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STRATEGIC SIGNIFICANCE OF THE SUEZ CANAL:
Analyzing Maritime Chokepoints, Geopolitical Equilibria, and
their Impact on World Trade Flows

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TABLE OF CONTENTS

ABSTRACT.....	1
INTRODUCTION.....	2
CHAPTER I: NAVIGATING CHOKEPOINTS: GEOPOLITICAL, STRATEGICAL AND ECONOMIC INSIGHTS	5
1.1. UNDERSTANDING MARITIME CHOKEPOINTS	5
1.1.1. <i>The Law of the Sea’s definitions of “Strait” and “Canal”</i>	<i>5</i>
1.1.2. <i>UNCLOS: the Innocent and Transit Passage in Maritime Chokepoints</i>	<i>6</i>
1.1.3. <i>Overview of Major Chokepoints Worldwide.....</i>	<i>11</i>
1.2. STRATEGIC AND ECONOMIC IMPORTANCE OF CHOKEPOINTS	18
1.2.1. <i>Chokepoints in Military Strategy: some Historical Examples.....</i>	<i>19</i>
1.2.2. <i>Gateways to Global Shipping Lanes: Volume and Composition of Trade Affected.....</i>	<i>21</i>
1.3. GEOPOLITICAL RISKS TO MARITIME CHOKEPOINTS	27
1.3.1. <i>Extreme Weather Events and Climate</i>	<i>28</i>
1.3.2. <i>Armed Conflicts, Terrorism, Piracy, and Cyber Insecurity.....</i>	<i>30</i>
1.3.3. <i>The Role of IMO in Protecting Against International Threats</i>	<i>32</i>
1.3.4. <i>Internal Political Instability.....</i>	<i>34</i>
CHAPTER II: THE SUEZ CANAL EXPLORED: A COMPREHENSIVE ANALYSIS	36
2.1. TIMELINE OF THE SUEZ CANAL	36
2.1.1. <i>From Construction to Inauguration: 1854-1869.....</i>	<i>37</i>
2.1.2. <i>Constantinople Convention of 1888: the Right to Freedom of Navigation</i>	<i>38</i>
2.1.3. <i>First Arab-Israeli War in 1948.....</i>	<i>39</i>
2.1.4. <i>The Nationalization Decree and the Suez Canal Authority: July 26, 1956.....</i>	<i>41</i>
2.1.5. <i>Suez Canal closures due to Arab-Israeli conflicts: 1956-1957 and 1967-1975.....</i>	<i>42</i>
2.1.6. <i>Major Expansion Phases leading to the 2014 Project for the New Suez Canal.....</i>	<i>44</i>
2.1.7. <i>Suez Canal Economic Zone established in 2015</i>	<i>46</i>
2.2. SUEZ CANAL TRAFFIC STATISTICS	48
2.2.1. <i>Ship Traffic.....</i>	<i>48</i>
2.2.2. <i>Cargo Traffic: by direction, by region, by countries</i>	<i>50</i>
2.3. SUEZ NAVIGATIONAL ISSUES AND CONCERNS	51
2.3.1. <i>Recent Blockades: the 2021 Ever-Given Accident.....</i>	<i>52</i>
2.3.2. <i>2023-2024 Geopolitical Tensions: the Red Sea crisis</i>	<i>54</i>
2.3.3. <i>Influence of the Red Sea crisis on Shipping Lanes: Alternative Routes to Suez.....</i>	<i>57</i>
2.4. RECENT DEVELOPMENT PROJECTS AND FUTURE INVESTMENTS	62
2.4.1. <i>Infrastructural, Industrial, Logistical Projects in the Suez Canal Economic Zone.....</i>	<i>62</i>
2.4.2. <i>Blue Economy and Sustainability Efforts: Green Canal by 2030.....</i>	<i>65</i>

CHAPTER III: FROM A GLOBALIZED WORLD TOWARDS DEGLOBALIZATION, RESHORING, AND GEOPOLITICAL FRAGMENTATION.....	67
3.1. WAVES IN THE GLOBALIZATION HISTORY	67
3.1.1. <i>First wave: Pre-WWI Globalization</i>	<i>68</i>
3.1.2. <i>Post-WWII Globalization: Bretton Woods Conference and Multilateralism</i>	<i>72</i>
3.1.3. <i>Hyper-globalization and the Phenomenon of Offshoring.....</i>	<i>79</i>
3.1.4. <i>Slowbalization or Deglobalization? Major Shocks of XXI Century</i>	<i>83</i>
3.2. GEOPOLITICAL RECONFIGURATION OF SUPPLY CHAINS	87
3.2.1. <i>The Instability of Markets: The Return of Geopolitics and Regionalism</i>	<i>88</i>
3.2.2. <i>Reshoring Trends: Back-shoring, Near-shoring, Friend-shoring</i>	<i>92</i>
3.3. FUTURE GLOBAL TRENDS AND IMPLICATIONS	97
3.3.1. <i>The Maritime Shipping Futures Matrix: Four Scenarios by 2050</i>	<i>98</i>
3.3.2. <i>Call for a Global Action</i>	<i>100</i>
CONCLUSIONS	104
ABBREVIATIONS.....	107
BIBLIOGRAPHY	109
SITOGRAPHY.....	115

ABSTRACT

Maritime chokepoints are narrow geographic passages through which ships pass to enable the exchange of goods between countries. Considering that maritime shipping is the primary way to transport the goods around the world, many chokepoints have become strategic resources for the countries controlling them. This research aims to explore the significance of the world's key maritime chokepoints, examining their economic and strategic importance both historically and presently, alongside the primary geopolitical risks they face, whether stemming from environmental or political factors. The focus will be placed on the Suez Canal, currently at the center of international debate. The analysis will delve into the canal's history, from its construction to recent events. Its global importance will be highlighted by showing economic data testifying the annual maritime traffic statistics. Additionally, alternative sea routes will be presented to mitigate temporary closures or obstacles. Furthermore, future investment plans affecting the Suez Canal will be analyzed. The concluding part will broaden the scope to a global horizon. Recent events in the Suez Canal, geopolitical tensions, and increasing conflicts may imply a rethinking of the direction of the economy: are we still moving toward a globalized world or are we facing fragmentation? This discussion includes the key stages of globalization in the past and the contemporary reconfiguration of global supply chains, including the return of geopolitics and reshoring trends. Finally, the research will speculate on the potential future of shipping and its evolutionary path.

INTRODUCTION

The objective of this thesis is to analyze the geopolitical and economic relevance of maritime chokepoints, i.e., geographical bottlenecks, whether natural or artificial, that the main maritime routes cross to connect countries in the most convenient way. In some cases, it is even the only alternative. Precisely for this reason, we question the disruptive effects that their closure could cause for world trade. In particular, current attention focuses on the Suez Canal, one of the main global maritime chokepoints for traffic, which has recently been the subject of severe geopolitical tensions. The increasingly frequent and intense risks of terrorism, piracy attacks and armed conflicts are making multinationals rethink the convenience of maintaining long global value chains. The instability of the present day is leading to a reconfiguration of them towards a progressive shortening, marking the end of the era of hyperglobalization towards a growing regionalism, determined by geopolitics.

The first chapter deals with the introduction to chokepoints, from their definition to their typologies, reconstructs from a legal point of view the steps that led to the current legislation, the 1982 Convention on the Law of the Sea. The latter regulates transit rights and innocent passage in chokepoints and defined the existence of maritime zones to determine how far the power of one coastal state extends over the adjacent portion of the sea and where the power of the other country begins. An overview of the 7 main chokepoints for world trade routes will be proposed, showing for each their own peculiarities. The strategic and economic importance of these points of interest will be addressed, first from a historical perspective, with some examples taken from military strategy, and then to see from an economic point of view what the world trade patterns are. The Review on Maritime Transport developed by UNCTAD will help to understand which are the most traded goods at a global level and whether these pass through one or more chokepoints. Two of the most relevant markets will be analyzed as a sample, that of agricultural crops for food safety and that of oil for energy security. Subsequently, the main geopolitical risks to which chokepoints are subjected will be shown. They vary from extreme climatic events, to armed conflicts, terrorism, and piracy, up to cyber-attacks or risks resulting from the political fragility of adjacent countries. The International Maritime Organization will be presented in the context of maritime security, as well as the SUA Convention in the fight against maritime terrorism.

The second chapter is dedicated entirely to the Suez Canal. As an essential connection point between the Mediterranean and the Red Sea, or rather between Europe and Asia, it has become an object of international interest, avoiding the longer route through the Cape of Good Hope which involves the circumnavigation of the Africa. The years from its construction between 1854 and 1869 will be retraced, until when it was inaugurated as an artery of prosperity for Egypt and the world. Growing control interests over the chokepoint led to the Constantinople Convention of 1888 which guaranteed freedom of navigation and non-discrimination in both times of peace and war. This was not always respected over the years, and the numerous Arab-Israeli conflicts of the 20th century bear witness to this. These caused two closures of the Suez Canal between 1956 and 1957, then between 1967 and 1975. In 2014 the New Suez Canal was inaugurated, following an expansion work, and in 2015 the Suez Canal Economic Zone was established. The Annual Report published by the Suez Authority in 2019 will show in quantitative terms the traffic involving it, both by direction and by country. Once the historical context has been developed, the main events that involved it most recently in 2021 and 2023 will be discussed. These have caused major disruptions in global trade traffic and have often resulted in the use of alternative routes. To relaunch the use of Suez, some future investment projects will be presented, aimed at strengthening the infrastructure, logistics and sustainability of the Canal and its surrounding economic area.

The third chapter continues the analysis by extending the reflection to global markets. The purpose of this section is to show, through an excursus of the history of globalization, what the recent trends in the world economy are and may be in the future. We can trace the first phase of globalization to the years between 1870 and 1914, in which the principles of liberalism and free trade dominated the scene. However, World Conflicts have caused a reversal of the trend, leading countries to adopt protectionist measures to safeguard their markets and domestic industries. Only after the Second World War did a relaunch of globalization take place, favored by the emergence of multilateral institutions, such as the World Bank, the International Monetary Fund and, subsequently, the World Trade Organization. The 90s saw the phase of greatest development of globalization thanks especially to the strengthening of ICT systems. The result from an economic point of view was the phenomenon of offshoring, i.e., international production, where multinationals transferred various processing phases to other countries, even very distant ones, on the basis of efficiency and cost reduction. The world seemed increasingly

connected, where the real distance was less than the physical distance. However, some shocks of the 21st century have caused a slowdown in this trend, perhaps leading us towards a future deglobalization: the financial crisis of 2008, the Covid-19 pandemic of 2020, the war between Russia and Ukraine that began in 2022, the Red Sea crisis due to the Palestine-Israel conflicts of 2023-2024. The numerous tensions and conflicts have led to the reconfiguration of global chains and to regionalism. Therefore, the phenomena of reshoring arise, i.e., bringing production back to the country of origin (back-shoring) or to selected countries in the geographical area adjacent to one's own (near-shoring) or with which one has political affinities (friend-shoring). In conclusion, speculations will be proposed on the future trends of the world economy and of the maritime trade sector in particular. Will a new phase of globalization follow, or will we proceed towards the progressive fragmentation of markets? Faced with the main global problems – climate change, the green transition and sustainability – will the countries of the world be able to end geopolitical conflicts and economic alliances to collaborate towards a common goal? These questions will be left on an optimistic note, presenting some occasions in the past when the world's major nations agreed on the need for global action. These make us think that a collective commitment could also happen in the future.

CHAPTER I: NAVIGATING CHOKEPOINTS: GEOPOLITICAL, STRATEGICAL AND ECONOMIC INSIGHTS

SUMMARY: 1.1 Understanding Maritime Chokepoints – 1.2 Strategic and Economic Importance of Chokepoints – 1.3 Geopolitical Risks to Maritime Chokepoints

1.1. Understanding Maritime Chokepoints

Maritime shipping is definitely the dominant mode of freight transportation. However, it has a limitation, which is given by the profile of the continental masses. Some trajectories are forced to pass through narrow, shallow points that, by their characteristics, restrict transportation. Henceforth we will refer to these locations as chokepoints, the term derived from the union of “choke” and “point”, where the former literally means «to be unable to breathe because the passage to your lungs is blocked or you cannot get enough air; to make someone unable to breathe»¹. Therefore, a chokepoint will be understood as «a strategic narrow route providing passage through or to another region»². Clearly, width, depth, and navigability determine its physical capacity. Chokepoints will be evaluated in terms of use and access, the former referring to how much it is used and how many alternative trade routes there are. The latter concerns the agreements governing its use and who has jurisdiction over it. In a context of increasing maritime circulation, many of these passages have become strategic resources for those who control them³.

1.1.1. *The Law of the Sea's definitions of “Strait” and “Canal”*

The terms “strait” and “canal” are often used in similar contexts, so one might be led to think that they are synonymous, but this is not the case. Although both connect two bodies of water and serve as critical passageways for maritime transportation, the strait is a natural phenomenon, while the canal is an artificial one⁴. Initially, when territorial waters covered three nautical miles, it was common to define a strait as a waterway less than six miles wide. Consequently, a vessel crossing the strait was invariably within the territorial

¹ Oxford Learner's Dictionaries, *Choke Definition*, https://www.oxfordlearnersdictionaries.com/definition/american_english/choke_1.

² Merriam-Webster Dictionary, *Choke point*, <https://www.merriam-webster.com/dictionary/choke%20point>.

³ RODRIGUE, J. P. (2004) *Straits, Passages and Chokepoints*, Cahiers de géographie du Québec, 48(135), pp. 359-365, <https://www.erudit.org/fr/revues/cgq/2004-v48-n135-cgq996/011797ar/>.

⁴ SPANIER, B. (2023) *Freedom of Navigation in the Suez Canal and the Channels: Law of the Sea*. In: LUTMAR, C.; RUBINOVITZ, Z. (2023) *The Suez Canal: Past Lessons and Future Challenges*, Palgrave Macmillan Cham, Switzerland, p. 118, <https://doi.org/10.1007/978-3-031-15670-0>.

waters of one of the adjacent shores. However, if the strait exceeded six nautical miles in width, the area not belonging to the territorial waters of either shore would be referred to as the “high seas”. Over the years, when the territorial waters were extended from six to twelve nautical miles, it became evident that the width of the strait alone could not determine its status as an international waterway. In the 1949 Corfu Channel case, the International Court of Justice articulated the concept of international strait as follows:

*“It may be asked whether the test is to be found in the volume of traffic passing through the Strait or in its greater or lesser importance for international navigation. But in the opinion of the Court the decisive criterion is rather its geographical situation as connecting two parts of the high seas and the fact of its being used for international navigation”*⁵.

Thus, an international strait constitutes a geographic link between two bodies of water and serves as a route for transnational maritime transit. Therefore, the main criterion is the presence of international shipping. The global landscape has hundreds of straits, from those located along international shipping lanes to those typically formed by geographic features such as islands or within archipelagos. Canals, on the other hand, are man-made waterways constructed to allow navigation through otherwise impassable land. The term “canal” in maritime law includes several variants. We will focus on interoceanic canals of international importance, which connect two areas of high seas. Moreover, the importance of these channels is assessed by the volume of international traffic they facilitate and the multitude of nations that use their services⁶. Some examples of canals and straits will be presented later.

1.1.2. UNCLOS: the Innocent and Transit Passage in Maritime Chokepoints

Throughout the history of maritime law, a delicate balance has persisted between the freedoms of navigation and the growing recognition of the rights and privileges of coastal states to govern an increasingly large portion of the seas adjacent to their shores. In the 19th century, the prevailing view supported the right to a “free sea”, but even earlier, in 1609, one of the fathers of international law, Hugo Grotius, had stated that «the seas were free to all nations but belonged to none of them»⁷, promoting free navigation and

⁵ International Court of Justice, *The Corfu Channel Case*, (United Kingdom of Great Britain and Northern Ireland v. Albania), 1949.

⁶ SPANIER, B. *op. cit.*, pp. 120-121.

⁷ BURGESS, J.; FOULKES, L. (2017) *Law of the Sea*, The Fletcher School of Law and Diplomacy, p. 6, <https://sites.tufts.edu/lawofthesea/files/2017/07/LawoftheSeaPrimer.pdf>.

independent exploitation of resources in the oceans. The customary international law serves as the normative framework in the field of maritime law. This is legitimized by Article 38 of the Statute of the International Court of Justice, which states that the Court, when setting disputes brought before it, in accordance with the laws of international law, «applies international custom attesting to a general practice accepted as law»⁸.

Between the 1950s and 1960s, with economic progression and technological advances, nation states increasingly demonstrated the need for a global law governing sovereign rights over the oceans. In 1956, the United Nations organized the inaugural Conference on the Law of the Sea, which concluded in 1958 with four treaties: the Territorial Sea and Contiguous Zone's Convention, the Continental Shelf's Convention, the High Seas' Convention, and the Fishing and Conservation of the Living Resources of the High Seas' Convention. These treaties came into force between 1962 and 1966. However, the conference was not a complete success because it failed to address some critical matters, notably the question of the extent of territorial waters over which coastal states could claim sovereign rights. As a result, the United Nations organized a second Conference in 1960, which unfortunately lasted only six weeks and was inconclusive. However, the unsolved issue of territorial waters had to be resolved and, in 1973, a third Law of the Sea's Conference was held in New York, whose negotiations lasted nine years. The United States played an active and primary role in supporting the initiative to reach a globally accepted convention⁹.

The 1982 United Nations Convention on the Law of the Sea (UNCLOS), also known as the Law of the Sea Convention (LOSC), entered into force on November 16, 1994, when it exceeded the requirement of sixty ratifications, and has 169 signatory states to date¹⁰. This body of law is of extreme international importance, to the point that it has been widely regarded as the “Constitution of the Oceans” or “Constitution of the Sea”. The United States signed the Convention in 1994, although it decided not to ratify it due to some concerns related to Part XI, which is intended to regulate the deep seabed and provides the mandatory framework for dispute settlement. The scope of UNCLOS is mainly concerned with navigational freedoms, fishing rights, and the existence of maritime zones. In analyzing the latter, it defines what they are and how the rights

⁸ Statute of the International Court of Justice of 26 June 1945, <https://www.icj-cij.org/statute>.

⁹ BURGESS, J.; FOULKES, L. *op. cit.*, pp. 7-10.

¹⁰ UNCLOS, List of state parties, Chapter XXI, <https://treaties.un.org/doc/Publication/MTDSG/Volume%20II/Chapter%20XXI/XXI-6.en.pdf>.

associated with them are determined. The classification of various zones, from the shore to the open sea, provide coastal states with unique jurisdictional rights, which typically decrease with increasing distance from the coast¹¹.

The UNCLOS identifies six maritime zones:

- Internal Waters
- Territorial Sea
- Contiguous Zone
- Exclusive Economic Zone (EEZ)
- Continental Shelf
- High Seas and Deep Ocean Floor

Graphically, they can be represented as follows.

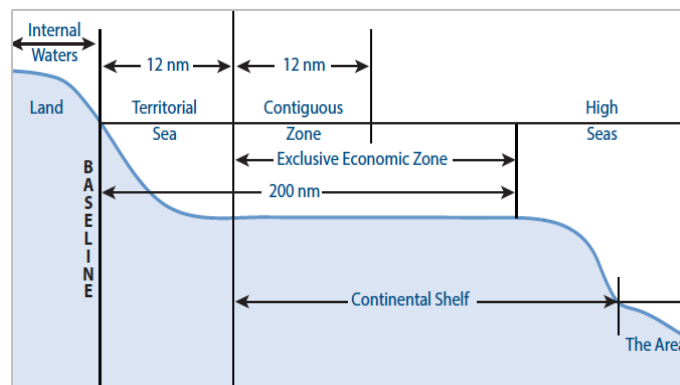


Figure 1. Maritime Zones.

Source: BURGESS, J.; FOULKES, L. (2017) *Law of the Sea*, The Fletcher School of Law and Diplomacy, <https://sites.tufts.edu/lawofthesea/files/2017/07/LawoftheSeaPrimer.pdf>

According to UNCLOS Article 2, subsection 1: «the sovereignty of a coastal State extends, beyond its land territory and internal waters and, in the case of an archipelagic State, its archipelagic waters, to an adjacent belt of sea, described as the territorial sea»¹². Regarding the definition of internal waters, they comprise all water bodies situated on land relative to the baseline, which includes lakes, rivers, and tidal waters. States exercise sovereign authority over inland waters equivalent to that they have over land territories. Additionally, each nation is granted the authority to designate the extent of its territorial

¹¹ ROTHWELL, D. R. (2021) *Challenges to the distinction between innocent passage and transit passage according to UNCLOS*, Maritime Policy & Strategy Research Center, Konrad Adenauer Found., pp. 11-13, <https://www.kas.de/en/web/israel/single-title/-/content/unclos-and-the-protection-of-innocent-and-transit-passage-in-maritime-chokepoints>.

¹² UN (1982) *United Nations Convention on the Law of the Sea (UNCLOS)*, Article 2, https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

waters, with a maximum limit of 12 nautical miles, calculated from the baselines. Similar to internal waters, coastal states exercise sovereignty and jurisdiction over their territorial seas. These rights encompass not only the surface, but also extend to the seabed, subsoil, and overlying airspace. While most states have set their territorial seas at the 12-nautical-mile limit, some have opted for shorter boundaries. Going forward, states may designate a contiguous zone extending to a maximum of 24 nautical miles from the baseline. Within the contiguous zone, a state retains the authority to prevent and prosecute violations of fiscal, immigration, sanitary, and customs regulations within its territory and territorial sea. Contrary to the territorial sea, the contiguous zone confers on a state jurisdiction only over the surface and bottom of the ocean, excluding air and space rights¹³. Regarding the exclusive economic zone, which extends 200 nautical miles from the baseline, Article 56 of UNCLOS grants the coastal state sovereign rights for the purpose of exploration and exploitation of the natural resources of its waters. Continental shelf refers to a natural extension of land boundaries into the sea. It occurs when the seafloor gradually recedes from the coast, comprising first a gentle slope (named the shelf), followed by a steep descent (called the continental slope), and then a more gradual descent leading to the deep seabed¹⁴. Finally, the waters beyond the exclusive economic zone belong to the high seas. The seabed that lies beyond the EEZ and continental shelf of a coastal state is referred to as the “Area”. According to UNCLOS, these seabed areas are considered “common heritage of all mankind” and lie outside any national jurisdiction¹⁵.

Within Part II, devoted to the territorial sea and the contiguous zone, it is important to focus on Article 17, which outlines the right of innocent passage. Indeed, UNCLOS provides for ships of all states the right of innocent passage through the territorial sea. This mainly comprises two dimensions: the physical passage of the ship and the mode of conduct. The first includes «(a) traversing that sea without entering internal waters or calling at a roadstead or port facility outside internal waters; or (b) proceeding to or from internal waters or a call at such roadstead or port facility»¹⁶. The passage must be continuous and expeditious even though it may involve stopping or anchoring, if made necessary by force majeure or danger. The last one refers to the following provision: «the passage is innocent as it is not prejudicial to the peace, good order or security of the

¹³ BURGESS, J.; FOULKES, L. *op. cit.*, pp. 11-12.

¹⁴ UNCLOS, Articles 56, 76.

¹⁵ BURGESS, J.; FOULKES, L. *op. cit.*, p. 14.

¹⁶ UNCLOS, Article 18.

coastal State»¹⁷. Activities considered a threat to the security of the coastal state include, for example: the use of force, violations of the principles of international law, any practice of arms, and acts of intentional pollution. The right of innocent passage aims to balance the privileges of the coastal state – the one that has authority over the territorial sea – and the flag state, the country where a company registers its commercial and merchant ships. The right applies only to foreign ships, excluding aircraft in flight, while submarines are obliged to sail on the surface, showing their flag¹⁸. Conversely, as a general rule, the coastal state is not allowed to impede the innocent passage of foreign ships through its territorial sea. This principle is upheld except in circumstances outlined Article 25. Under this provision, the coastal state may, without any form of discrimination against foreign ships, temporarily suspend the innocent passage of foreign ships through specific areas of its territorial sea if it is deemed necessary to protect its security. This includes activities such as weapons exercises. However, such a suspension can only occur after it has been duly announced and published¹⁹.

Furthermore, Part III of UNCLOS addresses the regulation of straits used for international navigation. They connect one part of the high seas or an EEZ and another part of the high seas or an EEZ. In this context, the right of transit passage is presented to ensure that they remain accessible for international routing. It differs from the right of innocent passage mainly in three aspects: firstly, the right of transit passage must be granted to ships as well as aircraft; secondly, submarines may cross the stretch while remaining submerged; and finally, the right of transit passage cannot be suspended, even temporarily. Article 38, in particular, disciplines the right of transit passage through straits as: «the exercise [...] of the freedom of navigation and overflight solely for the purpose of continuous and expeditious transit of the strait»²⁰. While exercising the right of transit passage, ships and aircraft must navigate through the area without delay; refrain from any threat or use of force against the territorial integrity and sovereignty of states bordering the strait, avoid any violation of the principles of international law expressed in the Charter of the United Nations. Comparing the two, it is evident that the transit passage regime imposes fewer restrictions than the innocent passage regime, as it provides a broader recognition of the freedom of navigation²¹.

¹⁷ UNCLOS, Article 19.

¹⁸ UNCLOS, Article 20.

¹⁹ UNCLOS, Article 25.

²⁰ UNCLOS, Article 38.

²¹ ROTHWELL, D. R.; *op. cit.*, pp. 13-14.

1.1.3. Overview of Major Chokepoints Worldwide

Maritime transport is the main vector of international trade with around 90 percent of the goods exchanged in the world traveling by sea²². Along these trade routes, goods encounter numerous bottlenecks and because they are forced through these narrow vulnerable passages, chokepoints are often mentioned as the “geographical Achilles’ heels of the global economy”. Globally there are about 200 of these locations, of which only a few are strategically important. Many bottlenecks are located in close proximity to politically unstable countries, resulting in high navigational risks and possibility of their closure²³. Only the most relevant ones will be presented below.

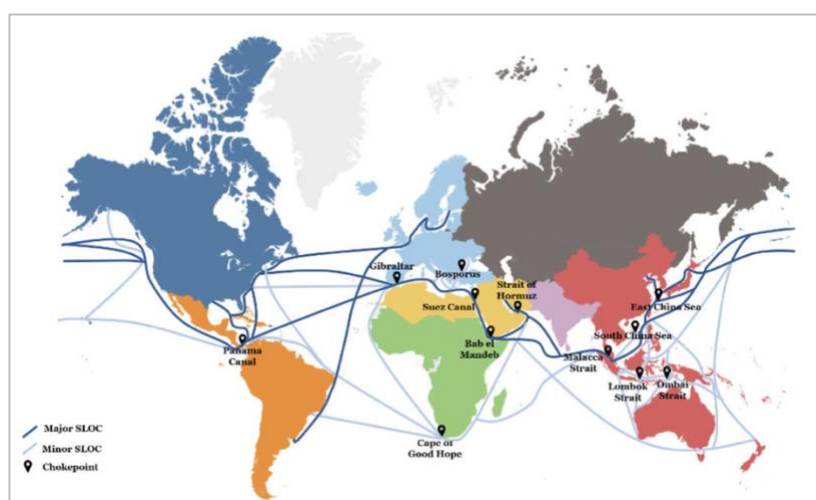


Figure 2. Maritime chokepoints and maritime transport routes.

Source: GIRARDI, B.; VAN HOOFT, P.; CISCO, G. (2023) *What the Indo-Pacific means to Europe: trade value, chokepoints, and security risks*, The Hague Centre for Strategic Studies, November, <https://hcss.nl/wp-content/uploads/2023/11/What-the-Indo-Pacific-means-to-Europe-Trade-Value-Chokepoints-and-Security-Risks-HCSS-2023.pdf>.

The major chokepoints in international trade are:

1. Strait of Hormuz
2. Bab el-Mandeb
3. Suez Canal
4. Malacca Strait
5. Bosphorus and Dardanelles (Turkish Straits)
6. Panama Canal
7. Gibraltar Strait

²² OECD, *Ocean shipping*, <https://www.oecd.org/ocean/topics/ocean-shipping/>.

²³ RODRIGUE, J. P. *op. cit.*, p. 365.

1. Strait of Hormuz

The Strait of Hormuz connects the Persian Gulf, the Gulf of Oman, and the Indian Ocean. The bordering countries are Iran on the northern coast, United Arab Emirates and Oman on the southern coast. Hormuz is the most relevant natural strait in the field of oil transportation, the vast majority of oil from Saudi Arabia, Iraq, Kuwait, Iran, Qatar, and United Arab Emirates travels, in fact, along this route²⁴. At its narrowest point, between the Iranian port of Bandar Abbas and the island of Kumzar in Oman, the Strait of Hormuz is around 34 km (21 miles) wide. Thanks to his extension in width and depth, the world's largest oil tankers can pass through this chokepoint. In 2018, 20.7 million barrels of oil passed through the strait per day, the main destinations were China, India, Japan, South Korea, Singapore²⁵. In the other direction, the largest flows concern food resources. The Gulf Cooperation Council countries – Qatar, Bahrain, Saudi Arabia, Oman, Kuwait, and the United Arab Emirates – represent an evident example of the cruciality of maritime chokepoints for food access. These countries depend heavily on import flows through the maritime bottlenecks of the Arabian Peninsula. A situation of a blockade of the Strait of Hormuz would have substantial consequences for food supply, including food shortage, rising prices and civil unrest²⁶.

A similar issue arises with the next chokepoint analyzed.

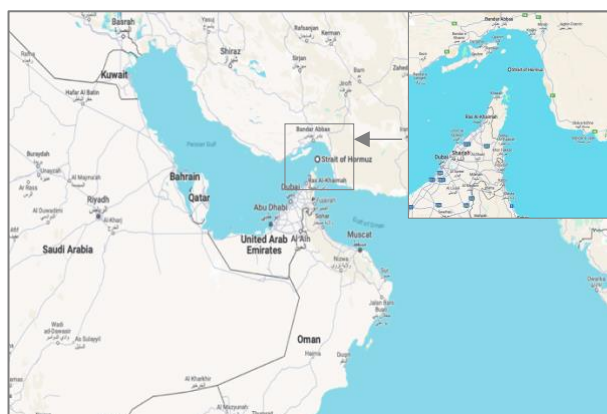


Figure 3. The map of the Strait of Hormuz.

Source: Google (2024), Maps data.

²⁴ MIAH, M. A.; AHMED, S. U.; SULTANA, K. S. (2019) *Control over Maritime Chokepoints an Assurance of Secure Lifeline*, Bangladesh Maritime Journal, Volume 3, Issue 1, pp. 112-113, <https://bsmrmu.edu.bd/public/files/econtents/5eb7a6476e3a5bmj-03-01-07.pdf>.

²⁵ US EIA (2017), *World Oil Transit Chokepoints*, Washington DC, July 25, https://www.eia.gov/international/analysis/special-topics/World_Oil_Transit_Chokepoints.

²⁶ WELLESLEY, L.; PRESTON, F. *et al.* (2017) *Chokepoints in global food trade: Assessing the risk*, Elsevier, Amsterdam, pp. 23-24, <http://dx.doi.org/10.1016/j.rtbm.2017.07.007>.

2. Bab el-Mandeb

Bab el-Mandeb is a natural strait connecting the Red Sea with the Gulf of Aden and the Arabian Sea. It borders Eritrea, Somalia, Djibouti, and Yemen. It widens 29 km (18 miles) at its narrowest point. Flows mainly involve oil and natural gas, which often first pass through the Strait of Hormuz and then through Bab el-Mandeb, up the Red Sea, through the Suez Canal to the Mediterranean, heading west. Another route involves the east, particularly Singapore, China, and India. In 2018, 6.2 million barrels of oil and petroleum travelled from this region to Asia, United States and Europe²⁷. People in the Horn of Africa have among the most severe food insecurity problems in the world; countries in this area are heavily dependent on imports of grain, maize, and rice supplies. For example, Djibouti is 100 percent reliant on foreign supplies, Sudan 84 percent, Somalia 82 percent, and Eritrea 56 percent. These imports depend in turn on the area's maritime chokepoints: between 70 percent and 85 percent of wheat imported in Ethiopia and Djibouti, and over 25 percent in Somalia, must pass through the Bab-el-Mandeb Strait²⁸.



Figure 4. The map of Bab el-Mandeb.

Source: Google (2024), Maps data.

3. Suez Canal

The Suez Canal is an artificial waterway, which connects the Mediterranean and the Red Sea. It is located in the Egyptian territory and is one of the narrowest bottlenecks, with a width of only 0.3 km (1.86 miles), although its extension is 193.30 km (120 miles). It represents the shortest route from Asia to Europe and North America, without having to circumnavigate Africa²⁹. The major northbound destinations of oil and petroleum flows from Iraq, Saudi Arabia, and United Arab Emirates through Suez, are the Netherlands,

²⁷ *Supra*, note 25.

²⁸ WELLESLEY, L.; PRESTON, F. *op. cit.*, p. 23.

²⁹ MIAH, M. A.; AHMED, S. U.; SULTANA, K. S. *op. cit.*, p. 119.

Turkey, United States, Italy, France, and Spain. In the opposite direction, the flows are mainly from Russia, Libya, Algeria directed to Singapore, China, and India³⁰. The Suez Canal constitutes a geostrategic point in world trade flows, its closure would lead to a series of cascading repercussions which also involve other chokepoints in the Middle East. Around 12 percent of international trade traffic flows through this point, indicating 30 percent of global shipping container volume. The Suez Canal is also a major chokepoint in worldwide food exchanges: 14.6 percent of the international cereal imports and 14.5 percent of the world's fertilizer imports, rely on this passage³¹.

Considering the history of this route and the recent events happened in this area of influence, the next chapter will be entirely dedicated to the in-depth analysis of the Suez Canal, an exploration of its economic and geopolitical significance in the past and future.



Figure 5. The map of the Suez Canal.

Source: Google (2024), Maps data.

4. Malacca Strait

The Strait of Malacca connects the Indian Ocean, the South China Sea, and the Pacific Ocean. The neighboring countries are Indonesia, Singapore, and Malaysia. It is a natural strait, with a width of 2.5 km (1.55 miles) at its narrowest point and a length of 805 km (500 miles) from the peninsular Malaysia to the Indonesian island of Sumatra. Its name originates from the Melaka Sultanate that existed in the archipelago between the 15th and 16th century. It is an essential part of the route from Asian markets to the Middle East and Europe. Oil and liquified natural gas transit through the Strait of Malacca to supply East

³⁰ Suez Canal Authority (2019) *Suez Canal Traffic Statistics: Annual Report 2019*, <https://www.suezcanal.gov.eg/English/Downloads/DownloadsDocLibrary/Navigation%20Reports/Annual%20Reports%E2%80%8B%E2%80%8B%E2%80%8B/2019.pdf>.

³¹ DEANDREIS, M.; CAMPIONI, D. (2023) *The Suez Canal*, SRM and Alexbank, p. 8, [https://www.alexbank.com/document/documents/ALEX/2023/Report_research/Other/Suez-23-DIGITAL-27323-h1140-\(1\).pdf0](https://www.alexbank.com/document/documents/ALEX/2023/Report_research/Other/Suez-23-DIGITAL-27323-h1140-(1).pdf0).

Asian countries, particularly China, Japan, and Indonesia³². The US Energy Information Administration estimated flows of 16.0 million barrels per day in 2016, up from 14.5 million in 2011. The Strait is Asia's main chokepoint, and the second busiest transit passage globally. If passage through the Strait of Malacca were obstructed, nearly half of the world's fleet would take alternative routes around the Indonesian archipelago. They could navigate through the Lombok Strait, located between the Indonesian islands of Bali and Lombok, or the Sunda Strait, situated between Java and Sumatra. This would greatly increase travel time, costs, and prices³³. Other traded goods are Chinese manufactures and food products, especially Indonesian coffee, and cereals. For example, Singapore imports 70 percent of its soybean, maize, wheat, and rice, of which a high share pass through the Malacca Strait. The rapid growth in Chinese demand for soybeans for imports has led to an increasing Chinese dependence on America and thus on passages connecting these markets (Panama Canal or Malacca Strait). Between 2000 and 2014, soybean imports increased by an astounding 530 percent and the share of Chinese imports passing through the Malacca Strait, increased from 20 percent to 48 percent³⁴.

