

This chapter assesses consolidation and competition issues in maritime trade, especially for liner shipping.¹ Section A looks at long-term trends in horizontal consolidation, vertical integration, and alliances, as well as their underlying causes. Section B discusses the implications for markets, shippers and regulatory bodies, and the ways in which cooperative agreements may have contributed to the ongoing supply chain crisis. Section C considers policy options for governments, port authorities, and regulatory bodies.

6

CONSOLIDATION AND COMPETITION IN CONTAINER SHIPPING

A. TRENDS IN CONSOLIDATION

Over recent decades, the container shipping sector has seen a continuous process of consolidation and restructuring of relationships. This has included: horizontal consolidation, through mergers and acquisitions; vertical integration, through carriers investing in terminal operations and other logistics services; and strategic cooperation agreements in the form of carrier consortia and alliances.

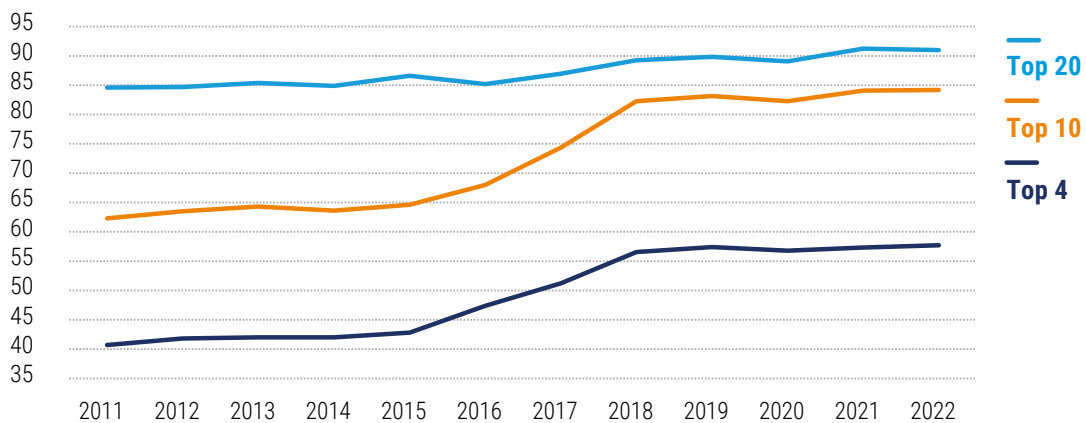
1. Horizontal consolidation

Often in response to capacity oversupply, container shipping lines have long been consolidating horizontally through mergers, acquisitions, and at times because of bankruptcies. As a result, between 1996 and 2022, the share of the top 20 carriers in container carrying capacity went up from 48 to 91 per cent.²

More recently, that share has remained stable, but within these 20 carriers the four largest have increased their share. Since 2017, the top four have controlled more than half of global capacity, and since 2018 each has had a market share greater than ten per cent (figure 6.1). The largest carrier in 2022 was MSC with 17.3 per cent of the market, followed by APM-Maersk (16.5), CMA CGM group (12.7) and COSCO Group (11.2). The fifth largest, Hapag-Lloyd, had 6.8 per cent.³

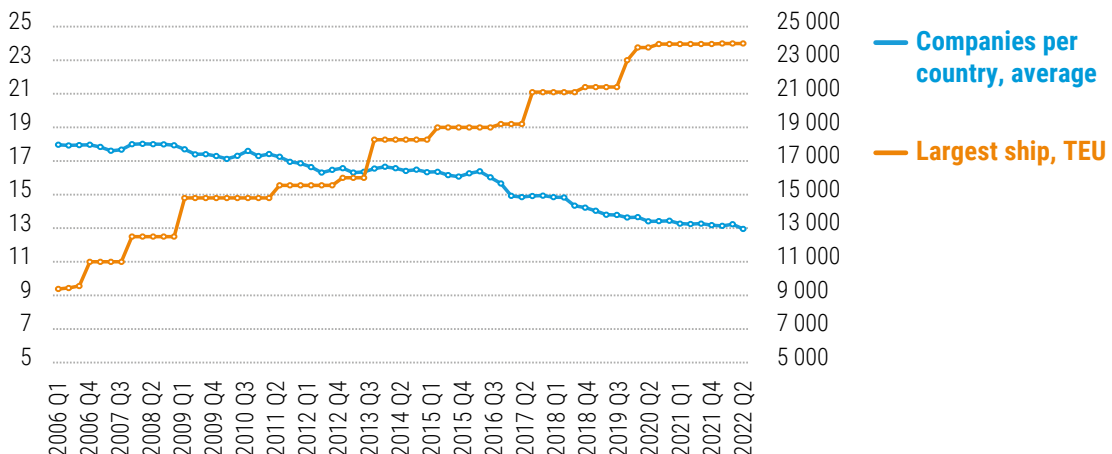
An important indicator is the number of companies that provide services in each country. Generally, this has been falling. As indicated in figure 6.2, between 2006 and 2022 the average number decreased from 18 to 13. Germany, for example, in 2006 had 97 carriers but by 2022 only had 37. In Palau, Turks & Caicos, and Wallis & Futuna, the number of carriers has fallen from two to a monopoly of one.

Figure 6.1 Market shares of top four, top ten and top twenty carriers, 2011–2022 (percentage)



Source: UNCTAD, based on data provided by Alphaliner, <https://public.alphaliner.com>.

Figure 6.2 Average number of companies providing services per country, and size of the largest ship, Q1 2006–Q2 2022



Source: UNCTAD, based on data provided by MDS Transmodal, <https://www.mdst.co.uk>.

Meanwhile, the size of the world's largest container ships more than doubled, from 9,380 to 23,992 TEU. During the same period, containerized trade also grew, but only by 75 per cent.⁴ On average, the size of the largest ship in each country almost tripled.⁵ Ships were thus growing faster than the volumes of cargo to fill them. At the same time, the number of services per country fell by 8.4 per cent, resulting in more than twice as much TEU carrying capacity per service as in 2006 (table 6.1).

These developments reduced competition. As ship sizes expanded faster than volumes, the rate of return on assets fell. Smaller shipping companies found it more difficult to remain in the market – unable to offer the same services, or compete on price with the larger carriers.

However, this experience is not universal. Compared with 2006, 110 countries had fewer companies offering services to importers and exporters, but 56 countries had more. The country that gained the most was Viet Nam, where the number rose from 40 to 55.

