

# New globalization

Future scenarios for  
international maritime trade  
in a time of disruption

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This process of accelerated economic and cultural globalisation is bringing about a **radical change in the world economic structure**. The transatlantic relationship between the US and Western Europe loses its pre-eminence. At the end of the 20th century, **the world's centre of gravity shifted from the Atlantic to the Pacific**, the ocean connecting the dynamic west coast of the United States and the Far East.

It is here that from the 1980s onwards most of the world GDP' increase is concentrated, thanks to the incredible growth of China (including Taiwan), Japan, South Korea and the rest of the Far Eastern economies that were renamed the **Asian tigers**.

In this process of transferring the world's economic centre of gravity, two of the aforementioned factors were of extraordinary importance: **the growth of container shipping** and the radical change in **Chinese economic policy promoted by Deng Xiaping**. These two elements fed back on each other to completely transform international economic relations from the 1980s onwards.

These two factors, Chinese policy and container shipping, are also behind the changes we are currently experiencing in a world characterised by climate change, **a new transfer of the planet's centre of gravity from the Pacific to the Indian Ocean and a transition towards a fragmented, accelerated globalisation**.

This short ebook, which you have just started to read, aims to provide the general public with the author's knowledge of these issues, acquired thanks to two incomparable sources of information: the professional experience in a privileged observatory of international economic relations such as the **Port of Barcelona** and the knowledge of **Ramon Torrent**, former director of the legal services of the Council of the EU (at the time, European Communities) and one of the European "legal" fathers of the **Uruguay Round of the GATT**, which led to the creation of the World Trade Organization (WTO).

The aim is to provide the non-expert reader and, above all, the professional reader, with new tools to imagine where globalisation, international trade and maritime transport are heading and to be able to guide their organisations on these possible future scenarios.



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01

# The acceleration of globalisation

since the second half  
of the 20th century





# Manufacturing production massively relocates to the Far East

The radical change in China's economic policy at the end of the 1970s and its conversion, first into the world's factory and then into a global economic power in competition with the United States, was the most significant economic change in the world in the second half of the 20th century. The origin of this process can be found in the Chinese Communist Party's adoption of the Reform and Opening-up Policy during the third plenary session of the 11th Central Committee of the Chinese Communist Party (18-22 December 1978).

In little more than three decades, the Asian giant went from being a predominantly agricultural country to the world's leading industrial power. South Korea and Taiwan (officially part of China) underwent similar developments around the same time. Japan had already been competing internationally with success for decades. This shift, underpinned by the growth of seaborne exports to the West, has led to **the largest quantitative and qualitative poverty reduction in human history.**

In a few decades, millions of people were lifted out of poverty in Asia. Eight hundred million in China alone. In absolute numbers, today there are roughly the same number of people living in absolute poverty in the world as at the beginning of the century. With one big difference: **the population has increased by about two billion people, most of them on the Asian continent.** The benefits of this process for Asia's most disadvantaged populations are therefore undeniable.

China's entry into the World Trade Organisation (WTO) in 2001 is probably the most symbolic event of this period on the international scene. The development of Asian countries was concentrated in thirty / forty years, depending on the case.

When the 2008 financial crisis broke out, mostly on the United States and Europe, **the world's centre of gravity had already shifted towards the Pacific Ocean**, the sea linking the dynamic American West (California, Oregon, Washington), home to Hollywood and Silicon Valley, and the great Asian metropolises of Shanghai, Shenzhen, Hong Kong, Taipei, Tokyo, Seoul and Singapore.

This radical change is more evident in the international trade in goods. This is where **the pre-eminence of the Pacific, and Asia in particular, is resounding.** Even more so when it comes to containerised trade.



### Some basic data to illustrate the preeminence of the Pacific:

- 1 90% of the EU's international trade with the world is transported by sea. In the US the percentage is similar.
- 2 In terms of value of goods, it is estimated that **more than half of international trade in goods is containerised** (around 60%). In terms of tonnage, it is still a minority, since the transport in conventional vessels of products such as oil, metals and cereals is still the main mode of transport.
- 3 Approximately **eight times more containers are traded annually between Asian countries than between America and Europe**. Two to three times more than between the Far East and Europe on the one hand, and the Far East and the USA on the other.
- 4 For every container that Europeans export to the Far East, this region exports three containers to the old continent. The balance is similar between the US and Asia.