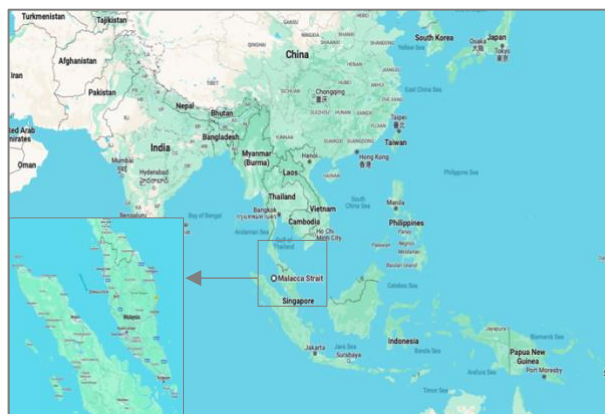


Figure 6. The map of the Malacca Strait.

Source: Google (2024), Maps data.

5. Turkish Straits

The Bosphorus and Dardanelles are two natural straits in Turkey, that connect the Black Sea with the Mediterranean Sea. They serve as a crucial junction between Europe and Asia. Specifically, the Bosphorus links the Black Sea with the Sea of Marmara, while the Dardanelles connects the Sea of Marmara to the Aegean and Mediterranean Seas. The former stretches 27 km (17 miles), the latter 64 km (40 miles). These accesses to the

³² MIAH, M. A.; AHMED, S. U.; SULTANA, K. S. *op. cit.*, p. 113.

³³ *Supra*, note 25.

³⁴ WELLESLEY, L.; PRESTON, F. *op. cit.*, p. 23.

Black Sea enable export routes for oil from Russia and of other Eurasian countries as Kazakhstan and Azerbaijan. At its narrowest point the width is only 0.8 km (0.5 miles), so the Turkish Straits are considered among the most difficult waterways to cross because of their tortuous geography. The oil shipment volumes through the Bosphorus and Dardanelles decline since 2011, dropping in 2016 to 2.4 million barrels per day³⁵. On the other hand, the Turkish Straits turn out to be extremely significant in terms of food commodity flows: Russia, Ukraine, and Kazakhstan, three of the largest grain producers globally, rely on the Turkish Straits and then the Strait of Gibraltar to reach the Atlantic Ocean, or the Suez Canal and the Strait of Bab-el-Mandeb to reach the East. One-fifth of total wheat exports and one-sixth of international maize exports transit through the Turkish Straits every year³⁶.

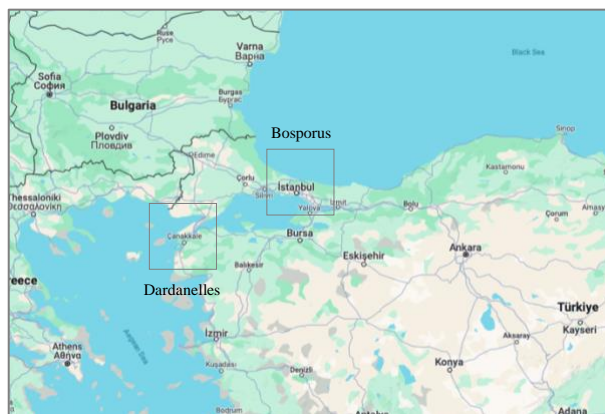


Figure 7. The map of the Turkish straits.

Source: Google (2024), Maps data.

6. Panama Canal

As Suez, Panama is a narrow man-made canal in the State of Panama, connecting the Atlantic with the Pacific Ocean. It is strategically important as it bridges the East and the West coast, without having to travel around Cape Horn, the Strait of Magellan, or the Drake Passage, in the southern region of South America. These alternative routes would add about 13,000 km (8,000 miles) to the route, increase the time of traveling and consequently the costs of the journeys. Panama Canal's length is 81 km (50 miles) and at its narrowest point is only 33.5 m (110 feet) wide. It was completed in 1914, and in 1999 the jurisdiction over it was transferred from the US to Panama. The canal operates through a system of three locks: the Gatun Locks, facilitating access from the Atlantic Ocean

³⁵ *Supra*, note 25.

³⁶ WELLESLEY, L.; PRESTON, F. *op. cit.*, p. 22.

access; the Gaillard Cut traversing the continental divide; and the Miraflores Locks, providing access to the Pacific Ocean. Around 14,000 ships pass through Panama every year, with an average of 9 hours to cross the canal³⁷. Currently, it is controlled and managed by the Panama Canal Authority, which also invested in an expansion project to allow larger ships, such as oil and aircraft tankers, to pass through the chokepoint. The enlargement was completed in June 2016. With the old lock system, the maximum dimensions of the vessel became known as Panamax, after the expansion a new word was coined: Neopanamax³⁸. The major trade flows involve commodities as maize and soybean, which are largely exported by the US towards Asian markets³⁹.

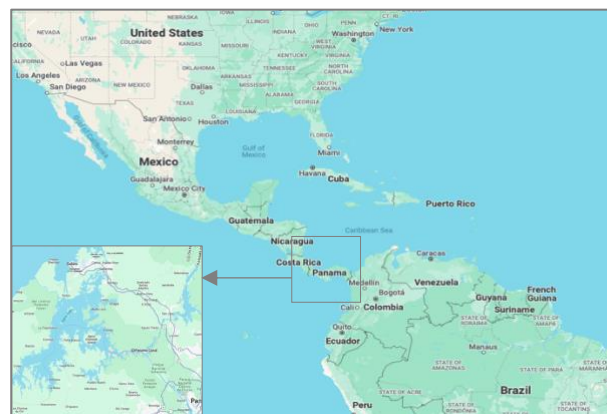


Figure 8. The map of the Panama Canal.

Source: Google (2024), Maps data.

7. Gibraltar Strait

The Gibraltar Strait is a natural strait, 13 km (8 miles) wide that connects the Mediterranean Sea to the Atlantic Ocean. It confines with Spain, Gibraltar (United Kingdom), and Morocco. It is a strategic point on the trade flows towards the United States, therefore the sovereignty over it has long been disputed between Spain and UK. The term “Gibraltar” derives from the Spanish translation of the Arabic “Jabaal Tariq”, signifying “Mountain of Tariq”. This revokes the Rock of Gibraltar, entitled to the Arab commander Tariq ibn-Ziyad. The British army conquered Gibraltar from Spain during the Spanish Successor War in 1704. In 1713, with the “Treaty of Utrecht”, the sovereignty over this territory was surrendered to Britain⁴⁰. As a UK strategic point from a historic point of view, the Strait of Gibraltar will also be recalled later for more in-depth analysis.

³⁷ MIAH, M. A.; AHMED, S. U.; SULTANA, K. S. *op. cit.*, pp. 120-121.

³⁸ *Supra*, note 25.

³⁹ WELLESLEY, L.; PRESTON, F. *op. cit.*, pp. 22-23.

⁴⁰ MIAH, M. A.; AHMED, S. U.; SULTANA, K. S. *op. cit.*, pp. 116-117.

This chokepoint is particularly important for transshipment, and fuels competition for its control between the hub of Tanger Med (on the Moroccan side) and the hub of Algeciras (on the Spanish side)⁴¹.



Figure 9. The map of the Gibraltar Strait.

Source: Google (2024), Maps data.

1.2. Strategic and Economic Importance of Chokepoints

«For whosoever commands the sea, commands the trade, whosoever commands the trade of the world commands the reaches of the world and consequently the world itself»⁴².

In the 16th century, Sir Walter Raleigh uttered these words. He was an English writer, and explorer during the reign of Queen Elizabeth I, he was one of the main initiators of British colonial expansion who organized expeditions for the colonization of America⁴³. As he did, many others were beginning to think that the real struggle between countries should have been about controlling the sea rather than the land. For example, Collin S. Grey, a British professor of International Relations, while writing on geopolitics, spoke about the world's geographic chokepoints as the critical vulnerabilities to be gained control of in order to maneuver world trade⁴⁴.

In this section, we delve into the strategic importance of such maritime passages, starting by looking at some historical narratives. Subsequently, we pivot to a contemporary analysis, highlighting the economic significance of major chokepoints in more recent years.

⁴¹ NOTTEBOOM, T.; PALLIS, A.; RODRIGUE, J.P. (2022) *Port Economics, Management and Policy*, New York, Routledge, <https://porteconomicsmanagement.org/pemp/contents/part1/interoceanic-passages/container-traffic-handled-ports-strait-of-gibraltar/>.

⁴² RALEIGH, W. (1829, reprinted 1965) *A Discourse of the Invention of Ships, Anchors, Compass, &c.*, The Works of Sir Walter Raleigh, Vol. 8.

⁴³ Encyclopedia Treccani, *Raleigh Sir Walter*, <https://www.treccani.it/enciclopedia/sir-walter-raleigh/>

⁴⁴ GREY, C. S. (1999) *Modern Strategy*, Oxford University Press, Vol. 2.

1.2.1. Chokepoints in Military Strategy: some Historical Examples

The concept of chokepoint draws its origins from the military field, «it implies a narrow passageway that cannot easily be bypassed and that offers a ready opportunity to prevent the movement of military forces»⁴⁵. It can be a geographic conformation, as a valley, a narrow river or sea passage, even a bridge, that an army is forced to cross to accomplish its goal, and generally this obstacle greatly reduces the effectiveness of the enemy. A numerically inferior army can exploit the narrow passage to confront an outnumbered opponent, since the enemy is forced to cross it and can be more easily attacked at that time⁴⁶. One of the earliest examples from history dates back to 480 BC during the Second Persian War. Xerxes, king of Persia, conducted a massive army by land and a considerable fleet by sea to conquer Greece. Their resistance, which was commanded by Leonidas and numbered about 7,000 men, tried to stop the Persian advance. It is estimated that the Persian soldiers totaled between 70,000 and 300,000 men. On an open battlefield they would never have stood a chance, but they found two strategic points at which to position themselves. One on land, near the Strait of Thermopylae, between Thessaly and Boeotia, and the other on the sea nearby, in the Strait of Artemisium, between Euboea and Thessaly. Despite the numerical disadvantage, the Greeks managed to withstand the enemy. Although it ended in a retreat, the Battle of Thermopylae has become soon an example of brave persistence even when the odds seem unfavorable⁴⁷.

The second example is taken from the First Scottish Independence War and concerns the Battle of Stirling Bridge. An English army of 9,000 men sought to pass through the Forth River across a narrow passage, precisely the Stirling bridge, to invade the adjoining territories of Scotland. Nevertheless, William Wallace and Andrew de Moray led the 2,000 Scottish soldiers to victory, though less numerous, by taking advantage of a strategic position from which they could attack the advancing English horsemen. Many knights soon ran aground on the swampy land, and many decided to retreat. In the English history, this battle was a humiliating defeat⁴⁸.

⁴⁵ EMMERSON, C.; STEVENS, P. (2012) *Maritime Choke Points and the Global Energy System Charting a Way Forward*, Chatham House Paper, London, January, p. 6, https://www.chathamhouse.org/sites/default/files/public/Research/Energy%20Environment%20and%20Development/bp0112_emmerson_stevens.pdf.

⁴⁶ Wikipedia, *Choke point*, https://en.wikipedia.org/wiki/Choke_point.

⁴⁷ SOMMERVILLE, D.; LOHNES, K. (2023). *Battle of Thermopylae*, Encyclopedia Britannica, December 26, <https://www.britannica.com/event/Battle-of-Thermopylae-Greek-history-480-BC>.

⁴⁸ ADAMS, S. (2023) *Battle of Stirling Bridge*, Encyclopedia Britannica, September 4, <https://www.britannica.com/event/Battle-of-Stirling-Bridge>.

In both cases the use of narrow passages, on land or by sea, to confront an opposing army is evident. These are just two examples of the many others in history.

Focusing henceforth on the control of sea lanes, since the 15th century, a nation's power has derived largely from its naval strength. The country that best exemplifies this power is the United Kingdom⁴⁹. «Five keys lock up the world! Singapore, the Cape, Alexandria, Gibraltar, Dover. These five keys belong to England» (John Fisher, 1904). The chokepoints referred to are the Strait of Malacca, the Cape of Good Hope, the Suez Canal, the Strait of Gibraltar, and the English Channel, also referred to as the Strait of Dover, respectively. Britain does not overlook the Mediterranean Sea, yet it outdistanced other European nations, establishing itself as the leading maritime power, from the Napoleonic Wars until World War II. In order to exercise such dominance, three essential characteristics were required: a mercantile fleet, a skilled navy, and a strong network of colonies as naval bases, three fundamentals in which the Royal Navy was unrivaled⁵⁰. During the 17th century, Britain began its colonial expansion phase, establishing British naval bases in the Americas, African and Indian coasts. However, the eastern colonies soon proved complex to be managed, the most critical routes involved the passage around the Cape of Good Hope to reach the Indies. In 1704, Britain conquered Gibraltar from Spain, where it found its first permanent naval base in the Mediterranean. This ensured a more dominant presence on that sea and the routes that crossed it. Only with the victory of the Napoleonic Wars, could the United Kingdom count on almost total hegemony of the world's seas. The British understood Malta's potential value as a colony in the Mediterranean, and in 1814 with the Treaty of Paris, the island became part of the British Empire. Cyprus, as well, became a British protectorate in 1878. So did many Ionian islands in the Mediterranean. In 1869 the Suez Canal was inaugurated, greatly lowering sailing times between England and India, consequently the British interest in Egypt grew. In 1882 England occupied Egypt which marked the beginning of the Anglo-Egyptian War. Until 1914, the Khedivate of Egypt remained an autonomous province of the Ottoman Empire, although in fact the territory was controlled by the British. Instead, from 1914 to 1922 a formal protectorate was established. In truth, British forces left the country

⁴⁹ STEVENSON, T. (2022) *Keys to the World*, London Review of books, Vol. 44, No. 17, September 8, <https://www.lrb.co.uk/the-paper/v44/n17/tom-stevenson/keys-to-the-world>.

⁵⁰ MAHAN, A. T. (1890) *The influence of sea power upon history*, Cambridge University Press, <https://doi.org/10.1017/CBO9780511783289>.

only in 1954 under an Anglo-Egyptian agreement⁵¹. These brief historical notes are intended to show how the propensity to control trade across the seas and particularly by exploiting chokepoints, was widely in use in the past. This tendency will return, even in more recent events. As for the history of the Suez Canal, it will be discussed at length in the following chapter.

1.2.2. Gateways to Global Shipping Lanes: Volume and Composition of Trade Affected

This section will be concerned with illustrating, from a more economic point of view, the importance of the major chokepoints in global trade routes. Initially at an aggregate level, then providing further insights into some of the world's most traded commodities by sea: oil and dry bulk. The analysis will consider which are the major countries engaged in the flows of those goods and whether these patterns involve passing through one or more of the most significant chokepoints.

International trade is mainly about physical goods. In 2021, global trade in goods totaled more than US \$22 trillion. Since the early 2000s, the number of goods exchanged internationally between countries has increased significantly. The nations that have shown the strongest growth, in both imports and exports, have been the developing countries, remarkable is in particular the case of China, which has more than tripled its traded goods over the past 15 years. Trade volumes experienced negative growth due to the 2009 Financial Crisis and a slowdown between 2015 and 2016. The Covid-19 pandemic caused a serious fallout in trade, from which markets recovered gradually in 2021 and 2022. Trade in goods is estimated to be evenly divided between developing and developed countries. BRICS countries (Brazil, Russia, India, China, and South Africa) contribute significantly to world trade in both goods and services⁵². The LDC countries (Least Developed Countries), on the other hand, struggle to gain a position in the global scenario⁵³. To understand the analysis that follows, it is important to highlight that countries have very different food and energy net positions. With reference to food products, South America and South Asia generally export, while most countries in Asia, in the Middle East and Africa are net importers. Regarding energy, countries in West and

⁵¹ HOLCOMB, S. J. (2021) *A Century of British Dominance of the Mediterranean: Lessons for the U.S. Navy in the South China Sea*, Naval History Magazine, Vol. 35, No. 3, June, <https://www.usni.org/magazines/naval-history-magazine/2021/june/century-british-dominance-mediterranean-lessons-us-navy>.

⁵² UNCTAD (2023) *Key statistics and trends in International Trade 2021/2022*, United Nations Publications, https://unctad.org/system/files/official-document/ditctab2023d1_en.pdf.

⁵³ Full list of Least Developed Countries available at <https://www.un.org/ohrlls/content/list-ldcs>.

Central Asia, most countries in South America and Africa, are net exporters. In contrast, Europe, and many countries in South-East Asia are net importers. The net position is calculated by subtracting a country's imports from its exports, then dividing this number by the total (imports plus exports) to obtain a normalized value, an index that varies between -1 and 1. In this way a scale can be created: very high surplus (0.5 to 1), high surplus (0.1 to 0.5), neutral (-0.1 to 0.1), high deficit (-0.5 to -0.1), very high deficit (-1 to -0.5)⁵⁴. The net food and energy position of the world's countries for the year 2021 is depicted by the maps below.

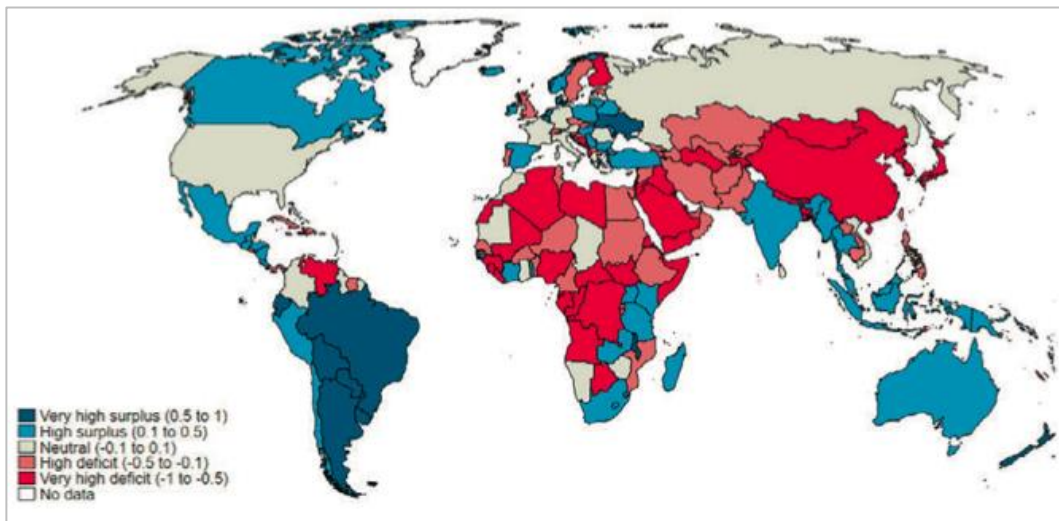


Figure 10. Food net position, 2021.

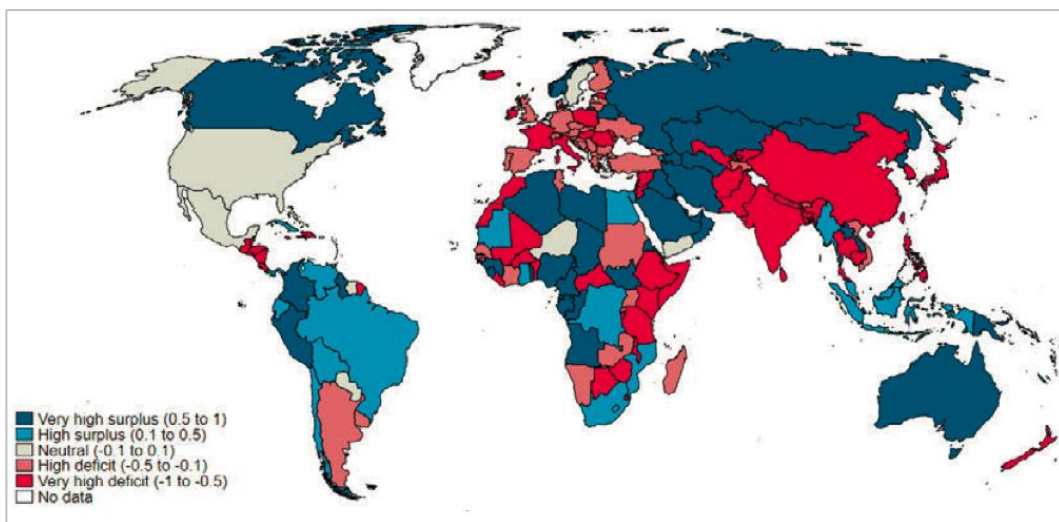


Figure 11. Energy net position, 2021.

Source: UNCTAD (2023) *Key statistics and trends in International Trade 2021/2022*, UN Publications https://unctad.org/system/files/official-document/ditctab2023d1_en.pdf

⁵⁴ *Supra*, note 52.

Out of these differences arises the demand of countries to exchange goods as conveniently as possible. The mode of transportation chosen depends on several factors: the type of goods, the cost, and the value-to-volume ratio. In general, companies are willing to pay higher transportation costs for high-value goods, in exchange for other priorities, such as punctuality and reliability. In some cases of large cargo, sea freight is the only choice. In terms of volume, the vast majority of goods travels by sea, reaching 11 billion tons of traded goods in 2021⁵⁵. Within maritime shipping, we can identify two main types of cargo: liquid cargo, such as crude oil and its derivatives, which are transported by tankers; and dry cargo, which includes both major bulks (iron ore, coal, and grain) and minor bulks (minerals, metals, agribulks). This type is generally moved by bulk carriers⁵⁶.

UNCTAD, the United Nations Conference on Trade and Development, published in 2023 the Review of maritime transport, which ranks dry bulk as the world's most traded category in 2022, with over 5000 million tons, oil as second with about 3000 million tons and container trade as third with almost 2000 million tons. In terms of percentage growth from 2021, oil and gas have increased the most, by 6 percent and 4.6 percent, respectively. This trend stems from higher demand for fuels, caused also by the return to normalcy after the pandemic. Energy-intensive sectors which have rebounded strongly are, in fact, transportation and travel. In addition, certain geopolitical events have intensified the need to ensure energy security for one's own country. On the other side, containerized cargo volumes fell by 3.7 percent and dry bulk by -2.9 percent in 2022. This decrease was largely influenced by the outbreak of war in Ukraine since it is one of the major exporters of grain worldwide. Over time, the average distance traveled by seaborne goods has risen for both oil and dry bulk goods. In the former case, petroleum (including crude oil and refined derivatives) traveled from 3,993 nautical miles in 2002, to 4,350 in 2022. On the other side, grain traveled an average distance of 5,574 nautical miles in 2002 that became 7,251 in 2022⁵⁷. These long routes, at some point along the way, will inevitably encounter one or more geographical bottlenecks. Lincoln F. Pratson, an American geologist with technical experience in the field of in ocean sciences, estimated the global share of maritime-traded goods between non-neighboring nations passing through major

⁵⁵ UNCTAD, *World seaborne trade*, <https://hbs.unctad.org/world-seaborne-trade/>.

⁵⁶ BOLLMANN, M. *et al.* (2010) *Maritime highways of global trade*, in *Living with the Oceans*, World Ocean Review, Maribus, pp. 164-171, https://worldoceanreview.com/wp-content/downloads/wor1/WOR1_en.pdf.

⁵⁷ UNCTAD (2023) *Review of maritime transport 2023*, United Nations Publications, https://unctad.org/system/files/official-document/rmt2023_en.pdf.

chokepoints for year 2019. The most significant results are summarized in the following table.

Malacca Strait	34.5
English Channel	29.9
Gibraltar Strait	27.8
Suez Canal	22.9
Bab el-Mandeb	22.6
Bosporus Strait	6.6

Table 1. Share of maritime-traded goods by weight between non-neighboring nations passing through major chokepoints (in percentage).

Source: PRATSON, L. F. (2023) *Assessing impacts to maritime shipping from marine chokepoint closures*, Communications in Transportation Research, Vol. 3, December, <https://www.sciencedirect.com/science/article/pii/S2772424722000336>.

These estimations rely on assumptions pivotal to their accuracy, implying that any variation in these assumptions could affect the outcomes. The primary three are⁵⁸:

1. Generally, when two countries have a border in common, goods are traded mainly by air or over land, as in the case of North America or Europe. In this analysis, we consider trade between states that are relatively distant, which geographically do not share a border. The vast majority of trade between these countries takes place by sea.
2. The exchange of goods between non-neighboring countries travels the most convenient sea route so that distance, transportation costs, and transit time are minimized.
3. The trade flows involving landlocked countries, those without a direct contact with sea, go through the nearest major port of a neighboring country with direct access to an ocean.

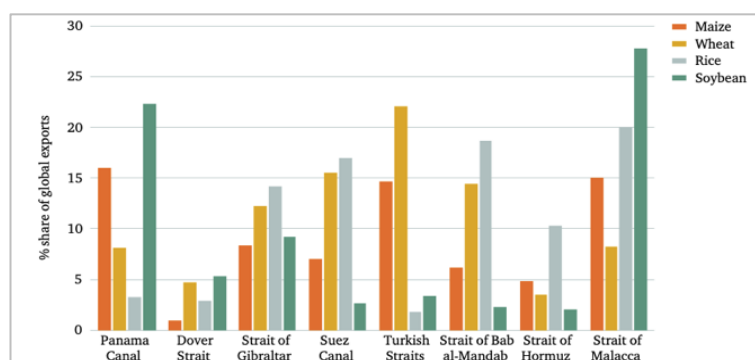
Table 1 highlights the share of maritime-traded goods in aggregate terms, but delving into the previously mentioned sectors, the analysis will now focus on some specific product categories passing through the major chokepoints: agricultural crops and oil.

Global food security relies on international trade in a very limited number of crops: maize, wheat, rice, and soybeans together account for two-thirds of the total stored calories globally. Few “breadbasket” regions produce these crops extensively and export worldwide. Over the years, population has continued to grow, and it is estimated that by

⁵⁸ PRATSON, L. F. (2023) *Assessing impacts to maritime shipping from marine chokepoint closures*, Communications in Transportation Research, Vol. 3, December, <https://www.sciencedirect.com/science/article/pii/S2772424722000336>.

2050 the world's production of these crops will have to increase by 50 percent to sustain the pace of this ever-increasing demand. Most international trade in maize, wheat, rice, and soybeans travels through one or more of those chokepoints, 55 percent of these crops pass through at least one of them. In terms of volume, annual grain trade reaches 24 million tons through the Strait of Hormuz and 108 million tons through the Strait of Malacca. In aggregate, the Straits of Malacca and the Panama Canal record the most noteworthy annual flow of the four crops being major gateways connecting Western and Asian markets. More than 20 percent of soybean exports and around 16 percent of maize exports pass through the Panama Canal each year; much of these flows are directed from Brazil and the United States to Asia. Almost 27 percent of soybean trade, 20 of rice exports and 15 percent of maize, transit through Malacca. However, the Turkish straits also record significant numbers. More than 20 percent of wheat exports travel through the Turkish straits, reflecting the importance of Black Sea producers to global export markets. Next in importance, we find the Suez Canal and the Bab el-Mandeb, the former with 17 percent of rice and 15 percent of wheat exports; the latter with 18 percent of rice and almost 15 percent of wheat flows⁵⁹.

Figure 12. Annual maritime chokepoint throughput of maize, wheat, rice, and soybean as a share of total trade, 2015



Source: BAILEY, R.; WELLESLEY, L. (2017) *Chokepoints and Vulnerabilities in Global Food Trade*, Chatham House: the Royal Institute of International Affairs Report, London, June, <https://www.chathamhouse.org/2017/06/chokepoints-and-vulnerabilities-global-food-trade>.

⁵⁹ BAILEY, R.; WELLESLEY, L. (2017) *Chokepoints and Vulnerabilities in Global Food Trade*, Chatham House: the Royal Institute of International Affairs Report, London, June, pp. 10-12, <https://www.chathamhouse.org/2017/06/chokepoints-and-vulnerabilities-global-food-trade>.

In addition to food security, another aspect of relevance to a country that deserves separate consideration is energy supply. Crude oil, which single-handedly represents about 25 percent of all seaborne cargo, is the most central type of good traded globally. The European Union, Japan and the United States are among the main importers, while the Middle East is the principal oil-producing region, exporting the largest quantities of crude oil in the world. Major shipping routes thus extend westward from the Arabian Gulf through the Suez Canal to Europe and the United States; eastward reaching East Asia, in particular China, and Japan⁶⁰. In 2016, the Strait of Hormuz and the Strait of Malacca were the most vital chokepoints in terms of oil flows, with 18.5 and 16 million barrels per day, respectively. They were followed by the Cape of Good Hope, with 5.8 and the Suez Canal, with 5.5 million barrels per day⁶¹.

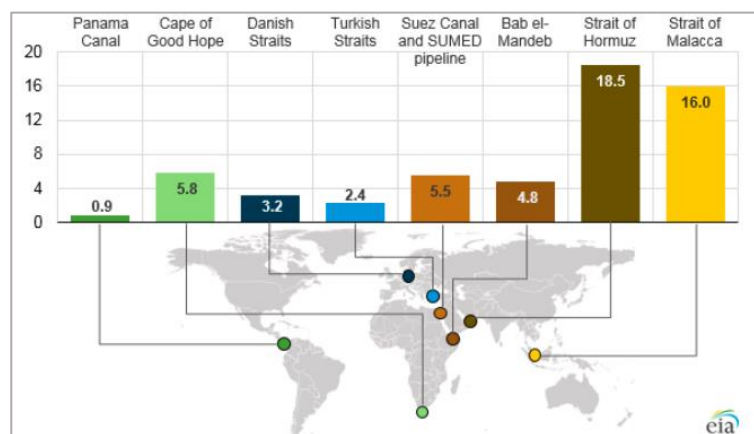


Figure 13. Petroleum transit volumes through maritime routes, (million barrels per day)

Source: US EIA, 2016 <https://www.eia.gov/todayinenergy/detail.php?id=32292>.

Some chokepoints create limitations in terms of the maximum dimension ships can have. Crude oil and refined product tankers have been classified according to the Average Freight Rate Assessment (AFRA) system. The most used ships are Long Range (LR) ships that can carry both crude oil and refined petroleum products. Other categories of ships, including Very Large Crude Carriers (VLCC) and Ultra-Large Crude Carriers (ULCC), are larger and more efficient to answer an expanding world oil demand. The Strait of Hormuz and other few chokepoints are deep and wide enough to allow the passage of ships of all sizes. Panama and Suez canals, instead, impose constraints to vessels' depth and width. Bab el-Mandeb and the Turkish Straits do not require specific ship characteristics but are difficult to navigate due to the relatively narrow sea lanes⁶².

⁶⁰ BOLLMANN, M. *et al.*, *op. cit.*, p. 169.

⁶¹ *Supra*, note 25.

⁶² *Ibidem*.

To conclude this part, it is necessary to point out that the relevance of each maritime chokepoint is determined not only by the volume of goods passing through it each day, but also by its strategic role played in international connectivity. They may be more or less critical points, and this depends on how many and what alternative routes are. In terms of criticality, we can identify three classes of chokepoints:

- Moderate criticality. When the chokepoint is to be avoided, an alternative route can be taken that does not result in major shipping delays and substantial additional costs. This is the case with the Straits of Malacca and the Straits of Dover.
- High criticality. A chokepoint has high criticality if, should it be closed, the only alternative route involves drastically higher shipping costs and considerably longer transit time. Examples belonging to this category are the Panama and Suez canals, the Strait of Bab el-Mandeb, and the Strait of Gibraltar.
- Very high criticality. When there is no alternative route by sea, so a closure could result in a disruption in food or energy supply. This concerns the Turkish Straits and the Strait of Hormuz⁶³.

In the next section we will look at what are the most frequent risks to which the various chokepoints are subjected, which could lead to their more or less temporary closure.

1.3. Geopolitical Risks to Maritime Chokepoints

All chokepoints discussed thus far have experienced at least one closure in the past 15 years, with the exception of one, the Strait of Gibraltar. As anticipated above, in traveling an international route, goods often pass through even more than one chokepoint, so the closure of one has many times cascading repercussions on the others. This scenario may cause the disruption of global supply chains and the need to reprogram the route according to alternative itineraries. The reasons why closures have occurred in the past and continue to occur in the present are numerous and different. We could classify them into three areas of risks: firstly, there are hazards arising from climate and weather, such as storms, high winds, and fog, which can render the navigation unsafe. Secondly, conflict and security risks represent a significant challenge, they include piracy, terrorism, military conflicts. Lastly, closure risks can derive from institutional decisions, some chokepoints are vulnerable in the sense that they depend on the political administration of a country⁶⁴.

⁶³ BAILEY, R.; WELLESLEY, L. *op. cit.*, pp. 13-14.

⁶⁴ BAILEY, R.; WELLESLEY, L. *op. cit.*, p. 32.

1.3.1. Extreme Weather Events and Climate

The first category of risks includes weather and climate conditions; as these are a threat to the transportation of goods through narrow points, such as chokepoints. These events generally cause temporary inefficiencies, but these can have very large consequences. Heavy rainfall, extremely high or low temperatures, storms, high winds, droughts, and storm surges fall into this class. Climate change is making these events increasingly frequent and more severe in terms of consequences; it acts as a multiplier of weather-related effects. The increasing frequency of these events makes subsequent restoration from them more complex; recovery plans are needed, acting promptly before the next shock. This requires numerous resources and efficiency from the authorities controlling that chokepoint.

Severe rains and floods represent a danger that make the conduct of activities in ports very complex; in such cases other means of transportation would be more suitable. This situation becomes critical when alternative roads or means are not possible. Equally harmful is the opposite case, that of drought. An example is the lowering of the water level of the two lakes on either side of the Panama Canal, the Gatún and Miraflores, which forced all ships with a greater depth to derive route⁶⁵. The canal indeed operates through a system of locks that allow the ships to be raised and lowered in order to overcome the difference in height present between the two oceans (26 meters). However, the water in the locks is primarily replenished by Lake Gatún, which is affected by the absence of rainfall. Due to a phenomenon called El Niño the Panama area was hit by a very severe drought, in July 2023, high temperatures and lack of rainfall lowered the level by about two meters⁶⁶. This extreme event obliges the Panama Canal Authority (PCA) to reduce the number of vessels traveling through it. Usually, 34-40 ships pass through the canal per day, in December 2023 it announced that this number would have been reduced to 20 and 18, by January and February 2024, respectively. The PCA then confirmed a slight increase of this number to 24 vessels per day.⁶⁷

⁶⁵ BAILEY, R.; WELLESLEY, L. *op. cit.*, pp. 33-34.

⁶⁶ LOMBROSO, L. (2024) *La siccità sta colpendo il Canale di Panama*, Meteored, <https://www.ilmeteo.net/notizie/attualita/siccita-sta-colpendo-il-canale-di-panama-el-nino-e-i-cambiamenti-climatici-minacciano-il-commercio-globale.html#:~:text=Nel%20corso%20del%202023%2C%20complice,acqua%20dolce%20nel%20Lago%20Gatun.>

⁶⁷ SAVVIDES, N. (2024) *Container ships defy Panama Canal transit trends*, Seatrade Maritime news, <https://www.seatrade-maritime.com/panama/container-ships-defy-panama-canal-transit-trends.>

Another problem for shipping is the presence, in some regions, of strong winds that bring sand and dust with them, making it difficult to have sufficient visibility to continue maritime traffic. Examples are the delays and closures of the Suez Canal in December 2010, February 2015, and March 2021. In these situations, high temperatures have increased the violence of sandstorms. Climate change is escalating the frequency with which sandstorms and extreme heat events occur in this region⁶⁸. The case of March 23, 2021, was particularly serious in terms of consequences, because on that occasion a ship, the *Ever Given*, was hit by a sandstorm, and driven by strong winds of up to 74 kilometers per hour (40 knots) while crossing the Suez Canal. It lost control of its course and got stranded on one of the banks, completely blocking the passage. The next chapter, devoted to Suez, will also recall this event in more detail⁶⁹.

Another strait vulnerable to high winds and storms is the Strait of Dover. Here, a further risk is from rising sea levels caused by melting glaciers in the Arctic region. The port of Rotterdam, northeast of the strait of Dover, is one of the most subjected to high winds and storms⁷⁰. Storm *Ciarán* in November 2023 was a remarkably strong storm, causing severe gusts of 111-130 kilometers per hour (60-70 knots) in the northern France and across the English Channel. The event highly affected transportation, with the temporary closure of the port of Dover and the cancellation of ferry services in general⁷¹.

A different weather hazard hits frequently the Indonesian and Malaysian region: haze and fog, slowing down the shipping traffic in the Strait of Malacca because of poor visibility, as it happened in 2015. The countries belonging to the Association of Southeast Asian Nations (ASEAN)⁷², signed an Agreement on Transboundary Haze Pollution in 2002. This commitment demonstrates a willingness to mitigate the effects of haze in the region, but Indonesia was last in the ratification process, in 2014, even though it is the main source of forest fires, especially in the islands of Sumatra and Kalimantan⁷³.

