. Many nations, primarily those within the OECD, have enforced these sanctions, which specifically target ships with connections to Russia. A significant number of Western container shipping companies have halted operations to and from Russia. For example, the European Union (EU) has prohibited all Russian vessels from accessing its ports. The maritime focus of these sanctions is demonstrated in Table 1.

International sanctions have also had an impact on new orders and completions at Russian shipyards. In 2019, Russia accounted for just 0.36% of global vessel completions. According to the Clarkson's shipping intelligence network, the Russian-owned fleet consists of around 3,000 ships, totaling 18.1 million gross tonnes. This represents 1.2% of the global fleet, with over half being oil and gas tankers, amounting to 2.4% of the global tanker fleet and 2.1% of the LNG fleet. Just 0.8% of the global fleet is registered under the Russian flag, while 0.6% is registered under the Russian Register. The Russian shipbuilding industry is heavily reliant on the military sector, which accounts for approximately 80% of shipbuilding production. The sanctions could motivate Russia to become more self-sufficient in terms of sourcing supplies from foreign countries. Additionally, several superyachts owned by Russian oligarchs have been seized.

9. Red Sea

Introduction and Background

The Red Sea is a narrow and elongated body of water that spans between the northeastern part of the African continent and the Arabian Peninsula. It connects the Mediterranean Sea in the north via the Suez Canal and the Indian Ocean in the south through the Bab el Mandeb Strait. The Red Sea is approximately 1,200 miles (1,900 kilometers) in length and has an average width of roughly 190 miles (300 kilometers).

This strategically-located sea has been an essential trade route for centuries, connecting Europe, Africa, and Asia. Additionally, it is renowned for its rich biodiversity and unique marine life, attracting many to engage in activities such as scuba diving and snorkeling.

Several countries, including Egypt, Sudan, Eritrea, Djibouti, Saudi Arabia, Yemen, and Jordan, border the Red Sea. It also houses important ports, like Jeddah in Saudi Arabia and Port Sudan in Sudan.

The Red Sea has held immense significance in the region's history and modern development, serving as a vital maritime route for global trade and commerce.

9.1 2023 Red Sea Crisis

The Red Sea crisis is a military standoff that began on October 19, 2023, when the Houthi movement in Yemen launched missiles and drones at Israel. The Houthi rebels have been attacking shipping vessels since mid-November 2023. The attacks are in response to Israel's war on Gaza.

The Bab al-Mandab Strait, a 20-mile-wide chokepoint for maritime traffic, has been the target of continuous attacks. The attacks have caused global shipments to reroute around Africa's Cape of Good Hope, resulting in commercial delays and increased freight costs. In January 2024, it was reported that Red Sea shipping volumes have dropped to 30% of normal levels due to Houthi intervention.

The roots of the Red Sea crisis lie in Yemen's strategic response to regional conflicts, notably its solidarity with Palestine.

Impacts of the Red Sea crisis:

- Global energy market: The attacks have already rattled the global energy market.
- India's economy: Capital goods and fertilizers are the most impacted.
- European refiners: European refiners have responded by switching to processing more US crude.
- European suppliers: European suppliers have also had to replace Russian barrels with middle distillates from the Middle East and India.

Red Sea war risk rates soften as insurers price in Prosperity Guardian

The price of hull war risk insurance for ships sailing through the Red Sea has remained consistent and has even eased somewhat from its pre-Christmas levels, in contrast to earlier predictions of higher rates as insurance underwriters returned to their desks after the holiday season. The market has not demonstrated any significant response to Operation Prosperity

Guardian, the US-led Western naval initiative aimed at ensuring the safety of vessels in the critical waterway, with some sources attributing this to a lack of specific information. While incidents of attack have decreased slightly from the previous month, underwriters generally view the associated level of risk as already factored into the pricing. As a result, the additional premiums, commonly referred to as APs in industry jargon, have settled at approximately 0.3% to 0.35% of the hull value for a single standalone transit, which is lower than the range of 0.3% to 0.5% seen in late December. However, it is worth noting that larger fleets with higher volumes of transit may be eligible for no-claims bonuses of up to 50%, leading to even more favorable deals. One major London broker even mentioned gross rates as low as 0.15% for a round trip under the most optimal conditions.

In financial terms, present-day alternative proxies continue to impose a substantial burden on shipowners. For a brand-new $130 million VLCC, the additional cost per voyage could reach as high as $455,000, while for a new $150 million boxship, the price tag per trip might climb up to £525,000.

Several liner companies initially imposed a war risk surcharge on shippers, typically around $40-$50 per twenty-foot equivalent unit (TEU). However, major liner operators such as Maersk and Hapag-Lloyd are now choosing to reroute their ships via the Cape of Good Hope, adding seven to ten days to the east-west transit times.

In response to these changes, Maersk has decided to implement a transit disruption surcharge of up to $450 per container to cover the additional costs incurred. Shipping rates for product tankers from the Middle East Gulf to the UK-Continent route have surged by 60% over the past month, attributed to a reduction in transits through the Red Sea routes. Moreover, data from the IMF Port Watch indicates a 28% decrease in traffic through the Suez Canal in the last 10 days.

The risk of congestion is also increasing as the Chinese Lunar New Year approaches. Consequently, the cost of shipping goods in a 40-foot container from Asia to northern Europe has risen significantly, exceeding $4,000, with spot container shipping rates skyrocketing by 173% on the Red Sea routes.

Shippers facing huge wave of rocketing ocean rates and new surcharges

The escalating container freight rates have now infected the Asia-Europe, transpacific, and transatlantic shipping lanes.

North Europe to US East Coast spot rates, as per Xeneta's XSI, currently amount to $1,464 per 40ft, which is down from $6,412 in the same week of the previous year. Despite this decrease, Maersk has announced a Peak Season Surcharge of $750 per 40ft starting February 5th. Rival carrier CMA CGM has already implemented a rate restoration initiative, charging $1,000 per 40ft from European ports to the US, Canada, and Mexico from January 21st. Furthermore, Asia-Europe carriers have imposed surcharges for cargo already in transit, such as emergency contingency fees, and introduced new FAK rates, like CMA CGM's $6,000 charge per 40ft container from Asia to North Europe starting January 15th. Container spot rates on this route are currently sky-high, with Drewry's WCI Asia-North Europe component up 115% week-over-week and 91% year-over-year to $3,577 per 40ft.

Meanwhile, on the transpacific, the freight rates hike contagion has spread to the Asia-US trades, with the WCI Asia-west coast reading up 30% on the week, amounting to an average of $2,726 per 40ft, which is 39% higher than 12 months ago. On the east coast, rates were up 26%, amounting to $3,858 per 40ft, which is, in contrast, only 2% higher than a year ago.

Asia-US west coast rates are predicted to soar further in the coming weeks, given the Panama Canal draught restrictions and the Suez Canal diversions that are impacting the all-water Asia-US east coast services.

Tension in Middle East Raises During Red Sea Crisis

The Red Sea region has been a focal point of geopolitical tensions, particularly concerning military dynamics, in recent years. The ongoing conflicts and strategic rivalries in the Middle East have contributed to heightened military tension during the Red Sea crises. These tensions have significant implications for maritime security, regional stability, and global trade routes. Understanding the complexities and drivers behind these military tensions is crucial for comprehending the broader dynamics shaping the Red Sea region and its impact on international relations.

Fig 11: Middle East Military Activity[23]

[23] https://press.un.org/en/2024/sc15661.doc.htm

Freight costs are starting to stabilize as shippers adjust to using the Cape of Good Hope as a diversion route.

Shippers moving goods from Asia to North Europe have had to adapt their supply chains to accommodate longer transit times around Africa. They now seek freight rates that are reasonable. Container hub ports are effectively handling the arrival of vessels that are off schedule. Most carriers, except CMA CGM, are redirecting their Asia-Europe services around the Cape of Good Hope instead of using the Suez Canal. Some carriers have temporarily adjusted their network schedules and provided revised Estimated Time of Arrivals (ETAs) to clients. There are reports indicating that CMA CGM has opted to cease sending its ships through the Red Sea and Suez Canal, although this decision has not been officially confirmed yet. Between mid-December and mid-January, average container spot rates on this route surged by approximately 200% to reach around $5,000 per 40ft container. Some shippers were even required to pay up to $10,000 per 40ft to secure equipment and shipment ahead of the Chinese New Year. However, spot rates have begun to decline in recent weeks. The Ningbo Containerized Freight Index (NCFI) commentary mentions reduced demand and slightly lower freight rates by carriers. Drewry's WCI Asia-North Europe component decreased by 6% last week, averaging $4,661 per 40ft container, although the spot rate remains about 170% higher compared to a year ago.