Of course, if we talk about other products transported by sea in bulk, the numbers change. However, **the world's main trade relationship in terms of tonnage is also 100% Asian**. It is the one that connects the Persian Gulf and the rest of the continent, especially the Far East, through the export of fossil fuels (oil and natural gas) in conventional ships (tankers, LNG tankers, etc.) from countries such as Saudi Arabia, Iran, Qatar, United Arab Emirates and Kuwait to states such as China, Japan, South Korea and India.

In the field of trade in services, the situation is obviously different. **The US still leads in exports**, thanks especially to the ICT and audiovisual companies located in the American West (Los Angeles, San Francisco, Seattle) and to the financial companies on the East Coast, especially in New York.

Yet, in this area, the shift of leadership to Asia also seems unstoppable, albeit slow. The success of **Korean mainstream cultural** productions is a paradigmatic example. In just a few years, Korea has produced the first film to win an Oscar for the best picture being a non-English language film (*Parasites*), the most watched series in history (*Squid Game*) and songs (*Gangnam Style*) and music groups (BTS, Blackpink) that top the global music charts.

## The irruption of the container

The shift of the planet's centre of gravity from the Atlantic to the Pacific would not have been possible, however, without an unprecedented evolution in maritime transport. The advent of the container and the boost it gave to the **gigantism of container ships** (as well as the transport of fossil fuels, driven by the oil industry and growing Japanese and European demand after the Second World War) was a blessing for the Chinese government. Mass container shipping allowed this shift of investment and production from the West to Asia to happen harmoniously and without much disruption.

Its importance becomes clearer if we compare a few facts:

*"In a matter of fifty years, **world population has doubled, world output (in constant market prices) has increased by 4.5 times, and merchandise exports (measured in tonnes) have increased by nearly 9 times.** The definitive boost to trade between countries comes from an unprecedented boom in trade in manufactured goods (those that travel in containers). Since 1970, trade in this type of goods has increased 15-fold, far outstripping trade in agri-food raw materials (4.5) and energy-industrial raw materials (3). It is precisely this massive intercontinental trade in products with a certain degree of processing that distinguishes the contemporary trade period from any other in human history<sup>1</sup>."*

*"Traditionally, the creation of the container is associated with **Malcolm McLean**, a remarkably inventive American businessman who had often swallowed his frustration at the difficulty of dock handling. [...] McLean began to apply the idea of a homogeneous box on land to his fleet of more than 600 trucks. [...] He then formed his own shipping company, the Pan-Atlantic Steamship Company. At the end of April 1956, he loaded 58 crates of aluminium on the Ideal-X that had arrived at the port by road on an identical number of semi-trailers, and the ship transported them from Newark to Houston<sup>2</sup>."*

1. Strategic framework of the Spanish port system. October 2022. Page 6
2. A sea without limits. David Abulafia. Editorial Crítica. Pages 1.215 and 1.216
3. A sea without limits. David Abulafia. Editorial Crítica. Page 1.216

*"Loading the Ideal-X cost one thirty-seventh (1/37) of what it would have cost to do it with the usual stowage process up to then. Few simple innovations like this have involved similar cost reductions in any industry or sector<sup>3</sup>."*

**What made this simple metal box a revolutionary invention for international trade and shipping?** Well, it was easy to coat, stack, handle and transport. Why? Because it was robust, airtight and homogenous, and it standardised the way finished or semi-finished products could be transported and handled without spoilage and in huge volumes. The innovation consisted of providing international trade with safe, airtight, homogenous packaging, homogeneous in dimensions and robust in materials, which would overcome the transport of goods that had been carried out until then in fragile and heterogeneous packaging (sacks, boxes, drums, etc.).



**The revolution of Malcolm McLean, creator of the shipping container in 1956, transformed international trade forever**



**The container simplified the loading and unloading operations in ports, lowered the cost of these operations and reduced the number of fatal and serious accidents** suffered by dockers, who until then performed one of the toughest and most dangerous jobs in the world.

The container was also more secure than the forms of packaging used until then. **It prevented leakage and made it harder to steal goods.** It was airtight and could not be punctured. When the maritime and port industry later introduced container sealing systems, theft of goods (one of the great historical problems of freight transport, especially in ports) became anecdotal.