⁶⁸ MASTERS, J. (2021) *Suez Canal shutdown shows the vulnerability of the global economy to extreme events*, Yale Climate Connections, <https://yaleclimateconnections.org/2021/03/suez-canal-shutdown-shows-vulnerability-of-global-economy-to-extreme-events/>.

⁶⁹ LEE, J.M.; WONG, E. Y. (2021) *Suez Canal blockage*, Édition Diffusion Presse Sciences, <https://doi.org/10.1051/mateconf/202133901019>.

⁷⁰ BAILEY, R.; WELLESLEY, L. *op. cit.*, pp. 34-35.

⁷¹ KENDON, M. (2023) *Storm Ciarán, 1 to 2 November 2023*, Met Office National Climate Information Centre, https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/uk-past-events/interesting/2023/2023_09_storm_ciaran_1.pdf.

⁷² ASEAN countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam, <https://asean.org/member-states/>.

⁷³ SCAWEN, S. (2015) *The true cost of Malaysia haze*, Al Jazeera, October 23, <https://www.aljazeera.com/features/2015/10/23/the-true-cost-of-malaysia-haze/>.

1.3.2. *Armed Conflicts, Terrorism, Piracy, and Cyber Insecurity*

«Geopolitical and security risks arguably pose the greatest threat to shipping security through chokepoints, [...] geopolitical developments or crises have the greatest potential for escalation and for involving multiple states»⁷⁴. International trade routes often involve passage through areas governed by unstable administrations, are often theaters of conflicts, both civil and with neighboring countries, piracy, terrorism. The chokepoints most at risk of these phenomena are the Strait of Bab el-Mandeb, the Suez Canal, the Strait of Hormuz, and the Strait of Malacca. Firstly, the waters of the Bab el-Mandeb Strait represent a fertile area for the proliferation of criminal networks that exploit the nearly total absence of authority in the horn of Africa states and the vacillating Yemeni state. There is an intense pirate activity off the coast of Somalia, ranging from arms trafficking to incidents of maritime terrorism. Unlike Nigerian pirates, who are interested in the cargo and robbing the crew, Somali pirates often hijack the ship and kidnap the crew for large ransoms. This increases insurance policies for transportation, delays in supplies⁷⁵. In addition to the presence of pirates, other risks in this geographic area are armed conflicts and terrorist attacks. The, still ongoing, Red Sea crisis that began in October 2023, is evidence of this. The attacks are operated by the Houthi, an Islamist group that controls a large part of Yemeni territory bordering the Red Sea. They are militarily supported by Iran, and allies of the Palestinian fundamentalist organization of Hamas. They are believed, by the Yemeni government itself, Saudi Arabia, the United Arab Emirates, and by the Western world, to be a terrorist group⁷⁶. Since Israel started his war against Hamas in 2023, Houthi have launched repeated missiles and drones to shoot down almost all commercial ships passing through the Strait, directed to Israel, as a sign of support for Palestine. Indeed, the Middle East crisis extends beyond land boundaries and involves the sea as well, endangering international flows by seizing control of a strategic trade chokepoint. Cascading consequences also affect the Suez Canal, as ships, fearing attacks, reconsider their routes⁷⁷.

⁷⁴ GIRARDI, B.; VAN HOOFT, P.; CISCO, G. (2023) *What the Indo-Pacific means to Europe: trade value, chokepoints, and security risks*, The Hague Centre for Strategic Studies, November, p. 11, <https://hcsc.nl/wp-content/uploads/2023/11/What-the-Indo-Pacific-means-to-Europe-Trade-Value-Chokepoints-and-Security-Risks-HCSS-2023.pdf>.

⁷⁵ SELLARI, P. (2013) *Geopolitica dei trasporti*, GLF editori Laterza, Roma, pp. 54-55.

⁷⁶ International Crisis Group (2024) *Bab al-Mandab, Yemen*, February 20, <https://www.crisisgroup.org/trigger-list/iran-usisrael-trigger-list/flashpoints/bab-al-mandab-yemen>.

⁷⁷ BONINI, E. (2024) *Hamas-Israel conflict hits Suez Canal, trade crisis risk, including Italy*, EU news, January 9, <https://www.eunews.it/en/2024/01/09/hamas-israel-conflict-hits-suez-canal-trade-crisis-risk-including-italy/>.

A further chokepoint, subject to armed conflicts, is the strait of Hormuz, as it has been an object of American-Iranian contention for many years. Several times throughout history, Iran has endangered the free crossing of the passage, bothered by the U.S. military presence in the Gulf. They mutually accused opposing naval forces of carrying out “provocative actions”. Incidents between the two navies numbered about 300 in 2015, and 250 in the first half of 2016 alone. Tensions between the two countries increased in May 2018, when Trump decided to abandon the Joint Comprehensive Plan of Action (JCPOA)⁷⁸ and reinstate sanctions on Iran. In 2019, a U.S. drone was shot down by Iran after being accused of flying over Iranian airspace. The event caused a series of chain reactions, a month later a U.S. ship shot down an Iranian drone, the motivation lay in the fact that it had approached the ship itself beyond the limit. Iran has also been blamed for sending arms to support Houthi rebels in Yemen, a further conflict that adds to the already complex U.S.-Iranian relationship⁷⁹.

In Southeast Asia, particularly in the Strait of Malacca, the highest risk comes from piracy attacks. Initially, they were manifested by minor criminals robbing ships that were not large in size. Today, however, attacks focus on container ships, cargo, and tankers; of which many are hijacked, and their crews are kidnapped for ransom. In the years between 1990 and 2013, attacks by pirates peaked, with the 41 percent of piracy attacks worldwide taking place in Southeast Asia. Indonesia, Malaysia and Singapore, the major players in the area around the strait, launched joint patrol operations with coast guard vessels in the early 2000s to combat criminality. In 2006, the Malacca Strait Patrols (MSP) was established, and surveillance procedures were greatly intensified. Two years later, Thailand declared its intention to join the Malacca Strait Patrols, and this made the MSP the first multilateral, military arrangement in Southeast Asia regarding the coast guards, air forces and navies of the parties.

⁷⁸ In July 2015, Iran, China, France, Germany, Russia, the United Kingdom, the United States, and the European Union signed the JCPOA agreement requiring Iran to substantially reduce its nuclear engineering activities in exchange for international sanctions relief.

PALAMAR, S. (2017) *The US and the Iran Deal: No Time for Magical Thinking*, October 16, Centre for International Governance Innovation, https://web.archive.org/web/20180612141047/https://www.cigionline.org/articles/us-and-iran-deal-no-time-magical-thinking?clid=Cj0KCQiAiKrUBRD6ARIsADS2OLIDPPobuVgEq_il8yZW7bz4yNHISzgalnes1VPiRqBc3Okhg8z4f4aAmoVEALw_wcB.

⁷⁹ International Crisis Group (2024) *Strait of Hormuz*, February 15, <https://www.crisisgroup.org/trigger-list/iran-us-trigger-list/flashpoints/hormuz>.

Finally, the cyber insecurity represents a fast-emergent threat to shipping, since it extends to all aspects of maritime commerce, including inland transportation networks. The use of automated vehicles has become a standard practice across many sectors, hence the reliance of these on information systems for navigation and communications security. This phenomenon increases the vulnerability of ships to cyberattacks, potentially fostering an increase in piracy activities in open waters. However, the most organized criminals often aspire to target ports, where satellite communications allow the functioning of several interconnected systems. An attack on one element of these systems could cause cascading shocks, amplifying the severity of the situation. A particular concern regards the strategic areas of the Bab el-Mandeb Strait and the Gulf of Aden, where the risk of such attacks is very high.

1.3.3. The Role of IMO in Protecting Against International Threats

The International Maritime Organization (IMO) stands as a specialized agency within the United Nations, founded in response to the ratification of the 1948 Geneva International Maritime Convention. Its primary objectives encompass guaranteeing navigation safety, fostering maritime cooperation among member countries and protecting the marine environment. Currently, it is joined by 170 states, and is headquartered in London. IMO's role is legitimized by UNCLOS (explicitly in Art. 2, Annex VIII), which recognizes it as the lawful international entity for maritime safety and invites all states to observe its regulations. Maritime security defined as the activity of preventing and countering intentional threats to the free use of the sea has deep historical roots, although its theorization has occurred in recent times, particularly following the events of September 11, 2001⁸⁰. Oversight of the legality of maritime traffic is regulated by the UNCLOS, especially in Article 100, which states that: «all States shall cooperate to the fullest possible extent in the repression of piracy on the high seas or in any other place outside the jurisdiction of any State»⁸¹. Moreover, Article 108 deals with cooperation in combating illicit trafficking in narcotic drugs and psychotropic substances, and Article 109 with cooperation in the repression of unauthorized broadcasting from the high seas. However, it is Article 110 of the UNCLOS that best embodies the maritime security concept, by allowing the right of warships to interfere with the navigation of ships of

⁸⁰ CAFFIO, F.; CARNIMEO, N.; LEANDRO, A. (2013) *Elementi Di Diritto e Geopolitica Degli Spazi Marittimi*, Cacucci Editore, Bari, pp. 211-215.

⁸¹ UNCLOS, Article 100.

other flags suspected of being involved in unlawful activities. The use of force on the high seas in a context other than an armed conflict must necessarily adhere to the canons of necessity and proportionality relative to the threat at hand. In fact, in all cases it is necessary to acquire the prior consent of the flag state of the merchant vessel involved, unless it consists of piracy, unflagged merchant vessels or sailing under false flag vessels. On October 7, 1985, the cruise ship Achille Lauro was hijacked by a terrorist group of Palestinians who had illegally boarded the ship. At the time, the incident did not meet the criteria for a piracy attack because it was characterized by political purposes, rather than private gains, and because it lacked a ship-to-ship assault. In response to the gap in the international legal framework concerning the rise of maritime terrorism, the IMO supported the development of a Convention for the Suppression of Unlawful Acts against the safety of maritime navigation (SUA Convention), which was signed in Rome in 1988⁸². According to Article 3, «any person commits an offence if that person unlawfully and intentionally:

- a) seizes or exercises control over a ship by force or threat thereof or any other form of intimidation;
- b) performs an act of violence against a person on board a ship if that act is likely to endanger the safe navigation of that ship;
- c) destroys a ship or causes damage to a ship or to its cargo which is likely to endanger the safe navigation of that ship; [...]
- d) communicates information which he knows to be false, thereby endangering the safe navigation of a ship»⁸³.

Following the events of September 11, 2001, the IMO took action to deal with new intentional threats to maritime security attributable to terrorism. To this end, a supplementary Protocol was drafted, which was approved in London on October 14, 2005, and led to the current SUA Convention. The London Protocol introduces new offenses to the previous regime of the 1988 Convention, such as (1) using a ship to cause massive destruction of public areas; (2) transporting on a ship weapons of mass destruction for the purpose of terrorism; and (3) discharging from a ship hazardous or noxious substances in quantities sufficient to cause serious injury or extensive environmental damage. Maritime security encompasses aspects relevant to the national

⁸² CAFFIO, F.; CARNIMEO, N.; LEANDRO, A., *op. cit.*, p. 216.

⁸³ Convention for the Suppression of Unlawful Acts, Article 3.

security of individual states which, when threatened by a danger to their internal security, could act in self-defense to prevent the implementation of hostile actions. The concept of preventive self-defense may legitimize coercive actions against merchant vessels engaged in terrorist activities reported to states⁸⁴.

1.3.4. Internal Political Instability

Efficiency in global maritime shipping also depends, to a significant extent, on the political and regulatory framework of countries along the route, as well as the competence of infrastructure administration. Corruption, bureaucratic obstacles, labor strikes occurring at critical points can inflate expenditures and hinder the flow of goods across borders, or even stop it. Of particular concern are trade restrictions applied at chokepoints, which have the potential to cause significant disruptions. Governments have jurisdiction over inland and coastal chokepoints, as well as interoceanic channels such as the Panama and Suez canals, which lie within the territories of nation-states⁸⁵. Egypt's internal instability represents the main threat to the accessibility of the Suez Canal. Any political upheaval could jeopardize the shipping flow across the Suez Canal, as it managed by the Suez Canal Authority. The likelihood of politicians completely blocking passage is remote, although, an extremist administration could agree to restrict the passageway of ships to and from certain nations⁸⁶. One example of this situation occurred between the years 1948 and 1956 during the early Arab-Israeli conflicts, in which Egypt imposed an embargo on Israeli-owned ships passing through the Suez Canal⁸⁷. These events will be discussed further in the next chapter. Maritime straits, on the other hand, are controlled by littoral states. However, when classified as international straits, they are also subject to the regulation of international law, as established by UNCLOS. The Strait of Hormuz, although located in Iranian waters and under the authority of Tehran, cannot be completely blocked by Iran due to the presence of international norms. Political instability also affects Bab el-Mandeb Strait, where piracy, armed robbery and terrorist attacks add to the already fragile situation in neighboring countries. Yemen, Djibouti, Somalia, and Eritrea can be considered vulnerable states from the political point of view⁸⁸.

⁸⁴ CAFFIO, F.; CARNIMEO, N.; LEANDRO, A., *op. cit.*, pp. 217-218.

⁸⁵ BAILEY, R.; WELLESLEY, L., *op. cit.*, p. 70.

⁸⁶ GIRARDI, B.; VAN HOOFT, P.; CISCO, G., *op. cit.*, pp. 11-14.

⁸⁷ BARAK, E. (2023) *Israel's Freedom of Passage in the Suez Canal, 1957-1967*. In: LUTMAR, C.; RUBINOVITZ, Z. *op. cit.*, p. 148.

⁸⁸ *Supra*, note 86.

This analysis concludes the first chapter, which aimed to provide an overview of what are the characteristics of the main maritime chokepoints, which relevance they may have in strategic and economic terms for neighboring countries. Finally, it aimed to present the most common risks to which they are subjected, from environmental to geopolitical.

In the next chapter, there will be a shift in focus to the analysis of the Suez Canal exclusively, given its relevance in global trade, especially in light of recent events that have involved it.

CHAPTER II: THE SUEZ CANAL EXPLORED: A COMPREHENSIVE ANALYSIS

SUMMARY: 2.1 Timeline of the Suez Canal – 2.2 Suez Canal Traffic Statistics – 2.3 Navigational Issues and Concerns – 2.4 Recent Development Projects and Future Investments

2.1. Timeline of the Suez Canal

The history of the Suez Canal has very ancient origins, the first attempts to connect the Red Sea with the Mediterranean were recorded, in fact, around 1800 B.C. At that time, according to some historians, pharaoh Senusret III supposedly commissioned the digging of a first canal that could become navigable during periods of flooding, which later became known as the “Pharaohs Canal”. However, the certainty of its construction came at the time of Pharaoh Necho II, about 600 B.C. This Canal did not follow the route that the Suez Canal travels today. The ancient version extended from west to east, connecting a branch of the mouth of the Nile River with the Red Sea. Today it stretches, instead, from north to south, directly connecting Port Said in the Mediterranean to Suez in the Red Sea. Over time, extensions were made to this route, especially by the Ptolemaic dynasty, to which Cleopatra belonged and that ruled Egypt from 305 B.C. to 30 B.C. Also, in Roman times it was considerably used, eventually taking the appellation of Trajan's Canal, in honor of the emperor's name. However, in 676 A.D., for military reasons, the caliph of the Abbasid dynasty had it closed permanently⁸⁹. To facilitate trade with Asia, in the early 1500s, the Venetians were the first to envision the possibility of directly connecting the Mediterranean Sea with the Red Sea, avoiding the long route beyond the Cape of Good Hope. Nevertheless, the many ideas did not find expression in real life. It was not until the end of the Napoleonic wars, in the first half of the 1800s, that the sansimonists, a socialist movement in France, initiated the plan for a direct navigable waterway, and the project of building a canal became more concrete. In 1833 Barthélemy-Prosper Enfantin, one of the exponents of the movement, visited Egypt with some collaborators to persuade Muhammad Ali, the country's governor from 1805 to 1848, to permit the start of the channelization work on the isthmus. Well realizing the significance of a similar project, he was in favor of its construction. But the terms stipulated that the canal would belong to Egypt, and that it would remain open under all circumstances to

⁸⁹ Il Post (2021) *La storia del Canale di Suez*, March 25, <https://www.ilpost.it/2021/03/25/canale-suez-storia/>.

all nations. Muhammad Ali's apprehensions particularly concerned England, known for its domains along strategic commercial routes. In 1842, the prince of Metternich-Winneburg, foreign minister of the Austrian empire, similarly asked the Egyptian governor about the possibility of building the project. Therefore, the realization became universal in character, and in November 1846 the Société d'Études du Canal de Suez was founded, so that international rivalries between the nation states would not arise. Within the company, operations were divided among a French group, an Italian-Austrian group, and a British group. In 1847, the first two groups completed their assignments, the British, on the other hand, not only did not perform their part; but also began to obstruct the project. At that time England held control of the Cape of Good Hope and possibly feared French rivalry in the routes to the east⁹⁰.

2.1.1. *From Construction to Inauguration: 1854-1869*

In 1854, Sa'īd Pasha became the new viceroy of Egypt and authorized, on November 30, the First Concession for the construction of the Suez Canal. The right was granted to Ferdinand de Lesseps, a French diplomat and entrepreneur, who had previously served as consul in Egypt. Pursuant to the first clause of the Firman, the Decree of the sultan:

*"M. Ferdinand de Lesseps will form a company, which he is authorized by us to manage, under the name of the Universal Company of the Suez Maritime Canal, for the opening of the Suez isthmus, the running of a route specifically for large ships, the creation or adaptation of two adequate entry points, one on the Mediterranean Sea and the other on the Red Sea, and the setting up of one or two ports"*⁹¹.

Under the third clause, the concession lasted for ninety-nine years, starting from the day of the opening of the channel between the two seas. Clause number six, on the other hand, stated that the fees to be charged for crossing the Suez Canal would be decided by mutual agreement between the viceroy of Egypt and the Company, and in any case, would be equal for all nations, without granting favorable treatment to some countries over others. According to the above, from the moment that the concession expires, the Egyptian government would become the sole owner of the Suez Canal, prevailing over the Company, assuming unreserved possession of all rights to the Canal and all related

⁹⁰ STEFANINI, SAMMARCO, MONTI (1936) *Suez, Canale di*, Enciclopedia Italiana Treccani, [https://www.treccani.it/enciclopedia/canale-di-suez_\(Enciclopedia-Italiana\)/](https://www.treccani.it/enciclopedia/canale-di-suez_(Enciclopedia-Italiana)/).

⁹¹ First Concession Act (1854) <https://www.napoleon.org/wp-content/themes/napoleon/annexes/hors-serie/suez/en/html-content/historique/txt-006.html>.

operations. On January 5, 1856, a Second Concession was granted to clarify the first one. In its twenty-three articles, it reiterated that the channel would be neutral, and open to anyone. In December 1858, F. de Lesseps initiated a subscription to raise funds, leading to the formation of the Universal Suez Maritime Canal Company with a capital of 200 million francs (equivalent to 8 million Egyptian pounds), divided into 400,000 shares valued at 500 francs each. Excavations began the following April, and the entire construction process took ten years to complete.

On November 17, 1869, the Canal was inaugurated and promoted as “the artery of prosperity for Egypt and the world”. The event was attended by sovereigns, princes, and aristocrats from Europe as well, French, Austrians, Hungarians, to name a few.

Great Britain, which had initially opposed the construction of the Canal, fearing loss of primacy on trade routes to the east, then conquered Egypt in 1882 and bought 44 percent of the Suez Canal Company's shares, with the remaining 56 remaining in French hands. During the British protectorate, it was in French interest to obtain the signing of a multilateral treaty guaranteeing freedom of navigation in the Suez Canal for all countries. This would have greatly weakened the British control. So, an International Conference for the Suez Canal was held in Paris, in 1885⁹².

2.1.2. Constantinople Convention of 1888: the Right to Freedom of Navigation

On October 29, 1888, the Constantinople Convention was signed among Great Britain, Germany, France, Austria-Hungary, Spain, Italy, the Netherlands, Russia, and Turkey. Article 1 stated that: «the Suez Maritime Canal shall always be free and of commerce or of war, without distinction of flag. Consequently, the High Contracting Parties agree not in any way to interfere with the free use of the Canal, in time of war as in time of peace. The Canal shall never be subjected to the exercise of the right of blockade»⁹³. Therefore, the contracting parties established that they would not take any action intended to obstruct free navigation either through the Canal or within three miles from its ports of entry. It was stipulated, for warships, that they were forbidden to unload or load equipment or military forces during passage. Moreover, ships of countries at war were not allowed to moor in the ports of entry. Egypt had the obligation to safeguard the implementation of

⁹² Suez Canal Authority, *A historical evolution*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/CanalHistory.aspx>.

⁹³ Suez Canal Authority (2019) *Constantinople Convention of 1888*, <https://www.suezcanal.gov.eg/English/About/CanalTreatiesAndDecrees/pages/constantinopleconvention.aspx>.

the provisions of the Constantinople Convention, and in any case, had the power to use even force, if needed to preserve public order and guarantee the free navigation⁹⁴. On one hand, its opening revolutionized world trade by reducing the number of ships passing through the Cape of Good Hope, and by becoming an obligatory passage for European energy supplies from Persian Gulf countries. On the other hand, it also played a strategic role militarily, both during World War I and World War II. It was successfully defended by England, which used it to stop German and Italian ships. However, after World War II, a further conflict involved the Middle East⁹⁵.

2.1.3. *First Arab-Israeli War in 1948*

In 1948 the British Mandate of Palestine came to an end; the United Kingdom had, in fact, ruled the region since 1920, after the defeat of the Ottoman Empire. The end of the mandate resulted in the transfer of jurisdiction over Palestine to the United Nations. The UN General Assembly established in 1947 a Special Committee on Palestine, which discussed the issue. The majority was in favor of founding two separate states, an Arab and a Jewish state, while Jerusalem would have been under international administration. A minority suggested a single state with Palestinian areas and Jewish ones. Therefore, the partition plan for Palestine was voted and accepted with Resolution No. 181⁹⁶. On one hand, Jewish leaders agreed with the UN decision, conversely Arab leaders did not accept it. The state of Israel proclaimed itself an independent nation on May 15, 1948, but the neighboring Arab countries, Saudi Arabia, Egypt, Iraq, Lebanon, Syria, and Transjordan responded by invading the new country⁹⁷. During the conflicts, the Arab states refused to engage commercially with the state of Israel, which is why Egypt imposed an embargo on Israeli ships passing through the Suez Canal. The war ends in 1949 with the signing of the Rhodes Accords, according to which Israel defined its new borders: it included in its extension some territories that the UN plan had earmarked for the Arab state, and concluded agreements with Egypt, Syria, Transjordan, and Lebanon. These decisions stated that the West Bank would belong to the Transjordan and that the Gaza Strip would be controlled by Egypt.

⁹⁴ SPANIER, B. *op. cit.*, pp. 121-122.

⁹⁵ *Supra*, note 89.

⁹⁶ Full text available at: UN, *Resolution adopted on the report of the ad hoc Committee on Palestinian question*, <https://documents.un.org/doc/resolution/gen/nr0/038/88/pdf/nr003888.pdf?token=Pmv48xdLHO46gLvMTW&fe=true>.

⁹⁷ Camera dei deputati, *Il conflitto in Medio Oriente*, Servizi Studi, http://leg15.camera.it/cartellecomuni/leg14/RapportoAttivitaCommissioni/testi/03/03_cap06_sch01.htm.

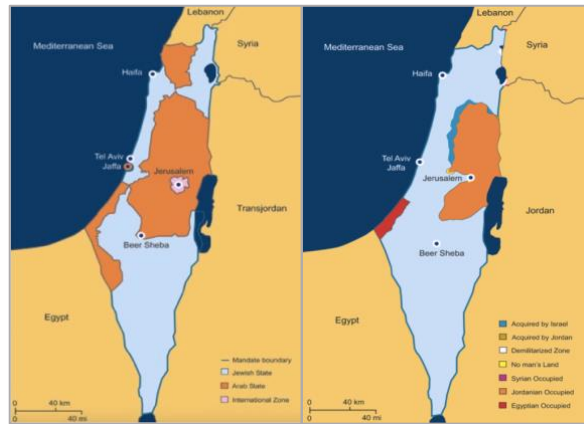


Figure 14. 1947 UN Partition Plan (on left), Armistice Lines after 1948 Arab-Israeli War (on right). *Source:* CFI Charitable Trust, *Maps of Israel's History*, United Kingdom, <https://www.cfi.org.uk/downloads/MapsofIsraelHistory-v5.pdf>.

The agreement signed on February 24, 1949, between Egypt and Israel challenged the embargo of Israeli shipping at the Suez Canal. On the one hand, Egypt believed that the state of war had not ended, and therefore it had no obligation to end searches on Israeli ships. On the other, Israel argued that, even if the state of war continued to exist, as the Egyptians claimed, according to the 1888 Constantinople Convention, the Egyptian authorities still could not interfere with free movement across the Canal. General Riley, Chief of Staff of the United Nations Truce Supervision Organization (UNTSO), the oldest peacekeeping mission of the UN, expressed himself on the subject:

“It is quite clear to me that action taken by Egyptian Authorities in interfering with passage of goods destined for Israel through the Suez Canal must be considered an aggressive action and interference with the passage of goods destined for Israel is a hostile act, entirely contrary to the spirit of the General Armistice Agreement and does, in fact, jeopardize its effective functioning. It was certainly never contemplated at Rhodes that what, is, in effect, an act of blockade [...]”.

In 1950, the state of Israel proposed a request to the UN Security Council insisting on the fact that Egypt had to remove the blockades and reestablish the free flow through the Suez Canal. However, it was not implemented. Israel was supported by the Western countries, which recognized its rights, yet Egypt, promising to act in the sole interest of the canal for preserving its security, continued to block Israeli ships⁹⁸.

⁹⁸ SABEL, R. (2023) *International Law and Freedom of Navigation Through the Suez Canal*. In: LUTMAR, C.; RUBINOVITZ, Z. *op. cit.*, pp. 139-141.

2.1.4. *The Nationalization Decree and the Suez Canal Authority: July 26, 1956*

In 1956, the Egypt's President, Gamal Abdel Nasser, decided to nationalize the Canal, and take all management functions under government control. A historic speech was given in Alexandria on July 26, in which it was stated that: «the Suez Maritime Canal Company is nationalized. All money, rights and obligations of the company are transferred to the state. All organizations and committees now operating the company are dissolved. Shareholders and holders of constituent shares shall be compensated in accordance with the value of the shares on the Paris Stock Market on the day preceding the enforcement of this law [...] ». The management of the Canal was thus assigned to an independent body with legal personality, subordinated to the Ministry of Commerce, which reported directly to the Prime Minister – the Suez Canal Authority (SCA)⁹⁹. The SCA is still operating and maintaining the Suez Canal. This authority has the exclusive right to issue rules for navigation through the passage and other regulations that ensure proper management of the Canal. One of SCA's other duties, is to impose and earn tolls for transit, and other port operations such as pilotage, mooring, towing. Under no circumstances shall the SCA act contrary to the terms of the Constantinople Convention of 1888, nor will it discriminate against one ship in favor of others, ensuring equal treatment in all cases¹⁰⁰. However, according to Britain, the United States and France, Nasser's act of controlling the canal would have involved more than a nationalization decision. It was seen by them as «an arbitrary and unilateral seizure of an international waterway on which the economy, trade and security of much of the world depend»¹⁰¹. To the accusations that the Canal nationalization operation lacked legitimacy, Dr. Mahmoud Fawzi, then Egypt's Foreign Minister, responded with a well-known speech on October 8, 1956, before the UN General Assembly. The latter had legitimized the «right to use its resources for the welfare of its people by virtue of its sovereignty and the principles of the UN Charter», hence the nationalization of Suez was a lawful application of Egyptian rights. Nevertheless, the nationalization of the Canal caused the outbreak of the Suez Crisis, with Egypt being invaded by Israel, on one side, and by French and British forces, on the other, which hoped to regain control over the Suez Canal¹⁰².

⁹⁹ Suez Canal Authority (2019) *Nationalization Decree of 1956*, <https://www.suezcanal.gov.eg/English/About/CanalTreatiesAndDecrees/Pages/NationalizationDecree.aspx>.

¹⁰⁰ Suez Canal Authority, *SCA Overview*, <https://www.suezcanal.gov.eg/English/About/SuezCanalAuthority/Pages/SCAOverview.aspx>.

¹⁰¹ US Department of State, Tripartite Statement Issued at London, August 2, 1956, Vol. XVI, Doc. 53, <https://history.state.gov/historicaldocuments/frus1955-57v16/d53>.

¹⁰² *Supra*, note 92.

2.1.5. Suez Canal closures due to Arab-Israeli conflicts: 1956-1957 and 1967-1975

The Suez Crisis, also remembered as Sinai War or second Arab-Israeli war, firstly involved Israel troops invading on October 29, 1956, Egyptian territories, in particular the Gaza Strip and the Sinai Peninsula. Then, the British and French forces joined the conflict, blocking the Suez Canal accesses. Hence the appellation of Tripartite Aggression. The crisis was solved in March of the following year, thanks to pressure from the United States, which, fearing a widening of the conflict with the USSR alongside Egypt, forced Western troops to withdraw. The Suez Canal, for the entire duration of the conflicts, remained closed. It was opened again on March 29, 1957.

In 1967, a new conflict involved the Middle East area, the third Arab-Israeli war. Egypt positioned its military forces toward the Israeli border, decided to close the straits of Tiran to Israeli ships, which was a required passage from the Red Sea to the state of Israel. Other Arab states also armed their borders with the Jewish state. In six days, from the 5th to the 10th of June, Israel acted against threats and took control of many Arab territories, including Golan Heights, Gaza, the Sinai Peninsula, to the point of gaining command of the east bank of the Suez Canal¹⁰³.



Figure 15. Israel before and after the 1967 Six Day War.

Source: CFI Charitable Trust, *Maps of Israel's History*, United Kingdom, <https://www.cfi.org.uk/downloads/MapsofIsraelHistory-v5.pdf>.

Therefore, Egypt decided to close the Suez Canal despite the fact that 14 ships were passing through it at that time. These cargo ships belonged to different countries, some were British, some were German, other Polish, Swedish, Bulgarian, Czechoslovak, and US. They remained anchored in the widest section of the canal, in the Great Bitter Lake. The vessels became known as the "yellow fleet," since sand carried by the desert wind

¹⁰³ *Supra*, note 96.

had covered them over time¹⁰⁴. The conflict between Arab countries and Israel ended with the Resolution No. 242 of November 22, 1967, which ordered Israel to withdraw its forces from illegitimately occupied areas and imposed the «termination of all claims or states of belligerency and respect for and acknowledgment of the sovereignty, territorial integrity and political independence of every State in the area and their right to live in peace within secure and recognized boundaries free from threats or acts of force»¹⁰⁵. However, Israel refused to accept these conditions, and further conflicts arose. Egyptians attempted to regain the Sinai territory from Israeli hands several times from 1967 to 1970, although the attempts were unsuccessful. The fourth Arab-Israeli war began on October 6, 1973, known also as the Yom Kippur War, because that day represents the holy day of Yom Kippur in the Jewish calendar. The Arab coalition of Egypt and Syria, supported indirectly by the Soviet Union, made the first military move, by attacking Israel, which, on the other side, was supported by the United States. The war ended, under UN pressure with the Resolution No. 338, on October 26, 1973. As a result, the Sinai Peninsula returned under Egyptian control and the two countries signed a disengagement agreement, on January 18, 1974¹⁰⁶. The Suez Canal was finally reopened in 1975, eight years after being closed. Only in this year, the 14 ships that remained blocked were towed out. It was the longest closure in the history of the canal¹⁰⁷. On March 26, 1979, the Israeli prime minister M. Begin and the Egyptian president A. Sadat signed a peace agreement in Camp David, US. Particularly relevant was Article V, which stated that:

“Ships of Israel, and cargoes destined for or coming from Israel, shall enjoy the right of free passage through the Suez Canal and its approaches through the Gulf of Suez and the Mediterranean Sea on the basis of the Constantinople Convention of 1888, applying to all nations. Israeli nationals, vessels, and cargoes, as well as persons, vessels and cargoes destined for or coming from Israel, shall be accorded non-discriminatory treatment in all matters connected with usage of the canal”¹⁰⁸.

As of this time, the channel will not experience any further relevant obstruction until the most recent events in 2021 and 2023, which will be covered later.

¹⁰⁴ Al Jazeera World (2019) *Suez: The Yellow Fleet trapped by the 1967 Arab-Israeli War*, <https://www.aljazeera.com/program/al-jazeera-world/2019/11/20/suez-the-yellow-fleet-trapped-by-the-1967-arab-israeli-war>.

¹⁰⁵ United Nations (1967) *Resolution 242*, <https://www.un.org/unispal/document/auto-insert-184858/>.

¹⁰⁶ Britannica, the Editors of Encyclopaedia (2024), *Yom Kippur War*, March 5, <https://www.britannica.com/biography/Hosni-Mubarak>.

¹⁰⁷ *Supra*, note 102.

¹⁰⁸ State of Israel (1979) *The Camp David Accords*, Ministry of Foreign Affairs, <http://muqtafi.birzeit.edu/InterDocs/images/284.pdf>.

2.1.6. Major Expansion Phases leading to the 2014 Project for the New Suez Canal

At the time of opening, in 1869, the canal had a depth of 8 meters (26 feet), a width at the bottom of 22 meters (72 feet) and at the surface of about 60-90 meters (200-300 feet). In 1870, about 490 ships passed through the Suez Canal, less than two per day. Over the years, the size of ships began to increase and consequently the need for a larger capacity started to be perceived. Therefore, canal widenings were made in both width and depth. During the 1950s the passage reached a width of 55 meters (179 feet) at the bottom at a depth of 12 meters (40 feet). This was only the beginning. Other projects had been proposed but were halted in June 1967 because of the Arab-Israeli conflict, which lasted until 1975, and for the entire duration the canal remained closed¹⁰⁹. Major enlargements were made in the 1980s, when the depth became 19.5 meters (64 feet) and the width at the surface 263 meters (863 feet). Investment had gradually increased over the years; in 2010 the canal was 24 meters deep (79 feet) and 313 meters wide (1,027 feet). The new depth allowed the 61.2 percent of tankers, 92.7 percent of the bulk carriers and 100 percent of the container ships to travel through the Suez Canal¹¹⁰. However, the width of the canal did not allow two ships to travel in opposite directions at the same time. Wider areas, such as Lake Manzala, Lake Timsah, the Bitter Lakes (both Great and Little), were therefore exploited to make the exchange. In the 1950s, constant ship convoys were organized, two southbound and one northbound, every day. Transit time over the years strongly reduced, from 40 to 11-16 hours, in 1870 and 1975, respectively. A significant change occurred in 2014, when President Abdel Fattah al-Sisi announced a new Suez-related project that would lift the Egyptian economy¹¹¹. The idea included two subprojects: the first aimed to deepen and widen the by-passes at Ballah, for an extension of 10 km, and that of Great Bitter Lakes, which extended for 27 km. The second was to build a new section of canal, running parallel to the existing one, from km 60 to km 95, thus an extension of 35 km (22 miles). This would have allowed ships to flow simultaneously in both directions, resulting in a reduction in the time ships had to wait to transit. This new passage has taken the name of “New Suez Canal”¹¹². According to the

¹⁰⁹ FISHER, W.; SMITH, C. G. (2024) *Suez Canal*, Encyclopedia Britannica, <https://kids.britannica.com/scholars/article/Suez-Canal/108305>.

¹¹⁰ Suez Canal Authority (2019) *Suez Canal Characteristics*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/CanalCharacteristics.aspx>.

¹¹¹ *Supra*, note 108.

¹¹² CHOREV, S. (2023) *The Suez Canal: Forthcoming strategic and geopolitical challenges*. In: LUTMAR, C.; RUBINOVITZ, Z. (2023) *The Suez Canal: Past Lessons and Future Challenges*, Palgrave Macmillan Cham, Switzerland, p. 7-8, <https://doi.org/10.1007/978-3-031-15670-0>.

Suez Canal Authority, the main ambitions of the projects were: to be able to transit more ships than in the past, reducing the travel time from the Mediterranean to the Red Sea to 11 hours, and waiting time to a maximum of 3 hours (previously 8-11 hours). In this way, they aimed to make the service more attractive and consequently increase the revenues for the Egyptian government. This would have helped make the Suez Canal a key international route, increasing Egypt's prestige as a major player in world maritime logistics. The first dredger, the mobile float on which there is a machine for underwater excavation of the canal, was operated on November 5, 2014, and the work had to last 12 months. Inauguration was held on August 6, 2015. Dry excavation involved removing 258.8 million cubic meters, for which the SCA had estimated a cost of EGP 4 billion, while dredging works concerned excavating other 250 million cubic meters of soil and sand from the seabed, for a total cost of EGP 15 billion. Compared to 2014, the set goal for the future was to increase the number of ships transiting the channel from 49 to 97 by 2023, projecting an increase in revenue from \$5,3 billion to \$13,226 billion in the same time frame¹¹³.