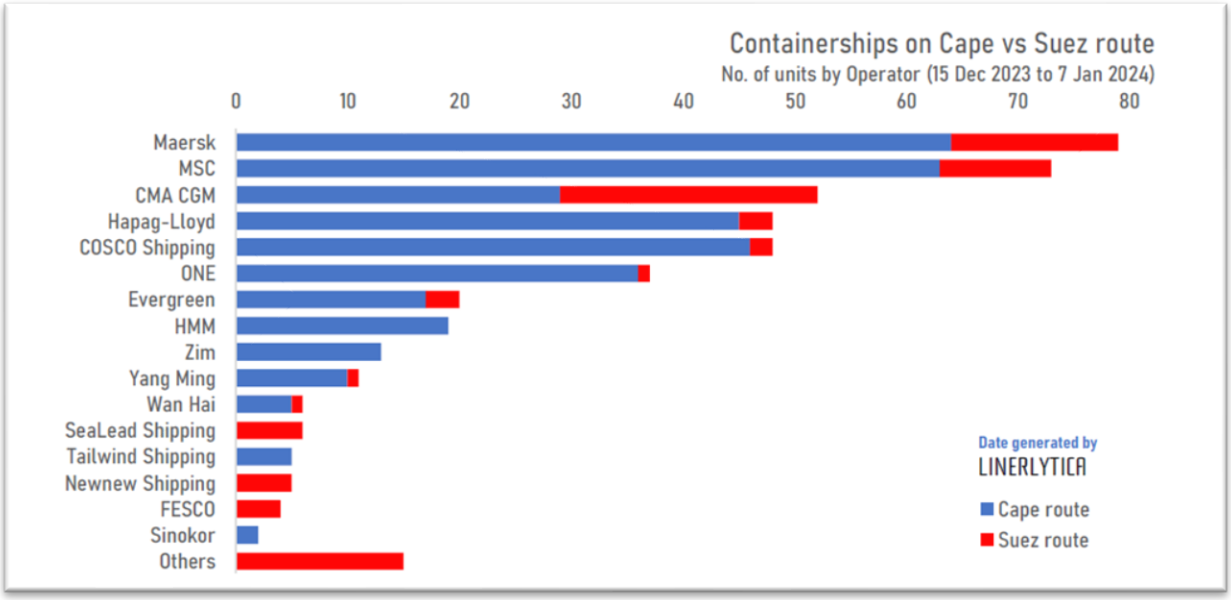


Fig 12: Various Shipping Companies[24]

[24] https://www.linerlytica.com/post/80-of-all-containerships-on-suez-route-have-diverted-to-the-cape-of-good-hopeuntitled/

CHAPTER 4

Sea Routes: Understanding the Impact of Closures

4. Major Sea Routes

Introduction and Background

In the expansive oceanic landscape of our planet, there exist essential channels of trade and connection that have shaped civilizations, economies, and cultures for millennia. These are the primary sea routes, the lifeblood of global commerce, connecting continents, nations, and people in a web of exchange that transcends geographical boundaries and bodies of water. From the bustling ports of the Mediterranean to the serene waters of the Pacific, these routes have borne witness to the rise and fall of empires, the exchange of ideas, and the movement of goods that have transformed the world.

The Strait of Malacca, a narrow waterway situated between the Malay Peninsula and Sumatra, serves as a crucial link between the Indian and Pacific Oceans, transporting approximately a quarter of the world's traded goods. The Panama and Suez Canals, engineering marvels that have significantly reduced journey times and costs, connect the Atlantic and Pacific Oceans and the Mediterranean and Red Seas, respectively. The English Channel, a relatively narrow passage measuring just 21 miles wide, serves as a gateway between the North Sea and the Atlantic, facilitating the seamless movement of goods between Europe and the rest of the world.

The South and East China Seas, with their extensive network of waterways, function as a hub of maritime activity, linking East Asia with the Indian Ocean and beyond. The Strait of Hormuz, a narrow waterway situated between the Persian Gulf and the Gulf of Oman, is a critical chokepoint for global oil trade, with roughly 20% of the world's oil passing through it. The Strait of Gibraltar, which separates Europe from Africa, serves as a key shipping lane, with approximately 300-400 vessels traversing it daily.

4.1 The important routes along major world trade lanes

1. **English Channel**: This narrow body of water separates southern England from northern France and links the southern part of the North Sea to the Atlantic Ocean. It is one of the busiest shipping lanes in the world, with an estimated 500-600 ships passing through each day, carrying about 20% of the world's trade.

2. **Strait of Malacca**: This is a narrow, 550-mile stretch of water between the Malay Peninsula and the Indonesian island of Sumatra. It is one of the most important shipping lanes in the world, with an estimated 94,000 vessels passing through annually, carrying about one-quarter of the world's traded goods, including oil and liquefied natural gas (LNG).

3. **Panama Canal**: This artificial waterway connects the Atlantic Ocean with the Pacific Ocean and is a key conduit for international maritime trade. It is about 50 miles long and handles around 14,000 transits annually, with a significant portion of the world's trade passing through it.

4. **Suez Canal**: This artificial waterway in Egypt connects the Mediterranean Sea to the Red Sea and is a crucial trade route between Europe and Asia. It is about 120 miles long and handles around 12% of global trade, including oil and LNG.

5. **South and East China Seas**: These are large bodies of water in the western Pacific Ocean, bordered by China, Taiwan, the Philippines, Malaysia, Brunei, Indonesia, Singapore, and Vietnam. They are important for international shipping, with a significant portion of the world's trade passing through them.

6. **Strait of Hormuz**: This narrow waterway connects the Persian Gulf to the Gulf of Oman and the Arabian Sea. It is a critical chokepoint for global oil trade, with about 20% of the world's oil passing through it.

7. **Strait of Gibraltar**: This narrow strait connects the Atlantic Ocean to the Mediterranean Sea and separates Spain in Europe from Morocco in Africa. It is a key shipping lane, with about 300-400 ships passing through daily.

8. **Danish Straits**: These are three channels that connect the Baltic Sea to the North Sea and are important for trade between Northern Europe and the rest of the world. They include the Øresund, the Great Belt, and the Little Belt.

9. **St. Lawrence Seaway**: This system of locks, canals, and channels connects the Great Lakes to the Atlantic Ocean, allowing ships to bypass the Niagara Falls and other natural barriers. It is an important trade route for North America.

10. **Bosphorus Strait**: This narrow, natural strait in Turkey connects the Black Sea to the Sea of Marmara and is a key passage for oil and other goods between Europe and Asia. It is about 19 miles long and handles around 50,000 vessels annually.