2. Vertical integration

Over recent years, container shipping lines have also been integrating vertically. They have extended their operations to:

Terminals – The four largest carriers are now among the top ten terminal operators, competing with port companies such as PSA, Hutchison and Dubai Ports. The two largest container terminal operators are associated with major shipping lines. In 2021 China COSCO Shipping had 13 per cent of global throughput, and APM Terminals, associated with Maersk had 11 per cent. Also among the top 10 terminal operators are Mediterranean Shipping Company (MSC), via a subsidiary Terminal Investment Limited, and CMA CGM.⁶

Logistics – In addition to operating ports and terminals, shipping companies have been buying warehouses and freight-forwarding and other logistics companies. In 2021, MSC expanded its logistics arm MedLog by buying the Brazilian company Log-In Logística Intermodal, as well as Bolloré Group Africa division. CMA CGM bought back Fenix Marine Services, a Los Angeles terminal it had sold four years earlier, while Hapag-Lloyd bought a 30 per cent stake in the German deep-water port Wilhelmshaven. A.P. Moller-Maersk has acquired B2C Europe as well as Visible Supply Chain Management, a leading US-based B2C/e-commerce logistics and parcel delivery company. Vertical integration enables shipping companies to provide customers with last-mile delivery. Maersk, for example, has started to manage all logistics operations for the consumer goods multinational Unilever.

Air freight – In 2021, Maersk acquired the freight forwarder Senator International and ordered five freight airplanes. CMA CGM ordered six air freighters for the launch of its airline. MSC has started developing a new MSC Air Cargo solution, to be available from early 2023, following the delivery of the first of four aircraft that will be operated by Atlas Air.⁷

Rail – To cater for fast-changing customer needs, strengthen supply chains and offer alternatives to ocean and air services, A.P. Moller-Maersk has launched a rail-sea Asian-Europe service connecting China to Romania through Kazakhstan, Azerbaijan and Georgia.⁸

3. Alliances

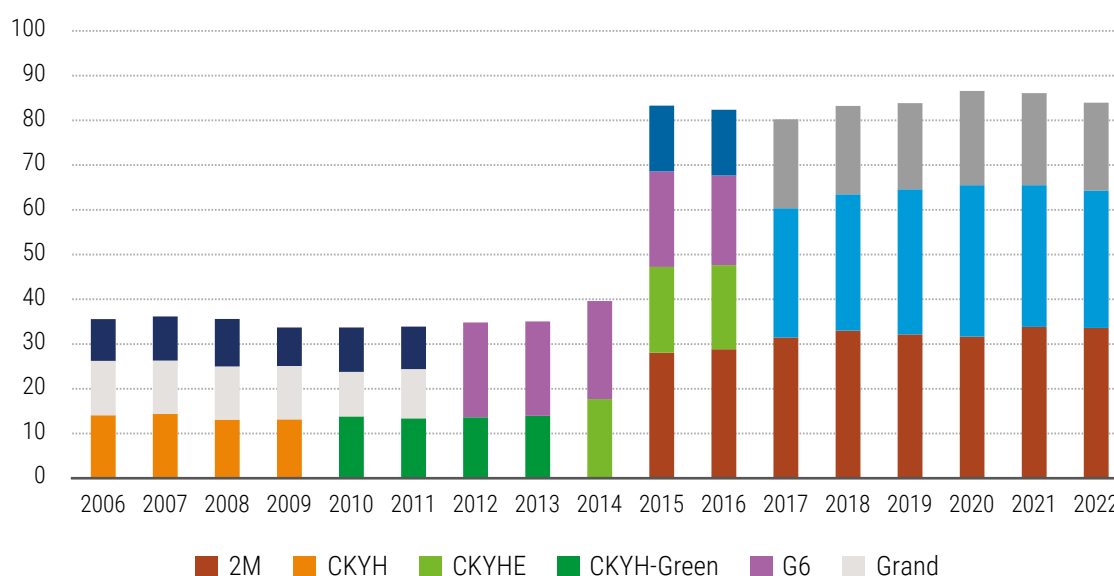
The most common form of collaboration between the major shipping lines for container transport services is strategic alliances. Since 2015, the proportion of global capacity controlled by such alliances has increased to more than 80 per cent. Today, the top nine container operators organize their East-West services through three strategic alliances: Ocean, 2M, and THE Alliance.⁹ During the pandemic, this proportion fell slightly as non-alliance members entered the profitable Asia-North America route, but the three main alliances continued to control 84 per cent of the market (figure 6.3). These alliances do not include small carriers.

Table 6.1 Container shipping fleet deployment indicators, 2006 and 2022

	Q1 2006	Q2 2022	Change
Number of companies per country, median	9	8	-11%
Number of companies per country, average	18	13	-28%
Number of companies per country, maximum	103	93	-10%
Number of services per country, average	36	33	-8%
Number of countries with 1 to 4 carriers	49	56	+14%
Largest ship, TEU, global	9 380	23 992	+156%
Largest ship, TEU, average per country	2 814	7 742	+175%
Total TEU deployed, average per country	2 790 079	5 561 814	+99%
TEU per company, average per country	155 327	429 422	+176%
TEU per service, average per country	77 342	168 311	+118%

Source: UNCTAD calculations, based on data provided by MDS Transmodal.

Figure 6.3 Global alliances in deep-sea container shipping, market share, percentage



Source: UNCTAD, based on data provided by MDS Transmodal.

Notes: Based on Q2 data. Not all services of alliance members are joint services with alliance partners.

Shipping alliances bring economies of both scale and scope. Running a weekly liner service between several ports requires a set of ships, entailing high fixed costs – often beyond the financial capacity of a single shipping line. In 2022, of the 402 active deep-sea liner services, only 131 were provided by single carriers without vessel partners or slot charterers.¹⁰

Vessel sharing mitigates risk and increases utilization. The incentive for such cooperation has intensified as ship sizes have increased faster than trade volumes. With the prospect of such agreements to boost utilization, carriers have invested in larger ships.

As part of alliances, shipping lines can spread the risks of investment and with ever-larger vessels achieve economies of scale that reduce shipping costs per container and improve fleet utilization.¹¹ By forming alliances with shipping lines in complementary regions, they can offer customers more comprehensive networks.¹²

Shippers have a different perspective, worried about shrinking choice and lack of competition, with potentially abusive charging. They and regulators want the cost savings that accrue to the carrier to be passed on to clients.

4. Causes of consolidation

An underlying driver of consolidation is technological development. In the mid-1990s, the first post-Panamax container ships had capacities of 6,000 TEU. Today's largest container ships are four times that size. The newer, bigger ships are more costly to build but are more fuel-efficient and incur lower operations and communication costs.