The invention and gradual introduction of the container as a method of packaging for international trade brought a revolution in maritime transport and ships. These quickly adapted to the transport of this new packaging and began an **unstoppable race to increase its size** to take advantage of the benefits of transporting hundreds or thousands of identical boxes that were easy to seal.

[The increase of ships size](#) since the eighties of the last century, especially relevant in the container ship sector but also in the oil tanker, bulk carrier, ro-ro and cruise ship sectors, has forced a constant adaptation of the infrastructures that serve them in an endless race of growth and investment.



*The increase in the dimensions of ships has forced constant adaptation of the infrastructures that serve them in an infinite race of growth and investment*



*Carrying goods between Asia and Europe in a metal box, together with hundreds or thousands of other containers, involves almost insignificant costs for consumer or high-value products*

An endless race of growth and investment, mostly financed with public resources to avoid the loss of capacity of a country, region, city or port cluster to attract these **marine giants that provide international connectivity**, which has proved to be indispensable for the companies located in their hinterland (area of influence) to import or, even more importantly, export and compete efficiently in global markets.

**Ports and terminals have grown in parallel with the increase in ship size.** The shore stowage areas, the water depth in quays (increasing the draft) and the length of the mooring line have been increased. Bridges have been raised to allow ships to pass and the size of the cranes for unloading ships has increased dramatically. Even the two great artificial canals of the planet, **Suez and Panama**, have increased their capacity in the 21st century to allow the navigation of ever larger ships.

**The container allowed a substantial reduction in shipping costs.** Carrying goods between Asia and Europe in a metal box, together with hundreds or thousands of other containers, involves almost insignificant costs for consumer or high-value goods.

Even so, this took a few years to happen, i.e. for the unit cost of moving a container between two continents such as Asia and Europe to become insignificant in relation to the selling price of its contents. In fact, in value terms, **the container was not the main means of transport for world foreign trade until the 1990s.**



Ships of sufficiently large dimensions were needed to exploit the competitive advantage of containerisation. The absorption by China and the “Asian tigers” of part of the European and, in general, Western industry, had to be completed. This process reached cruising speed (to use a maritime expression) in the mid-1990s.

**The big global shipowners, a small handful of essentially European companies, pushed Asian shipyards, especially Chinese and Korean, into a dizzying race to build bigger and bigger ships.** Each new container ship ordered and launched in Korean and Chinese waters aroused the envy and concern of competing shipping companies who rushed to order even bigger ships. The bigger the ship, the greater the capacity to attract new traffic, the greater the economies of scale in shipping and port costs and the greater the possibility of offering even lower freight rates, especially in the China-Europe and China-US relation. It was an extraordinary race that forced naval engineers to make titanic efforts to increase the length, breadth, draught, height and hold of these marine giants, while at the same time trying to reduce fuel consumption, which is the main operating cost of big shipping companies.

From the fifty containers per ship carried on the first voyage of what can be called a container ship, we moved to ships of around 8,000 TEU capacity at the turn of the century. If between the 1980s and the end of the 20th century, the size of ships increased by 2.5, in the 21st century it has increased by a factor of three, from 8,000 TEU ships to today’s largest ships of around or slightly more than **24,000 TEU**.

This [naval gigantism](#) turned international trade in goods into an ultra-efficient system that allowed products manufactured tens of thousands of kilometres away to be available to European consumers at negligible cost. An example. Transporting a container from China to Europe full of clothes (e.g. hundreds of thousands of pieces of a major European brand) could cost as little as two thousand euros. **So, 0.02 cents per piece.**



***Naval gigantism turned international trade into an ultra-efficient system that made it possible to make available to European consumers products manufactured tens of thousands of kilometers away at negligible cost***

**The growth of container shipping experienced a turning point with the financial crisis of 2008.** It can be seen symbolically as the beginning of a new stage of this accelerated globalisation that would be characterised by the growth of almost all the Asian economies (China, Japan, Korea and Singapore are joined by India, Indonesia, Vietnam, Malaysia, Bangladesh, the Philippines, etc.) and the stagnation of the most advanced nations until then.

**The crisis, which mostly affected the West, had a major impact on shipping, especially container shipping.** For the first time in almost fifty years (since the invention of the container) there was stagnation or very weak growth in container shipping between the West and the rest of the world, especially Asia. In contrast, seaborne trade between Asian countries continued to grow, often by double-digit figures.