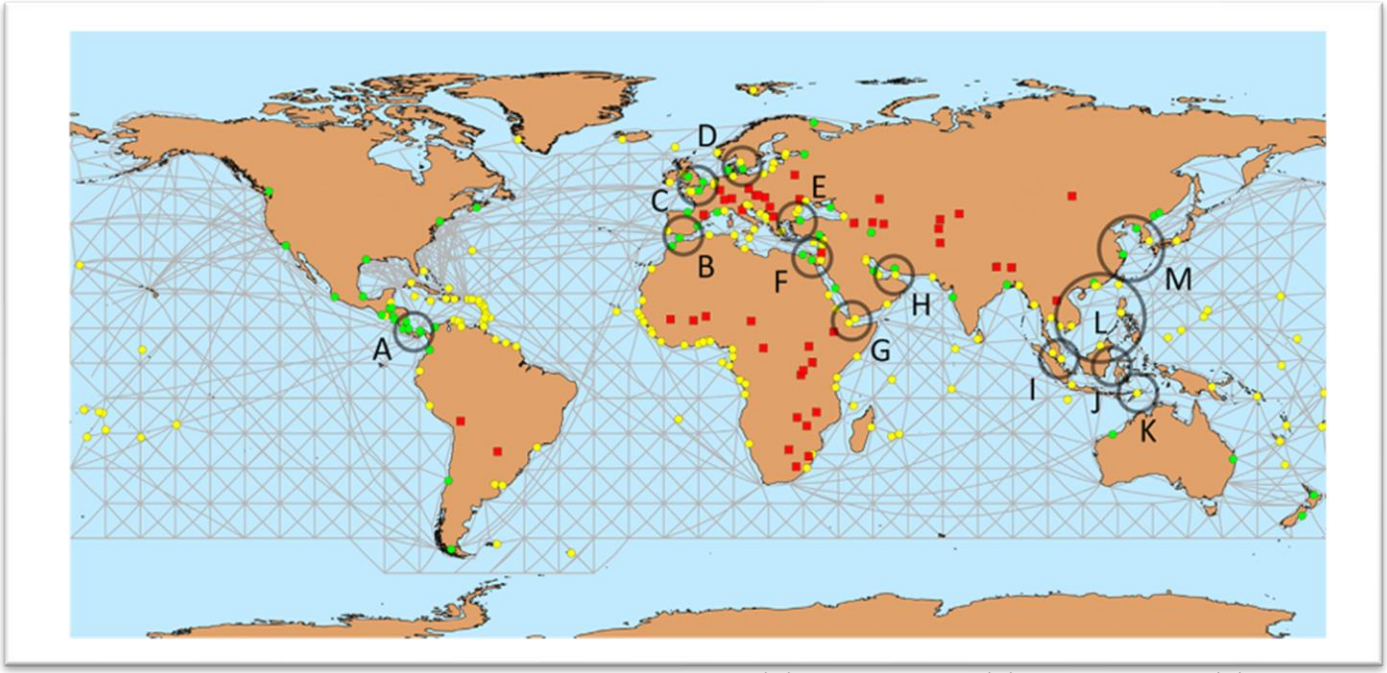


Fig. 13. Major marine chokepoints analyzed in this study: (A) Panama Canal, (B) Gibraltar Strait, (C) English Channel, (D) Danish Straits, (E) Bosporus Strait, (F) Suez Canal, (G) Bab el Mandeb Strait, (H) Strait of Hormuz, (I) Malacca Strait, (J) Lombok-Makassar Strait, (K) Ombai Strait, (L) South China Sea, and (M) East China Sea. Light grey lines are ORNL (2000) international shipping lanes dataset used to calculate shortest routes between principal ports for countries with direct access to the ocean or a sea. Yellow dots mark the locations of the principal port used for countries with one coastline, green dots the principal ports for countries with multiple coastlines, and red squares the capitals or most populous cities in landlocked countries[25]

4.2 Top 5 Busiest Global Major Shipping Routes

1. Asia-US

The Panama Canal plays a crucial role in facilitating significant trade between Asia and the U.S., particularly the trade route between Asia and the East Coast of the U.S., which is its busiest vessel route. It serves as a direct link for ships traveling between the Atlantic and Pacific Oceans, eliminating the need to sail around the Cape Horn at the southern tip of South America. This saves each vessel approximately 2000 to 8000 nautical miles per trip, making the Panama Canal one of the most strategically important man-made shipping routes globally.

2. Asia - Europe

The Suez Canal, an essential trade route, provides efficient connectivity between Asia and Europe, handling shipments of energy resources, commodities, and consumer goods. In 2020, it accommodated 19,000 vessels, representing 12% of global trade and 30% of container traffic.

[25] https://globalmaritimehub.com/report-presentation/assessing-impacts-to-maritime-shipping-from-marine-chokepoint-closures

It plays a critical role in transporting oil and gas, accounting for 7-8% of global oil shipments and 8% of liquefied natural gas (LNG) transport. The canal's significance was highlighted by the major disruption caused by the blockage in 2021. As a precaution due to the Russia-Ukraine conflict, freight forwarders are redirecting shipments through the Middle East to avoid potential disruptions in the region.

3. Europe – UK

The Dover Strait plays a vital role as a trade link between the UK and Europe, handling a significant portion of British imports and exports with the EU. About 22% of British imports from the EU and 30% of exports to the EU pass through this channel. This route contributes to approximately 25% of the total trade value, which amounts to around $123 billion USD, between the UK and EU. It transports various goods such as postal freight, electronics, and transport equipment. Located in the narrowest part of the English Channel, it offers the quickest transit time, leading to significant reductions in transport duration. The Dover Strait is a bustling route, accommodating around 400 commercial vessels on a daily basis and ranking the harbours of Dover and Calais among the busiest in the world.

4. North America-Canada

The St. Lawrence Seaway plays a crucial role in facilitating shipping between American and Canadian waters, especially for Canada's northern regions. It provides direct access to smaller ports, eliminating the need for loading activities at distant, larger ports. This makes it a focal point for international trade between the United States and Canada, serving key ports in both countries. With an annual cargo handling capacity of 40-50 million tons, including commodities like iron ore, grains, and energy products, the seaway helps save approximately $3.6 billion in transportation costs compared to alternative modes. Furthermore, recent widening efforts along the route have enhanced navigation safety and expanded trading opportunities between America and Canada.

5. Intra-Asia

The Strait of Malacca is the primary and largest channel linking the Indian Ocean with the Pacific Ocean, serving as a crucial shipping route in and out of Asia. It connects India, China, and Japan — three of Asia's largest economies — with each other and other significant Asian economies like Thailand, Indonesia, Malaysia, Philippines, Singapore, Vietnam, Taiwan, and

South Korea. This makes it a vital maritime route globally, shouldering 25% of global maritime trade and accommodating approximately 50,000 vessels annually.

Commodities that are transported on important global trade routes

Ocean-going vessels are adapted to transport a wide range of goods across global trade routes, including machinery, petroleum gases, packaged or frozen food, vehicles, livestock, equipment, factory parts, mineral ores, and chemicals. These routes handle a significant volume of cargo annually, with major routes such as the Trans-Pacific, Europe-Asia-Europe, and Trans-Atlantic routes transporting millions of twenty-foot equivalent units (TEUs) of cargo.

Specifically, the Trans-Pacific routes moved 31.2 million TEUs in 2021, the Europe-Asia-Europe route handled 26.3 million TEUs, and the Trans-Atlantic route managed approximately 8 million TEUs. Overall, ships transport an average of 11 billion tons of goods each year, equivalent to about 1.5 tons per person based on the current global population.

Among these routes, the Dover Strait stands out as the busiest shipping lane globally, with 500-600 vessels passing through it daily. In 1999 alone, 1.4 billion tonnes of freight crossed through this narrow waterway, equivalent to around 62,500 ships.

4.3 The impact of shutting down significant maritime sea routes

Shutting down major maritime sea routes can have profound consequences, affecting global trade, economies, and geopolitical stability. These routes are vital for transporting goods, energy resources, and people worldwide, and any disruption can cause far-reaching effects. The closure of key routes like the Suez Canal and the Strait of Hormuz can lead to delivery delays, increased shipping costs, product shortages, and even oil price spikes. Geopolitically, tensions between nations could escalate with the closure of critical maritime routes, potentially leading to heightened conflict and instability.

Chokepoint Transport Modeling: Disruption Effects

1. Bab el-Mandeb Strait and Suez Canal

The Red Sea crisis significantly impacts cargo transportation on the Asia-Europe route, which could disrupt supply chains for industries such as construction, automotive, chemicals, and machinery that depend on imports from the Asia-Pacific region. This disruption could also affect energy, food security, and environmental sustainability. The Suez Canal is a vital source of foreign currency revenue for Egypt, generating $9.4 billion in the previous fiscal year, which is equivalent to 2.3% of GDP in 2023. The Red Sea crisis has reportedly led to a 40% drop in Suez Canal revenues. A deteriorating situation in Egypt could have negative spillover effects for neighboring countries such as Ethiopia and the Sudan. Foreign trade for several East African countries, including Djibouti, Kenya, and Tanzania, is highly dependent on the Suez Canal. For Djibouti, approximately 31% of foreign trade by volume is channeled through the Suez Canal, representing 6% of exports and 31% of the country's imports. The equivalent shares for Kenya and Tanzania are 15% and 10%, respectively, with 12% and 8% of their exports and 11% and 15% of their imports passing through the canal. Among East African countries, the Sudan's foreign trade depends the most on the Suez Canal, with about 34% of its trade volume crossing the canal, including 28% of exports and almost 36% of imports. By comparison, Germany's foreign trade, although more significant in absolute terms, only accounts for 7% of its volume going through the Suez Canal.