As ships get larger, a higher proportion of costs are fixed rather than variable. Whether it carries 6,000 or 24,000 TEU, a container ship has a crew of 20 to 30. Over recent decades, while the market has grown, the ship sizes and fixed costs needed to maintain a global network have increased even faster, which tends to reduce the number of companies in the long-term market equilibrium.¹³

Technological development has been accompanied by deregulation. Since the early-2000s there have been reforms in port regulations, as well as changes in competition law that removed national cargo reservation regimes and legal price-setting exemptions. This has made it easier for carriers to expand into new markets through mergers and acquisitions, alliances, and vertical integration.

This process of deregulation and port privatization initially produced fiercer competition – which in turn drove down both freight rates and profits. Though carriers were investing in ever-bigger ships, they did not scrap older and smaller one but sold them or kept this in the market, resulting in overcapacity. But this may now be coming to an end. Container ship sizes seem to have reached a maximum and further mergers and acquisitions are constrained by regulatory limitations.

B. IMPACTS OF CONSOLIDATION ON MARKETS

1. Determinants of maritime freight rates and charges

Freight rates depend on many factors, including the distance to the destination, economies of scale, port performance, trade balances, and the type of service provided. But one of the most important influences is competition.¹⁴ Empirical evidence shows that the more carriers there are the more likely it is that cost savings will be passed on to shippers.

In Latin America, for example, a one per cent increase in the number of services per unit of cargo was estimated to decrease freight costs by 0.11 per cent.¹⁵ In the Caribbean, one study concluded that two-fifths of the variance in the price of shipping was explained by the number of carriers providing direct services.¹⁶ Lower prices stimulate trade: in South Africa an additional carrier on a bilateral route was estimated to increase exports by 2.8 per cent.¹⁷ Globally, modelling shows that improving container shipping connectivity can significantly reduce freight rates.¹⁸

When deciding on how ports should operate, local and national governments face difficult choices. To attract investment, improve port performance and achieve economies of scale, they might prefer to concession an entire port to a single investor. On the other hand, to increase the choice for shippers, it may be better to divide a port into competing terminals. However, States or islands that depend on a single seaport may not generate sufficient traffic volumes to support multiple terminals.

Governments must also consider infrastructure costs. Larger ships may help achieve economies of scale and improve energy efficiency at sea but the moment they reach port their larger cargos create peak demands that require additional infrastructure and thus higher total logistics costs.

In addition to the basic freight rate, carriers often impose surcharges, for bunkering, for example, terminal operations, or congestion, or for late pick-up (demurrage) or returns of containers (detention). There is the further risk of a monopoly, or an oligopoly with other shipping lines tacitly colluding and following the lead of the dominant player to set prices. Competition authorities need to gauge whether charges are justifiable or excessive.

A limited number of significant players and markets increases the likelihood that certain lines will have dominant positions in specific corridors. Competition authorities always need to maximize choices between competing carriers and services, and monitor anti-competitive behaviour or abusive fees or charges.

2. Competition for the market, and in the market

Ports

When bidding for a concession to operate a port or terminal, the investor competes for the market. That terminal then joins others serving the same hinterland, thus the operator then competes in the market.

When assigning concessions, governments may want to establish their ports as transshipment hubs. They may therefore prefer vertically integrated companies that also run liner shipping services, so are more likely to use the terminal a hub. For example, the port of Piraeus in Greece was concessioned to COSCO (China) which is one of the top five global liner shipping companies. The company brought its own services and cargo and significantly increased volume and connectivity, both to the hinterland and to the 'foreland' – the overseas ports and markets that it links to.

If providers are integrated both horizontally and vertically, this will limit the choices for shippers. After Maersk purchased Hamburg Süd, for example, services that previously went to Buenos Aires in Argentina and Callao in Peru to terminals operated by independent operators such as Dubai Ports, were switched to terminals operated by APM Terminals, which belongs to the same group as Maersk. The acquisition of Hamburg Süd by Maersk not only reduced the choice of shipping lines, it also limited the choice of terminals.

Smaller economies, and especially island economies without extensive hinterlands, may not have sufficient volume to justify more than one terminal or attract more than one operator. To avoid monopolistic pricing the government may need to strengthen regulation.

Liner shipping

If freight rates and profits on a liner (container) shipping route are exorbitant, other carriers will be tempted to redeploy ships to that market. Thus, the surge in demand in the US attracted new carriers to the Far East-North America direct trade lane. According to MDST, between 2020 and 2022, the combined market

share for CMA CGM & COSCO fell by around three percentage points. There was also a fall in market share for Hapag-Lloyd-ONE-Yang Ming.¹⁹

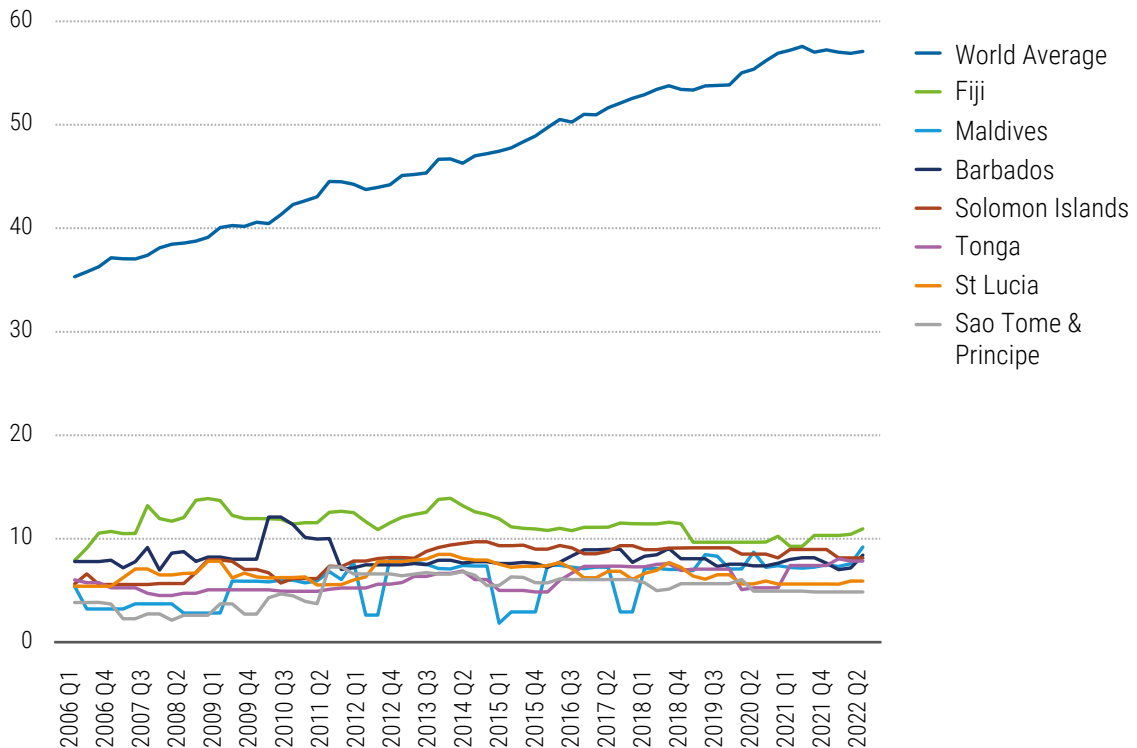
Similarly, on the Far East-North Europe & Mediterranean route, between 2021 and 2022, the combined market share of the Maersk and MSC service decreased by four percentage points. Some of this was lost to another alliance: CMA CGM and COSCO’s combined market share increased by two percentage points and is now above 30 per cent.