*The 2008 financial crisis can be seen symbolically as the beginning of a new stage in this accelerated globalization*





02

# The Covid-19 pandemic, maritime supply chain disruptions and the war in Ukraine

Covid-19

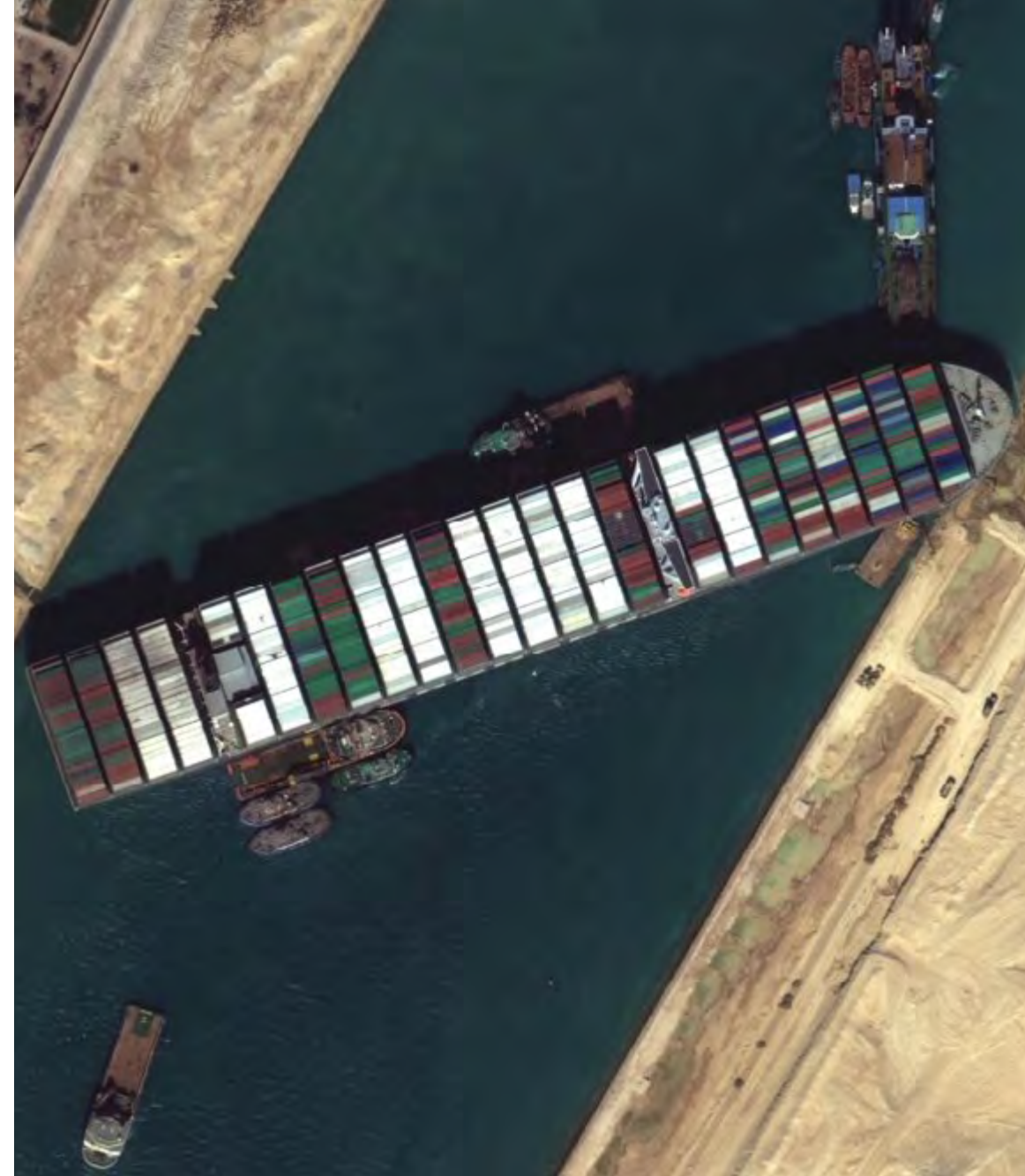


The shift of the global economic centre of gravity to the Pacific and of trade in goods to the Far East took place without much of a hitch. Despite the successive crises of the last fifty years (the Iran-Iraq war, the collapse of the Eastern Bloc, the attacks of 11 September 2001, the 2004 tsunami, the 2008 financial crisis, etc.), maritime transport has continued to function efficiently. The massive transfer of manufacturing production to the East did not lead to problems in the supply of products to the West in general and Europe in particular.