Rerouting ships lengthens their journey and necessitates operational changes. The Suez Canal is a significant time and distance saver for ships. For instance, an oil tanker traveling from the port of Ras Tanura in Saudi Arabia to Rotterdam in the Kingdom of the Netherlands would cover 10,358 km through the Suez Canal, compared to 17,975 km via the Cape of Good Hope. This reduces the journey length by 42 percent. Similarly, a container shipment from Singapore to Rotterdam sees a 29 percent reduction in travel time when using the Suez instead of the Cape of Good Hope. While rerouting involves longer distances, it also increases the need for additional vessels and ship capacity. For example, a round trip between India and Europe takes 56 days and 8 vessels. If the trip extends to 63 days, an extra vessel is required. The distance traveled by maritime cargo has increased over time, due to shifts in global trade geography and evolving globalization trends. Recent events in the Red Sea are expected to further enhance this trend, exacerbated by the war in Ukraine as it pertains to oil and grain trade. For instance,

Brazil and the United States now supply grain to Egypt instead of Ukraine, while Russian oil The goods are primarily bound for India and China instead of Europe.

Impacts of Red Sea shipping disruptions on global food security

The recent attacks by Yemen-based Houthi rebels on ships in the Red Sea have paralyzed shipping through the Suez Canal, leading exporters in the Black Sea region and elsewhere to seek alternative and more expensive shipping routes. A.P. Moller-Maersk A/S, the world's second-largest container ship company, announced the suspension of shipments through the Red Sea due to these attacks, causing trade volumes in the Suez Canal to drop by an estimated 40%.

Such disruptions in major shipping chokepoints, although infrequent, have occurred in various locations recently. The six-day blockage of the Suez Canal in March 2021 by the EverGiven container ship caused a global trade disruption. Additionally, droughts affecting water flows in the Panama Canal, Rhine River, and Mississippi River have limited shipping and increased costs.

The current crisis is particularly impacting shipments of grains and other key commodities from Europe, Russia, and Ukraine, which can raise imported product costs for consumers and lower prices for producers. This poses risks to food security in countries dependent on food imports. This post analyzes the impacts of the Red Sea disruption on key exporters and food commodity markets and consumers in East Africa and Asia.

Impacts of transportation costs on food prices

Increased transportation costs can disrupt economies in various ways. They lead to higher consumer prices, reduced demand, and lower prices for producers in exporting countries. This scenario also contributes to decreased trade volumes, causing price volatility and challenges for suppliers reliant on disrupted routes. The fluctuation in transportation costs has been notable in recent years, initially dropping during the early stages of the COVID-19 pandemic but later rising due to global economic recovery, increased demand, and energy price hikes. The surge in trade led to shipping shortages and port congestion, further driving up costs. Although costs have since fallen with bunker oil price decreases, they remain below their peak levels from late 2021 and early 2022.

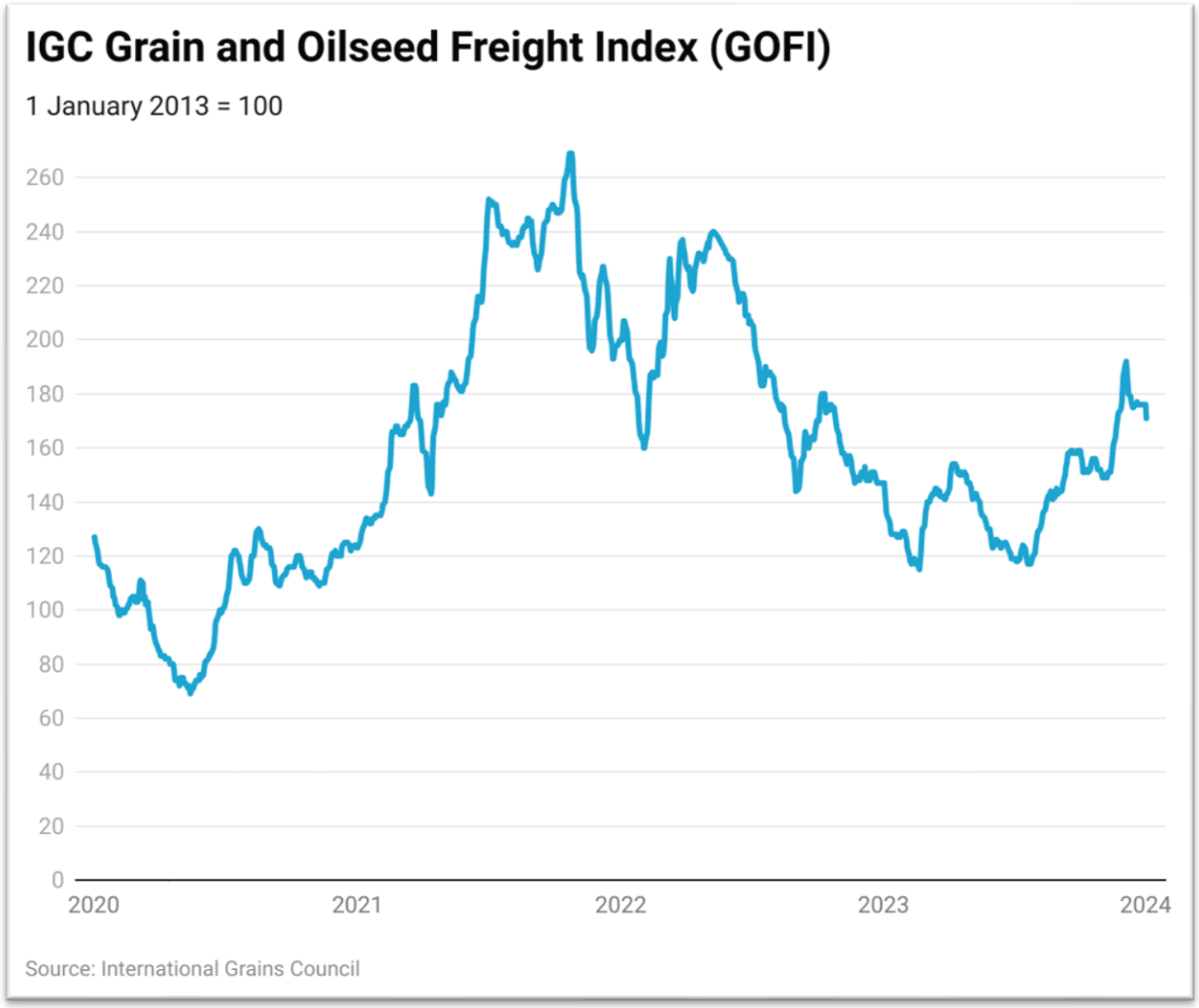


Fig 14: GOFI[26]

Potential impacts of the Red Sea disruptions on wheat exports

Using 2018-2020 data, a Chatham House analysis concluded that about 14% of cereals and 4.5% of soybeans traded globally pass through the Suez Canal. However, for certain exporting countries the share is far greater. Fig 15 shows the average shipping distances to Mombasa, Kenya (in nautical miles) for various wheat exporters. For wheat originating from the European Union, Russia, and Ukraine, shipping through the Suez Canal is the shortest route to Mombasa, while alternative routes are typically far longer; traveling around the Cape of Good Hope is as much as twice the distance or more.

[26] https://www.igc.int/en/default.aspx

Distance to Mombasa, Kenya via alternative sea routes

Nautical miles

Exporter/port	Suez Canal	Cape of Good Hope	Panama Canal	Strait of Magellan
France (Rouen)	6,128	8,518	18,445	18,967
Russia (Novorossiyk)	4,231	9,838	20,342	20,304
Ukraine (Odesa)	4,117	9,724	20,228	20,190
Canada (Thunder Bay)	5,134	10,677	18,003	20,253
United States (New Orleans)	9,472	9,783	15,164	18,984
Argentina (Rosario)	10,374	6,351	14,288	13,264

Table: Joseph Glauber • Source: Sea-Distances.org

Fig 15: The Average Shipping Distances To Mombasa, Kenya (In Nautical Miles) For Various Wheat Exporters[27]

The impact of disruptions in shipping routes can be substantial, especially for commodities like Russian wheat shipped from Novorossiysk through the Cape of Good Hope instead of the Suez Canal. This alternative route adds 5,607 nautical miles and more than doubles the voyage time from 14.7 days to 34.2, significantly increasing fuel and operational costs. This ultimately raises the landed costs of Russian grain in destinations like Mombasa, with exporters absorbing some of the additional shipping expenses. Continued disruptions may prompt importers in places like Kenya to seek alternative suppliers like Australia or Argentina, unaffected by such shipping disruptions. Using real-time maritime cargo tracking data from the World Trade Organization's Global Trade Data Portal, we can estimate the share of wheat exports from the EU, Russia, and Ukraine impacted by Suez Canal and Red Sea disruptions. Since July 2020, roughly 20%-30% of these wheat exports could be affected if redirected via longer routes around the Cape of Good Hope.