Other new entries come from high-volume shippers, such as IKEA, Wal-Mart or Amazon. During recent periods of high congestion in United States ports, these companies have been chartering smaller container ships, which has also enabled them to bargain down the freight rates, leaving the smaller volume shippers to pay more. Contracts for container services are confidential, making it easier to charge the higher prices to the smallest-volume shippers, and for the thinnest routes.

Nevertheless, establishing a new service is not easy; it means providing several ships calling at a range of ports and is thus capital-intensive. For a small islands with low volumes, even high freight rates may not suffice to attract new companies. Many SIDS are confronted with a vicious cycle of low connectivity and low trade volumes, where only few carriers provide services, making trade uncompetitive, which in turn leads to low volumes that make the market less attractive to carriers.

Figure 6.4 uses the UNCTAD Liner Shipping Connectivity Index (LSCI) to illustrate the growing divide between small island developing States and the global average. The LSCI has six components including total deployed capacity, the number of direct shipping services, and the number of carriers offering services to and from each country. A low index value implies fewer services, smaller ships, lower frequencies, and less choice for shippers.

Figure 6.4 UNCTAD liner shipping connectivity index, 2006 to 2022, world average and selected small island developing States



Source: UNCTAD, based on data provided by MDS Transmodal. The LSCI for all countries is available under <http://stats.unctad.org/maritime>.

Bulk cargo shipping

For bulk shipping on the other hand, carriers tend to be independent companies, providing tramp shipping services, comparable to chartered bus services. Shippers generally charter ships for single point-to-point voyages or for periods of time, and negotiate contracts individually through brokers. Competition in the market thus tends to be the same as competition for the market.

Some oil majors and commodity exporters may own their own ships. The Brazilian mining company Vale owns its iron ore mines as well as the railway that connects the mines to the ports, the iron ore terminals, and several “Vale max” iron-ore carriers. In this case the competition is between entire supply chains; iron ore from Brazil competes with iron ore from Australia and China.

Market adjustments over time

As markets change, providers try to adjust. For ports this is a slow process. Expanding capacity or even building new ports can take years, if not decades, since they typically have to take into account inland connections and environmental concerns. National and local governments seeking resilient and sustainable supply chains for their foreign trade will therefore need to plan ahead when considering new ports and the hinterlands they might serve.

Shipping lines, on the other hand can adjust more quickly. It will take them a few years to get new ships, but in the meantime they may be able to deploy previously idle ships, or increase service speeds so same tonnage can carry more cargo. They may order new ships at times when freight rates are high, but since these will be delivered two to four years later, this leads to cyclical up-and-downs for freight rates.

3. Market shares and client choices

In the 1980s, liner shipping companies mostly specialized in specific markets, but in the 1990s, as a result of mergers some of them became truly global players, offering services that connected all the world’s major regions. During the initial process of expansion, they were entering new markets and thus offering more options to shippers. But by the early 2000s when the major carriers had covered the globe, subsequent mergers and acquisitions tended to reduce competition and the choices for shippers.

In 2022, the top five carriers together controlled two-thirds of the capacity. These companies do not own all their ships; they charter around half of them from other ship owners. The market for ship ownership is less concentrated, with the top five owners controlling only one-third of capacity.

Industry concentration can be measured as the market share of the four largest operators – the ‘four-firm concentration ratio’ (CR4). If the CR4 is one, this means that four or fewer shipping companies provide services, and freight rates tend to be higher. In early 2022, there were 56 countries with a CR4 of one – 14 per cent more than in 2006.²⁰ Many of these are least developed countries and small island developing States, which depend more on shipping for their foreign trade, and already pay high freight rates. Generally, they do not have strong competition authorities or regulators to monitor anti-competitive behaviour. Box 7.1 discusses concentration and cooperation in competition law.

To safeguard shippers’ interests, competition authorities have investigated and ruled on competition issues on numerous occasions.²¹ As in:

- **China** – Fines for 14 carriers for misreporting freight rates.²²
- **India** – Fines for Japanese car carriers for sharing commercially sensitive information.²³
- **Republic of Korea** – Fines for 15 carriers for colluding on price fixing.²⁴
- **United States** – Fines for price fixing on ro-ro services;²⁵ and for Hapag-Lloyd for incorrectly applying detention and demurrage charges.²⁶
- **European Union** – 14 carriers avoided a major fine by agreeing to legally binding commitments to increase transparency and reduce the likelihood of coordinating prices.²⁷

Competition authorities have also intervened to avoid market domination:

- **United States** – AP Moller-Maersk proposed a \$1bn-deal to sell its refrigerated container production unit to China International Marine Containers (CIMC). This could have cemented CIMC’s dominant position in an already consolidated industry. After antitrust concerns, the company backed off.²⁸
- **European Union** – The European Commission prohibited Hyundai Heavy Industries Holdings from acquiring another Republic of Korea company, Daewoo Shipbuilding & Marine Engineering. This would have given the merged company a dominant position and reduced competition in the global market for large liquefied-gas carriers.²⁹
- **Australia** – The competition authority investigated potential anti-competitive compensation deeds and prevented the coal port of Newcastle from building a container terminal.³⁰

Box 7.1 Concentration and cooperation in competition law

A key distinction for competition policy is between a concentration operation and a cooperation agreement. Both may restrict competition, but they are treated differently by competition law.

In a concentration operation, two or more companies merge to create a single new legal entity, thus reducing the number of players in the market. Regulatory authorities will examine such a proposal to determine its effects. For this purpose, they can use indicators such as the Herfindahl-Hirschman index (HHI). In addition, they will analyse the entry barriers, the static or dynamic nature of the market and the characteristics of the product or service at stake. They will then decide to approve, conditionally approve, or prohibit the operation.