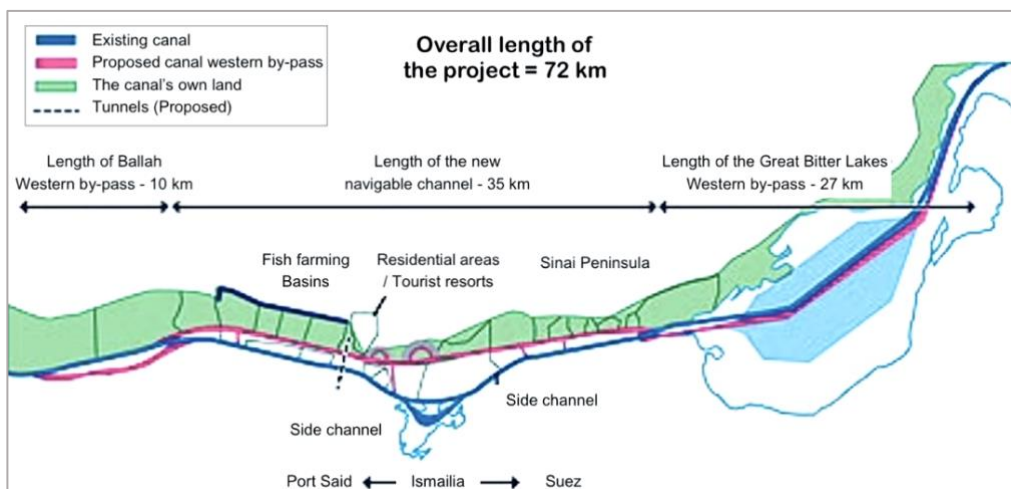


Figure 16. The new Suez Canal Project

Source: PAROVEL, P. G. (2015) *Il nuovo Canale di Suez ed i porti adriatici di Trieste, Koper e Rijeka*, The Voice of Trieste, <https://www.lavoceditrieste.net/2015/08/07/il-nuovo-canale-di-suez-ed-i-porti-adriatici-di-trieste-koper-e-rijeka/>.

¹¹³ Suez Canal Authority (2019) *New Suez Canal: the project*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/NewSuezCanal.aspx>.

2.1.7. Suez Canal Economic Zone established in 2015

The Suez Canal Economic Zone (SCZone) has been considered by the Embassy of Egypt in Washington: «an innovative and self-sustaining industrial development corridor that will transform 461 square kilometers and six maritime ports strategically located along one of world's most main trading routes into an international commercial hub»¹¹⁴. The idea was to promote the development of the region, attract substantial foreign investment, and make the area bordering the canal a vital part of world trade. This was done through the establishment of an Economic Zone, whose existence is legitimized by Law No. 83 of 2002 on Economic Zones of a Special Nature, amended in 2015.

With the Decree 330 of August 9, 2015, three days after the opening of the new section of the Suez Canal, the President Abdel Fattah El-Sisi constituted the Suez Canal Zone, which included:

- two integrated areas, Ain Sokhna and East Port Said, each consisting of both a port and an industrial zone;
- two development areas, Qantara West and East Ismailia, assigned mainly to residential communities and technology industries;
- four ports, West Port Said Port, Adabiya Port, Al Tor Port and Al Arish Port.

Starting with the Ain Sokhna area, located on the west coast of the Gulf of Suez, it is a high-density logistics and industrial center. Port facilities, industrial zones as well as residential areas are based there, and they are all efficiently connected by road or rail to the cities of Cairo and Suez. Ain Sokhna hosts an important international transit port, which also plays a crucial role in domestic trade. The extent of the adjacent land allows for continued development of this industrial area, which is already becoming a key hub for the Suez route. Future enlargement plans claim the creation of new terminals, of different destinations: container, dry bulk, general cargo, or liquid bulk. Additional investment will be made in upgrading storage facilities and port automation.

On the other hand, East Port Said is also a rapidly growing integrated area, particularly as a transshipment and multimodal logistics hub. It is located on the eastern side of the canal on the north. The area is affected by both the presence of industries and commercial firms. The port on the Mediterranean boasts of very deep waters to the extent that even the largest ships have access to the port. It is included in the 40 busiest ports in the world.

¹¹⁴ Embassy of Egypt, *The Suez Canal Economic Zone: An Emerging International Commercial Hub*, Washington, https://www.egyptembassy.net/media/Egypt_SuezCanal_082216a.pdf.

Plans to expand this area include a 26 km² extension, allowing for more receptive logistics and port facilities. For what concerns the development areas, Qantara West, is located on the east coast of the Suez Canal, just above the halfway point between the Red Sea and the Mediterranean. Residential activities, and small industries arise there. Given the presence of agricultural land, and water for crops, the region is important for the agribusiness sector. The other is East Ismailia, which is positioned slightly south of the previous one, but on the opposite bank of the Suez Canal. The conditions in the region are once again favorable for light industry, with the addition of the high-tech and research sectors. To improve connection to the other side, a tunnel is under construction between east and west. With reference to the four ports belonging to the SCZone, the port of West Port Said is located on the northern coast, on the opposite shore from the port of East Port Said. It is mostly dedicated to transshipment. The port of Adabiya, on the other hand, is located on the coast of the Red Sea in the northern part of the Gulf of Suez. As a special feature, it is mentioned to handle large volumes of dry bulk cargo. The port of Al Tor is placed on the east coast of South Sinai. It is mainly characterized by exports of minerals and dry bulk. The port of Al Arish is another port located in the Sinai Peninsula, this time on the Mediterranean. It operates as a cargo, fishing, and tourist port, and it is relevant especially to North Sinai and the Gaza Strip¹¹⁵.



Figure 17. The Suez Canal Economic Zone

Source: DEANDREIS, M.; CAMPIONI, D. (2018) *The Suez Canal after the expansion*, SRM and Alexbank, Maritime Economy, October Report, https://www.sr-m.it/wp-content/uploads/2018/12/srm_alexbank_suez_2018.pdf.

¹¹⁵ DEANDREIS, M.; CAMPIONI, D. (2018) *The Suez Canal after the expansion*, SRM and Alexbank, Maritime Economy, October Report, https://www.sr-m.it/wp-content/uploads/2018/12/srm_alexbank_suez_2018.pdf.

The SCZone will be later recalled in the chapter to present some investment projects that have involved it in recent years, and the key development plans for the future.

2.2. Suez Canal Traffic Statistics

The Suez Canal, with its strategic location connecting the Mediterranean Sea to the Red Sea, is a vital artery for global trade networks. This waterway not only facilitates the efficient transportation of goods, but also plays a key role in shaping international trade and geopolitical dynamics. By providing a direct sea route between Europe and Asia, the Suez Canal significantly reduces transit time and shipping costs for vessels carrying a wide range of goods. It is the focal point of an intricate network of global supply chains. As a result, the geopolitical dynamics surrounding the Suez Canal remain a central issue in international relations, with various stakeholders fighting to safeguard their interests and ensure the uninterrupted flow of goods through this vital waterway.

This section will be concerned with showing the relevance of the Suez Canal from a more economic point of view, by looking at the main ship and cargo traffic data through this route, focusing on which countries are most involved in these exchanges, and in which direction the trade flows are more frequent. All data that will be presented below refer to the 2019 Annual Report published by the Suez Canal Authority regarding traffic statistics through the Suez Canal¹¹⁶.

2.2.1. Ship Traffic

From Figure 18, it can be seen that over the years there has been an increase in trade through Suez both in terms of number of ships and tons of cargo. Taking the 1970s for comparison with 2019, it is evident that at that time the ships passing through the canal had relatively little cargo. These vessels were, indeed, in line with the original capacity of Suez. As a result of the enlargements, and of the fact that ships were being built larger, there has been a noticeable increase in the net amount of cargo carried by each ship. The number of ships, on the other hand, has maintained a fairly constant trend, first slightly decreasing in the 1990s, then beginning to rise again, since the 2000s. To have a more detailed numerical comparison, the number of ships transiting Suez in 1975 was 5,579, with a daily average of 26.6 vessels. In 2019, ships became 18,880, while the daily

¹¹⁶ Suez Canal Authority (2019) *Suez Canal Traffic Statistics: Annual Report 2019*, <https://www.suezcanal.gov.eg/English/Downloads/DownloadsDocLibrary/Navigation%20Reports/Annual%20Reports%E2%80%8B%E2%80%8B%E2%80%8B/2019.pdf>.

average was around 51.7. As for net tonnage, in 1975 it was about 50 million tons, averaging 240.2 per day. While in 2019 it became 1,207 million tons, with a daily average of 3,307.1. Therefore, the number of ships passing through Suez increased by about 238.41 percent in the 1975-2019 time frame, while the net tonnage by 2,293.07 percent.

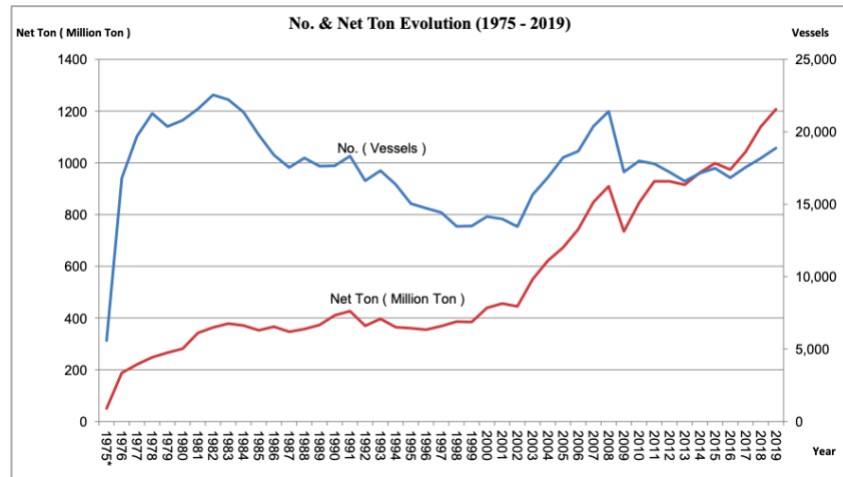


Figure 18. No. Vessels and Net Ton Evolution (1975-2019)

Source: Suez Canal Authority (2019) *Suez Canal Traffic Statistics: Annual Report 2019*, <https://www.suezcanal.gov.eg/English/Downloads/DownloadsDocLibrary/Navigation%20Reports/Annual%20Reports%E2%80%8B%E2%80%8B%E2%80%8B/2019.pdf>.

Regarding the type of vessels crossing the chokepoint, we can distinguish between tankers, which transport liquids or gases in bulk; liquified natural gas ships (LNG), bulk carriers that carry dry cargo in bulk, general cargo ships, container ships, roll-on/roll-off (Ro/Ro), which transport wheeled cargo that can be driven on and off the ship, car carriers, and passenger ships.

In 2019 the type of ship that crossed the Suez Canal with the highest frequency, was the container ship, with 5,375 ships making up 28 percent of the total. This was followed by tanker with 5,163 ships, about 27 percent of the total. In third place numerically we find the bulk carrier, with 4,200 ships, 22 percent of the total. Next, we encounter general cargo with 1,499 ships, almost 8 percent of the total. Not particularly significant are the other categories mentioned above.

From the point of view of net tonnage, nothing unchanged as far as the top three rankings are concerned, the highest transported cargo concerns containers with 636,107 net tons (53 percent of the total), followed by tanker ships with 238,193 tons (20 percent of the total), and finally bulk carriers with 159,457 tons (13 percent of the total). LNG ships emerge in fourth place, representing the 7 percent by tonnage, with 84,700 tons.

According to an SRM analysis, since 2012, the presence in the Mediterranean of container ships larger than 13,000 TEU has increased by 37 percent, the number of ships between 7,000 and 13,000 TEU has seen an increase of 51.6 percent, and ships between 3,000 and 7,000 TEU have experienced a decrease of 18.7 percent¹¹⁷.

2.2.2. *Cargo Traffic: by direction, by region, by countries*

Now analyzing the direction of the cargo as the first thing, the 2019 Report, published by the Suez Canal Authority, shows that in 2019 the trade flows were slightly more in the southbound direction (572 million tons), than in the northbound direction (458 million tons). Interestingly, the number remained constant compared to 2018 for the northbound traffic, while the southbound ones showed an increase of 9.1 percent.

Taking instead as a reference for analysis the regions that were the main destinations of traffic passing through Suez in 2019, we find in the northern direction: Northern and Western Europe, also including UK with 270,723 tons, representing 26.3 percent; then the East, and South-east Mediterranean region with 197,158 tons exchanged (19.1 percent). Followed by the North Mediterranean area, with 145,324 tons (14.1 percent). The other minority regions in this direction were: America (11.6 percent), Black Sea (10.7 percent), West and Southwest Mediterranean (9.8 percent). In the other direction, meanwhile, the largest trade volumes involved: Southeast Asia with 290,864 tons, or 28.2 percent; the Red Sea, with 230,447 tons, equivalent to 22.3 percent; and in the third position the Arabian Gulf, with 182,548 tons (17.7 percent). The other minority regions in this direction were: the Far East (15 percent), and South Asia (14.7 percent).

To increase the level of depth of the analysis, will also be presented the countries that, within these areas, are found to be most relevant, consistently based on 2019 data. For the category of oil and derived products, the main northbound exporting countries were Iraq (30,986 tons), Saudi Arabia (28,511 tons), and India (19,067 tons), while the principal southbound exporting countries were Russia (33,218 tons), Libya (16,099 tons) and Algeria (13,841 tons). The key northbound importers were the Netherlands (25,164 tons), France (13,110 tons) and Turkey (12,090 tons), while the major southbound importers were China (31,258 tons), India (24,946 tons), and Singapore (20,355 tons). Taking into consideration cereals, the main trade flows are southbound: the most significant exporting countries were Ukraine (21,128 tons), Russia (11,373 tons), and

¹¹⁷ *Supra*, note 115.

Romania (5,535 tons), while the main importing countries were Saudi Arabia (8,912 tons), China (7,020 tons) and Bangladesh (4,739 tons). As for liquified natural gas, the foremost exporting country in the north direction was Qatar, with 23,290 tons, and the importing countries were UK, Italy, Belgium, and Spain. These data confirm what we have seen before, Europe has a significant energy deficit while Middle Eastern countries have a severe deficit in food supply¹¹⁸.

Figure 19 shows the increase over the period 2001-2017 in the trade flows with the major destinations in both directions, northbound and southbound, respectively.

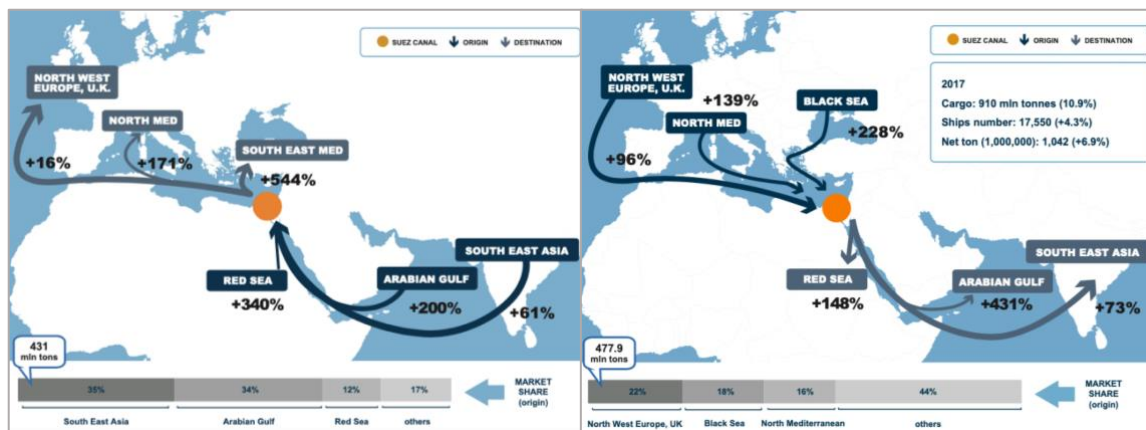


Figure 19. Growth of northbound cargo traffic (links), of southbound cargo traffic (rights) through Suez, by markets of origin and destination.

Source: DEANDREIS, M.; CAMPIONI, D. (2018) *The Suez Canal after the expansion*, SRM and Alexbank, Maritime Economy, October Report, pp. 10-11, https://www.sr-m.it/wp-content/uploads/2018/12/srm_alexbank_suez_2018.pdf.

2.3. Suez Navigational Issues and Concerns

As mentioned in the previous chapter, the threats of extreme weather events, terrorism and piracy are very high in the Suez Canal area. On one side, climate change is intensifying the occurrence rate of sandstorms and extreme heat events in this area. On the other, the risk of terrorism has been perceived as serious especially since 2013, when on July 3, a coup was staged by Egyptian military forces, led by Commander Abdel Fattah el-Sisi, to bring about the resignation of then-president Mohamed Morsi, in favor of el-Sisi himself, who as of 2014 is still the sixth president of Egypt. The Sinai Peninsula is the territory that most represents the home of many terrorist groups openly hostile to the government. One example was on November 12, 2014, when some Islamic State (IS)

¹¹⁸ *Supra*, note 114.

boats encircled an Egyptian ship in the Suez Canal. This made the threat of terrorist attacks increasingly credible. As a result, many ships decided to cross only if escorted by sea or air. Following the canal expansions, the task of ensuring security along the crossing became more complex than before, since it involved monitoring numerous ships without creating delays or slowdowns¹¹⁹.

This part of the analysis will deal with presenting some facts related to closures or obstructions of the Suez Canal, due to reasons of different nature. The main effects caused by such closures and what were, in these cases, the alternatives to the Suez route will be discussed next.

2.3.1. Recent Blockades: the 2021 Ever-Given Accident

On March 23, 2021, the Ever Given, a 400-meter-long ship owned by Japan's Shoen Kisen Kaisha and operated by Evergreen Line, with a maximum capacity of 20,000 TEU¹²⁰, ran aground in the southernmost section of the Suez Canal. On that day, the weather in the area was particularly bad, the winds from the south were very strong. However, the captain of the Ever Given decided not to stop and wait for the weather to improve. The 2020-2021 biennium was challenging for global maritime trade, during the Covid-19 pandemic consumers being in lockdown in their homes were ordering many items online, most of which move via ship. The Ever Given was transporting a cargo from Asia to Rotterdam, in Europe. Hit by a sandstorm, and driven by strong winds, the ship got stuck diagonally across the canal, completely blocking the passage. The expansion and creation of the new Suez Canal, in fact, allowed two-way traffic only in the central section of the canal, while the two sections, adjacent to the Red Sea and the Mediterranean Sea, continued to provide only one-way traffic. In addition to the weather issue, a possible human error during the crossing was also examined. In order to transit the chokepoint two pilots from the Suez Canal Authority must come on board, not to replace the captain, but to supervise and advise on the maneuvers. The captain thus holds the ultimate responsibility and can override a pilot's order in any case. The Merchant Shipping Act of the United Kingdom of 1894 exempts the pilot from any liability in the event of an

¹¹⁹ CHOREV, S., *op. cit.*, pp. 21-22.

¹²⁰ The TEU is an abbreviation for twenty-foot equivalent unit: a standard measure for a container for transporting goods, used to calculate how many containers a ship can carry. *Source*: Cambridge Dictionary, <https://dictionary.cambridge.org/it/dizionario/inglese/teu#:~:text=Significato%20di%20TEU%20in%20inglese&text=abbreviation%20for%20twenty%2Dfoot%20equivalent,capacity%20for%201.5m%20TEUs>.

accident, it reads in fact, «notwithstanding the duties and obligations of a pilot, his presence on board does not relieve the master or officer in charge of the watch from their duties and obligations for the safety of the ship». One of the rare exceptions to the rule is the Panama Canal, where instead the local pilot assumes responsibility for the navigation of any ship through the canal¹²¹. However, in this case, the captain intervened at some points during the transit, but did not actively participate in piloting the ship. The Ever Given was sailing under the flag of Panama, so the Panama Maritime Authority issued the incident report and presented to IMO, two years later, to analyze the causes of the event. The ship was anchored south of the channel, waiting to transit north. The winds were beginning to increase, to the point that the ship's anchor was moved. To regain control, the captain raised it and informed port control that he intended to proceed to a safer position outside the Suez Canal holding area. Nonetheless port control instructed the Ever Given to hold its position because a local pilot was on the way to the ship. Approximately ninety minutes after the first pilot boarded, two additional Suez Canal pilots joined the crew and the Ever Given began its northbound transit. The ship entered the Suez Canal without any issues; however, the wind speed had increased, and blowing sand reduced visibility. The pilots struggled to keep the ship centered in the canal and ordered an increase in speed to facilitate steering. Despite this, the ship began to veer off course and eventually ran aground on the eastern bank of the channel. The ship was also traveling at a speed of 12-13 knots, which exceeds the maximum allowable speed of 8.64 knots for ships in the Suez Canal¹²². The operation to clear the canal took six days, until March 29, 2021, a period that may seem short, but the consequences were substantial for each day of closure. The delay has been estimated in monetary terms as about \$400 million per hour. In fact, the value of cargoes crossing Suez each day averages \$9.7 billion, of which \$5.1 billion is westbound and \$4.6 billion is eastbound¹²³. The Suez Canal Authority has demanded almost \$1 billion in compensation for liberating the ship. Substantial costs were spent on both the equipment and machinery required to remove

¹²¹ GERSON, A. (2023) *Stranding of the Mega-Ship Ever Given in the Suez Canal: Causes, Consequences, and Lessons to Be Learned*. In: LUTMAR, C.; RUBINOVITZ, Z. (2023) *The Suez Canal: Past Lessons and Future Challenges*, Palgrave Macmillan Cham, Switzerland, pp. 232-249, <https://doi.org/10.1007/978-3-031-15670-0>.

¹²² Shipping Italy (2023), *Pubblicato il rapporto finale sull'incaglio della Ever Given: ecco le responsabilità*, July 14, <https://www.shippingitaly.it/2023/07/14/pubblicato-il-rapporto-finale-sul-sinistro-della-ever-given-ecco-le-responsabilita/>.

¹²³ VLAMIS, K. (2021) *The giant ship stuck in the Suez Canal is costing the global economy an estimated \$400 million per hour*, Business Insider, March 26, <https://www.businessinsider.com/boat-stuck-suez-canal-costing-estimated-400-million-per-hour-2021-3>.

the ship and the wages paid to the labor force. Lost tolls will also have to be reimbursed as the canal closure resulted in a change of route for more than 400 ships. After the ship was removed from transit, it was sequestered by the Egyptian authorities until compensation was paid. The Japanese company, which owned the ship, agreed with the SCA to pay a deposit of \$200 million as security for total compensation of \$550 million, a sum far lower than the one initially proposed by the Egyptian authorities. The estimate of about \$1 billion had in fact been reduced after a more thorough assessment of the value of the cargo and damage¹²⁴.

In the history of the Suez Canal, the Ever Given is not the first ship to be stranded. In 2004, the Tropic Brilliance, a South Korean-flagged oil tanker, ran aground in the canal, causing a three-day closure. Same fate as the Hong Kong-flagged Okal King Dor, a cargo ship, which blocked traffic in 2006. Fortunately, in this case the vessel's removal operations took only eight hours. Also in 2017, OOCL Japan blocked the channel for a few hours. Certainly, the most prolonged closure in the history of Suez remains that resulting from the Arab-Israeli wars from 1967-1975¹²⁵.

2.3.2. 2023-2024 Geopolitical Tensions: the Red Sea crisis

After the Ever-Given episode, the Suez Canal has returned to the center of media attention because of the Red Sea crisis that began in 2023. As introduced in the previous chapter, piracy attacks on ships passing through the Red Sea are operated by the Houthis, a Yemeni Islamist group that supports the Palestinian terrorist group of Hamas in its war against Israel. The armed conflict between the two parties began on October 7, 2023, when Hamas launched an attack on Israel, killing about 1,200 people and taking 250 of them away as hostages. The motive that provoked such an action is supposedly the willingness to destroy the state of Israel, to replace it with an Islamic state, putting an end to what they say are Israel's crimes against the Palestinian people. The Hamas group took political command of the Gaza Strip in 2007 and is believed to be supported financially in its actions by Iran. Prime Minister B. Netanyahu ordered a response to enemy fire by invading and shelling Palestinian territory. The conflict continued, alternating between

¹²⁴ Redazione UeT (2021) *Ever Given "in ostaggio", chiesti 200 milioni di dollari di deposito per liberarla*, May 25, <https://www.uominietrasporti.it/professione/ever-given-in-ostaggio-chiesti-200-milioni-di-dollari-di-deposito-per-liberarla/>.

¹²⁵ DZHANOVA, Y. (2021) *The Suez Canal has a contentious history and has been blocked and closed several times since opening*, Insider, March 29, <https://www.businessinsider.com/the-suez-canal-blocked-and-closed-several-times-since-opening-2021-3?r=US&IR=T>.

attacks and temporary truces (e.g., the six days, from November 24 to November 30, 2023) for the release of some hostages¹²⁶.

In this context, the Houthis joined the war, in Palestinian defense. They have gained control of most of northwestern Yemen, including the capital Sana'a, since 2014. Their military commander, Yahya Sarei, declared that «attacks would follow until the Israeli aggression stops and the Palestinians are victorious». They began in November 2023 to conduct attacks in the Red Sea, hijacking the ship *Galaxy Leader*, whose owner they believed to be one of Israel's wealthiest men. Three bulk carriers were hit on December 3, even if minor damage was caused. This provoked the reinforcement of U.S. military forces in the area in support of Israel¹²⁷.

The Houthis have threatened to attack all ships directly or indirectly linked to Israel every 12 hours until it ends its war against Gaza. The European Union, on the other hand, condemned the Houthi-led operations and declared the blockade of international maritime traffic via Suez and Bab el-Mandeb unacceptable. On December 18, the United States announced that it was forming a coalition against the rebels as an international security initiative. Participating were United Kingdom, France, Canada, Holland, Spain, Norway, Italy, Seychelles, and Bahrain. U.S. Secretary of Defense, Lloyd Austin, spoke on the matter, recalling that nations must ally to be able to confront and defeat this threat to the fundamental principle of free navigation. The largest shipper companies such as the Dutch Maersk, the French CMA CGM, the German Hapag-Lloyd, and the Swiss MSC, have decided to close the Suez route until it is again safe to cross the Red Sea¹²⁸. Since December 15, the South Korean HMM and the Taiwanese Yang Ming, have also ordered to circumnavigate Africa. Taiwan's Evergreen suspended the dangerous route and announced that it would temporarily no longer accept cargoes to or from Israel. It was not the only one; Chinese Orient Overseas Container Line, controlled by Cosco, also made this decision¹²⁹.

¹²⁶ BBC (2024) *What is Hamas and why is it fighting with Israel in Gaza?*, February 13, <https://bbc.com/news/world-middle-east-67039975>.

¹²⁷ JUNYENT, M. M. (2023) *Why Are the Houthis Getting Involved in a War Between Israel and Hamas?*, Stimson, December 4, <https://www.stimson.org/2023/why-are-the-houthis-getting-involved-in-a-war-between-israel-and-hamas/>.

¹²⁸ MANCINI, A. (2023) *Operazione nel Mar Rosso, gli Houthis minacciano: «Attaccheremo ogni 12 ore»*, Open, December 19, <https://www.open.online/2023/12/19/operazione-mar-rosso-houthi-minacce-cosa-succede/>.

¹²⁹ Redazione Shipping Italy (2023) *Proseguono le reazioni degli armatori alla crisi del Mar Rosso: ecco i primi effetti stimati*, December 19, <https://www.shippingitaly.it/2023/12/19/proseguono-le-reazione-degli-armatori-alla-crisi-del-mar-rosso-ecco-i-primi-effetti-stimati/>.

It is difficult to quantify the number of attacks operated by the Houthis because many were just inconclusive attempts. Up to December 24, over 120 ships were hit, carrying 1.7 million TEU. In the first week of January, they became 400 ships, with a cargo of 5 million TEU. On January 9, 2024, the rebels launched a strong offense but with no serious effects due to the presence of the coalition “Operation Prosperity Guardian” of mainly western navies. Meanwhile, other countries had joined in the defense in commercial ships passing through Suez. Two days later the British Royal Air Force and the US Navy launched the coalition's first major counterattack on the rebels since the beginning of the conflict. During the last weeks of January, the frequency of attacks on ships reached an alarming number, with assaults occurring daily. They provoked the intensification of airstrikes toward inland Yemen, where missile launches were believed to take place.

As of mid-February, some estimates suggest that the Red Sea will remain closed for months; although the Houthis have expressed willingness to attack only Israeli, American, and British vessels, the situation remains risky for anyone crossing the Red Sea. On February 18, the vessel “Rubymar”, which was transiting the Bab el-Mandeb strait northwards, was hit by a submarine drone and sank 11 days later. This attack provoked an environmental disaster, with fuel and fertilizer leaking in the sea. With the weeks passing, the crisis situation in the Red Sea still remains critical, marked by numerous new attacks on cargo ships. Geopolitical tensions, disruptions on the global supply chain contribute to an environment of profound uncertainty and volatility. On March 6, another vessel, the “True Confidence” was hit by Houthi causing the death of three crew members. In response to the escalating danger, freight forwarders continue to reroute ships until safety is restored in the Red Sea.

As of the latest update in mid-March, tensions remain high following thirteen weeks of intense conflict. The European Union, concerned about the potential long-term consequences on global logistics chains, is actively calling for a diplomatic resolution to the crisis. The need for international efforts to safeguard the freedom of navigation, has become increasingly essential. Although Yemen's government openly condemns the Houthi, there are no signs of their intention to stop. On the contrary, they are thought to be seeking to increase the scale of their missile attacks, leading to a further escalation of the conflict in the coming months¹³⁰.

¹³⁰ JAS, *Updated customer advisory: Red Sea attacks and Suez Canal bypass*, <https://www.jas.com/regions/alerts-advisories>.

2.3.3. *Influence of the Red Sea crisis on Shipping Lanes: Alternative Routes to Suez*

In considering which maritime route to take, that is, the competitiveness of one over another, three main factors must be considered: the distance between the port of departure and the port of destination, the time taken by the ship to travel that route, and the overall costs involved. The first measure is the distance, which will be measured in nautical miles between the two ports. The second is the travel time, which will include not only the sailing period, but also the vessel dwell time, i.e., the time spent in port to unload or load the ship or carry out other activities. Other aspects considered are the stops along intermediate ports to the route, so-called ports of call, then also the time to cross critical points, e.g., the Suez Canal, and depends on the average speed of the vessel, measured in knots. In estimating the time required, the possibility of having delays must also be considered, they can be caused by contingency of ships, or by other events. Regarding the cost analysis, many items need to be considered: first and foremost, the ship's operating costs, handling rates at interlining terminal, canal transit fees, and port dues¹³¹. This section will discuss the main consequences of the ongoing Red Sea crisis of 2023-2024. On the aforementioned occasion, as the safety of navigation is no longer guaranteed, ships have found themselves in the condition of having to avoid the strategic geographical route of Bab el-Mandeb Strait and Suez Canal to reach their destination. However, this forced choice has led in many cases to increased distance traveled, longer transit times, and higher transportation costs.

Distances and travel times of some shipping routes will now be presented to highlight how the Suez Canal avoidance is detrimental to world trade. Beginning by considering the Asia-Europe maritime trade, a first example is given by the Rotterdam-Singapore route. The distance is 8,288 nautical miles, which at an average speed of 23 knots is traveled in 15 days passing through Suez. In the event of its inaccessibility, the alternatives would be the Cape of Good Hope with a distance of 11,755 nautical miles and 21 days and 7 hours of sailing, or the Panama Canal with a journey of 15,335 nautical miles, traveled in 27 days and 19 hours. These data represent the performance of an average containership, while cargo vessels, such as large tankers or bulk carriers, are typically slower and travel between 13 to 17 knots. Calculating transit time for an average of 15 knots, the Suez Canal route requires 23 days, the Cape of Good Hope 32 days and

¹³¹NOTTEBOOM, T. E. (2012) *Towards a new intermediate hub region in container shipping? Relay and interlining via the Cape route vs. the Suez route* Journal of Transport Geography, 22(2), pp. 164–178, <https://doi.org/10.1016/j.jtrangeo.2012.01.003>.

16 hours, the Panama 42 days and 14 hours. In any case, the Suez route shortens the distance by about 3,500 and 7,000 nautical miles, respectively.

Moving to another example, also the Shanghai-Hamburg route is greatly reduced by the Suez Canal, compared to alternatives: in the former case the distance is 10,778 nautical miles, via Panama Canal the nautical miles become 13,664, while circumnavigating the Cape of Good Hope, they are 14,096 nautical miles. Voyage time at a speed of 23 knots is 19 days and 13 hours, 24 days and 18 hours, 25 days and 13 hours, respectively. At a lower speed of 15 knots they become, 29 days and 23 hours, 37 days and 23 hours, 39 days and 4 hours, respectively.

Whereas, for the trade flows between the Far-East and the West Coast of North America, the Hong Kong-Boston route will be analyzed. Via Panama Canal the distance is 11,371 nautical miles, and it takes 20 days and 14 hours to sail at a speed of 23 knots. There are no strong differences via Suez Canal, the distance is 11,430 nautical miles, traveled in 20 days and 17 hours. Reducing the speed to 15 knots the transit time become 31 days and 14 hours in the former case, 31 days and 18 hours in the latter case.

On the other hand, as far as East Asia – East Coast of North American traffic is concerned, generally no chokepoints are crossed¹³².

The crisis in the Red Sea has caused a reduction in trade through the Suez Canal since November 2023 with the consequent lengthening of the route. By February 18, 2024, because of the new security threat, container tonnage passing through the Suez chokepoint dropped by 82 percent and 621 container ships have changed their route, preferring to circumnavigate Africa. The Suez Canal is one of the important sources of income for the Egyptian government, and it is estimated that, until February 2024, the Red Sea crisis has resulted in a 40 percent drop in revenues. Lengthening the route by many miles and days of sailing leads to large extra costs, primarily the fuel needed for the longer route, compounded by the risk of piracy, delays, and cargo damage. These issues contribute to increasingly high insurance and legal claims from shipping companies. Consequently, maritime freight rates have surged. In the last week of December 2023, the container freight rates have risen by \$500. On the Shanghai-Europe route, which usually passes through the Suez Canal, costs almost tripled from the beginning of November to the first week of February, an increase of 256 percent. Soaring rates were recorded in the Shanghai-East Coast North America route as well, which

¹³² Sea Distances Calculator Tool, <https://sea-distances.org>.

usually travels through Suez or Panama. Also in this case, freight rates increased from about \$2,500 to about \$6,500, a variation of 160 percent. Although the largest growth in freight rates concerns the routes involving Suez, cascading effects have also resulted in higher rates in the Asia-West Coast North America route, which does not cross chokepoints. In the latter case, freight rates rose from just over \$2,000 to just under \$5,000, an increase of 130 percent¹³³. Figure 20 represents this trend from the beginning of November 2023 to the first week of February 2024.

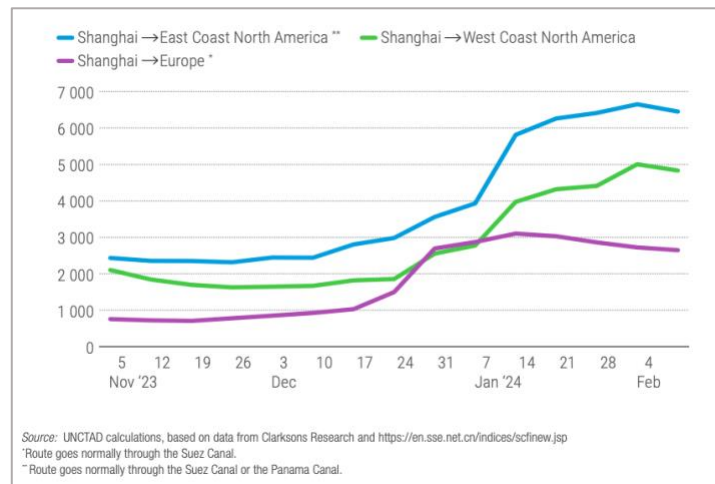


Figure 20. Freight on the Suez Canal route sees the highest surge in rates.