Even during the first year of the **Covid-19 pandemic**, after the first few weeks of anguish over the lack of masks, the global economy, international trade and shipping continued to function with relative normality. The end of strict confinement in late 2020 and early 2021 caused these **global supply chains underpinned by shipping to start to falter seriously for the first time.**

Suddenly, the European and Western foreign sector found itself in the midst of a **perfect storm**. [A combination of simultaneous global and regional disruptions](#) called into question the continuity of strategic economic sectors and the very evolution of globalisation over the last fifty years.

The sudden increase in demand, the decrease in maritime supply, the **loss of reliability and predictability of container ships**, the lack, dispersion and poor availability of empty containers, port congestion - especially severe in the USA -, the skyrocketing freight rates, the frequent closure of



Chinese ports due to the zero Covid policy, [the temporary blockage of the Suez Canal by the Evergiven ship](#), or the lack of a reliable and predictable container ship, the exorbitant increase in freight rates and the lack of truck drivers affected almost all productive and economic sectors.



Orders were not coming in, parts were missing from assembly lines, **raw materials were in short supply**, exporters and importers of low-value products (chemicals, steel, grains, etc.) could no longer afford to pay shipping prices, etc. In certain sectors, **shipping disruptions coincided with production and distribution problems of key products** from a single location or company.

A paradigmatic case is the **semiconductor sector**, key for the automotive industry, which is largely dependent on a single Taiwanese company. Also paper, used by the European publishing industry or to produce drug package inserts, which originates in China. However, the problems extended to other sectors too dependent on one or a few suppliers.

The **coup d'état in Myanmar** meant that European brands that were mainly sourced from factories in this Southeast Asian country were suddenly out of stock. The **coup in Guinea**, one of the world's leading bauxite producers, affected the aluminium industry. These and other sectors had to cope with the additional disruption of **rising inflation**, which reached double-digit levels in many countries.

Suddenly, **Europe became truly aware of its fragility as a result of delocalising its industry** over the last forty years, the lack of raw materials and the huge dependence on container shipping, in the hands of a handful of companies, and a few hundred large container shipping monsters.

When disruptions to shipping and supply chains and inflation were at their peak, war broke out in Ukraine, leading to [further disruptions in international commodity trade](#) and a further increase in inflation and energy costs. And the realisation, once again, **that dependence on a single country for one or more key commodities, in this case oil and gas, is a huge risk.**



*With shipping disruptions and inflation at an all-time high, war broke out in Ukraine, leading to further disruptions in international merchandise trade and a further increase in inflation and energy costs*

03

# Reactions to the perfect storm.

From *just in time*  
to *just in case*





At the beginning of 2022, after almost a year of disruptions, many companies decided to act and change their supply chains. Some, desperate due to rising prices and lack of reliability of maritime transport, opted to use rail transport between China and Europe.

Unfortunately, the Eurasian train has a limited capacity (less than 100 containers per service) compared to container ships, so it can hardly become a full alternative to maritime transport. In addition, the growth in demand for rail transport between China and Europe pushed prices up. By the end of 2021 tens of thousands of euros were being paid to transport a container by rail between China and Europe. The outbreak of the war in Ukraine in February 2022 further undermined this alternative.

**Air transport also benefited from the increase in ocean freight rates**, although the subsequent increase in fuel prices made up the difference. Normally, air transport has always been much more expensive than maritime transport. For a long period between 2021 and 2022, prices became fairly equal, so many companies swapped. Those that were already using it increased their use.

Flying also offered greater reliability and, as always, substantially shorter delivery times. Inflation, **fuel price growth** and air transport disruptions in mid-2022 worsened its reliability and increased prices, so those advantages were significantly reduced.

Many companies, accustomed to the **'just in time'** which, among other things, made them work without stocks, had to recover them. They had to store stocks, references, parts and finished products in order to be able to meet orders or not have to stop the assembly lines.

They could no longer rely on international supply chains. Instead of 'just in time', they had to work on a 'just in case' basis, an expression that became popular in the world of international trade from 2022 onwards. The automotive sector was a paradigmatic case.