In a cooperation agreement, independent companies and competitors in the same market agree to cooperate, but each company remains independent. In principle this is anti-competitive, but the negative effects may be outweighed by the benefits such as improving operations and efficiency and making optimal use of available resources. Given the experience of the past two years, with high freight rates and poor service this may no longer be true.

When making agreements, competing shipping companies must adapt to a regulatory framework, as in the European Union with the EU Consortia Block Exemption Regulation. If they do not do so, they can be sanctioned.

In many jurisdictions in developing countries the authorities may not take the appropriate action because they do not have the resources or lack the skilled personnel. They may therefore not act decisively or may approve an operation that is anti-competitive.

Source: UNCTAD.

Competition authorities can safeguard the interests of shippers and clients and enforce anti-trust regulation. They need to remain vigilant and monitor shipping markets closely, especially where a small group of service providers could collude for market sharing or price fixing or otherwise abusing a dominant market position.

4. Carriers as clients in an oligopsony

Carriers may also be strengthening their positions as port users. Over recent decades, the negotiating position of the carriers vis-à-vis the port authorities has been strengthened in four ways:

- Individual carriers have been able to increase their market shares.
- Carriers have a greater choice of ports, to reach the same inland transport markets or, as a result of better trade facilitation, improved transit, and common transport markets in neighbouring countries.
- Through vertical integration, major carriers have become both clients and tenants and acquired greater negotiating power.
- As members of alliances, shipping lines have been able to create concentrated buyers' markets – oligopsonies.

In addition, carriers are likely to benefit if seaports in neighbouring countries or municipalities use public funds to invest in infrastructure to undercut each-other when attracting terminal operators or carriers. States may also find themselves competing for tax income if, through transfer pricing, carriers shift taxable profits to States with lower tax rates.

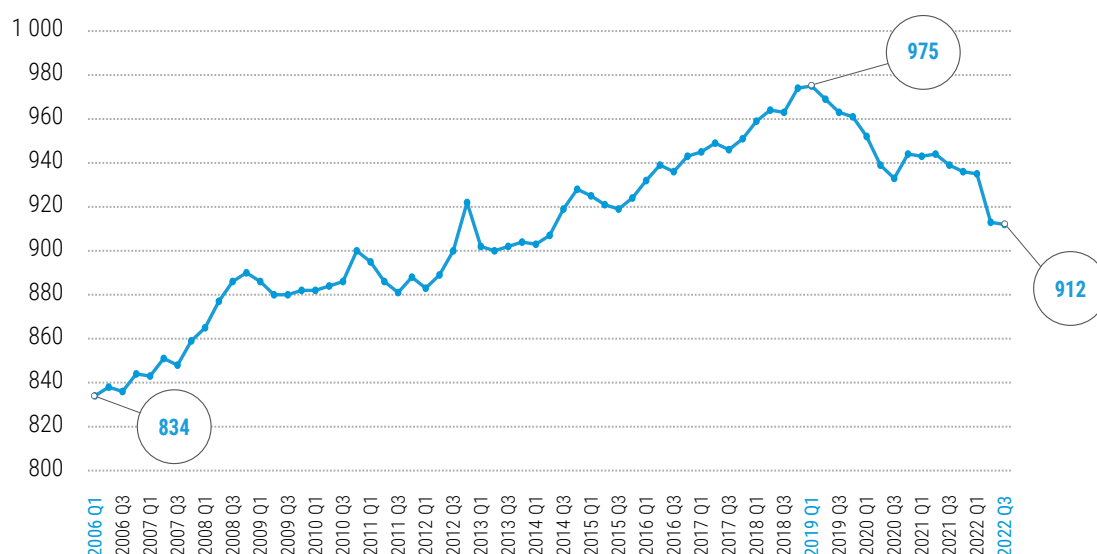
To connect their hubs to secondary ports, carriers and their alliances link with independent feeder service providers. But if they do so as monopolies or oligopsonies, these regional, national, or smaller inter-island services will have little negotiating power.

Shippers too may suffer from fewer service options, but may also gain from greater port operational efficiency, stronger inter-port competition, and the economies of scale achieved by the carriers – as long as these gains are passed on to clients.

For their liner networks, carriers and their alliances may remove or add ports. Figure 6.5 shows the number of seaports connected to regular container shipping services. Up to early-2019, the numbers were increasing, but then started to decline, with a further dip as a result of the war in Ukraine.

The recent downward trend could be the result of shorter supply chains, combined with the process of industry consolidation. But the situation of each port differs depending on its infrastructure, market, hinterland and geographical position.

Figure 6.5 Number of container ports served by regular liner shipping services, quarterly, 2006–2022



Source: UNCTAD, based on data provided by MDS Transmodal, <https://www.mdst.co.uk>.

5. Consolidation and the supply-chain crisis

Over the past two years, shippers have been faced with historically high freight rates, congested ports, significant delays and unreliable services.³¹ Finding it difficult to collect and return containers on time they have often had to pay costly demurrage and detention charges, further exacerbating problems for many importers and exporters.³² Meanwhile, carriers have recorded record profits, leaving clients understandably unhappy and suspecting that the crisis may be a consequence of oligopolistic markets.

Shrinking competition will have contributed to high prices, but the supply chain crisis and congestion have had a mixture of causes. One is the pandemic. UNCTAD data show that at the end of 2021 compared to pre-COVID times, container ships spent on average about 20 per cent longer in port, thus reducing the available shipping capacity.³³ Another cause is the surge in consumer demand. The United States Federal Maritime Commission concluded that the supply chain crisis was the result of a surge in consumer spending leading to record congestion.³⁴

These and other factors have contributed to record prices, even in markets without alliances and where there is much less market concentration. The highest increases since 2019 include the following.³⁵