[27] https://www.igc.int/en/default.aspx

Impact on importers

From a food security perspective, which countries are most likely to be affected by the current Red Sea crisis? As outlined in the analysis above, trade disruptions are most likely to impact the countries in East Africa, South Asia, Southeast Asia, and East Asia. Figure 16 shows the share of wheat imports from the EU, Russia, and Ukraine as a percent of total wheat imports in 2021 (the last year for which data on Russian exports was available).

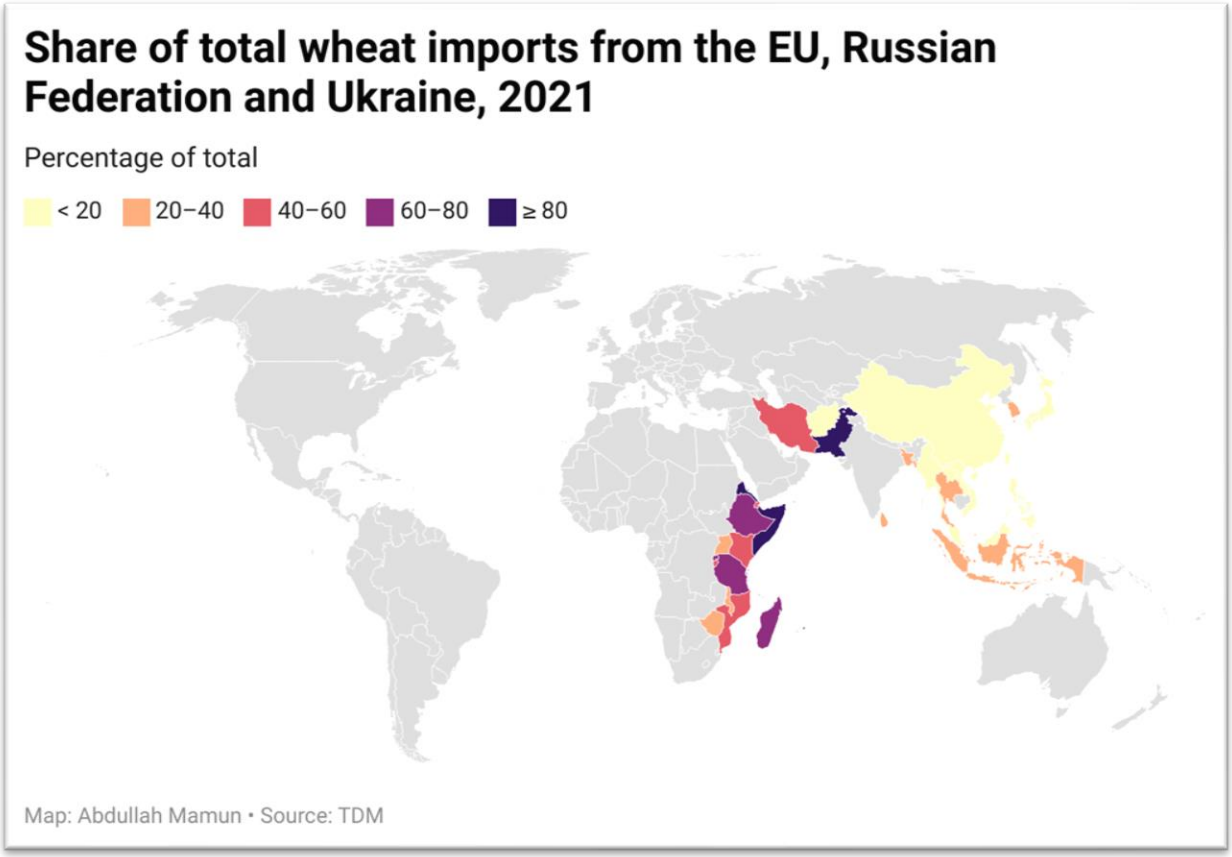


Fig 16: The Share of Wheat Imports from the EU, Russia, And Ukraine[28]

The map illustrates that countries in East Africa, Iran, and Pakistan are especially vulnerable to trade disruptions, given their high reliance on wheat imports from Europe and the Black Sea. In East Africa, imports constitute a significant portion of consumption, and disruptions could exacerbate food inflation, which has only recently started to ease after consumer price increases in 2022. The analysis assumes that all wheat exports from the EU, Russia, and Ukraine to these regions transit through the Red Sea, which might overstate the impact on Russian exports for countries like Iran and China.

[28] https://www.igc.int/en/default.aspx

Continued disruptions could lead to increased costs for consumers in importing countries. Countries may seek alternative suppliers, but El Niño-related impacts have reduced wheat production in Australia, another major supplier to the region.

The closure of the Red Sea would also negatively impact Ukraine's maize exports to China. China has been a significant market for Ukraine's maize, accounting for about 20% of exports since 2018. Long-term disruptions to Red Sea shipping would further damage Ukraine's competitiveness, already affected by the war and the termination of the Black Sea Grain Initiative in July 2023.

Oil Transportation

Oil is a critical energy source that fuels economies all over the globe. The Middle East, which possesses a significant portion of the world's oil reserves, heavily depends on the Red Sea for transporting oil. Countries like Saudi Arabia, Kuwait, and Iraq export substantial amounts of oil through the Red Sea, which is then transported to locations in Europe, Asia, and further afield. The income generated from oil exports plays a pivotal role in the economic growth of these nations, financing infrastructure projects, social programs, and other developmental initiatives.

Impact on Oil Transportation during Red Sea Crisis

Disruptions in oil shipments through the Red Sea have significant implications for oil prices globally. As a vital route for delivering oil to major consumer areas like Europe and Asia, any disturbance in this route could lead to supply shortages in these regions, causing oil prices to surge. This, in turn, would raise production and transportation costs for businesses, ultimately resulting in higher prices for consumers.

The Red Sea handles around 12% of total oil trade via sea, pushing oil prices above $80 per barrel. In the January-November period of 2023, approximately 8.2 million barrels per day of crude oil and oil products traversed the Red Sea. Leading oil companies like BP and Shell have temporarily halted shipments through the Red Sea, while Equinor redirected vessels originally destined for this route.As much as 8.2 million barrels per day (bpd) of crude oil and oil products traversed the Red Sea in the January-November period of 2023.

The leading oil companies, BP and Shell, temporarily halted all shipments through the Red Sea, whereas the Norwegian oil and gas firm, Equinor, redirected vessels originally destined for the Red Sea. the Atlantic Basin accounted for 51% of last year's 16.2 million metric tons

(MMt) of LNG trade, while the Pacific Basin contributed 15.7 MMt. Meanwhile, Qatar, a significant exporter of liquefied natural gas (LNG), has halted shipments to Europe via the Red Sea since January 14th, and at least five cargoes are now taking the longer route around the Cape of Good Hope.

Furthermore, the naphtha market in Asia gained after an attack on a Trafigura-owned tanker in the Red Sea over the weekend, exacerbating concerns over supply disruptions in the region. As a result, the crack price jumped by about $16 to $118.63 per metric ton over Brent crude, following a 19% increase last week due to worries about Russian supply disruptions.

The country that remained untouched by the Red Sea crisis was Russia.

Russian Oil Sails Red Sea Despite Tanker Fire

Tankers carrying Russian oil have largely continued their voyages through the Red Sea without major interruptions from Houthi attacks on shipping, indicating lower risks for these vessels. Russia's reliance on trade through the Suez Canal and the Red Sea has increased since the Ukraine conflict, which led to European sanctions on Russian imports and redirected Moscow's crude exports towards China and India. There has been a slight decrease in the number of Russian ships passing through the Red Sea since December, but traffic remains higher than the 2023 average by about 20%, according to oil analytics firm Vortexa. This stands in contrast to broader disruptions in oil tanker sailings through the Red Sea in recent weeks.

The close ties between Russia and Iran, which supports the Houthis, may have contributed to preventing attacks on ships carrying Russian oil. These vessels typically have no connections to Israel, the United States, or Britain, which are targets of Houthi attacks due to solidarity with Palestinians in Gaza. G7 sanctions on Russia's oil trade during the Ukraine conflict have led to the growth of a shadow fleet of vessels transporting sanctioned crude and fuel. These vessels, operated by companies outside sanction-imposing countries and using non-sanctioned maritime services and insurance, are less likely to be targeted by attacks.