Source: UNCTAD (2024) *Navigating Troubled Waters: impact to global trade of disruption of shipping routes in the Red Sea, Black Sea and Panama Canal*, February, https://unctad.org/system/files/official-document/osginf2024d2_en.pdf.

To the recent disruptions in the Suez Canal, most ships have responded by circumnavigating Africa or in other cases, passing through Panama. At the same time, however, a new challenge is emerging. This solution stems from the fact that global warming is progressively melting the ice in the Arctic region, opening up the possibility of a northeast passage, which took the name of Northern Sea Route (NSR) and allows navigation from the Far East by crossing the Bering Strait and coasting the entire northern Russia to the North Sea, arriving in northwestern Europe. In addition, a northwest passage connects the Bering Strait with the Atlantic by crossing the Canadian inlets¹³⁴.

¹³³ UNCTAD (2024) *Navigating Troubled Waters: impact to global trade of disruption of shipping routes in the Red Sea, Black Sea and Panama Canal*, February, https://unctad.org/system/files/official-document/osginf2024d2_en.pdf.

¹³⁴ Arctic Portal, *Shipping Routes*, <https://arcticportal.org/shipping-portal/shipping-routes>.

Returning to an earlier example, we will now see the difference between Shanghai and Hamburg via Suez or the Arctic route. We have seen that the most convenient route between Suez, Panama, and Cape of Good Hope, is undoubtedly the former, with 10,778 nautical miles that traveled at a speed of 23 knots, allow the ship to arrive at its destination in 19 days and 13 hours. However, using the Northern Sea Route the nautical miles of distance would become 8,034, even if this would not result in a significant reduction in time, about 18 days, because the ship could not maintain the speed of 23 knots even in the ice region. One study estimated that during that stretch the maximum speed would be 14 knots. Considering a container vessel with a capacity of 4,000 TEU¹³⁵ crossing the NSR, the fuel cost savings would be very high, \$616,700, assuming a fuel price of \$465 per ton. In this way a vessel with the aforementioned characteristics would also avoid the considerable toll to cross Suez, resulting in \$135,145¹³⁶.

As a consequence, countries' interest in the NSR has increased in recent years, which, when operational, will inevitably reduce trade in the Indian Ocean and Suez Canal. The latter would continue to be convenient in some routes, e.g., from the Middle East to Europe is a vital gateway, but also from the Southeast Asian countries (Vietnam, India, Thailand, Malaysia) to Europe. While, in the longer Northeast Asia-Northwestern Europe route the Arctic route becomes extremely competitive. In this case, the countries mainly concerned would be Japan, Korea, China. Some estimates predict that the NSR, compared to Suez, will reduce the average shipping distance by one third, and as a result also the days of sailing. The trade through the Suez Canal could be reduced by as much as two-thirds because of the Arctic route.

However, a number of obstacles make the project still distant in time: firstly, it is not entirely predictable how quickly the ice will melt to allow ships to transit without icebreakers and be able to proceed at a faster speed. Another problem concerns logistics along a trade route characterized by extreme weather conditions¹³⁷. Russia in particular is investing heavily in developing this route, claiming control over the waters bordering its territories by applying transit fees. China is also collaborating on the project later called the "Ice Silk Route". There is a need to build infrastructure, ports along the way to

¹³⁵ Other vessel's characteristics: Gross tonnage (GRT) 39,941; Net tonnage (NRT) 24,458; Deadweight ton (DWT) 50,790; Suez Canal Net Tonnage (SCNT) 57,387; Draught in meter 12,6.

¹³⁶ WERGELAND, T. (2010) *Arctic Shipping Routes - Cost Comparisons with Suez*, <http://www.arctisearch.com/tiki-index.php?page=Arctic+Shipping+Routes+-+Cost+Comparisons+with+Suez#422>.

¹³⁷ BEKKERS, E; *et. al.* (2015) *Melting Ice Caps and the Economic Impact of Opening the Northern Sea Route*, CPB Netherlands Bureau for Economic Policy Analysis, May, <https://boris.unibe.ch/89212/1/Melting%20Ice%20Caps.pdf>.

facilitate trade logistics. Many navigation tests in the Arctic region are being conducted by the Chinese giant shipping company COSCO¹³⁸.

According to the research conducted by J. Verny and C. Grigentin, «among the 20 largest container ports in the world, 13 are Asian and 8 of these are Chinese. Asian mother ships are gradually abandoning Southeast Asia for Northern China. On the basis of this new geography, it would seem worthwhile to transfer part of the containerized freight from the Royal Road (Southern Sea Route) to the NSR. [...] Following the example of Egypt for the Suez Canal, rights of passage would represent an important source of profits for Russia were the NSR to become a major axis of international transit»¹³⁹.



Figure 21. The Northern Sea Route (NSR) and the Southern Sea Route (SSR)

Source: BEKKERS, E; *et. al.* (2015) *Melting Ice Caps and the Economic Impact of Opening the Northern Sea Route*, CPB Netherlands Bureau for Economic Policy Analysis, May, <https://boris.unibe.ch/89212/1/Melting%20Ice%20Caps.pdf>.

However, the rate at which the ice caps are melting cannot be estimated exactly and on the other hand there are still uncertainties about the logistical barriers along the NSR, so it is still unknown when this route will actually come into year-round use, the passage would in fact be navigable in the summer months but not in the winter due to ice. E. Bekkers, J. F. Francois, and H. R. Romagosa in 2015 estimated this horizon in the year 2030¹⁴⁰. While the NSR represents an economic and commercial opportunity, nevertheless it demonstrates how problematic the effects of climate change and global warming are currently and will be in the future.

¹³⁸ CHOREV, S., *op. cit.*, pp. 18-20.

¹³⁹ VERNY, J., GRIGENTIN, C. (2009) *Container shipping on the Northern Sea Route*, International Journal of Production Economics, 122(1), pp. 107–117, <https://doi.org/10.1016/j.ijpe.2009.03.018>.

¹⁴⁰ *Supra*, note 137.

2.4. Recent Development Projects and Future Investments

In light of the recent challenges posed to the Suez Canal by alternative routes, especially the Arctic route, the SCA needs a continue flow of investments and development projects in the region to maintain the route's competitiveness on alternatives. Some of the investment plans have been operated by the Egyptian government, the SCA, and other local companies, but many have been financed by external countries. The following section will be concerned with presenting the main interventions operated in the area over the past decade and the future development prospects underway. This will particularly involve China, as the Suez Canal has become part, since 2013, of the Chinese investment plan called the Belt and Road Initiative. Sustainability choices will then be discussed, as well as Egypt's ambitious plan to build a Green Canal by 2030. The country has indeed growing interests in the blue economy, that is, the creation of a sustainable economic system through technological innovation.

2.4.1. Infrastructural, Industrial, Logistical Projects in the Suez Canal Economic Zone

Throughout the chapter, presenting the history of the Suez Canal, at one point the SCZone was introduced¹⁴¹ as an area established in 2015, which includes two integrated areas (Ain Sokhna and East Port Said), two development areas (Qantara West and East Ismailia) and four ports (West Port Said Port, Adabiya Port, Al Tor Port and Al Arish Port). The goal for which it was founded was to contribute to the development of the region, to the obtaining of investment flows, to enhance the vitality of the Suez geographical area as a main hub for world trade.

Beginning with the Ain Sokhna area, an investment project has involved the construction of new berths in the port, trading yards, and new commercial and logistics areas. The plan will cost the Egyptian Ministry of Transport EGP 20 billion (about \$420 million), and the first phase was already completed in March 2023. Another infrastructure project is the one involving Al Arish Port. In this case, the funders would be the Suez Canal Authority and the Armed Forces Engineering Authority. The plan was to deepen the draft for 12 m so that larger ships could stop at this port. The cost was about EGP 4 billion (about \$84 million) and was estimated to be operational by early 2024. As regards industrial and logistics projects, the construction of a 300,000 square meters extended area entirely dedicated to logistics in the Sokhna area was financed by Dubai Ports World, an Emirati

¹⁴¹ See Section 2.1.7.

multinational logistics company. The Egyptian company Roots Commodities and the Emirati company Rosa Grains have instead signed a partnership to finance the construction of a bulk grain terminal in East Port Said. The aim was being able to handle 1.5 to 7.2 million tons of grain per year, the area available was 267,000 square meters and the cost would be EGP 2.2 billion (\$46 million). Another project involved the construction of an industrial complex for methanol and ammonia production in the Ain Sokhna area, to increase the exports of petrochemical products. The cost was \$1.6 billion in the first phase, \$1 billion in the second, with an estimated completion in 3 years, starting in 2021. It was proposed by the SCZone Authority, which established the International Society for Methanol and its Derivatives. Other development plans included new logistics services for ships entering the SCZone, such as refueling and catering starting in 2023 in Port Said and Suez¹⁴².

Subsequently, Chinese investments in the Suez area, deserve separate attention. They are part of the larger Belt and Road Initiative (BRI), a major Chinese investment project that aspires to create an overland logistics link route that traces the ancient Silk Road, uniting Western China with Central Asia, Russia to Central Europe. It will rely on roads, railway lines and oil pipelines. Then, a sea route will connect the ports along the Chinese coast with the countries of Southeast Asia, India, Africa and then travel through Suez, to the Mediterranean Sea. This route will require substantial investment in ports and logistical accommodations in the areas that are part of the route.



Figure 22. The Belt and Road Initiative

Source: DEANDREIS, M.; CAMPIONI, D. (2018) *The Suez Canal after the expansion*, SRM and Alexbank, Maritime Economy, October Report, https://www.sr-m.it/wp-content/uploads/2018/12/srm_alexbank_suez_2018.pdf.

¹⁴² DEANDREIS, M.; CAMPIONI, D. (2023) *op. cit.*, pp. 60-61.

The project was announced by President Xi Jinping in 2013 and is expected to be completed in 2049, with a massive investment of \$8 trillion.

In terms of our area of interest, China has signed partnership agreements with Egypt to help finance new logistics and industrial areas along the Suez Canal. The BRI, combined with the 2015 expansion project presented above, had the potential to make Suez one of the most relevant hubs in the world's maritime trade routes. An example of Chinese investment dates back to 2013, when China's TEDA Corporation, signed a 45-year development agreement with SCZone to build infrastructure in an area adjacent to Suez of 7.23 square kilometers. Financially, this was an amount of \$600 million invested in 38 different projects. Another project worth \$45 billion was about the construction of a new administrative capital, not far from the city of Cairo, by the Chinese company China State Construction Engineering Corporation. In 2016, China and Egypt signed a remarkable number of partnership agreements, specifically 21, for a total sum of \$15 billion¹⁴³.

Two additional companies that should be mentioned are Chinese COSCO, a global shipping giant, and Hutchison Ports, from Hong Kong. In 2023, the former announced a \$375 million investment in the construction of a new terminal in the Sokhna port, with a 30-year development horizon. In COSCO's vision: «continuing to improve our global terminal network is one of Cosco Shipping Ports' most important development strategies. Currently, the company already has a non-controlling terminal in Egypt, the Port Said Suez Canal Terminal, and the investment in Sokhna Port will help the company improve its terminal network in the regions, as well as optimize the company's global layout»¹⁴⁴. Hutchison Ports also declared future investments for a new container terminal in Sokhna Port, and another one in the port of Alexandria, called B100. Approximately the combination of the two projects will cost \$700 million. «We are delighted to announce our investment in Sokhna and B100, which reflects our commitment to Egypt and the wider African market. These investments will enable us to provide high-quality services to our customers and contribute to the growth and development of the local economy», commented the Group Managing Director of Hutchison Ports¹⁴⁵. Some recent investment

¹⁴³ DEANDREIS, M.; CAMPIONI, D. (2018) *op. cit.*, pp. 28-29, 33, 47.

¹⁴⁴ SI, K. (2023) *Cosco Shipping Ports invests in Egypt's Ain Sokhna container terminal*, Seatrade Maritime News, March 17, <https://www.seatrade-maritime.com/ports/cosco-shipping-ports-invests-egypts-ain-sokhna-container-terminal>.

¹⁴⁵ SHAW-SMITH, P. (2023) *Hutchison Ports investing \$700m in Sokhna and Alexandria terminals* Seatrade Maritime News, March 16, <https://www.seatrade-maritime.com/ports/hutchison-ports-investing-700m-sokhna-and-alexandria-terminals>.

agreements also cover green hydrogen and renewable energy, but these will be presented in the next section.

2.4.2. *Blue Economy and Sustainability Efforts: Green Canal by 2030*

As defined by the World Bank, the blue economy is «the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health». Therefore, the blue economy encompasses multiple sustainable economic activities with the oceans, seas, coasts, and their preservation at the core of the discussion. Climate change is damagingly altering ocean balances, which is why international organizations have been mobilizing for years. The IMO is promoting measures to reduce the impact on the environment¹⁴⁶. Also, within the framework of the United Nations' Agenda for 2030, the Sustainable Development Goal number 14 "Life below water" is entirely dedicated to the conservation and sustainable use of the oceans, seas, and marine resources. Particularly by 2025, countries have committed to significantly reduce all forms of marine pollution, especially from activities carried out on land. By 2030, the goal is to support small island states, both the developing and the least developed, promote the sustainable use of ocean resources, in the various economic activities: fishing, aquaculture and tourism, for example¹⁴⁷. The blue economy has three main pillars: the disposal of pollution, the recycling, and the fostering of renewable energy. As far as the Suez Canal is concerned, there are multiple areas where action can be taken with opportunities for improvement in terms of sustainability and blue economy. Some possible applications include:

- The transition to green, carbon-neutral fuels as a means of reducing carbon emissions and negative environmental impacts.
- The achievement of a Green Canal by 2030 through the development and application of hybrid systems that generate electricity for navigation guidance stations through the Suez Canal.
- Potential improvements in the waste management, to prevent pollution risks and oil or chemical spills into the waters, by applying stricter marine safety procedures.

¹⁴⁶ EL-SAQTY, K. (2023) *Blue Economy and Future of Investment in Suez Canal*, The Egyptian Cabinet: Information and Decision Support Center (IDSC), December, pp. 2-6, <https://idsc.gov.eg/upload/DocumentLibraryIssues/AttachmentA/8842/Blue%20Economy%20and%20Future%20of%20Investment%20in%20Suez%20Canal%20-E%20.pdf>.

¹⁴⁷ United Nations (2015) *Goal 14: Conserve and sustainably use the oceans, seas and marine resources*, Agenda 2030, <https://unric.org/en/sdg-14/>.

- The development of tourist accommodation systems in the SCZone: many of the ships that transit across Suez each year are in fact cruise ships or passenger transport ships.
- Investments in sustainable fishing activities¹⁴⁸.

According to the SCA in 2021, the Suez Canal, by shortening the distance of many commercial sea routes, led ships to save a total of 10.3 million tons of fuel, reducing CO² emissions by 31 million tons. Moreover, the construction of the New Suez Canal has contributed to save 53 million tons of CO², because of the greatly reduced transit time, and waiting time. In the vision of the IMO's Secretary-General: «the long-term strategy of the Suez Canal to transform into a green channel will play an important role in promoting the trend towards green transformation in the maritime transport industry, pointing to the importance of the Suez Canal offering its successful experience and expertise to help reduce harmful carbon emissions»¹⁴⁹.

In terms of investments in sustainability and green hydrogen, the SCZone agreed with several Chinese stakeholders on funds of \$15.6 billion in 2023. The occasion for the two countries' representatives to meet was the Belt and Road Forum for International Cooperation held in October 2023 in China, which was also attended by the Egyptian Prime Minister. The negotiations resulted in a promise to build 11 green hydrogen and production sites in the Suez Economic Zone. Other analogous financing comes from Indian renewable energy company Ocior in the amount of \$4 billion; C2X, a Maersk company for green methanol development, about \$3 billion; Arab ACWA Power, American DAI, Emirate TAQA, and many others. Hala Al-Said, Egypt's Minister of planning and economic development, claimed that an amount of \$500 billion will be invested in the green transition by 2030¹⁵⁰. In 2022, as term goals, Egypt had set to use 20 percent electricity derived from renewable sources only, a number that is expected to increase to 42 percent by 2035, exploiting mainly solar and wind sources. In fact, the 16 navigation monitoring stations along the Suez Canal are powered by wind power, in the ultimate goal of being a green shipping channel by 2030¹⁵¹.

¹⁴⁸ *Supra*, note 146.

¹⁴⁹ Suez Canal Authority (2019) *The Green Canal: a new strategy*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/greencanal.aspx>.

¹⁵⁰ KALLANISH (2023) *Suez Canal inks \$15.6 billion green H2 deal with Chinese investors*, South East Asia Iron and Steel Institute, November 10, <https://www.seaisi.org/details/23790?type=news-rooms#:~:text=Egypt's%20Suez%20Canal%20Economic%20Zone,information%20service%20said%20this%20week>.

¹⁵¹ DEANDREIS, M.; CAMPIONI, D. (2023) *op. cit.*, pp. 61-62.

CHAPTER III: FROM A GLOBALIZED WORLD TOWARDS DEGLOBALIZATION, RESHORING, AND GEOPOLITICAL FRAGMENTATION

SUMMARY: 3.1 Waves in the Globalization History – 3.2 Geopolitical Reconfiguration of Supply Chains – 3.3 Future Global Trends and Implications

3.1. Waves in the Globalization History

Every scholar has given his own definition of globalization, and thus there is no universal definition of it. Several of them agreed on considering it as a progressive extension and intensification of relations on a global scale, leading to interdependences among economies, societies, and cultures. The term was first coined by *The Economist* magazine in 1962 as a synonym for the progressive liberalization of world markets and the reduction of trade barriers to global flows of goods and capital. However, its spread dates to the mid-1990s, when the advent of technology, economic developments, and geopolitical trends enabled the unification of markets¹⁵².

In the opinion of some, geographic boundaries tend to disappear when talking about globalization, because the markets act freely, and technological innovations, especially in the communication and information sector, make the world shrinking. Consequently, we can ask ourselves if distance still represents a physical barrier between countries. Geographer David Harvey views globalization as a «compression of space and time», achieved through the creation of a dense network of virtual interdependence and instantaneous communication. Accordingly, the real distance is always less than the actual geographical distance. Sociologist Manuel Castells agrees that globalization provoked a network society as a consequence of information technology, and the real issue to him is distinguishing who is connected to the network and who is not.

Another point of discussion concerns the fact that the power of nation states may be declining because of globalization, leading to a cultural uniformity of the world that some argue to be a homogenization of the American culture at the expense of traditional diversity. Conversely, sociologist Roland Robertson theorized the emergence of opposing movements to globalization as evidence of the defence of local cultures. He believed that they would retain their own identity even in an interconnected world. In this discourse,

¹⁵² Encyclopedia Treccani (2010) *Globalizzazione*, Dizionario di Storia, [https://www.treccani.it/enciclopedia/globalizzazione_\(Dizionario-di-Storia\)/](https://www.treccani.it/enciclopedia/globalizzazione_(Dizionario-di-Storia)/).

the term glocalization proved very useful. It was used by Robertson to convey the dual nature of globalization: on the one hand, localities are influenced by global flows; on the other, they need a specific place to be embedded in¹⁵³.

Geographer Peter Dicken defined this aspect as “spatial fixedness” because every event happening in the field of economy, culture, or politics, needs in any case a space in which take place. Therefore, we can look critically at those who think that globalization is nothing more than a process that unfolds like a blanket across the globe, provoking only homogenization, where everyone acts according to the same global system of values.

We recognize instead that globalization is “historically, spatially and politically contingent”, as Professor Geoffrey Jones claimed. Globalization is not a single universal phenomenon that applies to every place in the same way, it has instead “to be understood within the context of that situation”¹⁵⁴.

The discussion on the concept of globalization is thus wide-ranging and multiple points of view must be taken into consideration. This section aims to show how geopolitics has caused in recent times the reconfiguration of international supply chains and influenced globalization trends. This analysis will be presented after having retraced the history of globalization, outlining the significant developments in the economic sphere before and after the world wars, through the 1990s and finally into the 21st century, for a discussion on contemporary phenomena.

3.1.1. *First wave: Pre-WWI Globalization*

Throughout history, there have been phenomena that some scholars believed could be understood as early forms of globalization, although the term is not entirely adequate. Historian and economist Immanuel Wallerstein traced the beginnings of the globalization’s concept back to the colonial expansions of the 1500s conducted by Europeans. Geographic explorations, in fact, began to ensure stable trade even between very distant continents, giving rise to a form of multilateral interdependence that would intensify in the nineteenth century. Osterhammel and Petersson trace in their work *History of Globalization* the emergence of the modern world economy to the second half of the eighteenth century when a “double revolution” took place: on one side, the industrial revolution, which began in England in 1760, and, on the other, the French

¹⁵³ OSTERHAMMEL, J. PETERSSON, N. P. (2005) *Storia della globalizzazione: Dimensioni, processi, epoche*, Il Mulino, Bologna, pp. 7-15.

¹⁵⁴ MURRAY, W.E.; OVERTON, J. (2015) *Geographies of Globalization*, Second edition, London and New York, Routledge, pp. 4-7, 67-70.

revolution of 1789. The two events combined greatly increased the pace of production, allowing the exploitation of economies of scale and standardization, also improving the capacity for transportation and communication. Thus, in these years world economic relationships began to strengthen. One example is given by the English cotton industry: the United Kingdom imported raw material from abroad and exported processed textiles, this market was important to the British economy to the point that in 1830 it accounted for 70 percent of English exports.

Moreover, the introduction of the steam engine had a dual positive effect: on the one hand, it increased the productivity of factories that were able to produce more goods and reduce unit costs, as in the case of English cotton processing. On the other hand, the use of steam in navigation allowed for the intensification of exchanges on maritime trade routes, both to the Atlantic and the Pacific. In 1850 the London-Shanghai route was sailed by a steamship for the first time. In 1869 the Suez Canal was opened, which attracted English attention to greatly accelerate its trade with India. Transportation costs had been so reduced that bulk goods were being exchanged over great distances.

In addition to maritime shipping, another important aspect of the industrialization of transportation was the development and subsequent use of railways. During the 1800s, few countries outside Europe had invested in their construction, among them Japan, Argentina, and India, but also Turkey, South Africa, and China. Railroads in these countries were particularly important as they enabled to connect regions previously excluded from trade.

Furthermore, Samuel Morse's invention of the telegraph in 1839 represented a breakthrough in communication across great distances: thanks to the installation of cables, which allowed the transmission of data through codes, messages could be sent first between two locations on land, then via undersea cables to greater distances as well. In 1870, they completed the installation of the Porthcurno (UK)-Bombay undersea cables through Gibraltar, Malta, and the Suez Canal. Since two men in distant countries could exchange messages, the telegraph's invention had very prominent globalizing effects.

Other aspects that favored the liberalization of markets were certain political choices. For example, in 1846 the British Parliament repealed the Corn Laws, which had restricted grain imports since 1815 to protect the domestic market from cheaper foreign grain. Economist David Ricardo, two years later, developed the theory of comparative advantage to show that trade between two countries should be left free because each country would specialize in the production in which it had a competitive advantage.

Britain could thus specialize in the production and export of industrial manufactures, such as cotton products, while other countries, would focus on the export of agricultural products. Free trade would have led to lower prices and economic development for the parties involved in trade. In the mid-19th century, liberalism and Marxism represented political projects that embraced the utopian idea of globalization, in which the nation-state played a marginal role. Fervent advocates of free trade, such as Richard Cobden, believed that the removal of trade barriers would lead to prosperity and harmony for all humanity. This view was based on the idea that conflict-free interaction was possible if states refrained from intervening. For Karl Marx, the state and politics were also placed in the background: according to him, free trade tended to intensify conflict between capitalists and workers, accelerating the advent of social revolution. So, in its revolutionary sense, Marx was in favor of free trade.

As in England, free trade began to take root also in other Western countries. However, it was not able to fully establish itself in other countries, for example in the Eastern empires (Ottoman, Chinese, Japanese). In these cases, they were forcibly engaged in this integration by the Western economies. The phenomenon represented a form of imperialism, especially conducted by France and Britain. This economic integration also involved exporting the European social model, seeking to exploit the “civilizing mission” to establish Western political institutions in the colonies. During the 1800s, England was seen as the world's leading power, dominating the seas, and showing a prosperous economy, which was increasingly developing thanks in part to lucrative colonies. Reform movements were thus beginning to arise around the world to imitate the successful British Western model. The volume of world trade grew explosively between 1800 and 1913, by 25 times. Significant momentum toward trade expansion occurred especially from 1870, when it was registered an extraordinary acceleration. However, most international trade was concentrated within a triangle that included Western Europe, North America, and Australia-New Zealand. Among the other colonies, only India and South Africa were really open to international trade. The main promoter of this new phase of integration of the world economy was clearly the Great Britain.

Another phenomenon that heralds globalization is migration. Many people in Southern and Eastern Europe began as early as the nineteenth century to migrate to the more developed Germany, Switzerland, France. Between 1850 and 1914 nearly 70 million people left their country, most of whom were headed to the more distant North America.

Immigrants there contributed to economic development, after arriving in the new country many started businesses, created jobs and wealth for the country.

In addition to people, capital also began to move much more freely between countries. International investment could take place safely from inflation and currency fluctuations because major currencies were anchored to gold in the *gold standard*, the international currency system used from 1870 until 1914. For example, England alone invested about 6 percent of its GDP each year in building infrastructure and railways in various foreign states, usually these territories were also exploited for agricultural production that was then exported back to Europe. However, some regions especially in Africa, Latin America and Central Asia were marginally part of the nascent world economy because they were not reached effectively by transportation systems. For these areas not yet colonized, international competition grew over the years. In 1880, colonized territories were estimated to have a surface of 25 million km²; by 1913 they more than doubled to 53 million km². These appropriations sometimes provoked real armed conflicts, other times they were decided in advance, as in the case of the colonial partitioning of Africa. Until 1800, some areas on the African coasts had been colonized, but the central area had remained rather excluded from trade and independent. Between 1884 and 1885, the Berlin Conference was held to define how the European nations would split the African territories. The countries involved were Belgium, Germany, France, Portugal, Spain, England, and Italy. The expression “free trade imperialism” is used by some historians to recall this period because the nascent international economy was based on the values of liberalization, but actually took advantage of the exploitation of less developed territories rich in natural resources. It is precisely this tendency toward the colonial division of the world that highlights the complex choice between the terms *globalization* and *fragmentation*. This is a discourse that will return throughout history and will therefore be discussed later¹⁵⁵.

The first phase of globalization can thus be enclosed specifically in the years 1870-1914, and the trend that best describes trade relations in this period is the north-south colonial model as industrialized countries in Europe exported finished goods to southern countries while importing agricultural products from them. The degree of international openness, calculated by taking exports and imports into account in relation to national production, increased from 25 percent in 1870 to 40 percent in 1914.

¹⁵⁵ OSTERHAMMEL, J. PETERSSON, N. P. *op. cit.*, pp. 21, 51-68, 74-84.

Nevertheless, the years 1915-1950 were characterized by two World Wars and the Great Depression started with the Wall Street crash of 1929. This period tremendously impacted international relations because nation states caused the regress of «80 years of technological progress in transportation»¹⁵⁶. World conflicts caused indeed a major shock to the growing world economy, the international division of labor was abandoned, thus exports of manufactured goods and commodities collapsed to convert industries to the production of war machines. The gold standard was also left behind in order to finance the war by printing more money, although causing inflation and the loss of purchasing power. The liberalism of the past century was now opposed by the nationalist and protectionist trends, aimed at shielding domestic industries from foreign activities, and involved large investments by the nation states. The end of World War II represented a watershed year in that a new world order had to be re-established, mending previous relationships toward a new phase of globalization, no longer driven by European countries but by the United States, which had emerged as the great power of the new century.

3.1.2. *Post-WWII Globalization: Bretton Woods Conference and Multilateralism*

The post-World War II period was very different from the first and managed to produce many transformations in economies, societies, and politics. Economically, the world economy grew at an average annual rate of 5.1 percent from 1948 to 1958. From this year until 1970 it rose by 6.6 percent. Economic growth progressed at the same pace as the intensification of international trade¹⁵⁷.

A turning point in the recovery process of the world economic system was the Bretton Woods Conference of 1944, formally known as the United Nations Monetary and Financial Conference. On this occasion, delegates from 44 nations met to agree on what has been called the “institutional architecture” that guided the globalization of the new economy. Parties saw international trade as the main lever for economic development, which could have restarted only by removing trade restrictions. The conference planned the founding of two major organizations: the International Bank for Reconstruction and Development (IBRD) with the purpose of aiding the recovery of economies after World

¹⁵⁶ DE BENEDICTIS, H. (2007) *La globalizzazione*, OECD, Employment outlook, <http://www.ecostat.unical.it/Algieri/Didattica/Economia%20Internazionale/materiale%20x%20internazionale/Globalizzazione.pdf>.

¹⁵⁷ OSTERHAMMEL, J. PETERSSON, N. P. *op. cit.*, pp. 83-84, 92-93, 97, 104.

War II, by financing the building of infrastructure and promoting economic growth. This institution will then become known as World Bank (WB). The second authority was the International Monetary Fund (IMF), which had to regulate unbalances in the international balance of payments through adjustments in the fixed exchange rate system¹⁵⁸. Hence, the two organizations came into force in 1945, and were dedicated to the financial and monetary spheres, respectively. Moreover, it was hypothesized the establishment of an organization dedicated to the promotion of multilateralism through the liberalization of international trade. The proposed institution discussed in the Havana Charter of 1947 was the International Trade Organization (ITO). However, this Charter never entered into force and the ITO was not founded. The party that stood in the way of a successful outcome was the United States itself, the initiators of the initiative. From a formal point of view the power of the President of the United States, at the time Truman, to bind the country to such an agreement was questioned by the US Congress. From a more substantive point of view, it is thought that the motivations were deeper and concerned protectionist tendencies after some pressures from large US lobbies that feared, with free trade, to lose part of foreign markets. In the absence of an international trade organization, between March and October 1947, 23 countries¹⁵⁹ decided to negotiate a trade-related agreement that would ensure the reduction of international tensions, the expansion of world exchanges, and the development of trade through fair competition. The agreement was called General Agreement on Tariffs and Trade (GATT) and was signed in Geneva on October 30, 1947. Over the years, the number of member states gradually increased, allowing control and regulation over a larger percentage of world trade¹⁶⁰.

A fundamental principle of the GATT is the elimination of discrimination in international trade, as established in Article I of the first section with the Most Favored Nation clause (MFN) and in Article III of the second section with the principle of National Treatment (NT). These two clauses must be considered together since they complement each other: the first guarantees “external equality”, that is, the prohibition of discrimination outside national borders, while the second promotes “internal equality” between domestic goods

¹⁵⁸ US Department of State, *The Bretton Woods Conference of 1944*, <https://2001-2009.state.gov/r/pa/ho/time/wwii/98681.htm#>.

¹⁵⁹ The signatory countries were Australia, Belgium, Burma, Brazil, Canada, Czechoslovakia, Ceylon, Chile, China, Cuba, France, India, Lebanon, Luxembourg, Norway, New Zealand, the Netherlands, Pakistan, the United Kingdom, Southern Rhodesia, Syria, the United States of America, and South Africa. *Source*: GATT (1947) https://www.wto.org/english/docs_e/legal_e/gatt47_e.pdf.

¹⁶⁰ FERRO, A.; RAELI, G. (1999) *La liberalizzazione dei mercati mondiali. Dall'ITO alla WTO passando per il GATT*, Milano, pp. 1-20.

and imports. Under the MFN clause, each country is required to extend to its trading partners the same advantages, concessions, privileges, or favors granted to another state, thus ensuring fair treatment. This principle aims to promote uniformity in customs duties and taxes on imports and exports. This marks a shift from bilateralism, in which two states trade preferentially with each other but not for each other, to multilateralism, in which all countries benefit from the same reduction in trade barriers. The National Treatment clause stipulates, instead, that products of one contracting party imported into another contracting country may not be subject to higher domestic taxes or fees than those applied to similar domestic products. In other words, this clause counteracts the discrimination of goods from different countries and ensures that foreign goods within national borders receive the same treatment as domestic goods¹⁶¹.

Part Three to Article XXIV GATT presents a number of exceptions to the general principles outlined so far, namely Customs Unions and Free Trade Areas (FTAs), which allow preferential treatment against certain countries with the aim of facilitating trade between adjacent territories. The application of this article led to conflicting views in 1947, issues concerned mainly the possible trade-distorting effects that would be produced to the detriment of other members of the agreement. In both forms of association, the result is a territorial space in which trade is free: in the case of the Customs Union, economic integration is greater because a common external customs tariff is established vis-à-vis all third countries; whereas, in an FTA each state belonging to the area may have a different customs policy, and therefore, may establish its own customs tariff.

This peculiarity introduces the risk of distortion of FTA trade: assuming that a good is transferred from one country to another, and high duties are imposed on imports for that good in the recipient country, one might think of importing the good into an adjacent state with lower tariffs, and then transferring it within the region. To obviate this possibility, Rules of Origin (regulations and criteria for specifying the national source of a product) were introduced, so that only goods actually produced in the region would move freely within the free trade area. In the case of Customs Unions, however, the choice of a common trade policy and Common External Tariff (CET) vis-à-vis all third parties make it impossible to bypass legislation¹⁶².

¹⁶¹ VISONI, F. (2017) *Il GATT 1994 nel sistema della WTO*, Ius in itinere, September 29, <https://www.iusinitinere.it/gatt-1994-nel-sistema-della-wto-5225>.

¹⁶² *Supra*, note 160.

After the II World War the conflicts between France and Germany over control of the coal and steel resources of the Ruhr and Saar, and the plan devised by Robert Schuman, in collaboration with Jean Monnet, to entrust control of these territories to a supranational supervisory entity, created the basis for the European Community integration. Implementation of the proposal laid the groundwork for the unification of the coal and steel industry into a European Coal and Steel Community, which was achieved in 1952 by France, West Germany, Italy, Belgium, the Netherlands, and Luxembourg. In 1958, two more milestones were achieved: the European Economic Community and the European Atomic Energy Community, based on the 1957 Treaty of Rome. However, it was not until the Maastricht Treaty of 1993, and later the Lisbon Treaty of 2009, that the European Union was established as a customs union¹⁶³.

The history of Europe as well as that of Japan owes much to the United States for having supported them in the postwar period with the Marshall Plan (1948-1952) and the Colombo Plan of 1950, respectively. The political reason behind the costly recovery plans was essentially to avoid the spread of communism, it was indeed important for U.S. to provide aid to these countries, in order to have them “on the same side” during the Cold War.

In parallel, at the Bandung Conference in Bali in 1955, the concept of a group of “non-aligned countries” was established. They shared the idea of being involved neither in the first capitalistic bloc led by the United States nor in the second communist bloc led by the USSR. Political leaders who were active in promoting this group were, for example, Nehru for India, Tito for Yugoslavia, Nasser for Egypt, Zhou Enlai for China. The “Third World” (term coined later) countries shared the idea of getting out of the bipolar logic and had in common as their main political objective the process of decolonization to become politically independent and regain their national sovereignty. Therefore, the “Third World” had originally a political, not an economic meaning and was not synonymous of underdevelopment¹⁶⁴.

The decolonization process took place in these years and led to many conflicts in Africa and Asia: in India in 1947, in Libya in 1951, in Morocco in 1951, in Algeria in 1961, in Angola and Mozambique in 1974. Remarkable were the Indochina War between 1946

¹⁶³ MENGOZZI, P.; MORVIDUCCI, C. (2018) *Istituzioni di diritto dell'Unione Europea*, Cedam Wolters Kluwer, Milan.

¹⁶⁴ U.S. Department of State, *Bandung Conference (Asian-African Conference) of 1955*, Office of the Historian, Foreign Service Institute, <https://history.state.gov/milestones/1953-1960/bandung-conf>.

and 1954, and the Vietnam War between 1955 and 1975. After decolonization, many countries developed the need of strengthening their national industrial structure and applied the Industrialization as a Substitute of Imports (ISI) policy, an economic strategy that sought to develop national industry by means of trade obstacles and customs barriers. This choice would have reduced imports and thus allowed countries escaping from the world economy, deemed the “culprit of underdevelopment”. Many countries in Africa and Latin America tried to implement this policy, but it was often unsuccessful due to bureaucratic rigidities, political instability, civil wars, corruption, and totalitarian regimes. Some success was recorded, however, in Southeast Asia, for example, in South Korea, Honk Hong, and Singapore, which sought to follow Japan's rapid growth of the 1960s. The 1960s were, for the Western bloc, years of rapid and strong economic growth because in this period multinational firms started to affirm themselves in the world economy. These companies established production or distribution branches in other countries, yet the administrative headquarters remained in the home country. The mechanism through which the parent company initiates and controls the branches was Foreign Direct Investment (FDI)¹⁶⁵. This model was followed by many U.S. multinationals that brought companies to Europe, Asia, and Latin America, resulting in the spread of U.S. consumer products¹⁶⁶.