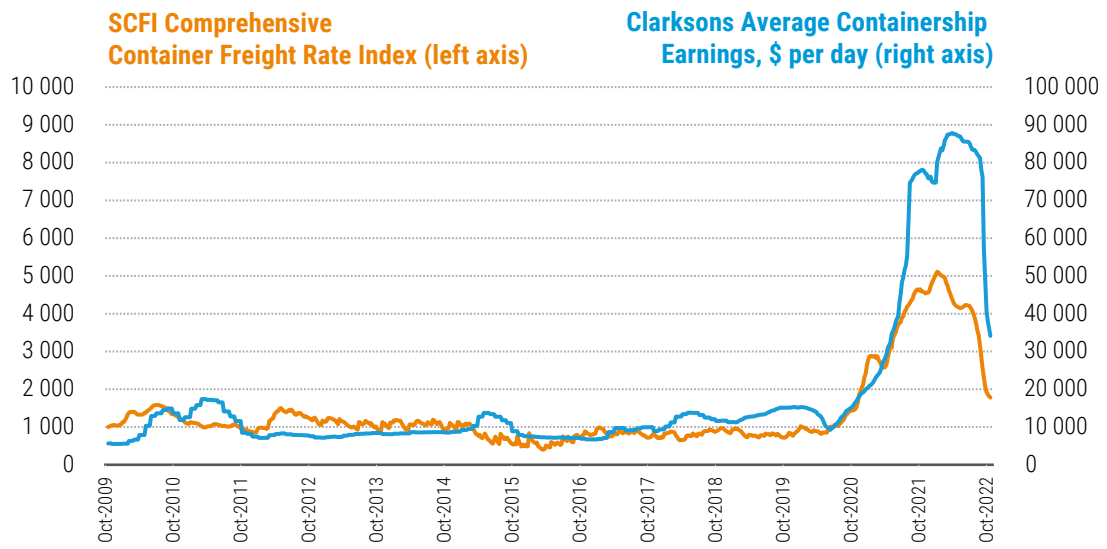
- Baltic Dry Index – up 14-fold between May 2020 and October 2021.
- LNG charter rates – up 11-fold between January 2019 and December 2021.
- Daily oil tanker earnings – up ten-fold between July 2019 and April 2020.
- Container ship charter rates – up nine-fold between June 2020 and March 2022.
- Container spot freight rate index – up seven-fold between October 2019 and January 2022.

The two latter increases are particularly telling, and are further illustrated in figure 6.6. The container freight rate index reflects the price that shippers pay for the transport of their containers, while the container ship earnings rate reflects what carriers pay to ship owners for chartering a ship.

However, it should be noted that during the COVID-19 pandemic, the prices that the less concentrated shipowners charged to the more concentrated container ship carriers was greater than the increase passed to shippers. Also, the price increases were even more pronounced in most other shipping markets.

In view of the high profits seen in the industry, shippers have a deepening mistrust of the industry's motives and practices.³⁶ During the ongoing supply chain crisis, shippers have expressed valid concerns about schedule unreliability, blank sailings, surcharges, and the withdrawal of shipping capacity, especially from smaller and vulnerable developing countries.³⁷ UNCTAD's assessments confirm that many developing countries are badly affected by higher freight rates and lower shipping connectivity. However, the causes of the crisis are many and complex and there is little evidence that the situation would have been any better had carriers not formed alliances or coordinated their schedules.

Figure 6.6 Container freight and vessel earning rates, 16 October 2009 to 21 October 2022



Source: UNCTAD, based on data provided by Clarksons Research Services, <https://www.clarksons.net>.

C. POLICY CONSIDERATIONS

Until the 1990s, despite some consolidation, most trade routes had more shipping lines competing for cargo. Asian lines entered the North Atlantic trade, for example, east-west lines entered north-south markets, and traditional regional lines were competing with the feeder services of larger lines.³⁸

Since then, consolidation among shipping lines has been such that one-quarter of countries are now serviced by four or fewer container carriers, creating monopolies or oligopolies that can abuse their dominant positions.

Most vulnerable are the small island developing States for whom access to global container shipping networks is an important determinant of their competitiveness. They are often confronted with vicious cycles: not enough demand to attract frequent and competing shipping services, making services more costly and less competitive, causing volumes to drop even further.

Support smaller and vulnerable economies

Small island developing States and the least developed countries in particular, need support in capacity building for national regulators, and competition and port authorities. Their importers and exporters would benefit from more transparency and available indices for freight costs and surcharges, similar to those available for the main shipping routes.

Include alliances and consortia in competition assessments

Competition authorities should clarify what alliances and consortia can legally do, such as negotiating jointly with other supply chain partners. They could then fully analyse the impact on competition, service quality and efficiency, and impose appropriately designed remedies. Another option would be to impose reporting requirements. In analysing cooperation agreements, competition authorities need to look at price-related effects, as well as at the variety and quality of services provided to shippers, and the coordinated management of capacity deployment.³⁹

Keep ports competitive

Vertical integration of carriers can contribute to modernizing facilities, improving services, and increasing the number of competitors and users in the ports, but they can also create problems of access or discriminatory treatment for competing users of port facilities. Terminals or entire ports are usually put out for tender through concessions by port authorities and operated by the winning firms for a period of two decades or more. When considering concessions, sectorial regulators, and competition and port authorities should work together to address competition concerns that may arise, ensure fair competition, and enhance the competitiveness of this segment of the supply chain.⁴⁰

Seize opportunities for international cooperation

Shippers in developing countries are deeply frustrated at the apparent indifference of regulators and governments in developed regions to their collective experiences, and the perceived anti-competitive practices of the container shipping industry. Their governments may not have much influence over major shipping companies that are domiciled in third countries where decisions on regulations do not consider the effects on developing countries.

Dealing with cross-border anti-competitive practices requires international cooperation for which the appropriate mechanism is the United Nations Set of Multilaterally Agreed Equitable Principles and Rules for the Control of Restrictive Business Practices (UN Set of Competition Rules and Principles).⁴¹

Responsibility for ensuring the implementation of the UN Set of Competition Rules and Principles lies with UNCTAD which is most appropriate forum for cooperation between competition authorities and regulators in the maritime sector. At the next meeting of the Intergovernmental Group of Experts on Competition Law and Policy in 2023, member States could request the establishment of a joint specific forum or informal working group to facilitate the exchange of information between authorities and regulators. This would strengthen the monitoring and publication of data and facilitate research and transparency for users and providers of container shipping services. It would also promote international cooperation for more consistent and uniform measures. Member States could then address problems detected in structural ways and strengthen their monitoring and interventions. A more homogenous global regulatory framework would have the additional benefit of reducing compliance costs for carriers.