Other companies, more accustomed to e-commerce, for example, already increased stock volumes to cope with this new way of selling and buying. In the West, all this triggered **a wave of new storage space hiring**, a blessing for the logistics real estate sector.

Other companies, especially large groups such as **Amazon, Coca Cola, Lidl, Walmart**, have reacted by taking back some control of their supply chains. They have chartered their own ships and bought or leased containers. And they have also bought or leased their own planes. Lidl has even created a company dedicated to shipping and has also entered the rail transport sector.

Other companies abandoned the use of containers and chartered their own ships to carry their products. These were generally companies importing or exporting low-value products such as plastics and chemicals. **They returned to conventional ships**, taking on the (very high) daily costs of “chartering” a ship. **Anything rather than continuing to rely on unpredictable and expensive shipping lines.**

As for the shipowners’ sector, it entered a similar dynamic to the period before the 2008 financial crisis. [Demand for new ships from Asian shipyards soared](#) from almost all major groups, led by MSC. **By early 2023, the combined demand for new container ship capacity is several million TEU (some sources put it at over five million TEU of new capacity).** A danger if demand suddenly drops again for a prolonged period as it did in the wake of the financial crisis.

**Shipowners are investing the astronomical profits gained from high freight rates over the past two years in the construction of new ships and in expanding their business in an unprecedented process of vertical integration.** They had penetrated the port terminal business years ago. Now they are also present in railways, freight forwarding, logistic real estate, inland rail terminals and even air transport. This vertical integration allows them to offer, in some cases, door-to-door services.



*Shipowners are penetrating the business of port terminals, inland rail terminals, air transport... a vertical integration that allows them to offer door-to-door services*



04

# Towards the fragmentation of globalisation?





Supply chain disruptions were a wake-up call taken to heart by many Western business and political leaders. Economic sovereignty had to be regained and production repatriated, especially in key strategic sectors. It was raining in the wind. In fact, already at the end of the last decade, China and the US had taken steps in this direction.

Almost a decade ago, Xi Jinping and the Chinese Communist Party, decided to “diversify” China’s economic policy. While pushing the new Silk Road (the [‘Belt and Road Initiative’](#)) to secure control of port and rail transport infrastructure along the Eurasian continent. They encouraged domestic consumption and domestic (often public) investment to reduce reliance on exports. In the US, Donald J. Trump promoted the repatriation of manufacturing production and imposed tariffs on Chinese and also European imports. From 2022, the trend accelerated.

A growing number of companies, especially European in the fashion sector, first chose to bring part of their production closer to Mediterranean countries, such as Turkey and Morocco. As a result of this strategy, traffic between these two countries and European ports in the **Western Mediterranean** has grown considerably. In fact, they have become an important source of containers and semi-trailers currently unloaded in ports such as **Sète** in France, **Trieste** in Italy, and **Algeciras, Barcelona, Tarragona** and Valencia in Spain.

Many companies (the Catalan **Buff** and the Swedish **Ikea** announced it to the media) decided to go one step further. To move their production to the European Union. Most companies, especially in the north of the continent, would repatriate their production to Eastern European countries where wages are substantially lower than in Western Europe. **Few companies, however, have the capacity to repatriate their production.** Wage differences, technological backwardness in some cases, lack of reliable partners, energy costs, lack of production capacity, among others, are factors limiting this trend. In Europe, more so than in the US. There, according to recent surveys among CEOs of large companies, many have plans to bring part of their production back home. According to a recent study by **Maersk** and **Reuters**, about half of the companies surveyed said they had moved some of their manufacturing production and changed their geographic supplier. The countries most commonly cited as having moved production were **Vietnam** and **India**, followed by a number of Western countries (US, Germany, Poland, Mexico) and Asian countries such as **Turkey, Indonesia** and **China** itself. The Far East remained, however, the most desirable place to produce for Western companies.

**It is in the semiconductor sector where this trend is perhaps most evident.** **Biden** has pushed for the construction of factories in the US, South Korea is moving in the same direction to expand domestic production (which has allowed **Hyundai** and **Kia** to top the 2022 lists of cars registered in many Western countries), as they are virtually the only brands that were not dependent on Taiwan-made semiconductors and have suffered less manufacturing disruption as a result. Europe is looking, ever slower than the others, to wean itself off its dependence on Asian-made chips.