Russian cargoes' vessels often indicate no ties to Israel through automatic identification systems (AIS), publicly broadcasting position and destination information. Russia, with partnerships in key Arab countries like Saudi Arabia and the United Arab Emirates alongside its ties with Iran, has criticized the attacks as 'irresponsible.' Chinese officials have urged Iran to prevent attacks on ships in the Red Sea from affecting Chinese interests.

Impact on commodities due to chaos in the Red Sea

AGRICULTURE

Grain cargoes are also being diverted due to the conflict.

Wheat shipments via the Suez Canal fell by almost 40% in the first half of January to 0.5 million metric tons due to attack. Robusta coffee futures on the ICE exchange have risen 9% so far this year and hit their highest price in at least 16 years last week as traders in top producer Vietnam scramble for supplies amid an escalating crisis in the Red Sea.

Attacks on commercial vessels in the Red Sea have delayed robusta shipments to Europe from not only Vietnam, but also key suppliers like Indonesia and India.

MINOR METALS

China and other Asian countries are critical minor metals exporters to Western countries.

Antimony prices have hit their highest since September 2022 as European and U.S. buyers grapple with delayed Asian shipments of the metal used in batteries and semiconductors owing to disruptions on the Red Sea route.

Traders noted further escalation could disrupt supplies of other minor metals, such as bismuth manganese elect 99.7 and ferrochrome, from Asia to Western countries.

SUNFLOWER OIL

India's sunflower oil imports are set to decline in coming months as a rally in prices, driven by a surge in freight rates, is prompting buyers to shift to rival vegetable oils available at a discount, traders told Reuters.

India, the world's biggest sunflower oil buyer, procures most of its imports from the Black Sea region via the Red Sea.

DRY BULK

Australian mining giant BHP said that the disruptions are forcing some of its freight service providers to take alternative routes, but noted that majority of it shipments do not go through

this route. Some 320 million tons of bulk commodities sail through the Suez Canal and through the Red Sea, accounting for 7% of global dry bulk trade.

4.4 South China Sea

The South China Sea, bordered by several Southeast Asian countries, is a region of immense strategic importance, natural resources, and geopolitical complexity. Its vast expanse and location at the nexus of major shipping routes have made it a key trade route and a point of contention for territorial claims and military navigation. Beyond its economic significance, it boasts abundant fisheries and potential oil and gas reserves.

Territorial disputes involve China, Vietnam, the Philippines, Malaysia, Brunei, and Taiwan, with China asserting historical rights through its "Nine-Dash Line" claim, sparking tensions and great power rivalry. Despite diplomatic efforts, the region remains volatile, with ongoing concerns about conflict escalation and its impact on global security and economic relations. Understanding the nuances of the South China Sea is essential for grasping contemporary geopolitics in the Asia-Pacific region.

How Much Trade Transits the South China Sea?

The United Nations Conference on Trade and Development (UNCTAD) estimates that about 80% of global trade by volume and 70% by value is transported by sea. Of that volume, 60% of maritime trade flows through Asia, with the South China Sea handling roughly one-third of global shipping. This waterway is crucial for China, Taiwan, Japan, and South Korea, as they rely on the Strait of Malacca, connecting the South China Sea to the Pacific Ocean and the Indian Ocean. Given that China's trade value travels over 60% by sea, its economic security is intricately linked to the stability and accessibility of the South China Sea.

Global Trade Through the South China Sea

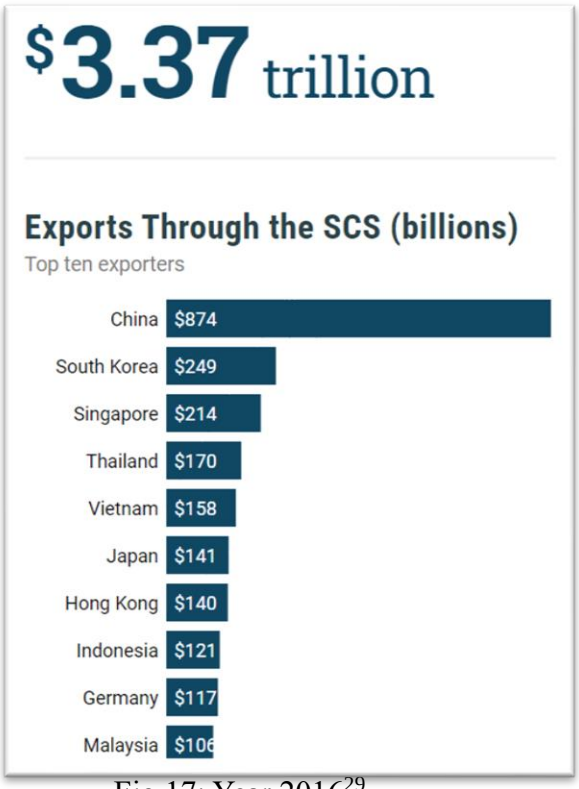


Fig 17: Year 2016[29]

[29] https://chinapower.csis.org/much-trade-transits-south-china-sea/#easy-footnote-bottom-4-3073

The 5.3 trillion-dollar

As a vital artery of trade for many of the world's largest economies, the South China Sea has garnered significant attention. The high concentration of commercial goods flowing through the relatively narrow Strait of Malacca has raised concerns about its vulnerability as a strategic chokepoint. Writings on the South China Sea frequently claim that $5.3 trillion worth of goods transits through the South China Sea annually, with $1.2 trillion of that total accounting for trade with the U.S. This $5.3 trillion figure has been used regularly since late 2010, despite significant changes in world trade over the last five-plus years.

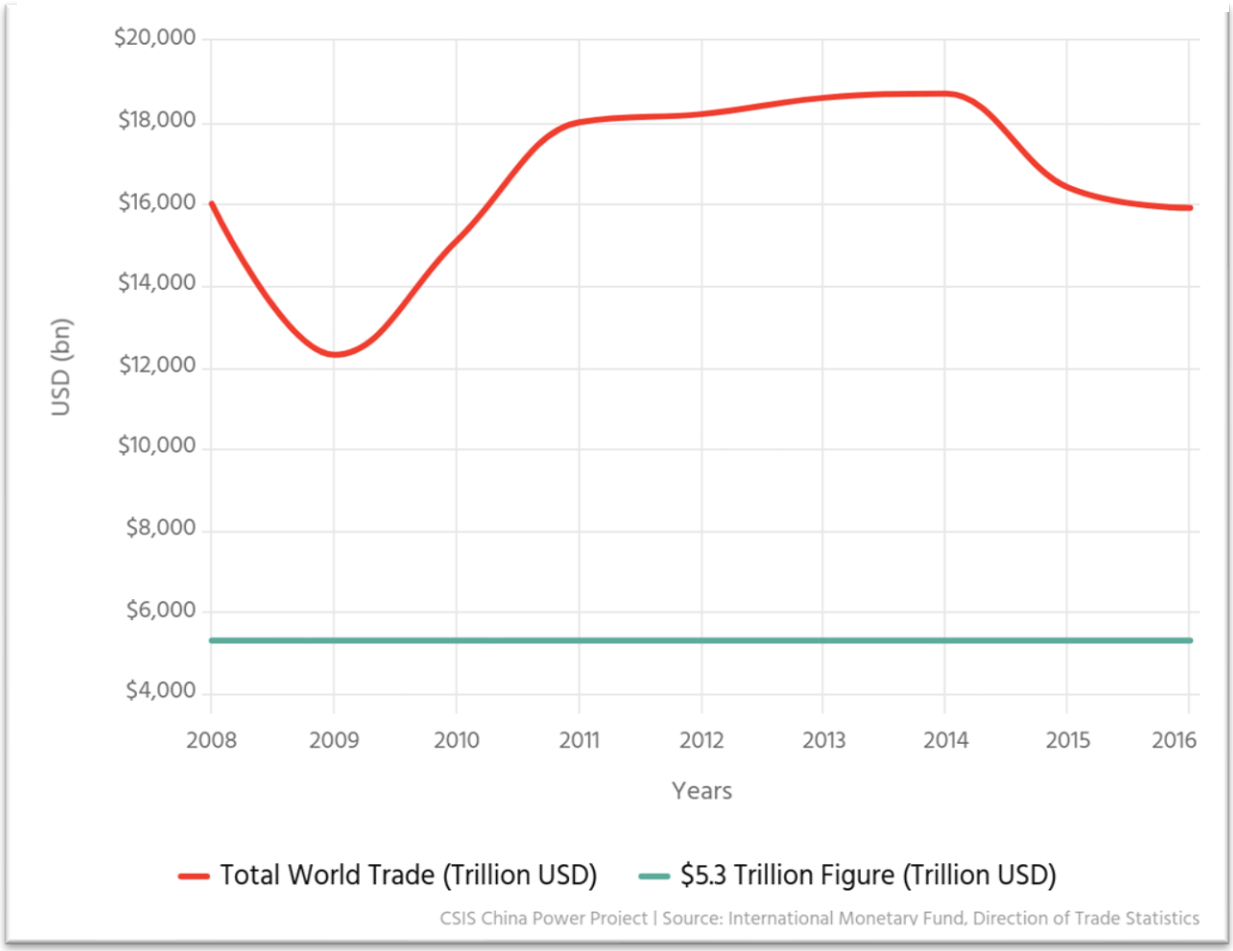


Fig 18: $5.3 Trillion Figure Compared to world trade[30]