REFERENCES

- Brooks M R, Vanelslander T, Sys C (2021). Regulation in the liner shipping industry: pathways to a balance of interests, in: Fabrizio Serra (ed.), *International journal of transport economics*, VOL. XLVIII, No. 3-4, December 2021. Available at <http://digital.casalini.it/17242185>.
- Container XChange (2019). *Shipping Alliances: 2M, Ocean Alliance & THE Alliance*, available at <https://www.container-xchange.com/blog/shipping-alliances/>.
- Drewry (2022). *Global Container Terminal Operators Annual Review and Forecast 2022/2023*, Drewry, London.
- European Commission (2016). *Antitrust: Commission accepts commitments by container liner shipping companies on price transparency*. 7 July 2016. Available at https://ec.europa.eu/commission/presscorner/detail/en/IP_16_2446.
- European Commission (2022). *Mergers: Commission prohibits proposed acquisition of Daewoo Shipbuilding & Marine Engineering by Hyundai Heavy Industries Holdings*. 13 January 2022. Available at https://ec.europa.eu/commission/presscorner/detail/en/ip_22_343.
- FMC (2022). *Effects of the COVID-19 Pandemic on the U.S. International Ocean Supply Chain: Stakeholder Engagement and possible violations of 46 U.S.C. § 41102(c)*, Federal Maritime Commission (FMC), Washington, May 2022. Available at <https://www.fmc.gov/commissioner-dye-releases-final-report-for-fact-finding-no-29/>.
- Ghorbani M, Acciaro M, Transchel S, Cariou P (2022). *Strategic alliances in container shipping: A review of the literature and future research agenda*, in: *Maritime Economics and Logistics* 24, 439–465 (2022). Available at <https://doi.org/10.1057/s41278-021-00205-7>.
- GSF/MDST (2021). *Shippers struggle as carriers' profits soar*. Press release, Global Shippers Forum (GSF), September 2021. Available at <https://globalshippersforum.com/wp-content/uploads/2021/09/GSF-MDST-Shippers-struggle-as-carriers-profits-soar-210901.pdf>.
- Haralambides H (2019). *Gigantism in container shipping, ports and global logistics: a time-lapse into the future*. In: *Maritime Economics and Logistics* 21, 1–60 (2019). Available at <https://doi.org/10.1057/s41278-018-00116-0>.
- Hoffmann J, Saeed, N & Sødal, S. *Liner shipping bilateral connectivity and its impact on South Africa's bilateral trade flows*. In: *Maritime Economics and Logistics* 22, 473–499 (2020). Available at <https://doi.org/10.1057/s41278-019-00124-8>.
- ITF (2018). *The Impact of Alliances in Container Shipping. Case-Specific Policy Analysis*. 2 November 2018. Available at <https://www.itf-oecd.org/sites/default/files/docs/impact-alliances-container-shipping.pdf>.
- ITF (2022). *Performance of Maritime Logistics*, International Transport Forum Policy Papers, No. 106, OECD Publishing, Paris. Available at <https://www.itf-oecd.org/sites/default/files/docs/performance-maritime-logistics.pdf>.
- Lloyds List (2014). *K Line pleads guilty in US price-fixing case*. 29 September 2014. Available at <https://lloydslist.maritimeintelligence.informa.com/LL047772/K-Line-pleads-guilty-in-US-price-fixing-case>.
- Lloyds List (2017). *Beijing fines 14 carriers for misreporting freight rates*. 21 February 2017. Available at <https://lloydslist.maritimeintelligence.informa.com/LL110353/Beijing-fines-14-carriers-for-misreporting-freight-rates>.
- Lloyds List (2021). *Competition watchdog appeals Newcastle box terminal ruling*. 27 July 2021. Available at <https://lloydslist.maritimeintelligence.informa.com/LL1137700/Competition-watchdog-appeals-Newcastle-box-terminal-ruling>.
- Lloyds List (2022a). *Changing lanes: New entrants do little to level boxship playing field*. Available at <https://lloydslist.maritimeintelligence.informa.com/LL1141269/Changing-lanes-New-entrants-do-little-to-level-boxship-playing-field> and <https://www.mdst.co.uk/changing-lanes-new-entrants-do-little-to-level-boxship-playing-field>.
- Lloyds List (2022b). *India fines Japanese shipping groups on cartel charges*. 26 January 2022. Available at <https://lloydslist.maritimeintelligence.informa.com/LL1139649/India-fines-Japanese-shipping-groups-on-cartel-charges>.

- Lloyds List (2022c). South Korea fines 15 carriers for collusion on price fixing. 10 June 2022. Available at <https://lloydslist.maritimeintelligence.informa.com/LL1141185/South-Korea-fines-15-carriers-for-collusion-on-price-fixing>.
- Merk O and Teodoro A (2022). Alternative approaches to measuring concentration in liner shipping in: *Maritime Economics & Logistics, Special Issue on Maritime Port Governance, 2022*. Available at <https://doi.org/10.1057/s41278-022-00225-x>.
- Port Economics (2020). Alliances in Container Shipping. Available at <https://porteconomicsmanagement.org/pemp/contents/part1/ports-and-container-shipping/alliances-container-shipping/>.
- Port Technology (2022). Maersk launches new Middle Corridor rail-sea service. 17 May 2022. Available at <https://www.porttechnology.org/news/maersk-launches-new-middle-corridor-rail-sea-service/>.
- Premti A (2016). Liner shipping: is there a way for more competition? UNCTAD discussion paper series No. 224. March 2016. Available at https://unctad.org/system/files/official-document/osgdp2016d1_en.pdf.
- Pro Publica (2022). The Hidden Fees Making Your Bananas, and Everything Else, Cost More, 16 June 2022. Available at <https://www.propublica.org/article/ocean-freight-shipping-costs-inflation>.
- RBB Economics (2021). Consortia, efficiencies, and service levels in container shipping and the impact of the Covid-19 pandemic. Prepared at the request of the World Shipping Council. June 2021. Available at <https://www.worldshipping.org/s/RBB-Economics-Report-on-Vessel-Sharing-Agreements.pdf>.
- Sanchez R, Hoffmann J, Micco A, Pizzolitto G, Sgut M and Wilmsmeier G (2003). Port Efficiency and International Trade: Port Efficiency as a Determinant of Maritime Transport Costs, in: *Maritime Economics & Logistics, 2003, 5, (199–218)*. Available at <https://doi.org/10.1057/palgrave.mel.9100073>.
- Sea-Intelligence (2019). “Alliance abolition likely to increase rates”, in: *Sea-Intelligence Sunday Spotlight, 30 June 2019, Issue 419*. Available at <https://www.sea-intelligence.com/services#Spotlight>.
- Sea-Intelligence (2022a). “Non alliance share doubles on Transpacific”, in: *Sea-Intelligence Sunday Spotlight, 30 January 2022, Issue 549*. Available at <https://www.sea-intelligence.com/services#Spotlight>.
- Sea-Intelligence (2022b). “Schedule reliability improves to 40% in June 2022”. Available at <https://sea-intelligence.com/155>.
- The Load Star (2022). Hapag-Lloyd fined after levying ‘wilful’ and ‘erroneous’ D&D charges. 25 April 2022. Available at <https://theloadstar.com/hapag-lloyd-fined-after-levying-wilful-and-erroneous-dd-charges/>.
- Trade Winds (2022a). US objections scuttle Maersk deal to sell refrigerated box unit to CIMC. 25 August 2022. Available at <https://www.tradewindsnews.com/containerhips/us-objections-scuttle-maersk-deal-to-sell-refrigerated-box-unit-to-cimc/2-1-1284909>.
- Transport Intelligence (2022). CMA CGM buys into AirFrance-KLM. 19 May 2022. Available at <https://www.ti-insight.com/briefs/cma-cgm-buys-into-airfrance-klm/>.
- UNCTAD (2015). *Review of Maritime Transport 2015*, Chapter 3. Available at <https://unctad.org/webflyer/review-maritime-transport-2015>.
- UNCTAD (2018a). Report of the Intergovernmental Group of Experts on Competition Law and Policy on its seventeenth session, TD/B/C.I/CLP/52. Geneva.
- UNCTAD (2018b). Challenges faced by developing countries in competition and regulation in the maritime transport sector. TD/B/C.I/CLP/49. Geneva. Available at https://unctad.org/system/files/official-document/ciclpd49_en.pdf.
- UNCTAD (2020). *Review of Maritime Transport 2020*. UNCTAD/RMT/2020. Available at https://unctad.org/system/files/official-document/rmt2020_en.pdf.
- UNCTAD (2021). *Review of Maritime Transport 2021*. UNCTAD/RMT/2021. Available at https://unctad.org/system/files/official-document/rmt2021_en_0.pdf.
- UNCTAD (2022a). Contracts for the carriage of goods by sea and multimodal transport – Key issues arising from the impacts of the Covid-19 pandemic UNCTAD/DTL/TLB/INF/2022/1. Geneva. Available at https://unctad.org/system/files/official-document/dtltlbinf2022d1_en.pdf.
- UNCTAD (2022b). COVID-19 and maritime transport: Navigating the crisis and lessons learned. UNCTAD/TCS/DTL/INF/2022/1. Available at https://unctad.org/system/files/official-document/tcsdtlinf2022d1_en.pdf.