The process, however, will not be easy, quick or cheap. Asian countries (Taiwan, Korea, etc.) are more technologically advanced and today there is no Western company with the capacity and know-how to manufacture, for example, the tiniest chips that **TSMC** and **Samsung** have. It takes billions of euros and many years to build such plants.

**But will the trend of repatriating production really intensify and be replicated in other sectors and companies?** To a large extent, it depends on the evolution of global seaborne supply chains in the short to medium term and on global geopolitical tensions.

**The evolution of energy prices and Europe's dependence on third parties may, in fact, act as a counterweight to this trend towards domestic production.** As a result of the war, the energy bills of many companies with factories in Europe have increased five or even tenfold, seriously jeopardising their viability on European soil. The situation is particularly dramatic in Germany's industrial engine, which is highly dependent on Russian gas, where some companies have considered relocating to countries where energy costs have not soared.

The recent evolution of the global geopolitical situation, largely due to the **war in Ukraine**, has accelerated a **movement of pieces** that began to take shape years ago and that will have consequences for the global economy and international trade. Russia's dependence on China and India, the tensions between the Asian giant and the US, Turkey's growing role as a regional power, the confrontation between the two main branches of Islam led by Saudi Arabia and Iran, the demographic and economic growth of Southeast Asia, the Indian subcontinent and also the large African states, despite their

endemic problems, are **shaping a new, more multipolar world order**. And they are increasingly placing the **Indian Ocean** at the centre of international economic relations.



***A new, more multipolar world order is taking shape, with the Indian Ocean more at the center of international trade***



05

# Maritime transport situation improves





From late summer 2022, after a year and a half of crisis, the shipping sector was gradually returning to normal. The main contributing factor was the drop in demand.

Congestion in American ports evaporated. Reliability improved substantially. Chinese port closures ended with the **relaxation of the Covid zero policy**. Freight rates began to fall, first slowly and then dramatically, from the all-time high they had reached in January 2022.

In early 2023, freight rates are similar to pre-pandemic levels. All indications show they will continue at these levels, or even lower, for quite some time. When Asian yards start delivering the new ships which shipowners had ordered in 2021 and 2022 (which had pushed the container ship **order book** to its highest ever level), supply will increase dramatically and this could push prices down. Even if the older ships are scrapped and the smaller ones are moved to secondary sea rotations.



*All indications are that freight rates will continue close to pre-pandemic levels*





06

# Future scenarios







In the short term, the logistical disruptions of the last few years (and the fear that they could be reproduced), the war in Ukraine, the tension between blocks, the desire for Western reindustrialisation and the desire to boost Chinese domestic demand, should all contribute to orienting globalisation towards a certain fragmentation between blocks. At the beginning of 2023, this trend seems to be confirmed.

Even so, **the forces pushing the world towards greater cultural and economic integration, with Asian dominance, are very strong.** The demographic and economic growth of Southeast Asia, the Indian subcontinent and Africa, communication and information technologies, global interdependence, the international division of labour, mass transport of goods and people, Asian and American technological competitiveness, are too powerful for us to imagine a world closed in autarkic blocs.



***We are heading towards the third oceanic transition of the economic center of gravity: from the Atlantic to the Pacific and the Indian Ocean***

Unless we suffer a catastrophe. A pandemic worse than Covid-19, a nuclear confrontation or recurrent environmental disasters as a consequence of the intensification of climate change.

In the medium term, however, it does seem that the world, from the economic and international trade point of view, is slowly but unstoppably heading towards **a new stage characterised by these factors that should be consolidated in the coming decades.**

**1 Economic growth in Southeast Asia and the Indian subcontinent outpacing China.** Much manufacturing activity is shifting, especially to countries such as India and Vietnam. The declining demographics of Northeast Asia (Japan, South Korea and China) compared to Southeast Asia and the Indian subcontinent will also drive this shift.

**2 The shift of the world's maritime centre of gravity from the Pacific to the Indian Ocean.** The growth of industrial production in the above-mentioned countries on the Asian continent, combined with the extraordinary population growth in the large African states (the Gulf of Guinea and Congo above all, but also Ethiopia and Tanzania), will lead in the medium term to an equivalent growth in international trade to and from these regions.

By the end of the century, **the third oceanic transition of the world's economic centre of gravity will probably be completed.** In 150 years, it would have shifted from the Atlantic to the Pacific and the Indian Ocean.