[30] https://chinapower.csis.org/much-trade-transits-south-china-sea/#easy-footnote-bottom-4-3073

The Significance of South China Sea Trade

For many of the world's largest economies, the South China Sea is an essential maritime crossroads for trade. Over 64 percent of China's maritime trade transited the waterway in 2016, while nearly 42 percent of Japan's maritime trade passed through the South China Sea in the same year. The United States is less reliant on South China Sea, with just over 14 percent of its maritime trade passing through the region.

Country	% Share of World GDP	Trade Value through South China Sea (USD billions)	South China Sea Trade As % of All Trade in Goods
United States	24.5	208	5.72
China	14.8	1470	39.5
Japan	6.53	240	19.1
Germany	4.58	215	9.00
United Kingdom	3.46	124	11.8
France	3.26	83.5	7.77
India	2.99	189	30.6
Italy	2.45	70.5	8.14
Brazil	2.37	77.3	23.4
Canada	2.02	21.8	2.67

Table 3: South China Sea Trade[31]

The recurrent mention of the $5.3 trillion figure across various publications indicates a widespread worry among media, academia, and governments that a disruption of South China Sea trade would trigger a global economic crisis. This figure is often associated with suspicions that China's growing regional influence could embolden Beijing to disrupt commercial shipping. Although certain circumstances may encourage China's leaders to take coercive action, this possibility is less likely during times of peace.

[31] https://chinapower.csis.org/much-trade-transits-south-china-sea/#easy-footnote-bottom-4-3073

Calculating South China Sea Trade

Accurately determining the value of trade passing through the South China Sea is crucial for assessing its geopolitical importance. A reasonable estimate can be obtained by taking into account bilateral trade partners whose trade is likely to traverse the South China Sea. For instance, a substantial portion of Europe's trade with China bypasses the Cape of Good Hope and travels through the Indian Ocean before entering the South China Sea via the Strait of Malacca.

To evaluate the value of these trade routes, country-level bilateral trade data from the International Monetary Fund's Direction of Trade Statistics (DOTS) is a good starting point, but it is important to note that DOTS includes trade via all modes of transportation - land, sea, and air.

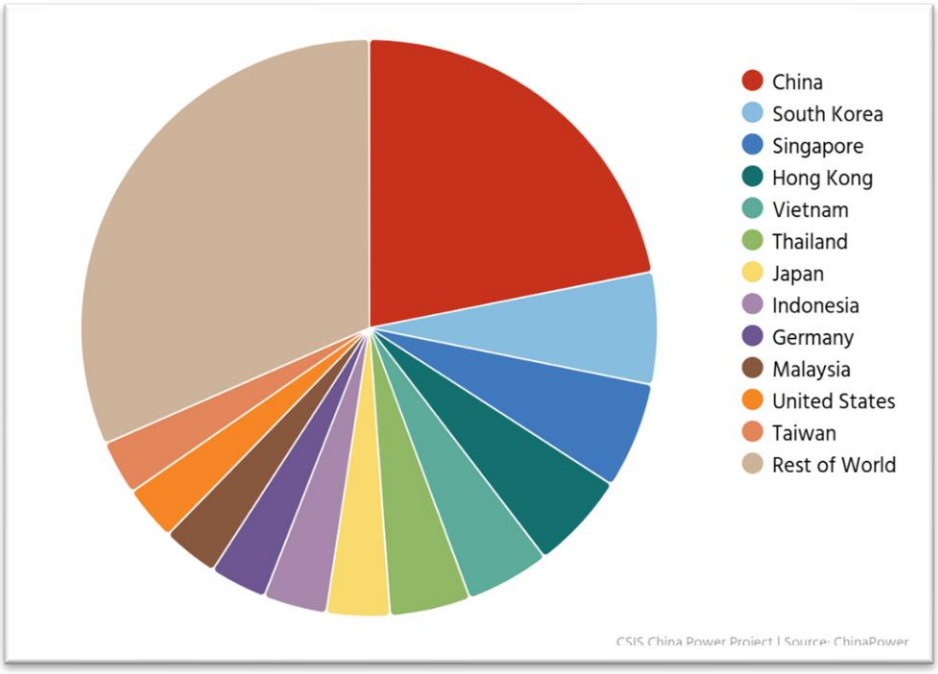


Fig 19: Percent share of south China sea trade (2016)[32]

Disrupting South China Sea Trade

While there are several major shipping routes or sea lines of communication that provide entry to the South China Sea, such as the Sunda Strait and the Lombok Strait, the Strait of Malacca is by far the most frequently used. This passageway is the shortest and most economical route between the Pacific and Indian Oceans. Several scenarios could disrupt shipping traffic and endanger commercial vessels passing through the Strait of Malacca. In case of a short-term

[32] https://chinapower.csis.org/much-trade-transits-south-china-sea/#easy-footnote-bottom-4-3073

peacetime disruption, vessels would have to either wait until access is restored or consider using an alternate route. On the other hand, a long-term disruption could have severe consequences for the trillions of dollars of goods that are transported through the South China Sea each year.

Fig 20: SLOC Map (sea lines of communication)[33]

A short-term peacetime closure of the Strait of Malacca would result in approximately $64.5 million in added shipping costs. However, this represents just 0.08 to 0.10 percent of the average weekly trade value passing through the South China Sea. In a worst-case scenario of multiple straits closures, rerouting all shipping through alternative routes could cost up to $2.8 billion monthly.

[33] https://chinapower.csis.org/much-trade-transits-south-china-sea/#easy-footnote-bottom-4-3073

War risk premiums for the Strait of Malacca could start at $167 million monthly, based on 2011 data, and would likely rise in a prolonged conflict. Similar to the impact of the Gulf of Aden's war risk designation in 2008, insurance premiums could sharply rise, affecting commercial traffic and supply chains.

A long-term closure of the Strait of Malacca could disrupt global supply chains, especially in Southeast Asia, akin to the 2011 Thailand floods that caused significant damages. Energy disruptions would particularly impact China, a major oil importer reliant on the South China Sea for 80 percent of its oil imports.

4.5 Northern Sea Route

The Northern Sea Route has garnered global attention as a viable alternative passage for West-East transit. In recent years, Russia has endeavored to establish this new trade route across the Arctic Ocean. To learn about the strategic significance of this route, visit this page.

In 2021, the "Ever Green," a massive 250,000-ton container ship, became lodged in the Suez Canal and blocked the waterway for six days. This incident caused daily trade losses of nearly $10 billion.

Although Egypt generates $8 billion in annual revenue from the Suez Canal, the blockage caused by the 400-meter-long container ship resulted in delayed product deliveries, increased costs for oil and liquefied natural gas (LNG), and daily losses.

Following the incident, it became apparent that an alternative West-East transportation route was crucial. Moreover, it brought attention to Russia's ambitions to establish a new trade route across the Arctic Ocean.

The Northern Sea Route, sometimes referred to as "The Northern Sea Route," has gained strategic importance in recent years due to Russia's efforts to develop it as a potential alternative trade route. This route, if established, could offer a more efficient West-East transportation route.

Fig 21: NSR[34]

Eastern and western regions of the Arctic Ocean are connected via the Northern Sea Route (NSR), sometimes known as the Northeast Passage (NEP).

- The NSR route between Europe and Asia is just 13,000 km long, compared to the 21,000 km covered by the Suez Canal route, which reduces the travel duration from one month to less than two weeks.
- The whole path, which has been dubbed the Northeast Passage and is comparable to Canada's Northwest Passage, is located in the Arctic seas and within Russia's Exclusive Economic Zone (EEZ).
- The NSR runs from the Barents Sea, near Russia's border with Norway, to the Bering Strait between Siberia and Alaska.
- Since the Barents Sea is not a part of the Northern Sea Route itself, the Atlantic is not reached.