- UN-ECLAC (1998). Concentration in liner shipping: its causes and impacts for ports and shipping services in developing regions. LC/G.2027. Santiago de Chile, 20 May 1998. Available at https://repositorio.cepal.org/bitstream/handle/11362/31094/1/S985396_en.pdf.
- Wilmsmeier G and Hoffmann J (2008). Liner Shipping Connectivity and Port Infrastructure as Determinants of Freight Rates in the Caribbean, in: *Maritime Economics and Logistics* 10, 130–151 (2008). Available at <https://doi.org/10.1057/palgrave.mel.9100195>.
- Wilmsmeier G, Hoffmann J, Sanchez R (2006). The impact of port characteristics on international maritime transport costs, in: *Port Economics – Research in Transportation Economics*, Volume 16, 117–140. ISSN: 0739-8859. Available at <https://www.sciencedirect.com/science/article/abs/pii/S0739885906160060>.

END NOTES

- 1 In 2018, the seventeenth session of the Intergovernmental Group of Experts on Competition Law and Policy encouraged governments to ensure fair competition and prevent anti-competitive practices in maritime trade and urged them “to cooperate with each other in dealing with cross-border anti-competitive practices, and even more so in the maritime transport sector, given its global nature.” In addition, the Group called upon UNCTAD to continue its analytical work on cooperative arrangements and mergers, “not only on freight rates but also on the frequency, efficiency, reliability and quality of services, as part of its work on the *Review of Maritime Transport*.” UNCTAD (2018a).
- 2 ECLAC (1998) and figure 6.1.
- 3 Data provided to UNCTAD by Alphaliner, <http://public.alphaliner.com>.
- 4 UNCTAD (2021).
- 5 Data provided to UNCTAD by MDS Transmodal <http://www.mdst.co.uk>.
- 6 Drewry (2022). Table 4.1: Global terminal operators’ throughput league table, 2021 per cent share of world container port throughput in TEU.
- 7 MSC: <https://www.msc.com/en/newsroom/press-releases/2022/september/msc-to-develop-air-cargo-solution-in-response-to-market-demand>.
- 8 Port Technology (2022).
- 9 Brooks et al (2021), Ghorbani et al (2022), Sea-Intelligence (2022a).
- 10 Information received by email from Sea-Intelligence <https://www.sea-intelligence.com>.
- 11 Sea-Intelligence (2019).
- 12 Container XChange (2019), Port Economics (2020), RBB Economics (2021).
- 13 UN-ECLAC (1998), Haralambides (2019).
- 14 UNCTAD (2015), Sanchez et al (2003), Wilmsmeier et al (2006).
- 15 Wilmsmeier et al (2006).
- 16 Wilmsmeier and Hoffmann (2008).
- 17 Hoffmann et al (2020).
- 18 UNCTAD (2021).
- 19 Lloyds List (2022a).
- 20 UNCTAD calculations based on data provided by MDS Transmodal www.mdst.co.uk. See also Merk and Teodoro (2022), Wilmsmeier and Hoffmann (2008), and table 6.1 above.
- 21 Premti (2016), UNCTAD (2018b), ITF (2018), Brooks et al (2021), Ghorbani et al (2022).
- 22 Lloyds List (2017).
- 23 Lloyds List (2022b).
- 24 Lloyds List (2022c).
- 25 Lloyds List (2014).
- 26 The Load Star (2022).
- 27 European Commission (2016).
- 28 Trade Winds (2022a).
- 29 European Commission (2022).
- 30 Lloyds List (2021).
- 31 For data on schedule reliability, see Sea-Intelligence (2022b).
- 32 UNCTAD (2022a), Pro Publica (2022). See also chapter 3 above.
- 33 UNCTAD (2020), UNCTAD (2021a), UNCTAD (2021b), UNCTAD (2022b). See also especially chapters 1, 2, 3, and 4 above. See UNCTAD statistics for time in port based on data provided by MarineTraffic under <http://stats.unctad.org/maritime>.
- 34 FMC (2016).
- 35 UNCTAD calculations, based on data provided by Clarksons Shipping Intelligence Network <http://sin.clarksons.net>.
- 36 ITF (2022).
- 37 GSF/MDST (2021).
- 38 UN-ECLAC (1998).
- 39 UNCTAD (2018b), Lloyds List (2022a).
- 40 UNCTAD (2018b).
- 41 UNCTAD (2018b).