Moreover, a turning point in the logistics of international trade was the invention of the container in 1956, when an American entrepreneur, Malcom McLean, wondered if there was a faster and more efficient way to unload a truck and load the goods onto the ship. This operation at the time took up to 3 weeks. The container optimized the use of space on board and allowed transportation to continue by train or wheel without emptying the container itself. The Economist claimed that: «the shipping container has been more of a driver of globalization than all trade agreements in the past 50 years together», since most goods travel by ship, and this invention enabled rapid growth in world trade¹⁶⁷.

Years between 1950 and 1970 are considered the golden age of capitalism. The recovery after World War II was impressive both in income growth, international trade, and financial flows. The process of decolonization created many new states that sought to

¹⁶⁵ The foreign direct investment (FDI) is a category of cross-border investment in which a company acquires or controls at least 10 percent in terms of voting rights of a company in another country. Source: OECD, *Foreign Direct Investment (FDI)*, https://www.oecd-ilibrary.org/finance-and-investment/foreign-direct-investment-fdi/indicator-group/english_9a523b18-en.

¹⁶⁶ OSTERHAMMEL, J. PETERSSON, N. P. *op. cit.*, pp. 110-113.

¹⁶⁷ THOMPSON, B. (2018) *The History of the Shipping Container created in 1956*, IncoDocs, August 31, <https://incodocs.com/blog/history-of-shipping-container-1956-world-trade/>.

integrate themselves into the international debate, despite the fact that their economies were based primarily on subsistence agriculture and key commodity exports. Two United Nations organizations were founded during this period: the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Industrial Development Organization (UNIDO) in 1964 and 1966, respectively. The former fostered the process of integration of developing countries into the world economy, the latter aimed to increase the industrialization of member countries. Developing economies recorded, over the period 1961-1970, an average annual growth rate of 5.5 percent, compared with 5 percent for developed countries¹⁶⁸.

To the golden age of economic growth dates back also the development of the welfare state, which helped and supported citizens from birth to the end of life. Pension schemes, health insurance, unemployment insurance, family allowances, and other social benefits were established in this period. The model was indeed based on massive public spending especially in education and health care. An advocate of the welfare state was Karl Schiller, who became West Germany's minister of economics in 1966. According to his vision, it was the government's job to maintain four commitments, which he likened to four edges of what he called the "magic square": high employment, steady growth, stable prices, and a balanced international account. Unemployment rate in West Germany in 1966 was in fact at an unprecedented 0.5 percent. Thanks to the high occupation and the improved standard of living, workers saw their incomes rise and contributed to the spread of new material goods, buying increasingly, cars, household appliances and televisions. The economic growth of these years has been undermined, however, by the 1973 oil crisis. On October 6, 1973, Egypt and Syria attacked Israel, beginning the fourth Arab-Israeli or Yom Kippur war, as previously discussed¹⁶⁹. Saudi Arabia, Iraq, and Iran decided to support the two Arab countries, as they were all members of the Organization of the Petroleum Exporting Countries (OPEC). In particular, they reduced oil supply and increased the barrel price, cutting off exports to all countries that supported Israel. This choice caused inevitably shortages in western importing economies. The period was thus characterized by a severe energy crisis that not only slowed down the performance of industries, but also increased inflation and unemployment. It was a period of hardship,

¹⁶⁸ WANGWE, S.; KAWAMURA, H. (2018) *The 1960s: High Growth, High Hopes, and Looming Structural Imbalances*. In Ocampo, J. A.; et. al., *The World Economy through the Lens of the United Nations*, Oxford Academic, April 19, <https://doi.org/10.1093/oso/9780198817345.003.0003>.

¹⁶⁹ *Supra*, Section 2.1.5.

later referred to as “austerity”, and showed how energy dependence could be a problem in the long run. Not to mention that the Suez Canal was closed from 1967 until 1975, causing tension and instability in maritime trade as well. Meanwhile, the welfare state was losing support as politicians had broken many promises, in terms of employment and increased per capita income. Thus, between 1979 and 1982, major economies began to elect right-wing politicians, for example Margaret Thatcher in the United Kingdom, Ronald Reagan in the United States, Helmut Kohl in Germany, and Yasuhiro Nakasone in Japan. The common intentions were to reduce state intervention in the economy and let market forces regulate it¹⁷⁰.

On November 9, 1989, the fall of the Berlin wall symbolized the collapse of the Soviet bloc and communism, resulting in the victory of liberal democratic values of the Western capitalist world. However, we cannot consider capitalism as a universal system equally applicable to all countries, as it is embedded in the historical and cultural conditions of the nation and therefore the process led to different forms of capitalism. Moreover, it needed to be reformed as social, environmental and climate problems were beginning to be the subject of international debate. In these areas, the initiatives of a single nation could not have significant effects unless supported by global collective action.

In addition, the liberalization of international trade caused greater decentralization of Western production activities: multinational companies shifted indeed part of the production process to geographic areas where they had competitive advantages, such as lower input costs, particularly labor, or where the regulatory and tax environment was more flexible. This trend was associated with an increase in FDI to the less developed countries that began to emerge in the 1980s as developing countries. The new international division of labor saw multinationals open subsidiaries in China, Vietnam, the Asian Tigers (Hong Kong, Singapore, South Korea, and Taiwan) and Mexico, then also in some African countries. In some of these cases, though, the presence of multinational companies in a country did not contribute to the economic development of the whole nation, but only of limited areas that became high-income. These formed the so-called *enclaves*, rich areas in which companies were more connected to international networks than to the country's economy. A further aspect of increasing interconnection among countries concerned people, as migration took place more easily than in the past,

¹⁷⁰ LEVINSON, M. (2017) *End of a golden age*, Aeon Magazine, February 22, <https://aeon.co/essays/how-economic-boom-times-in-the-west-came-to-an-end>.

they could move faster and at lower cost. All these elements led to the crisis of the nation-state, which since the 1980s has become less powerful in controlling flows outside its national borders as a global financial system started to emerge and international governmental organizations (IGOs) were dominating the public debate¹⁷¹.

3.1.3. *Hyper-globalization and the Phenomenon of Offshoring*

A new phase of the globalization process began in the 1990s and has been called “turbo globalization” or “hyper-globalization” to convey the rapid acceleration that has been experienced in global relations, economically, financially, and culturally. Some theorists viewed positively this drive toward the formation of a global market, where factors of production could, in theory, move freely thus leading to efficient allocation and perfect competition. This school of thought can be divided according to two different ideologies: the neoliberals and the neo-Marxists. The former saw the erosion of the state’s regulating power as a positive factor, which signaled the victory of capitalism over socialism. They thought that, in the short term, globalization would create winners and losers but, in the long term, the result would be a homogeneous modern society. On the contrary, the latter argued that inequalities would be permanent. However, they all questioned the role of the nation-state as new forms of governance were emerging both from above (IGOs) and below (global social movements) the state level.

In this period the main IGOs were the World Bank, the International Monetary Fund, and the World Trade Organization (WTO), which actively promoted the “Washington Consensus” discourse by encouraging the liberalization of markets, fostering international trade flows, and adopting neoliberal receipts. The WB, already mentioned in the course of the research as the former International Bank for Reconstruction and Development, adopted during the 90s a conditionality approach: it financed new infrastructures in previous communist countries but in exchange the state had to accelerate the transition towards the liberalization of its economy¹⁷². The IMF oversaw the international monetary system, while the WTO was an organization that superintended trade between states and aimed to liberalize markets, continuing what had been already prepared by the GATT agreement. It is a supranational governmental body officially operational since January 1, 1995, headquartered in Geneva, consisting of 164

¹⁷¹ OSTERHAMMEL, J. PETERSSON, N. P. *op. cit.*, pp. 119-125.

¹⁷² MURRAY, W.E.; OVERTON, J. *op. cit.*, pp. 37-45.

member states joined by 23 other countries in the role of observers. Its scope was extended in comparison to the GATT, in fact, in addition to reforming it, two additional multilateral agreements were concluded: the General Agreement on Trade in Services (GATS) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)¹⁷³. The GATS agreement testifies how globalization was becoming dematerialized, member states were in fact committed to supporting the liberalization of services through multilateral rounds of negotiations in order to achieve mutually beneficial terms. This posed a complex challenge for countries because services, unlike goods, are intangible in nature and generally require the movement of the service provider or user. In other cases, they are not directly tradable because they are incorporated into the production of tangible goods. For this reason, world trade consisted of 17 percent services in 1980, which in value-added terms corresponded to 30 percent. In 2008, these numbers grew to 20 and 43 percent, respectively. Since the 1990s, trade in services has grown proportionately faster than trade in goods, mainly due to the dramatic development of information and communication technologies. In parallel to the development of these technologies, the need for their protection also emerged, hence, the TRIPS agreement was signed to limit distortions and barriers to international trade in intellectual property rights through their effective protection and specific measures.

To summarize, WTO member states signed the GATT, GATS, and TRIPS agreements to coordinate the complex network of international flows and, by promoting non-discrimination, facilitate trade between countries, not only of finished goods or raw materials, but also of intermediate goods and services. The 1990s and early 2000s represent indeed the peak of the expansion of global value chains (GVCs). The term denotes “international production”, «where the different stages of the production process are located across different countries»¹⁷⁴. Some authors refer to this phenomenon as delocalization, international fragmentation of production, or offshoring. The rapid expansion of this practice had multinational companies as the main players, which relocated production, marketing, R&D, sales, and all other activities worldwide. A major reason behind this practice was taking advantage of different countries’ endowments of labor, resources, and capital, or was due to the presence of more favorable laws and regulations than those in the home country. In this sense, multinational firms were defined

¹⁷³ WTO in brief, https://www.wto.org/english/thewto_e/whatis_e/inbrief_e/inbr_e.pdf.

¹⁷⁴ OECD, *Global Value Chains*, <https://www.oecd.org/industry/global-value-chains/>.

“efficiency seekers”. The phenomenon had a first wave in the 1960s, when manufacturing firms started outsourcing work mainly to Asian countries, Central America, and Eastern Europe. It was a “material offshoring” because it mainly involved labor-intensive industries such as consumer electronics, textiles, and footwear. A second wave of offshoring was registered starting from the 1990s and was characterized mainly by the relocation of services. This was made possible by the advent of technology and the remarkable reduction of communication costs. Clear evidence of this phenomenon was the presence of call centers in India that served British customers, which was specializing in financial and IT-related services. Another example is given by the offshoring by the US to Mexico, which led to the development of *maquiladora*, assembling factories located in Mexico but US owned¹⁷⁵.

This period of growth in international trade also due to offshoring can be seen in Figure 23. The graph, taken from the 2010 Maritime Trade Report prepared by UNCTAD, depicts the explosion of global container traffic since the early 1990s. World seaborne trade has grown at the aggregate level from 17,121 billion of ton-miles in 1990 to 23,693 in 2000, showing a considerable growth of about 38 percent¹⁷⁶. A ton-mile is a measure used in maritime transport to express the volume shipped (in tons) over a certain distance (in miles)¹⁷⁷.

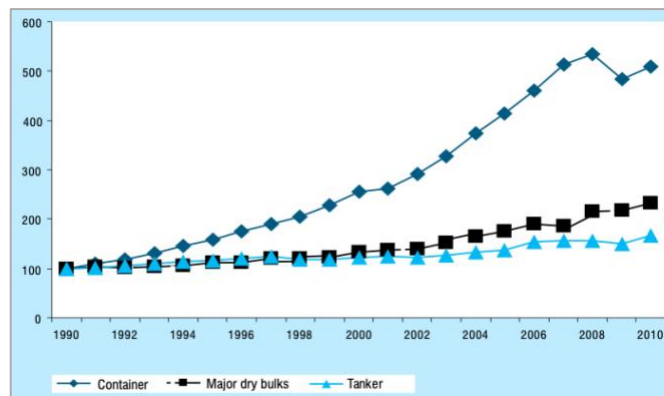


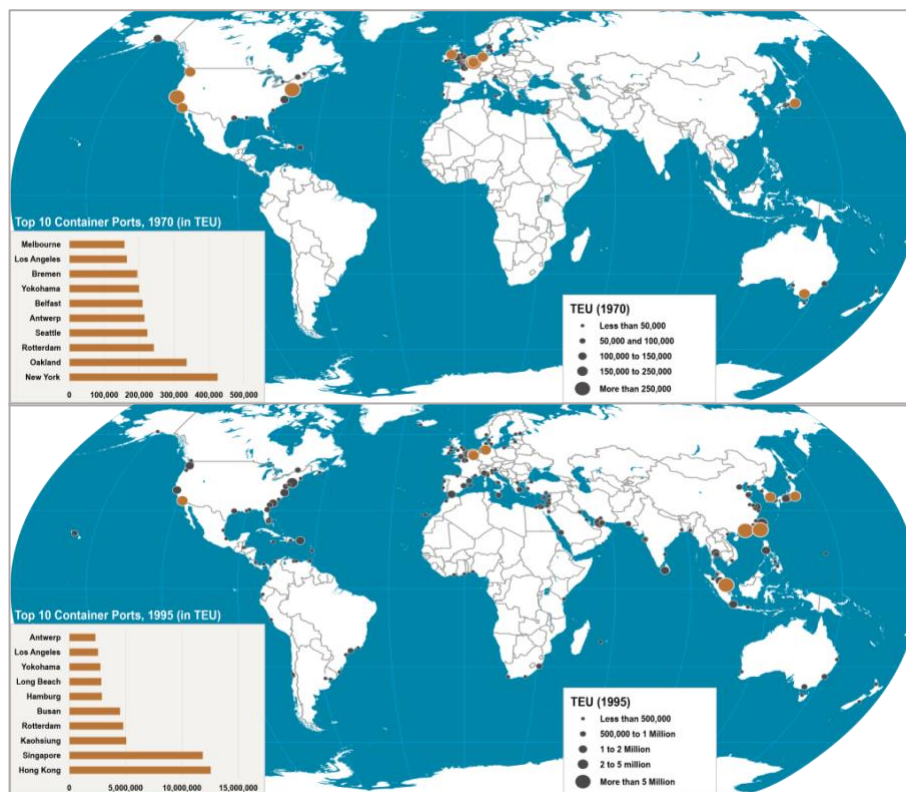
Figure 23. Indices for global container, tanker, and major dry bulks volumes, 1990-2010 (1990=100). Source: UNCTAD (2010) Review of maritime transport 2010, United Nations Publications, https://unctad.org/system/files/official-document/rmt2010_en.pdf.

¹⁷⁵ BOTTINI, N.; ERNST, C; LUEBKER, M. (2007) *Offshoring and the labor market: What are the issues?*, Economic and Labour Market Paper, International Labor Organization, Switzerland, pp. 1-7, https://ilo.org/wcmsp5/groups/public/---ed_emp/---emp_elm/---analysis/documents/publication/wcms_113922.pdf.

¹⁷⁶ UNCTAD (2005) Review of maritime transport 2005, United Nations Publications, https://unctad.org/system/files/official-document/rmt2005fas_en.pdf.

¹⁷⁷ US Bureau of Transportation Statistics, *Domestic Freight Ton-Miles*, [https://www.bts.gov/archive/publications/transportation_statistics_annual_report/2003/chapter_02/domestic_freight_ton-miles#:~:text=Ton%20miles%20is%20the%20primary,the%20distance%20shipped%20\(miles\).](https://www.bts.gov/archive/publications/transportation_statistics_annual_report/2003/chapter_02/domestic_freight_ton-miles#:~:text=Ton%20miles%20is%20the%20primary,the%20distance%20shipped%20(miles).)

Trying to understand on which trade routes this increase has most translated, confirming the current strategic importance of the key chokepoints, Figure 24 can shed some light. Containerization and hyperglobalization have greatly increased the amount of goods moved within commercial ports. Rotterdam, for example, has grown from about 250,000 TEUs to nearly 5 million TEUs over the years 1970-1995. Other European ports that were among the busiest in 1970, such as Bremen, Belfast, and Antwerp, have progressively lost their prominent role, with the exception of Antwerp, which re-entered as tenth, with about 2.5 million TEUs in 1995. In their place, new ports emerged along major shipping routes in Central America, the Mediterranean and East Asia. The top three ports for trade became Kaohsiung (Taiwan) with 5 million TEU, Singapore and Hong Kong with more than 12 million TEUs, confirming the importance of the Malacca Strait and the other chokepoints in Southeast Asia. Many new ports have developed also in the Mediterranean especially on the Spanish and Italian coast, while the port of Gibraltar has grown steadily. Finally, we experienced the emergence of the Middle East countries in international seaborne trade. The Egyptian Port Said and Ain Sokhna Port, the Qatari Doha, the Emirati Jebel Ali have demonstrated the growing importance of Suez and Hormuz, respectively¹⁷⁸.



¹⁷⁸ NOTTEBOOM, T.; PALLIS, A.; RODRIGUE, J.P. (2022) *Port Economics, Management and Policy*, New York, Routledge, doi.org/10.4324/9780429318184.

Figure 24. Evolution of Traffic Handled by Container Ports, 1970-1995. *Source:* NOTTEBOOM, T.; PALLIS, A.; RODRIGUE, J.P. (2022) *Port Economics, Management and Policy*, New York, Routledge, <https://doi.org/10.4324/9780429318184>.

However, this wave of intensification of global trade, offshoring and containerization has been challenged by several shocks in the 21st century that have caused a new phase of globalization, which will be discussed in the next paragraph.

3.1.4. Slowbalization or Deglobalization? Major Shocks of XXI Century

The latest wave in the history of globalization covers the period from 2008 to the present. This phase is often referred to as ‘slowbalization’ to denote a sharp slowdown in the pace of globalization since then. Other authors use the term ‘deglobalization’ to send an even stronger message, namely, not only that it is slowing down, but that we are going in the opposite direction. This situation was caused by a series of events that collectively weakened the values of free trade widely embraced since the post-war period.

The first major shock that interrupted trade liberalization was the Global Financial Crisis (GFC) of 2008-2009. The phenomenon originated in the U.S. real estate sector, where a speculative bubble had formed in previous years. Banks and other financial institutions had granted subprime mortgages because borrowers had poor credit requirements and there were insufficient guarantees that they would repay the loan. In addition, banks had packaged these securities into complex financial instruments known as Collateralized Debt Obligations (CDOs) that could be transferred to third parties, then sold around the world. This practice, called securitization, allowed banks to transfer the default risk of their customers, thus continued to provide high-risk mortgages. As a result of leverage, financial institutions were able to greatly expand assets relative to equity capital, but when the U.S. real estate market began to collapse and mortgage default rates rose, the values of CDOs collapsed, causing significant losses for the investors who held them. Some of the world's largest financial institutions found themselves in serious trouble because of their exposures to subprime mortgages. Lehman Brothers declared bankruptcy in September 2008, triggering severe instability in global financial markets. The collapse of this institution and the spread of the financial crisis generated a ripple effect, causing an increase in distrust among financial institutions and a contraction of credit. This led to a global recession in the real economy, with serious consequences for employment, household income and economic growth worldwide. The reduction in consumption also

resulted in the contraction of world trade. To avoid a complete collapse of the financial system, governments have taken rescue measures, including liquidity injections and nationalizations of some financial institutions. However, buying debt securities to increase liquidity in the markets laid the foundation for the sovereign debt crisis of 2010-2011 in the Euro area. In summary, the GFC was caused by a combination of excessive speculation in real estate, imprudent lending practices, excessive securitization of mortgages, and lack of adequate regulation and supervision of the financial sector. Its consequences had a lasting impact on the global economy and led to major reforms in the financial sector¹⁷⁹.

A second major shock was caused by the Covid-19 virus, firstly discovered in the Chinese region of Wuhan in December 2019, then rapidly spread to other countries through human-to-human infections, until the World Health Organization classified it as a global pandemic in March 2020. It had an unprecedented impact on globalization and world economies. Firstly, the lockdown taken to contain the spread of the virus led to the closure of national borders and the confinement of people in their own homes. Sectors such as tourism, hospitality, transportation, and retail were therefore particularly affected. The loss of economic activity has led to increased unemployment in many parts of the world. The pandemic accelerated changes in work and consumption patterns, for example, many companies have adopted remote work, while consumers have increased online shopping. Moreover, it has widened existing economic inequalities. People with low-wage jobs have been most affected by economic insecurity, while the wealthy not only did not experience the crisis, but also became richer. Once again, state intervention with extraordinary support measures was necessary to mitigate the economic damage to families and businesses¹⁸⁰.

The effects of the two events on industrial production and world trade in goods can be visualized in Figure 25. According to the OECD Report, the intensity of the GFC's shock is comparable to the Covid-19's shock, however, the recovery times were different. In the case of the pandemic, they were shorter, as visible from the tighter 'V shape' of the graph at the years 2020-2021 compared with the years 2008-2010. Despite the rapid recovery, changes recorded in the structure of trade in the biennium of Covid-19 generally

¹⁷⁹ CONSOB, *Crisi finanziaria del 2007-2009*, Autorità Italiana per la vigilanza dei mercati finanziari, <https://www.consob.it/web/investor-education/crisi-finanziaria-del-2007-2009>.

¹⁸⁰ ANTRÀS, P. (2020) *De-Globalization? Global Value Chains in the Post-COVID-19 Age*, Harvard University, National Bureau of Economic Research Working Paper Series, No. 28115, 11 November, pp. 38-42, <https://www.nber.org/papers/w28115>.

take a span of 4-5 years to occur. Especially in the technology sector, the pandemic has drastically pushed toward accelerated development of telecommunication and information technology services. Other services, conversely, such as those related to tourism and retail sales, have suffered tragically¹⁸¹.

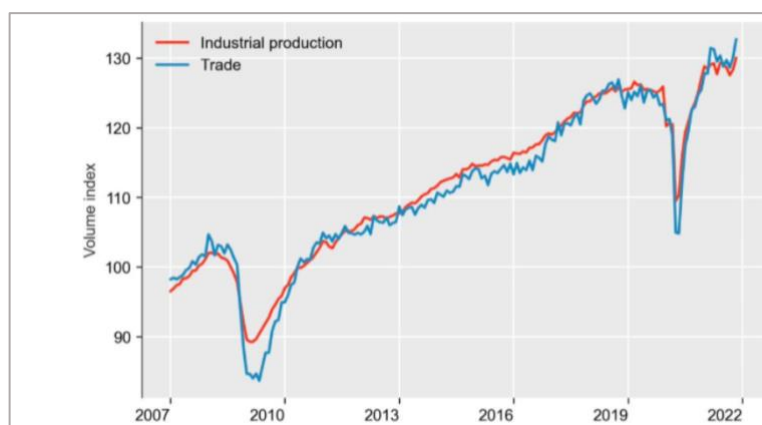


Figure 25. Volume of world trade and industrial production. Seasonally adjusted.

Source: OECD (2022) *International trade during the COVID-19 pandemic: Big shifts and uncertainty*, March 10, https://read.oecd-ilibrary.org/view/?ref=1129_1129345-casormobh7&title=International-trade-during-the-COVID-19-pandemic.

A sector which deserves separate attention is that of transportation. The cost of maritime transport during the Covid-19 pandemic rose unprecedentedly. The average price of a standard 40-foot container (corresponding to 2 TEU) went from \$1,342 to \$6,505, over the biennium 2019-2021. This increase corresponds to a significant +381 percent. Values grow even more when we consider some routes rather than others: the Far East-Mediterranean route saw the sea freight cost rise from \$1,789 in 2020 to \$11,924 in 2021, an increase of 567 percent. Smaller, the effect on the reverse route with +78 percent. While the Far East-North Europe route registered the highest sea freight cost increase, from \$1,967 in 2020 the price went up to \$13,188 in 2021, which corresponds to a +685 percent. In parallel, on the reverse route the variation was smaller, with a 69 percent increase.

The pandemic initially affected international trade with deep logistical disruptions between supply chains, thus maritime carriers had to suspend many shipping services and

¹⁸¹ OECD (2022) *International trade during the COVID-19 pandemic: Big shifts and uncertainty*, March 10, https://read.oecd-ilibrary.org/view/?ref=1129_1129345-casormobh7&title=International-trade-during-the-COVID-19-pandemic.

reduce supply. However, as early as the second half of the year 2020, the recovery of some economies and the increase in demand caused a shortage of containers, heavy congestion at ports, especially U.S. ports, and an increase in the average stop of ships at container ports. This situation delayed the punctuality of calls and caused prices to rise¹⁸². The situation recurs in 2023 due to the war in the Red Sea and the disruption of the Suez route. In this case, tariffs increased from the pre-pandemic threshold but did not reach the peaks of 2021. From Asia to Northern Europe the cost of a 40-foot container was \$5,500 while the Asia-Mediterranean route cost about \$6,500. The complex circumstances in the Middle East increase container traffic detour from the Suez Canal, delays, and congestion, sometimes causing a shift from ocean to air cargo, albeit much more expensive¹⁸³. However, the long-term economic implications and logistical consequences of this event will be seen in retrospect, after the situation stabilizes.

The third severe event that affected the globalization trends has been the Russia-Ukraine War. Tensions between the two countries date back to the 2014 annexation of Crimea but escalated with the Russian invasion of Ukraine on February 24, 2022. The unilateral annexation of the Ukrainian regions of Donetsk, Luhansk, Kherson and Zaporizhzhia was clearly illegitimate and violated international law. As a consequence, Western countries imposed a series of economic and political sanctions against Russia, which deeply impacted trade and investment relations. Moreover, the International Criminal Court (ICC) issued on March 17, 2023, an arrest warrant against President Putin for the war crimes of deporting Ukrainian children to Russia. A severe ruling, but ineffective as Russia is not a signatory to the Rome Statute establishing the ICC, resulting outside the jurisdiction. NATO has also provided substantial resources to assist Ukraine militarily without actually deploying its troops directly to the field. This was because Ukraine is an associate country and not a member of NATO, so the mutual defense clause of NATO's Article V was not triggered. However, some countries have decided to maintain a neutral stance with respect to Russian actions. For example, China, India, and other Asian and African countries have not openly condemned Russia and in UN General Assembly votes

¹⁸² Confindustria (2022) *L'incremento del costo dei noli marittimi per il trasporto merci via container*, Report, May, https://assembleaprivata2022.confindustria.it/wp-content/uploads/2022/05/CTI32_Confindustria-Indagine-sui-Noli-marittimi-agosto-2021.pdf.

¹⁸³ Freightos (2024) *Shipping & Freight Cost Increases, Current Shipping Issues, and Shipping Container Shortage*, February 1, <https://www.freightos.com/freight-blog/shipping-delays-and-cost-increases/>.

have abstained¹⁸⁴. From the economic point of view, the conflict provoked major instabilities in the commodity markets with significant escalations in their prices. Cereals were heavily affected, with price increases on wheat of 98 percent in April 2022 compared to the average January 2020, of which two-thirds was recorded after the start of the Russia-Ukraine War. In the same time frame, the conflict affected for about 45 percent the price increases of sunflower oil (+151 percent), steel (+217 percent), corn (+113 percent), Brent oil (+72 percent). While the natural gas market registered the highest price increase, as Ukraine represents a key transit route for Russian gas bound for Europe. Since the pre-pandemic years, the price of natural gas has increased by 740 percent, a change explained one-fifth by the outbreak of the conflict¹⁸⁵. The persistence of these tensions in the Ukraine region, as well as those involving the Middle East and the Red Sea, presented earlier in the research, underscore the fragility of the geopolitical landscape. An escalation of hostilities could have in the near future even more devastating repercussions for the world economy. Hence, international cooperation is essential to preserve global stability.

We can conclude that the main events of the 21st century have caused severe transformations in countries' foreign policies. These shocks have shaken global value chains, causing a significant reconfiguration of them, and have triggered the return of geopolitics in determining economic choices. The following issues will be further explored in next section.

3.2. Geopolitical Reconfiguration of Supply Chains

The previous section introduced the concept of global value chains. More precisely, a supply chain constitutes «the network of all the individuals, organizations, resources, activities, and technology involved in the creation and sale of a product. A supply chain encompasses everything from the delivery of source materials from the supplier to the manufacturer through to its eventual delivery to the end user»¹⁸⁶. It assumes a global dimension once some processes, from raw material sourcing to delivery, involve multiple countries. The accelerated globalization of the 1990s and early 2000s resulted in

¹⁸⁴ MILS, C. (2024) *Ukraine conflict: An overview*, House of Commons Library, UK Parliament, Research Briefing No. 9723, <https://researchbriefings.files.parliament.uk/documents/CBP-9723/CBP-9723.pdf>.

¹⁸⁵ Assolombarda (2022) *Conflitto Russia-Ucraina: il rialzo delle materie prime*, April 20, ALERT Study Center, <https://www.assolombarda.it/desk-russia-ucraina/analisi/20-04-conflitto-russia-ucraina-il-rialzo-delle-materie-prime>.

¹⁸⁶ LUTKEVICH, B. (2021) Supply chain, Tech Target, <https://www.techtarget.com/whatis/definition/supply-chain>.

increasingly interconnected value chains, higher foreign investment, and technology diffusion. In this context, North America, Europe, and Asia emerged as key promoters of liberalized economic activity and became central players in global supply networks, especially in the electronics, advanced innovation, and transportation sectors. Other countries, especially from Africa, Latin America and Central Asia often contribute to global supply chains at the raw material supply stage or the processing of intermediate goods¹⁸⁷.

Sometimes the international exchanges behind a finished product are numerous. A striking example is given by the Slazenger tennis balls headed to Wimbledon. The University of Warwick conducted a study to analyze this particular product. During the analysis, it was found that the tennis balls traveled 50,570 miles around the world: raw materials, in fact, came from 11 different countries belonging to 4 continents and were shipped to the Philippines, where the main production process took place, while the packaging was performed in Indonesia. Finally, they were sent to Wimbledon. The University of Warwick Professor who oversaw the study, Mark Johnson, stated that it was one of the longest journeys he had seen for a product. This shows how globally integrated the nature of a product's production can be, driven by cost and efficiency advantages¹⁸⁸. Nevertheless, the slowdown in globalization due to the numerous geopolitical shocks on the world economy presented above has undoubtedly affected global supply chains. Major changes in their reconfiguration, the return of geopolitics and regionalism will be presented below.

3.2.1. The Instability of Markets: The Return of Geopolitics and Regionalism

The Financial Crisis of 2008-2009 interrupted the relocation of production activities, slowing down the trend of developing long-distance cost-minimization strategies. The peak of the offshoring phenomenon occurred before that shock, and although the economy then recovered, afterwards it still failed to reach its former levels.

Pandemic, extreme weather events, trade disputes, such as the one between China and the United States that began in 2016 with the advent of Trump as U.S. President, terrorist

¹⁸⁷ AMIGHINI, A.; MAURER, A., *et al.* (2023) *Catene del valore globali*, External Relations thematic department, Directorate-General for External Policies of the Union, March, [https://www.europarl.europa.eu/RegData/etudes/STUD/2023/702582/EXPO_STU\(2023\)702582\(SU M01\)_IT.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2023/702582/EXPO_STU(2023)702582(SU M01)_IT.pdf).

¹⁸⁸ The Economic Times (2013) *Journey of tennis balls used at Wimbledon*, July 09, <https://economictimes.indiatimes.com/journey-of-tennis-balls-used-at-wimbledon/articleshow/20986599.cms?from=mdr>.

attacks, and cyber-attacks have challenged the stability and reliability of global value chains, showing their increasing vulnerability. The greater the degree of interconnectedness of the world's supply chains, and the more data, people, and capital move freely between countries, the greater the risk that the consequences of a shock from one part of the world will also fall on countries far away, but linked economically, according to a chain effect. The McKinsey Global Institute estimated the average interval between two geopolitical events that shock value chains, based on how long the repercussion, caused by the event itself, lasts. For example, a shock lasting 1-2 weeks would occur every 2 years, a more severe one lasting a few months every 5 years. However, the frequency of both natural and man-made events is likely to increase in the near future. Macroeconomic volatility and market instability paved the way to geopolitics, which has recently returned as a consideration in economic decision-making. The international liberal order, multilateralism, the globalization discourses, and the international division of labor, had gradually entered a crisis. Negative aspects of liberal trade emerged, instead: growing inequality, unemployment due to offshoring, and financial instability. All this resulted in the return of the nation state as an actor in the international context, shadowing the power of action of international organizations¹⁸⁹.

The term geopolitics was coined by the Swedish sociologist, political scientist, and geographer R. Kjellén to refer to «that complex of political problems that originate from facts of territorial order, especially when considering the state as an organism that is born, develops and decays, and that, like living beings, needs a living space». The return of this tendency in the economy affects international relations, to the extent that states return to adversarial relationships over the control of space and resources¹⁹⁰.

The spatial reconfiguration of global value chains has shown their increasing shortening over the years and the advent of regionalism in place of multilateralism. Beginning with the concept of shortening GVCs, the Asia Development Bank has presented some estimates. Figure 26 shows in the left graph how their length increased in almost all sectors in 2010 compared to 2000. The black square, identifies the average number of steps within the production process of a product, aggregated across sectors. It increased from 7.9 in 2000 to 8.5 in 2010. Conversely, there was a reverse process from the year

¹⁸⁹ European Parliament (2021) *Post Covid-19 value chains: options for reshoring production back to Europe in a globalised economy*, Directorate-General for External Policies, [https://www.europarl.europa.eu/RegData/etudes/STUD/2021/653626/EXPO_STU\(2021\)653626_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/653626/EXPO_STU(2021)653626_EN.pdf).

¹⁹⁰ Enciclopedia Treccani, *Geopolitica*, <https://www.treccani.it/enciclopedia/geopolitica/>.

2010 to 2019. Slowbalization maintained a trend of 8.5 steps in the global value chain, apart from water transport, which was the only sector in which GVC had lengthen.

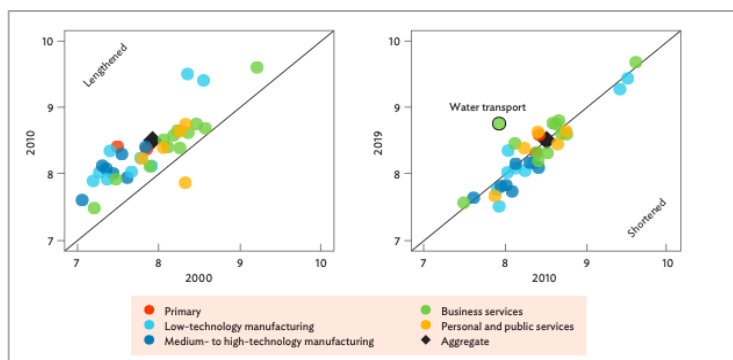


Figure 26. Global value chain production lengths by sector, World (2000, 2010, 2019).
 Source: Asian Development bank, World Trade Organization, Institute of Developing Economies (2021) *Global Value Chain Development Report 2021: Beyond Production*, https://www.wto.org/english/res_e/booksp_e/00_gvc_dev_report_2021_e.pdf.

There has been also an exponential increase in Preferential Trade Agreements (PTAs), according to which a country allows economic partners a preferential treatment, usually consisting in reduced custom tariffs. A subset of the previous ones is given by the Regional Trade Agreements (RTAs), which additionally involve countries that are geographically close. Between 1990 and 2020, the increase in the number of RTAs was exponential, from 70 to 300, respectively, as shown in Figure 27¹⁹¹.

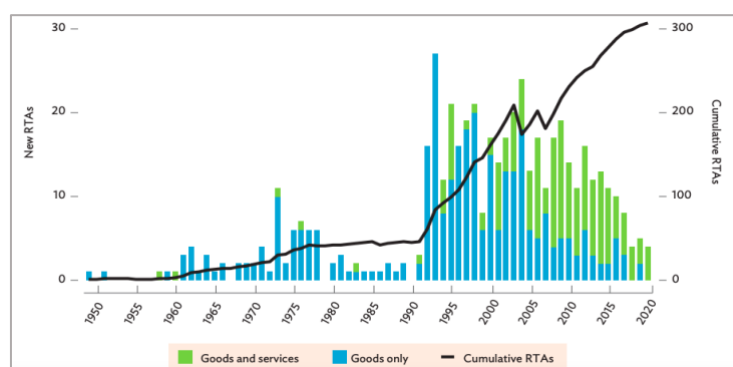


Figure 27. Regional Trade Agreements, 1949-2020.
 Source: Asian Development bank, World Trade Organization, Institute of Developing Economies (2021) *Global Value Chain Development Report 2021: Beyond Production*, https://www.wto.org/english/res_e/booksp_e/00_gvc_dev_report_2021_e.pdf.