Currently, the Northern Sea Route brings supplies of food, equipment, fuel, and minerals into Siberia's major rivers and ports along the Arctic coast.

[34] https://www.clearias.com/northern-sea-route/

The Northern Sea Route only has ice-free weather in certain places for two months out of the year, but as the Arctic ice covers melt, traffic along the route will undoubtedly rise.

- Since the mid-1930s the Northern Sea Route has been an officially managed and administered shipping route along the northern/Arctic coast of Russia.
- In August 2017, the first ship traversed the Northern Sea Route without the use of icebreakers.
- The Arctic ice has been melting faster due to global warming, and few studies have predicted that the route will be ice-free by 2030.
- However, despite several attempts, the NSR's development as an alternative to the Suez Canal has remained limited to research because of the region's harsh natural environment.

Advantages of Northern Sea Route

The route is most advantageous to Russia with it has three distinct geostrategic and geoeconomic benefits from the NSR, which is seen as a major artery of the Russian Arctic:

- become a global energy superhighway for the exchange of various natural resources from the Russian Arctic, including hydrocarbons;
- Create strong supply networks to the Arctic Zone of the Russian Federation (AZRF) to guarantee the uninterrupted flow of cargo to the ports and new points of economic growth;
- Gain prominence in the passage of international trade.

Heavily dependent on the Suez Canal route for its critical energy and rare minerals imports, China, too, has emerged as an active player in the NSR's development.

India and Russia are looking to expand the use of the Northern Sea shipping route, including the building of processing facilities which was discussed during the recent Russian ministerial visit to India.

The NSR is economically profitable in comparison with the Suez Canal due to several reasons:

- Fuel savings due to reduced distance;
- The shorter distance reduces the cost of staff labor and chartering vessels;
- The Northern Sea Route does not charge payments for the passage yet unlike the Suez Canal;
- There are no queues like in the Suez Canal;
- There is no risk of a pirate attack which the Horn of Africa is notorious for.

Issues with existing routes

International cargo using the traditional Suez Canal route has to encounter three critical choke points between Europe and Asia- The **Suez Canal**, the **Bab el-Mandeb**, also called the 'Gate of Grief' in West Asia, and the **Strait of Malacca** in the Indo-Pacific.

- Since 2005, there have been many pirate attacks on ships in the Bab el-Mandeb Strait. In the Red Sea, Houthi militants have planted naval explosives that pose a threat to it. These mines have been hit by several cargo ships in the Red Sea, and they have also claimed the lives of nearby fishermen.
- Because it provides the majority of its energy supply, the Strait of Malacca off the coast of Malaysia is crucial for East Asian nations like China and Japan. A blockade will have a 25% impact on global commerce and a 33% impact on oil trade.
- Chokes in the Suez Canal route's maritime traffic can obstruct international trade and trap commercial ships in perilous situations in constrained spaces.

Challenges of NSR

- At best, the Arctic is not a benign environment, and as the earth warms, it is getting more unstable.
- The Arctic is seeing twice as rapid a rise in surface temperatures as the rest of the world.
- Extreme cold occurrences are occurring more frequently in Russia and Europe as a result of this heat reducing the stability of the polar vortex air circulation.
- The paths of northern storms are also altering due to unusual jet stream patterns.

- The Laptev Strait's shallow depth, which is a few hundred miles east of the Lena River's mouth, is the NSR's main obstacle.
- The strait restricts the size of ships passing the NSR to those with an Arcticmax draught of 12 meters.
- Analysts have also noted that the new channel, which is far away and scantly supervised, may be used by terrorists to transport weapons.
- As Russia and China intensify their efforts, the High North's growing economic potential, which is thought to hold a fourth of the world's untapped petroleum reserves, has also elevated the region to the status of "profound importance" for NATO.
- Ships and workers navigating the NSR face dangers due to unpredictable and harsh weather conditions as well as inadequate search-and-rescue resources and infrastructure.

Way forward

Russia and China are considering linking the Northern Sea Route (NSR) with China's Silk Road, potentially creating a competitive global route connecting East Asia to Europe. This collaboration could consolidate their influence over the NSR and global trade.

The NSR's importance extends beyond Russia and China, with Japan and South Korea also utilizing this route for international commerce. Experts predict that the NSR will be fully operational and capable of handling significant trade volume by 2030.

While the Suez Canal will remain vital for marine trade, especially in specific regions like Turkey, South and Southeast Asia, and the Mediterranean, the emergence of alternative routes may shift global trade dynamics.

The growing influence of China and Russia along this new route raises questions about the future of global commerce and how Western powers will respond to these strategic developments.

CHAPTER 5

Summary & Findings

5.1 Summary

The paper "A STUDY ON ECONOMIC COST OF WAR IN SHIPPING AND TRADE" provides a comprehensive examination of the consequences of war on global trade, focusing on the economic impact of different types of war on shipping and trade. The study delves into the effects of war on the cost of shipping and trade, such as supply chain disruptions, increased costs, impacts on sea routes, rerouting, and effects on global chokepoints. It also analyzes the impact of changes in fuel prices due to war on shipping costs across various sectors and examines the role of insurance premiums in driving up shipping costs during wartime. The paper also reviews the economic effects of the war, covering the periods of the World War I to recent Red Sea crisis. The paper also sheds light on the methodology used, including a qualitative research design based on extensive secondary research, a systematic literature review, various case study approach, to gain insights into the economic costs of war in shipping and trade.

In addition, the paper includes an analysis of the economic costs of the Russian-Ukrainian War and the Israel-Hamas conflict on global economies, focusing on the impact of these conflicts on various sectors, including energy, commodities, and trade patterns. The paper highlights the significance of major sea routes on global trade, including various shipping routes. It also discusses the top 5 busiest global major shipping routes. Disruption due to Closure of major sea routes.

5.2 Findings

1. The literature review in Chapter 2 discusses various topics related to the consequences of geopolitical events on global trade and economic dynamics, such as the impact of the Red Sea disruption on supply chains.
2. It also explores the influence of the Russian-Ukrainian war on the global economy and digital banking networks, as well as the economic consequences of the Ukraine-Russia war and the US-China trade war.
3. Disruptions in global trade led to industrial goods shortages.
4. Post-war, trade policies changed with protectionist measures and efficiency improvements.
5. Significant economic damage, leading to reconstruction efforts and international cooperation.
6. Substantial growth in international trade during post-war II.
7. Geopolitical tension led to proxy conflicts and division into two blocs during cold war.
8. Impact on Iraq's oil sector and global oil market during 1956 northwest of Suez crisis.
9. Increased efforts to safeguard shipping lanes and reevaluate trade routes during red sea crisis by USA & UK.
10. IMF's role as an international lender during 1956 northwest of Suez crisis.
11. Disrupted global trade, highlighting vulnerabilities in oil supplies.
12. Efforts to mitigate risks and manage operational challenges in maritime and shipping industries.
13. Key sea routes like the Strait of Malacca, Suez Canal, South China Sea, and Northern Sea Route are vital for global commerce, connecting regions and facilitating the movement of goods and energy resources.
14. These routes handle various commodities, including machinery, petroleum gases, food products, vehicles, livestock, equipment, and minerals, contributing to around 11 billion tons of goods transported annually by ship.
15. The closure of critical sea routes, such as the Suez Canal and disruptions in the Red Sea, due to incidents or geopolitical tensions, has significant repercussions on global trade.
16. Alternative routes like the Northern Sea Route (NSR) are gaining importance as strategic alternatives to traditional routes like the Suez Canal, offering shorter distances and reduced risks like piracy.

5.3 Conclusion

This research delves into the economic impact of warfare on shipping and trade, examining losses, bottlenecks, shortages, volume/value declines, and supply chain disruptions caused by conflicts. The introductory chapter outlines research goals, methods, and limitations.

The literature review in chapter two surveys existing knowledge on warfare's shipping and trade impacts.

Chapter three analyzes nine war/dispute cases, revealing how increased freight rates affect dynamics.

Chapter four focuses on major sea routes and their closures' impact, highlighting rerouting challenges, shortages, volume declines, and delays. Also, brief information on Northen Sea Route.

The findings emphasize substantial economic costs during conflicts, with disrupted routes leading to higher costs, inefficiencies, and reduced trade volumes/values. Major route closures, like the Suez Canal, cause bottlenecks, delays, and global trade network repercussions.

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