3

Increased movement of goods. **The growth of the middle class in countries below the tropic of Cancer in Asia and Africa will drive the production, consumption and transport of goods of all kinds.** From food products to cars. This increase will offset the moderate consumption that will be generated by western economies.

4

**Energy transition.** As a consequence of intensifying climate change and inter-block tension, the energy transition tends to accelerate (despite the temporary increase in coal consumption caused by the war in Ukraine, for example). The electrification of transport for people and goods, the [transition to clean carbon fuels](#) and the increase in renewable energies should move to almost all spheres of economic activity.

This process will be a major generator of international trade in raw materials and industrial products that could compensate, in the more advanced economies, for stagnation in other areas of international trade.



***The transition to clean carbon fuels will be an important generator of international trade in raw materials and industrial products, which could offset stagnation in other areas of European trade***

07

# What does the future hold for shipping?





The maritime industry has been characterised in recent decades by the following main factors: a) The growth of ships' size; b) the reliability of transport; c) the existence of a handful of players, increasingly smaller and essentially European, which control most of the maritime supply, especially in the container ship segment; d) the progressive penetration of these companies in the land-based business; e) the use of fossil fuels; and f) low prices, except in recent years.

**What will maritime transport be like in the future, especially in the medium and long term?** Can we predict, based on recent disruptions, that technical and scientific progress, international tensions and climate change are sufficiently disruptive elements that make it impossible to predict future developments?

These elements generate enough uncertainties, so trying to make a prediction is a very risky exercise. Since medium and long-term evolution is a foresight exercise **we can cite five characteristics that should dominate the coming decades:**

- 1 The size increase of ships of all types, but essentially container ships, should not go on for much longer.** Obviously, there is room for growth, but everything seems to indicate that what they experienced in the first two decades of this century cannot be reproduced. It is difficult to imagine container ships of more than 30,000 TEU, just as tankers and passenger aircraft have stopped their growth spiral. It is quite possible, on the other hand, that the size and agility of short-sea vessels (ferries for example) will grow in size to better serve the growing intra-regional traffic (in the Mediterranean, in the Baltic, in the China Sea, in the Caribbean, etc.) as a consequence of a certain fragmentation of globalisation.
- 2 In relation to the use of alternative fuels, all indications are that LNG will continue to grow for some time yet.** Despite what was thought before the Covid-19 pandemic, [carbon neutral fuels](#) will arrive en masse sooner than later. Perhaps by the end of the next decade they will have widespread despite living alongside fossil fuels for quite some time.
- 3 Players in maritime transport, especially container shipping, will have to change in the medium term.** It does not seem logical that an industry in which the main demand originates in Asia, where the ships are also manufactured, should be dominated exclusively by European parent companies. It is more likely that Asian (or American) private or public companies will end up leading or sharing the leadership. It could be the case that some of these companies are unrelated to the sector and come from other industries, such as **Amazon**.

4

The reliability and competitiveness of maritime transport (in terms of price, operations, etc.) had been constant until the latest disruptions. By now, the pre-crisis situation has largely been recovered. Everything seems to indicate that, despite new disruptions (almost inevitable in today's globalised and interconnected world), **maritime transport will continue to be the only means of mass transport capable of offering a service in the price and operational conditions demanded** by the international economy and the foreign sector.

5

**Opening of new maritime routes.** Africa's growth in the coming decades will involve the development of new maritime routes to connect it with the rest of the world, especially with Asia, where the vast majority of the world's population lives. These new connections, in the case of the economies of the Gulf of Guinea led by Nigeria (soon to be the third most populated country in the world), should lead to the progressive recovery of the route via the Cape of Good Hope. It has in fact already been used frequently and increasingly regularly in recent decades, most recently at the end of 2022 and beginning of 2023 by some container ships returning to Asia from Europe to avoid paying the Suez toll.

The war in Ukraine will also boost the development and use of the [Arctic Route](#), one of the Russia's strategic priorities and one in which China is also very interested. As climate change advances relentlessly, the chances of using this route under competitive operating conditions improve. Unfortunately, global political and environmental conditions are likely to favour its use for decades to come.



*As climate change advances relentlessly, the chances of using the Arctic Route under competitive operating conditions improve*





*This document has been prepared by **Jordi Torrent** for the **innovation hub of the Port of Barcelona**, [PierNext](#), a project that analyzes trends and challenges in the sector to help generate an innovative ecosystem with an impact on society.*

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