¹⁹¹ SUBRAMANIAN, A.; KESSLER, M. (2013) *The Hyperglobalization of Trade and Its Future*, Peterson Institute for International Economics, Washington, Working Paper 13-6, July, pp. 3-10, <https://www.piie.com/sites/default/files/publications/wp/wp13-6.pdf>.

Nowadays, all WTO member states have participated in at least one agreement with a regional character, contributing to the establishment of trading blocs. There are different levels of integration: the FTA and Customs Union were previously presented. Some examples of FTAs are the European Free Trade Association (EFTA) and the North American Free Trade Agreement (NAFTA), while CARICOM for the Caribbean Community is a Custom Union. The next level of integration is the Common Market, according to which member countries have formed a customs union to which is added the free movement of people, capital, and resources. An example is MERCOSUR for the South American Common Market. Finally, the highest form of integration is the Economic Union, an example of which is the European Union. In this case, also economic and monetary policies are harmonized¹⁹².

Among the various areas of integration, the region with the largest number of agreements signed is Asia Pacific, which includes Southeast Asia, East Asia, and Oceania, with 42 intra-regional preferential agreements. It is followed by Europe with 31 intra-regional FTAs, and by South America with 26. However, this value does not indicate the depth of integration. In 1997, economist Frankel proposed the regional concentration index (RCI) to understand how much a region trades with itself relative to its contribution in the global market. By this new metric, the NAFTA region was the one that traded the most with itself, about 1.5 times the rate of trade it had with the rest of the world¹⁹³. Since 2020, this FTA has been replaced by the USMCA – the United States, Mexico, and Canada Free Trade Agreement.

On the one hand, some believe that globalization in the conception of a few decades ago – multilateralism, free trade, and liberalism – may not repeat itself in our future, while regionalization may still play a leading role. Governments, shifted to protectionist and nationalist measures, find regionalism as a compromise to ensure the country's economic growth without having to abandon international integration¹⁹⁴.

On the other hand, other scholars have argued that if «multilateralism cries, regionalism cannot laugh either». This is because there is a risk that regionalism will become discriminatory, in the sense that it will be used to increase barriers with non-members of the agreement, rather than foster trade among members. Tariff wars on trade often result in increased international tensions and an inefficient allocation of resources, which would

¹⁹² MURRAY, W.E.; OVERTON, J. *op. cit.*, pp. 148-150.

¹⁹³ Asian Development bank, World Trade Organization, Institute of Developing Economies (2021) *Global Value Chain Development Report 2021: Beyond Production*, pp. 25-30, https://www.wto.org/english/res_e/booksp_e/00_gvc_dev_report_2021_e.pdf.

¹⁹⁴ O'NEIL, S. K. (2023) *It's Not Deglobalization, It's Regionalization*, Yale University Press, <https://www.cfr.org/article/its-not-deglobalization-its-regionalization>.

instead be guaranteed by free markets. «At the end of the day, there is no choice between regionalism and multilateralism; there is only a choice between integration and dis-integration. A revival of multilateralism is necessary to complement RTAs in an age of conflict»¹⁹⁵.

If we think about the WTO, IMF and WB, these institutions will be eighty years old next year, and although almost all countries have joined them over time, they are no longer as effective. The last round of multilateral trade negotiations was the Doha Round, which began in 2001 and failed ten years later. This stalemate in negotiations marked the decline of multilateral trade liberalization and greatly reduced the decision-making power of the WTO. At the 2012 WTO public forum, an annual event where issues pertaining to the multilateral trading system are discussed, the growing difficulties of the organization were presented. Academics, scholars, and entrepreneurs agreed on the need for major reforms in the multilateral arena, because what may have been solutions to problems of the past do not guarantee a solution to contemporary problems. The world economic system has altered a lot since the postwar period, and the major IGOs should have adapted to this change. The challenges posed by conflicts, financial and economic crises over the years have caused a gradual loss of confidence in the international system and the advent of a new economic order¹⁹⁶.

The next section will analyze what have been the main phenomena experienced in the global economic context in the XXI century.

3.2.2. *Reshoring Trends: Back-shoring, Near-shoring, Friend-shoring*

The period has been characterized by a reversal of the past willingness of companies to move part of their manufacture and other activities abroad, the so-called offshoring. The reconfiguration of the production system has involved mainly advanced countries, in particular Europe and the U.S., that have experienced the new trend of reshoring.

Multiple forms of this phenomenon have originated:

- Back-shoring, when a company, firstly relocated from its home country to a foreign one, was then moved back to its home country.
- Near-shoring, if a company after being delocalized from the country of origin to a foreign state, is subsequently moved to a country close to the home country.

¹⁹⁵ RUTA, M. (2023) *The rise of discriminatory regionalism*, Finance & development, June.

¹⁹⁶ WTO (2012) *Is multilateralism in crisis?*, Public Forum 2012, https://www.wto.org/english/res_e/booksp_e/public_forum12_e.pdf.

When talking about these phenomena, analyzing the “where to go” and the “where to return” is essential to understand the motivations behind such decisions. In general, it can be seen that, after the Global Financial Crisis, FDIs to distant countries have significantly decreased and GVCs have shortened, within macro-regions. This has resulted in the return of many MNEs, i.e., multinational enterprises, to the home country or to locations close to it¹⁹⁷.

Fratocchi, Iapadre, *et. al.*, in the research paper *Manufacturing Reshoring*, conducted a study to analyze how many companies have actually been relocated or nearly localized. The data covers the years 2000-2014. As can be seen from Table 2, the United States was strongly affected by back-shoring: 141 multinationals were relocated, of which a large number came from China (88) and other Asian countries (37). Only 9 American companies were near-shored, which means that they were moved to Mexico or Canada, for example. Italy is another country that has greatly experienced the phenomenon: 60 companies have returned to Italy, 29 from Asia, 19 from Eastern Europe and 10 from Western Europe. While 12 multinationals were moved from abroad to a neighboring country. Germany and France have also been particularly affected by the back-shoring trend, as evidenced by the data in the table below. A common feature between back-shoring and near-shoring is that the host country was very often China or another Asian country, in about 70 percent of the cases¹⁹⁸.

Table 2. Breakdown by home and host country (number of evidence).

Source: FRATOCCHI, L.; IAPADRE, P.; *et. al.* (2014) *Manufacturing Reshoring: Threat and Opportunity for East Central Europe and Baltic Countries*, Research Gate, https://www.researchgate.net/publication/290950335_Manufacturing_Reshoring_Threat_and_Opportunity_for_East_Central_Europe_and_Baltic_Countries.

¹⁹⁷ PEGORARO, D.; DE PROPRI, L.; CHIDLOW, A. (2020) *De-globalization, value chains and reshoring*, Routledge, London, pp. 152-175.

¹⁹⁸ FRATOCCHI, L.; IAPADRE, P.; *et. al.* (2014) *Manufacturing Reshoring: Threat and Opportunity for East Central Europe and Baltic Countries*, Research Gate, https://www.researchgate.net/publication/290950335_Manufacturing_Reshoring_Threat_and_Opportunity_for_East_Central_Europe_and_Baltic_Countries.

Type of operation	Region	Home country	Host country						Total
			Asia (other than China)	Central & South America	China	Eastern Europe	North America	Western Europe	
Back-reshoring	Europe	Italy	8		21	19	2	10	60
		Germany	6	5	8	10	1	9	39
		France	4		10	5		1	20
		UK	1		17	2			20
		Norway			2				2
		Finland						1	1
		Slovenia						1	1
		Switzerland			1				1
		The Netherlands			1				1
		Total Europe		19	5	60	36	3	22
	Americas	USA	37	8	88	2	1	5	141
		Canada			1				1
		Total Americas	37	8	89	2	1	5	142
	Asia	Japan	1		2				3
		South Korea	1		1				2
		Taiwan			2				2
Total Asia		2	0	5	0	0	0	7	
Total			58	13	154	38	4	27	294
Near-reshoring	Europe	France			11	1			12
		Germany			3				3
		Italy	3		7	1		1	12
		Spain			1				1
		Sweden			2				2
		UK			1				1
		Total	3	0	25	2	0	1	31
	Americas	USA	4	2	1	2			9
		Canada		1					1
		Total	4	3	1	2	0	0	10
Total			7	3	26	4	0	1	41
Total			65	16	180	42	4	28	335

At this point one might ask which are the reasons that brought the companies back to their native country. A survey, in which multiple answers were allowed, identified the main causes for abandoning the offshoring strategy: 55 percent of multinationals cited ‘lack of flexibility’ as the first cause and 51 percent, ‘poor quality’ as the second. In third place by frequency of response there was the ‘unemployed capacity in one's own country’ (42 percent), as well as ‘transport and coordination costs’, cited by 24 percent and 22 percent, respectively. Minor reasons were labor costs (15 percent), lack of qualified personnel (11 percent), the distance between R&D and production site (5 percent) and know-how loss (2 percent)¹⁹⁹.

¹⁹⁹ DACHS, B.; KINKEL, S.; *et. al.*, (2019) *Backshoring of production activities in European manufacturing*, Journal of Purchasing and Supply Management, Vol. 25, Issue 3, June, Elsevier, <https://doi.org/10.1016/j.pursup.2019.02.003>.

On the one hand, the reshoring strategy could be seen as a deglobalizing trend, just as offshoring had been seen as a globalizing factor in the past.

On the other hand, many scholars, including Professor of Economics G. Ottaviano, consider this phenomenon more a “selective reglobalization” than a deglobalization. According to his point of view, countries have been creating internally integrated groups not only on the basis of economic collaborations, but especially on the basis of political and social affinities, which are externally in competition with each other for economic primacy²⁰⁰. The geopolitical events of the XXI century have indeed determined a new form of GVCs’ reorganization: crises, conflicts and tensions have led countries to develop trade relationships only with trusted partner countries, hence the name ‘friend-shoring’. Therefore, we began to hear concepts as ‘trade security’ and ‘political convergence’ in the foreign trade policy. In 2022, Maihold estimated that «up to 26 percent of global exports could potentially be relocated in the next five years, amounting to up to US \$4.6 trillion». The world economic order would therefore be divided into commercial alliances supported at the base by political affinities, as Europe is trying to reduce dependence on Russia, after the outbreak of the war, or as the United States is trying to do the same with China²⁰¹. A turning point that accelerated this process was year 2020, when, with the outbreak of the pandemic, the shortage of medical devices in America showed the substantial dependence on Chinese production. The strategy promoted then became ‘decoupling from China’, imports had to be thus reduced to protect and support American production. The interdependence between foreign markets, once promoted by almost every country and seen as a symmetrical advantage for the parties involved, is now considered asymmetrical and politically exploitable. Both the pandemic and the war in Ukraine have strengthened the concept that certain resources and production capacity in some sectors, considered strategic, cannot be relocated to countries that are not politically aligned. As a result, some measures have been adopted: for example, the American 100-Day Review Outlines Steps to Strengthen Critical Supply Chains in June 2021 and the European Industrial Strategy in 2020-2021. Other laws aimed at strengthening domestic industrial capacity were the Chips Act in America of August 2022, and the Critical Raw Materials Act in Europe of 2023. They aim to reduce dependence on foreign economies

²⁰⁰ OTTAVIANO, G. (2022) *Riglobalizzazione: dall'interdipendenza tra paesi a nuove coalizioni economiche*, EGEA, Milano.

²⁰¹ MAIHOLD, G. (2022) *A New Geopolitics of Supply Chains: The Rise of Friend-Shoring*, SWP Comment, No 45, July, Berlin, <https://doi.org/10.18449/2022C45>.

(in particular China) for the supply of semiconductors and batteries and other critical materials required for the digital and energy transition. In addition, some economic alliances of ‘like-minded’ countries have also been proposed, such as the Chip 4 Alliance supported by US President Joe Biden in 2022 with South Korea, Japan, and Taiwan, for the creation of a partnership in the supply of semiconductors. Another example is given by the Indo-Pacific Economic Framework for Prosperity, signed in May 2022 among Australia, Brunei Darussalam, Fiji, India, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, and Vietnam, to boost the competitiveness of their economies. A further case is that of the American Partnership for Economic Prosperity, announced in June 2022 and involving Barbados, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Panama, Peru, Uruguay, and the United States. More than mere trade agreements, they are also aimed at ensuring economic security and the resilience of global value chains. On April 27, 2023, the American National Security Advisor Jake Sullivan, stated that the new foreign policy strategy must aim «to build, to build capacity, to build resilience, to build inclusiveness at home and with partners around the world», and he underlined the always greater interconnection between the economy and national security²⁰². Not only has this concern been felt by the governments, but also at the corporate level by firms, which worried by the geopolitical tensions, expressed their interest in adopting reshoring trends, including back-shoring, near-shoring, and friend-shoring. These strategies aimed at ‘de-risking’ the supply chains, by relocating production in the home country or in trusted ones. Figure 28 shows the direct correlation between the increase in these phenomena and the current growing geopolitical risk.

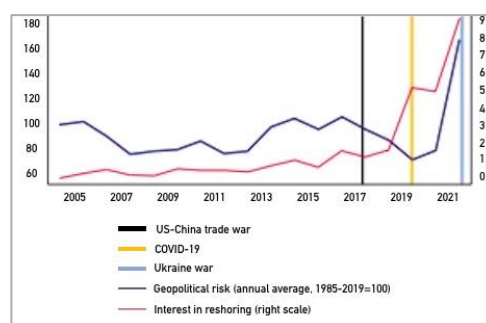


Figure 28. Rising geopolitical tensions and FDI fragmentation (Note: reshoring interest includes back-shoring, near-shoring, and friend-shoring).

²⁰² FASULO, F. (2023) *Il principio fu il decoupling*, ISPI Commentary, Ministry of Foreign Affairs and International Cooperation, <https://www.ispionline.it/it/pubblicazione/in-principio-fu-il-decoupling-12774>.

Source: AIYAR, S.; PRESBITERO, A.; RUTA, M. (2023) *Geoeconomic Fragmentation: The Economic Risks from a Fractured World Economy*, Center for Economic Policy Research Press and International Monetary Fund, Paris, <https://cepr.org/publications/books-and-reports/geoeconomic-fragmentation-economic-risks-fractured-world-economy>.

The analysis presented so far is intended to show how globalization is currently going through a complex period of its history. In the wave we are experiencing, geopolitics, geoeconomics and national security are dominating. Slowbalization, deglobalization, decoupling, fragmentation, and many other terms were used to define it. However, the thought of a complete fracture between China and the US, as well as between the other GVCs, is premature and risky, because in any case the costs entailed by such choices are high, especially in terms of efficiency. Conversely, what we may see is rather a slowdown in global interconnections, until a new balance is found. What we can say is that market uncertainty will remain for a period and the shocks to which the world economy will be subjected are not destined to decrease in the near future. Geopolitical fragmentation would have serious economic consequences such as the reduction of world GDP, the increase in inflation and public debts as well as social ones in terms of constantly growing inequalities and increasing technological gap. The economic stagnations experienced in the past should remind us how the risk of a negative spiral may be upon us again. What world leaders should reflect on is the possibility of restoring multilateral mechanisms to allow cooperation and alignment of all countries on global issues such as climate change and technological revolution, to safeguard the planet and everyone's well-being²⁰³.

The next section will delve into this aspect.

3.3. Future Global Trends and Implications

At this point, returning to the focus of this research – the analysis of strategic chokepoints and the importance of the global maritime industry for trade – we can ask ourselves what the future of the shipping sector will be in light of the following considerations on the progressive world fragmentation we are experiencing. Different scenarios will be presented, some more optimistic, others more pessimistic. Honestly, what has been said up to now would lead us to think that positive outcome events are distant from reality and

²⁰³ BRUGORA, A. (2023) *How Fragmentation is Threatening the Globalized Economy: The Economy of the New Global (Dis)Order*, Italian Institute for International Political Studies, August 1, <https://www.ispionline.it/en/publication/how-fragmentation-is-threatening-the-globalized-economy-137971>.

our future²⁰⁴. However, broadening the discussion from the maritime sector to a more comprehensive overview, some of the commitments made in the multilateral context will be successively shown. The Agenda 2030 and the definition of Sustainable Development Goals, the annual Conference of the Parties on Climate Change, the 2024 Summit of the Future are examples that demonstrate the willingness of nations to cooperate and form a strong partnership in the face of major global problems. The hope is that these initiatives will then have practical implications and can be effective in reality.

3.3.1. The Maritime Shipping Futures Matrix: Four Scenarios by 2050

Economist Impact, part of The Economist Group, in collaboration with 16 professionals in the field of maritime policy, hypothesized in the report *Global Maritime Trends*, a matrix gathering the possible scenarios for the future of the maritime sector. This matrix is formed by four quadrants determined by two variables: on the vertical axis we find the nature of cooperation on the climate agenda and on the horizontal axis the speed of technology absorption. The first variable can result in two outcomes: close cooperation between world leaders, on one side, and fragmentation due to the lack of coordination, on the other. The second variable can instead occur gradually or rapidly. The four combinations are represented in Figure 29.

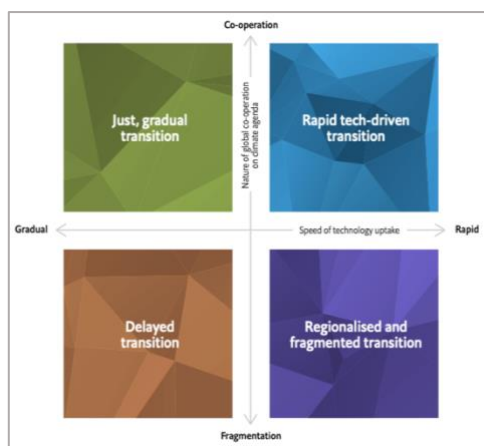


Figure 29. Futures matrix. *Source:* NORONHA, M; CHOW, M.; *et. al.* (2023) *Global Maritime Trends 2050*, Economist Impact, <https://impact.economist.com/ocean/global-maritime-trends-2050/downloads/Global%20Maritime%20Trends%202050%20Report.pdf>.

²⁰⁴ NORONHA, M; CHOW, M.; *et al* (2023) *Global Maritime Trends 2050*, Economist Impact, <https://impact.economist.com/ocean/global-maritime-trends-2050/downloads/Global%20Maritime%20Trends%202050%20Report.pdf>.

The four quadrants depicting the future of the maritime sector are:

- Just, gradual transition
- Rapid tech-driven transition
- Regionalized and fragmented transition
- Delayed transition

Starting with the top left corner, we identify a positive scenario in which countries will be able to cooperate globally and gradually integrate new technologies through their regulation. In the maritime sector, this will be determined by the signing of a supranational agreement which will guarantee the nations' commitment to respecting pollution limits and indeed push them towards emissions neutrality. In this context, particular attention will be paid to developing and underdeveloped countries to proceed towards their progressive integration into the world economic system, redistributing resources and trying to reduce inequalities. The adoption of new technologies, such as new fuels in ships, will require new supply systems, tanks, and infrastructures, as well as onboard navy training for new safety procedures. If they started in the mid-2020s, they could gradually integrate such technologies reaching global consensus within a few decades and allow their large-scale adoption.

Continuing with the top right corner, we hypothesize a future similar to the previous one as regards the collaboration of the various countries of the world but different in the speed of diffusion of technological innovations. In this case the absorption of them will be rapid, leading to disruptions also in the maritime sector: automated systems, artificial intelligence, green fuels, big data. They will probably lead to remotely controlled or fully autonomous ships, requiring massive investments in ship design, new compatible port infrastructure and highly trained workers. The risk of this scenario is the vulnerability of new advanced IT systems to cyberattacks, for which exceptional security measures will have to be taken.

A more negative vision is given by the case in the lower right corner: it is hypothesized that there would be a lack of international cooperation originated from mistrust towards supranational institutions, added to a series of geopolitical events that have caused conflictual relations between countries. The result would be the regionalization of trade, also manifested through phenomena such as friend-shoring or near-shoring, and the shortening of GVCs. In the maritime sector, this would involve reducing the size of ships and port logistics facilities. In short journeys, the so-called transshipments, smaller ships are, in fact, more suitable given the size of the terminals of the receiving ports. Moreover,

this phenomenon is combined with a rapid but asymmetric technological transition. Since countries are not able to collaborate on decarbonization and share technological resources, advanced countries that have financial resources would use new technological systems to unilaterally progress, leaving less developed countries behind. This would greatly increase economic and social inequalities.

The last scenario is the worst case we could experience, as in addition to the regionalization and fragmentation of world trade, we would witness a slow technological transition. The impact of these two factors combined would be serious: by not reaching emissions neutrality within the pre-established deadlines, climate change phenomena would intensify. In the maritime sector, this could lead to new shipping routes, as the Arctic route, due to the progressive melting of the glaciers, but at the same time this alteration of climatic balance would result in floods and other severe natural disasters. Many locations on the Atlantic and Pacific coasts would be submerged, and populations would be forced to relocate. Also, from a navigation point of view, it becomes increasingly risky to cross certain routes due to extreme climatic phenomena, hence insurance companies will ask for increasingly higher standards before insuring²⁰⁵.

These four scenarios, although hypothetical and largely simplifying, help to imagine the direction that could be taken in the coming years. Certainly, the boundaries between one case and another will not be so marked, aspects linked to different scenarios could even occur simultaneously in different parts of the world, given the complexity of reality compared to solely theoretical models. However, with provocations and speculations they invite us to reflect.

3.3.2. *Call for a Global Action*

The last paragraph intends to give a note of optimism to a scenario so far characterized by tensions dictated by geopolitical interests, consequent economic instabilities, and risks of escalation of new world conflicts. In recent years, there have been indeed numerous initiatives for global partnership in the face of major global problems.

In September 2015, the 193 United Nations member states defined 17 Sustainable Development Goals (SDGs)²⁰⁶ and within them 169 targets, as a universal plan of action

²⁰⁵ *Ibidem*.

²⁰⁶ 1. No poverty, 2. Zero hunger, 3. Good health and well-being, 4. Quality education, 5. Gender equality, 6. Clean water and sanitation, 7. Affordable and clean energy, 8. Decent work and economic growth, 9. Industry, innovation, and infrastructure, 10. Reduced inequalities, 11. Sustainable cities and communities, 12. Responsible consumption and production, 13. Climate action, 14. Life below water,

to foster economic growth, preserve peace and safeguard the planet by 2030. They were preceded by the 8 Millennium Development Goals (MDGs) of 2000, which however were not achieved by 2015. In Resolution 70/1, adopted by the UN General Assembly and establishing the SDGs, countries «committed to achieving sustainable development in its three dimensions – economic, social, and environmental – in a balanced and integrated manner». They aspired «to end poverty and hunger everywhere; to combat inequalities within and among countries; to build peaceful, just and inclusive societies; [...] to create conditions for sustainable, inclusive and sustained economic growth, shared prosperity and decent work for all, taking into account different levels of national development and capacities». In this ‘collective journey’ they ensured that no one would be left behind, rather the least developed would be helped first²⁰⁷.

The last SDG Report, published by UN in 2023, presented the progress made in some fields, but also highlighted the areas where national commitment or international cooperation had been insufficient. We are more than halfway between 2015 and 2030, but in terms of objectives the last few years have definitely marked a reversal of direction, and compared to some goals, we are now further away than in 2019. A few indices that have remained constant or improved over the years are, for example, access to mobile networks and the internet. On the other hand, the fight against poverty, the achievement of sustainable economic growth, vaccination coverage and global primary education, have not progressed over the years 2020-2023, they have instead worsened. Food insecurity, economic vulnerability and extreme climate events are increasing. A further problem arises from the fact that these factors act in a negative spiral that fuel inequalities in the world even more. It is thus imperative to initiate transformative change to avoid undermining past global efforts²⁰⁸.

In particular, considering the climate change issue, several commitments have been made between countries during the years: we remember the Kyoto Protocol established in occasion of the COP3 in 1997 and the Paris Climate Agreement published as result of the COP21 in 2015, as the most important instruments decided at an international level. The

15. Life on land, 16. Peace, justice and strong institutions, 17. Partnerships for the goals. *Source:* United Nations, <https://sdgs.un.org/goals>.

²⁰⁷ United Nations (2015) *Resolution 70/1 adopted by the General Assembly on 25 September 2015*, Transforming our world: the 2030 Agenda for Sustainable Development, https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf.

²⁰⁸ United Nations (2023) *SDGs Report 2023*, June 14, <https://sdgs.un.org/sites/default/files/2023-06/Advance%20unedited%20GSDR%2014June2023.pdf>.

COP (Conference of the Parties) is a governing body composed by the countries that ratified the UN Framework Convention on Climate Change (UNFCCC). Last meeting (COP28) was held between November 30 and December 13, 2023, in Dubai. Among the commitments made, they agreed on the need to reduce global greenhouse gas emissions by 43 percent by 2030 and 60 percent by 2035, to ensure compliance with the 1.5 °C limit against global warming. Other topics covered were energy and financing. The former because it is a sector which, through the production of energy from renewable sources, can still have great effects on the climate. The latter because collective action is needed to support developing countries in their transition towards decarbonization. The EU, for example, mobilized €28.5 billion in 2022 to fight the climate crisis and €11.9 billion only for developing countries²⁰⁹. The next meeting (COP29) will be held in Baku, Azerbaijan, in November 2024. The hope is that these international conferences will not result in just theoretical promises but will evidence that countries are working in the right direction to mitigate and adapt to the effects of climate change²¹⁰.

Another event that will be important to follow at the international level is the Summit of the Future taking place in September 2024, whose motto is “Multilateral solutions for a better future”. The ambition of this United Nations conference is to determine how the objectives, already outlined by Agenda 2030 and the SDGs, will be achieved, in light also of the recent geopolitical challenges given by the numerous ongoing conflicts in the world. Previously in the research, we highlighted that the multilateral systems needed reform, because the post-war institutions could not address today's needs. This Summit is intended to rebuild the trust of nations among themselves, as well as in multilateralism²¹¹. The conference will result in the definition of a “Pact for the Future”, a «concise, action-oriented outcome document, [...] comprising a chapeau and five chapters, as follows:

- (i) Chapter I. Sustainable development and financing for development,
- (ii) Chapter II. International peace and security,
- (iii) Chapter III. Science, technology and innovation and digital cooperation,
- (iv) Chapter IV. Youth and future generations,
- (v) Chapter V. Transforming global governance»²¹².

²⁰⁹ Consiglio Europeo (2024) *COP28*, <https://www.consilium.europa.eu/it/policies/climate-change/paris-agreement/cop28/>.

²¹⁰ United Nations, *UN Climate Change Conference Baku - November 2024*, <https://unfccc.int/cop29>.

²¹¹ United Nations (2024) *Summit of the Future*, <https://www.un.org/en/summit-of-the-future>.

²¹² United Nations (2023) *Draft decision submitted by the President of the General Assembly Scope of the Summit of the Future*, 77/L.109,

We can conclude this section by stating that strong nation-states are required in addressing global problems, including climate change. It is essential that they continue to participate in international negotiations, design new legal frameworks, keep global issues at the top of the political agenda. However, their individual efforts alone cannot be fully effective if they are not coordinated internationally. We should implement a multi-actor governance system and believe that a combination of traditional top-down and bottom-up approaches will be our best chance to deal with the complexity and uncertainty of recent years. Governments, IGOs, people and private companies should align their interest towards a common goal, otherwise the effectiveness of action would not be sufficient to achieve a sustainable model of economic growth²¹³.

<https://documents.un.org/doc/undoc/ltd/n23/252/95/pdf/n2325295.pdf?token=uaLyIkjOO7XBkIKy9h&fe=true>.

²¹³ BLEWITT, J. (2018) *Understanding Sustainable Development*, Routledge, London.

CONCLUSIONS

Around 90 percent of the goods exchanged in the world travels by sea. Along these routes numerous chokepoints became strategic for international trade. One is definitely the Suez Canal, which is entirely managed by the Suez Canal Authority, an Egyptian government agency. It constitutes a geostrategic point in world trade flows, because around 12 percent of international exchanges pass through this point. The Suez Canal is also a major bottleneck in world food trade: 14.6 percent of international cereal imports and 14.5 percent of world fertilizer imports, depend on this passage. It is also relevant to the oil market, with 5.5 million barrels per day transiting through it. Its convenience comes from the fact that it allows a direct passage between the Mediterranean Sea and Asia, significantly reducing transit time and shipping costs for vessels. In 2019, ships navigating the Suez Canal were 18,880, with a daily average of 51.7, and they were carrying 1,207 million tons, with a daily average of 3,307.1. Its geopolitical and economic importance is evidenced by the numerous investments that are affecting the area. Firstly, Chinese investments were directed to the creation of new logistics and industrial areas along the Suez route, since it became part of the larger Chinese Belt and Road Initiative. The aim is to make the Canal one of the most relevant hubs in the world's maritime trade routes. Secondly, global shipping companies are directly announcing the construction of new terminals and logistics areas, especially the Chinese COSCO and Hutchison Ports, from Hong Kong. In addition, Egypt is embarking on the implementation of an ambitious plan to build a Green Canal by 2030. Indeed, the country has growing interests in the blue economy, or the creation of a sustainable economic system through technological innovation. The Suez Canal, by shortening the distance of many commercial sea routes, saves ships a total of 10.3 million tons of fuel, reducing CO² emissions by 31 million tons. Hala Al-Said, Egypt's minister of planning and economic development, said \$500 billion will be invested in the green transition by 2030. In 2022, as a forward-looking goal, Egypt had set a target of using 20 percent of electricity derived exclusively from renewable sources, a number that is expected to rise to 42 percent by 2035, taking advantage mainly of solar and wind sources.

However, the Suez Canal has recurrently been the subject of geopolitical risks related to the presence of piracy, terrorism, and extreme weather events, which have highlighted its high vulnerability and made the risk of closure real. The Ever-Given incident of 2021, when a 400-meter-long ship ran aground on the eastern shore of the channel, showed how

critical this chokepoint is to international trade. After this incident, it returned to the center of media attention in 2023, when the Red Sea crisis began. The Yemeni Islamist Houthi group repeatedly attacked ships transiting through Suez to demonstrate its support for the Palestinian Hamas terrorist group in its war against Israel. Clearly, these events led to the blockade of international maritime traffic through Suez and Bab el-Mandeb. The current situation in the Red Sea is an example of the systemic fragility of global value chains. There has been a reversal of the trend: previously supply chains involved multiple countries even very distant from each other, now these are perceived as risky because all it takes is one accident along the way to jeopardize the entire production phase. A frequent choice has been to shorten GVCs, the so-called reshoring trend, to guarantee company's dependence on more reliable commercial partners and proximity to end customers. The choice of multinationals to return to their homeland or neighboring countries results in the advent of regionalism in place of multilateralism. Between 1990 and 2020, the increase in the number of RTAs was exponential, from 70 to 300, respectively.

Macroeconomic volatility and market instability paved the way to geopolitics, which has recently been witnessed by the return of the state as an actor in the international context, shadowing the power of action of international organizations. We have moved from a phase of hyper connectedness, where countries defined their economic choices purely on the basis of economic efficiency and cost reduction, to a situation of political convergence where a gradual loss of confidence is perceived in the international system, and there is a tendency to rely only on countries with political affinity. These trends that are leading to geopolitical fragmentation have been triggered by a series of events shaking global value chains: the Global Financial Crisis of 2008-2009, trade disputes, such as the one between China and the United States that began in 2016, the Covid pandemic, the ongoing Russia-Ukraine War, and the Red Sea crisis. The future of international trade through Suez is thus uncertain and largely conditioned by geopolitical choices. Investments in the Suez Canal Economic Zone risk not being sufficient to attract new trade if armed conflicts in the Middle East do not cease. Just as the intensification of trade tensions between China and America could worsen the international scenario, with countries taking one side or the other. Furthermore, the pandemic and the Ukraine-Russia conflict have shown how essential it is not to be completely dependent on some countries, especially with which there are no political affinities, for the supply of critical products.

Understanding and being able to express the multifaceted dynamics that determine the actions of the countries is certainly a complex challenge. In addition to the intricate nature of global relationships, the unpredictable evolution of events and the instability of markets could cause unexpected changes in direction. Drawing exact conclusions about future economies and global maritime trade would thus require simplifications and assumptions. The “Future Matrix” developed by Economist Impact, could however help us visualize four possible outcomes. Whether one occurs rather than the other depends on two main variables: the degree of cooperation on the climate agenda and the degree of technology uptake. In the case of a lack of international cooperation, we would assist to a progressive polarization into regional blocs, which could exacerbate existing inequalities with less developed countries. Advanced countries should recognize their national sovereignty, understand their geopolitical realities, and seek to cooperate on mutual benefits, in order to make them belong to the global economy. In 2015, during the definition of the 2030 Agenda, countries agreed on the need to progress ‘at the same pace’, without leaving anyone behind. The problem is that words are one thing, facts are another. Faced with the great global challenges we are experiencing; global action is necessary and requires the reinvigoration of multilateralism. Strong international institutions, cooperation and an orientation towards sustainable economic growth are the factors that great world leaders should promote, putting an end to individual interests, armed conflicts, and trade wars, to guarantee a better future for all.

ABBREVIATIONS

AFRA	Average Freight Rate Assessment
ASEAN	Association Southeast Asian Nations
BRI	Belt and Road Initiative
BRICS	Brazil, Russia, India, China, South Africa
CDO	Collateralized Debt Obligation
CET	Common External Tariff
COP	Conference of the Parties
EEZ	Exclusive Economic Zone
EFTA	European Free Trade Association
EGP	Egyptian Pound
FDI	Foreign Direct Investment
FTA	Free Trade Area
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GVC	Global Value Chain
IBRD	International Bank for Reconstruction and Development
ICC	International Criminal Court
IGO	International Governmental Organization
IMF	International Monetary Fund
IMO	International Maritime Organization
ISI	Industrialization as a Substitute of Imports
IT	Information Technologies
ITO	International Trade Organization
JCPOA	Joint Comprehensive Plan of Action
LDC	Least Developed Countries
LNG	Liquefied Natural Gas
LOSC	Law of the Sea Convention
LR	Long Range
MDG	Millennium Development Goal
MNE	Multinational Enterprise

MNF	Most Favored Nation
MSP	Malacca Strait Patrol
NAFTA	North American Free Trade Agreement
NSR	Northern Sea Route
NT	National Treatment
OPEC	Organization of the Petroleum Exporting Countries
PCA	Panama Canal Authority
PTA	Preferential Trade Agreement
RTA	Regional Trade Agreements
SCA	Suez Canal Authority
SCZone	Suez Canal Economic Zone
SDG	Sustainable Development Goal
SUA	Suppression of Unlawful Acts
TEU	Twenty-foot Equivalent Unit
TRIPS	Trade-Related Aspects of IP Rights Agreement
ULCC	Unit Ultra Large Crude Carriers
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
UNTSO	United Nations Truce Supervision Organization
USSR	Union of Soviet Socialist Republics
VLCC	Very Large Crude Carriers
WTO	World Trade Organization

BIBLIOGRAPHY

Articles, Books and Publications

AIYAR, S.; PRESBITERO, A.; RUTA, M. (2023) *Geoeconomic Fragmentation: The Economic Risks from a Fractured World Economy*, Center for Economic Policy Research Press and International Monetary Fund, Paris, <https://cepr.org/publications/books-and-reports/geoeconomic-fragmentation-economic-risks-fractured-world-economy>.

ALEXANDER, L. M. (1992) *The Role of Choke Points in the Ocean Context*, GeoJournal, Kluwer Academic Publishers, 26(4), <https://www.jstor.org/stable/41145437>.

AMIGHINI, A.; MAURER, A., *et al.* (2023) *Catene del valore globali*, External Relations thematic department, Directorate-General for External Policies of the Union, March, [https://www.europarl.europa.eu/RegData/etudes/STUD/2023/702582/EXPO_STU\(2023\)702582\(SUM01\)_IT.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2023/702582/EXPO_STU(2023)702582(SUM01)_IT.pdf).

ANTRÀS, P. (2020) *De-Globalization? Global Value Chains in the Post-COVID-19 Age*, Harvard University, National Bureau of Economic Research Working Paper Series, No. 28115, 11 November, <https://www.nber.org/papers/w28115>.

Asian Development bank, World Trade Organization, Institute of Developing Economies (2021) *Global Value Chain Development Report 2021: Beyond Production*, https://www.wto.org/english/res_e/booksp_e/00_gvc_dev_report_2021_e.pdf.

Assolombarda (2022) *Conflitto Russia-Ucraina: il rialzo delle materie prime*, April 20, ALERT Study Center, <https://www.assolombarda.it/desk-russia-ucraina/analisi/20-04-conflitto-russia-ucraina-il-rialzo-delle-materie-prime>.

BAILEY, R.; WELLESLEY, L. (2017) *Chokepoints and Vulnerabilities in Global Food Trade*, Chatham House: the Royal Institute of International Affairs Report, London, June, <https://www.chathamhouse.org/2017/06/chokepoints-and-vulnerabilities-global-food-trade>.

BEDNARSKI, L.; ROSCOE, S. *et al.* (2023), *Geopolitical disruptions in global supply chains: a state-of-the-art literature review*, UK Limited, Taylor & Francis Group, December, [10.1080/09537287.2023.2286283](https://doi.org/10.1080/09537287.2023.2286283).

BEKKERS, E; *et al.* (2015) *Melting Ice Caps and the Economic Impact of Opening the Northern Sea Route*, CPB Netherlands Bureau for Economic Policy Analysis, May, <https://boris.unibe.ch/89212/1/Melting%20Ice%20Caps.pdf>.

BLEWITT, J. (2018) *Understanding Sustainable Development*, Routledge, London.

BOLLMANN, M. *et al.* (2010) *Maritime highways of global trade*, in *Living with the Oceans*, World Ocean Review, Maribus, pp. 164-171, https://worldoceanreview.com/wp-content/downloads/wor1/WOR1_en.pdf.

BOTTINI, N.; ERNST, C; LUEBKER, M. (2007) *Offshoring and the labor market: What are the issues?*, Economic and Labour Market Paper, International Labor Organization, Switzerland, https://ilo.org/wcmsp5/groups/public/---ed_emp/---emp_elm/---analysis/documents/publication/wcms_113922.pdf.

BURGESS, J.; FOULKES, L. (2017) *Law of the Sea*, The Fletcher School of Law and Diplomacy, <https://sites.tufts.edu/lawofthesea/files/2017/07/LawoftheSeaPrimer.pdf>.

CAFFIO, F.; CARNIMEO, N.; LEANDRO, A. (2013) *Elementi Di Diritto e Geopolitica Degli Spazi Marittimi*, Cacucci Editore, Bari.

CHOREV, S. (2023) *The Suez Canal: Forthcoming strategic and geopolitical challenges*. In: LUTMAR, C.; RUBINOVITZ, Z. (2023) *The Suez Canal: Past Lessons and Future Challenges*, Palgrave Macmillan Cham, Switzerland, p. 7-8, <https://doi.org/10.1007/978-3-031-15670-0>.

DACHS, B.; KINKEL, S.; *et. al.*, (2019) *Backshoring of production activities in European manufacturing*, Journal of Purchasing and Supply Management, Vol. 25, Issue 3, June, Elsevier, <https://doi.org/10.1016/j.pursup.2019.02.003>.

DEANDREIS, M.; CAMPIONI, D. (2018) *The Suez Canal after the expansion*, SRM and Alexbank, Maritime Economy, October Report, https://www.sr-m.it/wp-content/uploads/2018/12/srm_alexbank_suez_2018.pdf.

DEANDREIS, M.; CAMPIONI, D. (2023) *The Suez Canal*, SRM and Alexbank, [https://www.alexbank.com/document/documents/ALEX/2023/Report_research/Other/Suez-23-DIGITAL-27323-h1140-\(1\).pdf0](https://www.alexbank.com/document/documents/ALEX/2023/Report_research/Other/Suez-23-DIGITAL-27323-h1140-(1).pdf0).

DE BENEDICTIS, H. (2007) *La globalizzazione*, OECD, Employment outlook, <http://www.ecostat.unical.it/Algieri/Didattica/Economia%20Internazionale/materiale%20x%20internazionale/Globalizzazione.pdf>.

EL-SAQTY, K. (2023) *Blue Economy and Future of Investment in Suez Canal*, The Egyptian Cabinet: Information and Decision Support Center (IDSC), December, <https://idsc.gov.eg/upload/DocumentLibraryIssues/AttachmentA/8842/Blue%20Economy%20and%20Future%20of%20Investment%20in%20Suez%20Canal%20-E%20.pdf>.

Embassy of Egypt, *The Suez Canal Economic Zone: An Emerging International Commercial Hub*, Washington, https://www.egyptembassy.net/media/Egypt_SuezCanal_082216a.pdf.

EMMERSON, C.; STEVENS, P. (2012) *Maritime Choke Points and the Global Energy System Charting a Way Forward*, Chatham House Paper, London, January, https://www.chathamhouse.org/sites/default/files/public/Research/Energy%2C%20Environment%20and%20Development/bp0112_emmerson_stevens.pdf.

FERRO, A.; RAELI, G. (1999) *La liberalizzazione dei mercati mondiali. Dall'ITO alla WTO passando per il GATT*, Milano, pp. 1-20.

FRATOCCHI, L.; IAPADRE, P.; *et. al.* (2014) *Manufacturing Reshoring: Threat and Opportunity for East Central Europe and Baltic Countries*, Research Gate, https://www.researchgate.net/publication/290950335_Manufacturing_Reshoring_Threat_and_Opportunity_for_East_Central_Europe_and_Baltic_Countries.

GANAPATI, S.; WONG, W. F. (2023) *How Far Goods Travel: Global Transport and Supply Chains from 1965–2020*, Journal of Economic Perspectives, 37(3), pp. 3-30, <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.37.3.3>.

GERSON, A. (2023) *Stranding of the Mega-Ship Ever Given in the Suez Canal: Causes, Consequences, and Lessons to Be Learned*. In: LUTMAR, C.; RUBINOVITZ, Z. (2023) *The Suez Canal: Past Lessons and Future Challenges*, Palgrave Macmillan Cham, Switzerland, <https://doi.org/10.1007/978-3-031-15670-0>.

GIRARDI, B.; VAN HOOFT, P.; CISCO, G. (2023) *What the Indo-Pacific means to Europe: trade value, chokepoints, and security risks*, The Hague Centre for Strategic Studies, November, <https://hcss.nl/wp-content/uploads/2023/11/What-the-Indo-Pacific-means-to-Europe-Trade-Value-Chokepoints-and-Security-Risks-HCSS-2023.pdf>.

GOKH, I; FILIPPAIOS, F. (2021) *Footloose multinationals: Extending the internalization theory*, Wiley, p. 478, <https://onlinelibrary.wiley.com/doi/pdf/10.1002/tie.22193>.

- GREY, C. S. (1999) *Modern Strategy*, Oxford University Press, Vol. 2.
- HERRERO, A. G. (2020) *From globalization to deglobalization*, Bruegel, Brussel, <https://www.bruegel.org/sites/default/files/wp-content/uploads/2020/02/Globalization-desglobalization.pdf>.
- HOLCOMB, S. J. (2021) *A Century of British Dominance of the Mediterranean: Lessons for the U.S. Navy in the South China Sea*, Naval History Magazine, Vol. 35, No. 3, June, <https://www.usni.org/magazines/naval-history-magazine/2021/june/century-british-dominance-mediterranean-lessons-us-navy>.
- KATARYNIUK, I.; PÉREZ, J.; VIANI, F. (2021) *(De-)Globalization of trade and regionalization: a survey of the facts and arguments*, Banco De España, October, <https://www.bde.es/f/webbde/SES/Secciones/Publicaciones/PublicacionesSeriadas/DocumentosOcasionales/21/Files/do2124e.pdf>.
- KOMISS, W.; HUNTZINGER, L. (2011) *The Economic Implications of Disruptions to Maritime Oil Chokepoints*, Center for Naval Analysis, Arlington, Virginia, March, https://www.cna.org/archive/CNA_Files/pdf/d0024669.a1.pdf.
- LEE, J.M.; WONG, E. Y. (2021) *Suez Canal blockage: an analysis of legal impact, risks, and liabilities to the global supply chain*, Édition Diffusion Presse Sciences, <https://doi.org/10.1051/mateconf/202133901019>.
- LOSSANI, M. *et al* (2023) *Deglobalizzazione o slowbalisation?*, OCPI, June 30, <https://osservatorioci.unicatt.it/ocpi-Deglobalizzazione%20o%20slowbalisation.pdf>.
- MAHAN, A. T. (1890) *The influence of sea power upon history*, Cambridge University Press, https://www.enabed2016.abedef.org/resources/download/1403180516_ARQUIVO_Maha_nInfluenceofSeaPowerUponHistory.pdf.
- MAIHOLD, G. (2022) *A New Geopolitics of Supply Chains: The Rise of Friend-Shoring*, SWP Comment, No 45, July, Berlin, <https://doi.org/10.18449/2022C45>.
- MENGOZZI, P.; MORVIDUCCI, C. (2018) *Istituzioni di diritto dell'Unione Europea*, Cedam Wolters Kluwer, Milan.
- MIAH, M. A.; AHMED, S. U.; SULTANA, K. S. (2019) *Control over Maritime Chokepoints an Assurance of Secure Lifeline*, Bangladesh Maritime Journal, Volume 3, Issue 1, <https://bsmrmu.edu.bd/public/files/econtents/5eb7a6476e3a5bmj-03-01-07.pdf>.
- MILS, C. (2024) *Ukraine conflict: An overview*, House of Commons Library, UK Parliament, Research Briefing No. 9723, <https://researchbriefings.files.parliament.uk/documents/CBP-9723/CBP-9723.pdf>.
- MURRAY, W.E.; OVERTON, J. (2015) *Geographies of Globalization*, Second edition, London and New York, Routledge.
- NORONHA, M; CHOW, M.; *et al* (2023) *Global Maritime Trends 2050*, The Economist Group, <https://impact.economist.com/ocean/global-maritime-trends-2050/downloads/Global%20Maritime%20Trends%202050%20Report.pdf>.
- NOTTEBOOM, T. E. (2012) *Towards a new intermediate hub region in container shipping? Relay and interlining via the Cape route vs. the Suez route* Journal of Transport Geography, 22(2), pp. 164–178. <https://doi.org/10.1016/j.jtrangeo.2012.01.003>.
- NOTTEBOOM, T.; PALLIS, A.; RODRIGUE, J.P. (2022) *Port Economics, Management and Policy*, New York, Routledge, doi.org/10.4324/9780429318184.

OECD (2022) *International trade during the COVID-19 pandemic: Big shifts and uncertainty*, March 10, https://read.oecd-ilibrary.org/view/?ref=1129_1129345-casormobh7&title=International-trade-during-the-COVID-19-pandemic.

OSTERHAMMEL, J. PETERSSON, N. P. (2005) *Storia della globalizzazione: Dimensioni, processi, epoche*, Il Mulino, Bologna.

OTTAVIANO, G. (2022) *Riglobalizzazione: dall'interdipendenza tra paesi a nuove coalizioni economiche*, EGEA, Milano.

ÖZKANLISOY, Ö.; AKKARTAL, E. (2021) *The effect of Suez Canal blockage on supply chains*, Maritime Faculty Journal, <https://dergipark.org.tr/en/download/article-file/1755096#:~:text=The%20marine%20route%20congestion%20and,lead%20times%20and%20shipping%20costs>.

PEGORARO, D.; DE PROPRI, L.; CHIDLOW, A. (2020) *De-globalization, value chains and reshoring*, Routledge, London, pp. 152-175.

PRATSON, L. F. (2023) *Assessing impacts to maritime shipping from marine chokepoint closures*, Communications in Transportation Research, Volume 3, December, <https://www.sciencedirect.com/science/article/pii/S2772424722000336>.

RALEIGH, W. (1829, reprinted 1965) *A Discourse of the Invention of Ships, Anchors, Compass, &c.*, The Works of Sir Walter Raleigh, Vol. 8.

RODRIGUE, J. P. (2004) *Straits, Passages and Chokepoints: A Maritime Geostrategy of Petroleum Distribution*, Cahiers de géographie du Québec, 48(135), pp. 357-374, <https://www.erudit.org/fr/revues/cgq/2004-v48-n135-cgq996/011797ar/>.

RODRIGUE, J. P. (2013) *The Geography of Transport Systems*, Routledge, London and New York, pp. 1-41, 158-182.

ROTHWELL, D. R. (2021) *Challenges to the distinction between innocent passage and transit passage according to UNCLOS*, Maritime Policy & Strategy Research Center, <https://www.kas.de/en/web/israel/single-title/-/content/unclos-and-the-protection-of-innocent-and-transit-passage-in-maritime-chokepoints>.

RUPERT, H. (2009) *The Suez Canal: Strategic & Operational Security Realities - Past, Present, & Future*, Strategic Insights: Global Maritime Analysis, 19(1), pp. 1-6. <https://www.sldinfo.com/wp-content/uploads/2009/11/Securing-the-Suez-Canal-October-20091.pdf>.

RUTA, M. (2023) *The rise of discriminatory regionalism*, Finance & development, June.

SABEL, R. (2023) *International Law and Freedom of Navigation Through the Suez Canal*. In: LUTMAR, C.; RUBINOVITZ, Z. (2023) *The Suez Canal: Past Lessons and Future Challenges*, Palgrave Macmillan Cham, Switzerland, p. 118, <https://doi.org/10.1007/978-3-031-15670-0>.

SELLARI, P. (2013) *Geopolitica dei trasporti*, GLF editori Laterza, Roma.

SPANIER, B. (2023) *Freedom of Navigation in the Suez Canal and the Channels: Law of the Sea*. In: LUTMAR, C.; RUBINOVITZ, Z. (2023) *The Suez Canal: Past Lessons and Future Challenges*, Palgrave Macmillan Cham, Switzerland, p. 118, <https://doi.org/10.1007/978-3-031-15670-0>.

STOPFORD, M. (2008) *Maritime Economics*, Routledge, London, pp. 1-89.

SUBRAMANIAN, A.; KESSLER, M. (2013) *The Hyperglobalization of Trade and Its Future*, Peterson Institute for International Economics, Washington, Working Paper 13-6, July, pp. 3-10, <https://www.piie.com/sites/default/files/publications/wp/wp13-6.pdf>.

VARGAS-HERNÁNDEZ, J. G.; VARGAS-GONZÁLEZ, O. C. (2021) *Global Supply Chain and Value Chain Relocation Strategy under Deglobalization*, Journal of Supply Chain Management Systems, Vol. 10 Issue 3, pp. 37-50.

VERNY, J., GRIGENTIN, C. (2009) *Container shipping on the Northern Sea Route*, International Journal of Production Economics, 122(1), pp. 107–117. <https://doi.org/10.1016/j.ijpe.2009.03.018>.

WANGWE, S.; KAWAMURA, H. (2018) *The 1960s: High Growth, High Hopes, and Looming Structural Imbalances*. In Ocampo, J. A.; et. al., *The World Economy through the Lens of the United Nations*, Oxford Academic, April 19, <https://doi.org/10.1093/oso/9780198817345.003.0003>.

WELLESLEY, L.; PRESTON, F. et al. (2017) *Chokepoints in global food Trade: Assessing the risk*, Elsevier, Amsterdam, <http://dx.doi.org/10.1016/j.rtbm.2017.07.007>.

Treaties and Official Reports

Asian Development bank, World Trade Organization et al. (2021) *Global Value Chain Development Report 2021: Beyond Production*, November.

Confindustria (2022) *L'incremento del costo dei noli marittimi per il trasporto merci via container*, Report, May, https://assembleaprivata2022.confindustria.it/wp-content/uploads/2022/05/CTI32_Confindustria-Indagine-sui-Noli-marittimi-agosto-2021.pdf.

Convention for the Suppression of Unlawful Acts (1988), Rome, https://www.classnk.or.jp/hp/pdf/activities/statutory/isps/IMO/isps_imo_sua%20covention%20and%202005%20protocol%20text_20051101.pdf.

European Parliament (2021) *Post Covid-19 value chains: options for reshoring production back to Europe in a globalised economy*, Directorate-General for External Policies, [https://www.europarl.europa.eu/RegData/etudes/STUD/2021/653626/EXPO_STU\(2021\)653626_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/653626/EXPO_STU(2021)653626_EN.pdf).

First Concession Act (1854), <https://www.napoleon.org/wp-content/themes/napoleon/annexes/hors-serie/suez/en/html-content/historique/txt-006.html>

GATT (1947) https://www.wto.org/english/docs_e/legal_e/gatt47_e.pdf.

International Court of Justice, *The Corfu Channel Case*, (United Kingdom of Great Britain and Northern Ireland v. Albania), 1949.

Protocol to the Convention for the Suppression of Unlawful Acts (2005), London, https://www.classnk.or.jp/hp/pdf/activities/statutory/isps/IMO/isps_imo_sua%20covention%20and%202005%20protocol%20text_20051101.pdf.

State of Israel (1979) *The Camp David Accords*, Ministry of Foreign Affairs, <http://muqtafi.birzeit.edu/InterDocs/images/284.pdf>

Statute of the International Court of Justice of 26 June 1945, <https://www.icj-cij.org/statute>.

Suez Canal Authority (2019) *Constantinople Convention of 1888*, <https://www.suezcanal.gov.eg/English/About/CanalTreatiesAndDecrees/pages/constantinopleconvention.aspx>.

Suez Canal Authority (2019) *Nationalization Decree of 1956*, <https://www.suezcanal.gov.eg/English/About/CanalTreatiesAndDecrees/Pages/NationalizationDecree.aspx>.

Suez Canal Authority (2019) *Republican Decree: Law No. 30 of 1975* <https://www.suezcanal.gov.eg/English/About/CanalTreatiesAndDecrees/Pages/ARepublicanDecreeLawNo.30of1975.aspx>.

Suez Canal Authority (2019) *Suez Canal Traffic Statistics: Annual Report 2019*, <https://www.suezcanal.gov.eg/English/Downloads/DownloadsDocLibrary/Navigation%20Reports/Annual%20Reports%E2%80%8B%E2%80%8B%E2%80%8B/2019.pdf>.

United Nations (2023) *Draft decision submitted by the President of the General Assembly Scope of the Summit of the Future*, 77/L.109, <https://documents.un.org/doc/undoc/ltd/n23/252/95/pdf/n2325295.pdf?token=uaLyIkjOO7XBkIKy9h&fe=true>

UN, *Resolution adopted on the report of the ad hoc Committee on the Palestinian question*, <https://documents.un.org/doc/resolution/gen/nr0/038/88/pdf/nr003888.pdf?token=Pmv48xdLHO46gLvMTW&fe=true>

UN (1967) *Resolution No. 242*, <https://www.un.org/unispal/document/auto-insert-184858/>.

UN (2015) *Resolution 70/1 adopted by the General Assembly on 25 September 2015, Transforming our world: the 2030 Agenda for Sustainable Development*, https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf.

UN (2023) *SDGs Report 2023*, June 14, <https://sdgs.un.org/sites/default/files/2023-06/Advance%20unedited%20GSDR%2014June2023.pdf>.

UN (1982) *United Nations Convention on the Law of the Sea (UNCLOS)*, https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

UNCLOS, List of state parties, Chapter XXI, <https://treaties.un.org/doc/Publication/MTDSG/Volume%20II/Chapter%20XXI/XXI-6.en.pdf>.

UNCTAD (2023) *Key statistics and trends in International Trade 2021/2022*, United Nations Publications, https://unctad.org/system/files/official-document/ditctab2023d1_en.pdf.

UNCTAD (2024) *Navigating Troubled Waters: impact to global trade of disruption of shipping routes in the Red Sea, Black Sea and Panama Canal*, February, https://unctad.org/system/files/official-document/osginf2024d2_en.pdf.

UNCTAD (2005) *Review of maritime transport 2005*, United Nations Publications, https://unctad.org/system/files/official-document/rmt2005fas_en.pdf.

UNCTAD (2010) *Review of maritime transport 2010*, United Nations Publications, https://unctad.org/system/files/official-document/rmt2010_en.pdf.

UNCTAD (2023) *Review of maritime transport 2023*, United Nations Publications, https://unctad.org/system/files/official-document/rmt2023_en.pdf.

US Department of State, *Tripartite Statement Issued at London, August 2, 1956*, Vol. XVI, Doc. 53, <https://history.state.gov/historicaldocuments/frus1955-57v16/d53>.

US EIA (2017), *World Oil Transit Chokepoints*, Washington DC, July 25, https://www.eia.gov/international/analysis/special-topics/World_Oil_Transit_Chokepoints.

SITOGRAPHY

ADAMS, S. (2023) *Battle of Stirling Bridge*, Encyclopedia Britannica, September 4, <https://www.britannica.com/event/Battle-of-Stirling-Bridge>.

Al Jazeera World (2019) *Suez: The Yellow Fleet trapped by the 1967 Arab-Israeli War*, <https://www.aljazeera.com/program/al-jazeera-world/2019/11/20/suez-the-yellow-fleet-trapped-by-the-1967-arab-israeli-war>.

Arctic Portal, *Shipping Routes*, <https://arcticportal.org/shipping-portlet/shipping-routes>.
ASEAN, <https://asean.org>.

BBC (2024) *What is Hamas and why is it fighting with Israel in Gaza?*, February 13, <https://bbc.com/news/world-middle-east-67039975>.

BENSON, E. (2023) *Broken value chains*, Italian Institute for International Political Studies, Dec 21, <https://www.ispionline.it/en/publication/broken-value-chains-158071>.

BONINI, E. (2024) *Hamas-Israel conflict hits Suez Canal, trade crisis risk, including Italy*, EU news, January 9, <https://www.eunews.it/en/2024/01/09/hamas-israel-conflict-hits-suez-canal-trade-crisis-risk-including-italy/>.

Britannica, the Editors of Encyclopaedia (2024), *Yom Kippur War*, March 5, <https://www.britannica.com/biography/Hosni-Mubarak>

BRUGORA, A. (2023) *How Fragmentation is Threatening the Globalized Economy: The Economy of the New Global (Dis)Order*, Italian Institute for International Political Studies, August 1, <https://www.ispionline.it/en/publication/how-fragmentation-is-threatening-the-globalized-economy-137971>.

BRUGORA, A.; FASULO, F. (2023) *The Rise of Competing Minilateralism Challenges Multilateralism*, Italian Institute for International Political Studies, December 27, <https://www.ispionline.it/en/publication/the-rise-of-competing-minilateralism-challenges-multilateralism-158673>.

Camera dei Deputati, *Il conflitto in Medio Oriente*, Servizi Studi, http://leg15.camera.it/cartellecomuni/leg14/RapportoAttivitaCommissioni/testi/03/03_cap06_sc_h01.htm.

CECERE, L. (2021) *The Ever Given Is Moving But Your Supply Chain Will Not*, Forbes, March 29, <https://www.forbes.com/sites/loracecere/2021/03/29/the-ever-given-is-moving-but-your-supply-chain-will-not/?sh=279ae444744f>.

CFI Charitable Trust, *Maps of Israel's History*, United Kingdom, <https://www.cfi.org.uk/downloads/MapsofIsraelHistory-v5.pdf>

Consiglio Europeo (2024) *COP28*, <https://www.consilium.europa.eu/it/policies/climate-change/paris-agreement/cop28/>.

CONSOB, *Crisi finanziaria del 2007-2009*, Autorità Italiana per la vigilanza dei mercati finanziari, <https://www.consob.it/web/investor-education/crisi-finanziaria-del-2007-2009>.

DZHANOVA, Y. (2021) *The Suez Canal has a contentious history and has been blocked and closed several times since opening*, Insider, March 29, <https://www.businessinsider.com/the-suez-canal-blocked-and-closed-several-times-since-opening-2021-3?r=US&IR=T>.

Encyclopedia Treccani, *Raleigh Sir Walter*, <https://www.treccani.it/enciclopedia/sir-walter-raleigh/>.

Enciclopedia Treccani, *Geopolitica*, <https://www.treccani.it/enciclopedia/geopolitica/>.

Enciclopedia Treccani (2010) *Globalizzazione*, Dizionario di Storia, [https://www.treccani.it/enciclopedia/globalizzazione_\(Dizionario-di-Storia\)/](https://www.treccani.it/enciclopedia/globalizzazione_(Dizionario-di-Storia)/).

Eurasia group (2024) *Top risks for 2024* <https://www.eurasiagroup.net/issues/top-risks-2024>.

FASULO, F. (2023) *Il principio fu il decoupling*, ISPI Commentary, Ministry of Foreign Affairs and International Cooperation, <https://www.ispionline.it/it/pubblicazione/in-principio-fu-il-decoupling-12774>.

FISHER, W.; SMITH, C. G. (2024) *Suez Canal*, Encyclopedia Britannica, <https://kids.britannica.com/scholars/article/Suez-Canal/108305>.

Freightos (2024) *Shipping & Freight Cost Increases, Current Shipping Issues, and Shipping Container Shortage*, February 1, <https://www.freightos.com/freight-blog/shipping-delays-and-cost-increases/>.

GUERRIERI, P. (2024) *Il nuovo contesto globale impone cambiamenti profondi all'Europa e alla sua economia*, Italianeuropei, February 26, <https://www.italianeuropei.it/en/italianeuropei-12024/item/4807-il-nuovo-contesto-globale-impone-cambiamenti-profondi-all'europa-e-alla-sua-economia/4807-il-nuovo-contesto-globale-impone-cambiamenti-profondi-all'europa-e-alla-sua-economia.html>.

HERRERO, A. G. (2023) *Global Growth: Choking Engines*, Italian Institute for International Political Studies, Dec 21, <https://www.ispionline.it/en/publication/global-growth-choking-engines-157902>.

Il Post (2021) *La storia del Canale di Suez*, March 25, <https://www.ilpost.it/2021/03/25/canale-suez-storia/>

International Crisis Group (2024) *Bab al-Mandab, Yemen*, February 20, <https://www.crisisgroup.org/trigger-list/iran-usisrael-trigger-list/flashpoints/bab-al-mandab-yemen>.

International Crisis Group (2024) *Strait of Hormuz*, February 15, <https://www.crisisgroup.org/trigger-list/iran-us-trigger-list/flashpoints/hormuz>.

JAS, *Updated customer advisory: Red Sea attacks and Suez Canal bypass*, <https://www.jas.com/regions/alerts-advisories>.

JUNYENT, M. M. (2023) *Why Are the Houthis Getting Involved in a War Between Israel and Hamas?*, Stimson, December 4, <https://www.stimson.org/2023/why-are-the-houthis-getting-involved-in-a-war-between-israel-and-hamas/>.

KALLANISH (2023) *Suez Canal inks \$15.6 billion green H2 deal with Chinese investors*, South East Asia Iron and Steel Institute, November 10, <https://www.seaisi.org/details/23790?type=news-rooms#:~:text=Egypt's%20Suez%20Canal%20Economic%20Zone,information%20service%20said%20this%20week>.

KANG, J. W. (2022) *Reshore or Diversify? How to Reorganize the World's Fragile Supply Chains*, Asian Development Blog, August 3, <https://blogs.adb.org/blog/how-to-reorganize-the-world-s-fragile-supply-chains>.

KELLER, C.; MAROLD, R. (2022) *Homecoming: The acceleration of deglobalization*, Barclays Corporate and Investment Bank, <https://www.cib.barclays/our-insights/3-point-perspective/Homecoming-The-acceleration-of-deglobalisation.html>.

KENDON, M. (2023) *Storm Ciarán, 1-2 November 2023*, Met Office Climate Information Centre, https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/uk-past-events/interesting/2023/2023_09_storm_ciaran_1.pdf.

LEVINSON, M. (2017) *End of a golden age*, Aeon Magazine, February 22, <https://aeon.co/essays/how-economic-boom-times-in-the-west-came-to-an-end>.

LOMBROSO, L. (2024) *La siccità sta colpendo il Canale di Panama*, Meteored, <https://www.ilmeteo.net/notizie/attualita/siccita-sta-colpendo-il-canale-di-panama-el-nino-e-i-cambiamenti-climatici-minacciano-il-commercio-globale.html#:~:text=Nel%20corso%20del%202023%2C%20complice,acqua%20dolce%20nel%20Lago%20Gatun>.

LUTKEVICH, B. (2021) *Supply chain*, Tech Target, <https://www.techtarget.com/whatis/definition/supply-chain>.

MANCINI, A. (2023) *Operazione nel Mar Rosso, gli Houthi minacciano: «Attaccheremo ogni 12 ore»*, Open, December 19, <https://www.open.online/2023/12/19/operazione-mar-rosso-houthi-minacce-cosa-succede/>.

MASTERS, J. (2021) *Suez Canal shutdown shows the vulnerability of the global economy to extreme events*, Yale Climate Connections, <https://yaleclimateconnections.org/2021/03/suez-canal-shutdown-shows-vulnerability-of-global-economy-to-extreme-events/>.

Merriam-Webster Dictionary, *Choke point*, <https://www.merriam-webster.com/dictionary/choke%20point>.

MLADENOV, N. (2023) *Minilateralism: A Concept That Is Changing the World Order*, Policy Analysis, The Washington Institute for Near East Policy, April 14, <https://www.washingtoninstitute.org/policy-analysis/minilateralism-concept-changing-world-order>.

OECD, *Foreign Direct Investment (FDI)*, https://www.oecd-ilibrary.org/finance-and-investment/foreign-direct-investment-fdi/indicator-group/english_9a523b18-en.

OECD, *Global Value Chains*, <https://www.oecd.org/industry/global-value-chains/>.

OECD, *Ocean shipping*, <https://www.oecd.org/ocean/topics/ocean-shipping/>.

O'NEIL, S. K. (2023) *It's Not Deglobalization, It's Regionalization*, Yale University Press, <https://www.cfr.org/article/its-not-deglobalization-its-regionalization>.

Oxford Learner's Dictionaries, *Choke Definition*, https://www.oxfordlearnersdictionaries.com/definition/american_english/choke_1.

PALAMAR, S. (2017) *The US and the Iran Deal: No Time for Magical Thinking*, October 16, Centre for International Governance Innovation, https://web.archive.org/web/20180612141047/https://www.cigionline.org/articles/us-and-iran-deal-no-time-magical-thinking?gclid=Cj0KCQiAiKrUBRD6ARIsADS2OLIDPPobuVgEq_il8yZW7bz4yNHISzgalnes1VPiRqBc3Okhg8z4f4aAmoVEALw_wcB.

PAROVEL, P. G. (2015) *Il nuovo Canale di Suez ed i porti adriatici di Trieste, Koper e Rijeka*, The Voice of Trieste, <https://www.lavoceditrieste.net/2015/08/07/il-nuovo-canale-di-suez-ed-i-porti-adriatici-di-trieste-koper-e-rijeka/>.

Redazione Shipping Italy (2023) *Proseguono le reazioni degli armatori alla crisi del Mar Rosso: ecco i primi effetti stimati*, December 19,

<https://www.shippingitaly.it/2023/12/19/proseguono-le-reazione-degli-armatori-alla-criasi-del-mar-rosso-ecco-i-primi-effetti-stimati/>.

Redazione UeT (2021) *Ever Given "in ostaggio", chiesti 200 milioni di dollari di deposito per liberarla*, May 25, <https://www.uominietrasporti.it/professione/ever-given-in-ostaggio-chiesti-200-milioni-di-dollari-di-deposito-per-liberarla/>.

SAVVIDES, N. (2024) *Container ships defy Panama Canal transit trends*, Seatrade Maritime news, <https://www.seatrade-maritime.com/panama/container-ships-defy-panama-canal-transit-trends>.

SCAWEN, S. (2015) *The true cost of Malaysia haze*, Al Jazeera, October 23, <https://www.aljazeera.com/features/2015/10/23/the-true-cost-of-malaysia-haze/>.

Sea Distances Calculator Tool, <https://sea-distances.org>.

SHAW-SMITH, P. (2023) *Hutchison Ports investing \$700m in Sokhna and Alexandria terminals* Seatrade Maritime News, March 16, <https://www.seatrade-maritime.com/ports/hutchison-ports-investing-700m-sokhna-and-alexandria-terminals>.

Shipping Italy (2023), *Publicato il rapporto finale sull'incaglio della Ever Given: ecco le responsabilità*, <https://www.shippingitaly.it/2023/07/14/publicato-il-rapporto-finale-sul-sinistro-della-ever-given-ecco-le-responsabilita/>

SI, K. (2023) *Cosco Shipping Ports invests in Egypt's Ain Sokhna container terminal*, Seatrade Maritime News, March 17, <https://www.seatrade-maritime.com/ports/cosco-shipping-ports-invests-egypts-ain-sokhna-container-terminal>.

SOMMERVILLE, D.; LOHNES, K. (2023). *Battle of Thermopylae*, Encyclopedia Britannica, December 26, <https://www.britannica.com/event/Battle-of-Thermopylae-Greek-history-480-BC>.

STEFANINI, SAMMARCO, MONTI (1936), *Suez, Canale di*, Enciclopedia Italiana Treccani, [https://www.treccani.it/enciclopedia/canale-di-suez_\(Enciclopedia-Italiana\)/](https://www.treccani.it/enciclopedia/canale-di-suez_(Enciclopedia-Italiana)/)

STEVENSON, T. (2022) *Keys to the World*, London Review of books, Vol. 44, No. 17, September 8, <https://www.lrb.co.uk/the-paper/v44/n17/tom-stevenson/keys-to-the-world>.

Suez Canal Authority, *A historical evolution*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/CanalHistory.aspx>

Suez Canal Authority (2019) *New Suez Canal: the project*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/NewSuezCanal.aspx>.

Suez Canal Authority, *SCA Overview*, <https://www.suezcanal.gov.eg/English/About/SuezCanalAuthority/Pages/SCAOverview.aspx>.

Suez Canal Authority (2019) *Suez Canal Characteristics*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/CanalCharacteristics.aspx>.

Suez Canal Authority (2019) *The Green Canal: a new strategy*, <https://www.suezcanal.gov.eg/English/About/SuezCanal/Pages/greencanal.aspx>.

The Economic Times (2013) *Journey of tennis balls used at Wimbledon*, July 09, <https://economictimes.indiatimes.com/journey-of-tennis-balls-used-at-wimbledon/articleshow/20986599.cms?from=mdr>.

THOMPSON, B. (2018) *The History of the Shipping Container created in 1956*, IncoDocs, August 31, <https://incodocs.com/blog/history-of-shipping-container-1956-world-trade/>.

United Nations (2015) *Goal 14: Conserve and sustainably use the oceans, seas and marine resources*, Agenda 2030, <https://unric.org/en/sdg-14/>.

United Nations (2024) *Summit of the Future*, <https://www.un.org/en/summit-of-the-future>.

United Nations, Sustainable Development Goals, <https://sdgs.un.org/goals>.

United Nations, *UN Climate Change Conference Baku - November 2024*, <https://unfccc.int/cop29>.

UNCTAD, *World seaborne trade*, <https://hbs.unctad.org/world-seaborne-trade/>.

US Bureau of Transportation Statistics, *Domestic Freight Ton-Miles*, [https://www.bts.gov/archive/publications/transportation_statistics_annual_report/2003/chapter_02/domestic_freight_ton-miles#:~:text=Ton%2Dmiles%20is%20the%20primary,the%20distance%20shipped%20\(miles\)](https://www.bts.gov/archive/publications/transportation_statistics_annual_report/2003/chapter_02/domestic_freight_ton-miles#:~:text=Ton%2Dmiles%20is%20the%20primary,the%20distance%20shipped%20(miles))

US Department of State, *Bandung Conference (Asian-African Conference) of 1955*, Office of the Historian, Foreign Service Institute, <https://history.state.gov/milestones/1953-1960/bandung-conf>.

US Department of State, *The Bretton Woods Conference of 1944*, <https://2001-2009.state.gov/r/pa/ho/time/wwii/98681.htm#>.

VISIONE, F. (2017) *Il GATT 1994 nel sistema della WTO*, Ius in itinere, September 29, <https://www.iusinitinere.it/gatt-1994-nel-sistema-della-wto-5225>.

VLAMIS, K. (2021) *The giant ship stuck in the Suez Canal is costing the global economy an estimated \$400 million per hour*, Business Insider, March 26, <https://www.businessinsider.com/boat-stuck-suez-canal-costing-estimated-400-million-per-hour-2021-3>.

WERGELAND, T. (2010) *Arctic Shipping Routes - Cost Comparisons with Suez*, <http://www.arctis-search.com/tiki-index.php?page=Arctic+Shipping+Routes+-+Cost+Comparisons+with+Suez#422>.

Wikipedia, *Choke point*, https://en.wikipedia.org/wiki/Choke_point.

WTO (2012) *Is multilateralism in crisis?*, Public Forum 2012, https://www.wto.org/english/res_e/booksp_e/public_forum12_e.pdf.

WTO in brief, https://www.wto.org/english/thewto_e/whatis_e/inbrief_e/inbr_e.pdf.