


Growth in international maritime trade stalled in 2019, reaching its lowest level since the global financial crisis of 2008–2009. Lingering trade tensions and high policy uncertainty undermined growth in global economic output and merchandise trade and by extension, maritime trade. Maritime trade volumes expanded by 0.5 per cent, down from 2.8 per cent in 2018 and reached a total of 11.08 billion tons in 2019. Growth in world gross domestic product slowed to 2.5 per cent, down from 3.1 per cent in 2018 and 1.1 percentage point below the historical average over the 2001–2008 period. In tandem, global merchandise trade contracted by 0.5 per cent, as manufacturing activity came under pressure and the negative impact of trade tensions between the two largest world economies took a toll on investment and trade.

Against the backdrop of a weaker 2019, the short-term prospects of maritime transport and trade darkened in early 2020. While initial expectations were that 2020 would bring moderate improvements in the economy and trade, the unprecedented global health and economic crisis triggered by the COVID-19 pandemic severely affected the outlook. The fallout on maritime transport and trade was dramatic, with all economic indicators pointing downward. Taking into account the prevailing and persistent uncertainty, UNCTAD estimates that the volume of international maritime trade will fall by 4.1 per cent in 2020. Predicting the timing and scale of the recovery is also challenging, as many factors can significantly influence the outlook. Bearing this in mind, UNCTAD projections indicate that maritime trade will recover in 2021 and expand by 4.8 per cent.

As the debate on the recovery continues to evolve, it is becoming clear that disruptions caused by the COVID-19 pandemic will have a lasting impact on shipping and trade. These disruptions may trigger deep shifts in the overall operating landscape, together with a heightened sustainability and resilience-building imperative. Potential shifts range from changes in globalization patterns to alterations in supply-chain design, just-in-time production models, technology uptake and consumer spending habits. Depending on how these patterns unfold and interact, the implications for maritime transport can be transformational. Further, risk assessment and management, as well as resilience-building to future-proof supply chains and maritime transport, are likely to feature more prominently on policy and business agendas. While maritime transport could emerge as a catalyst supporting some of these trends, it will also need to brace itself for change and adapt and ensure that it is also well prepared to enter the post-COVID-19 pandemic world.

The *Review of Maritime Transport 2020* is structured around five substantive chapters. Chapter 1 considers the demand for maritime transport services. Chapter 2 considers the factors that shape maritime transport infrastructure and services supply, including ship-carrying capacity, ports and related maritime businesses. Chapter 3 assesses the sector's performance using a set of indicators on port calls, port-waiting times, connectivity and the environmental sustainability of ships. Chapter 4 provides an overview of selected contributions received from various stakeholders, including government and industry, sharing experiences and lessons learned in connection with the pandemic. Chapter 5, the final chapter, presents key legal and regulatory developments, as well as trends in technology and innovation affecting maritime transport and trade.

The present chapter on international maritime trade and port traffic reviews major developments in the world economy, merchandise trade, industrial activity and manufacturing supply chains that underpin demand for maritime transport infrastructure and services. Section A discusses volumes of international maritime trade and port traffic and outlines key trends affecting maritime trade in 2019. Section B focuses on the unprecedented health and economic global crisis triggered by the pandemic and considers its immediate impacts and its fallout on the varied shipping segments and ports, as well as its implications for the outlook of maritime transport and trade. Section C concludes with some priority action areas with a view to ensuring the longer-term sustainability and resilience of maritime transport networks and supply chains.



INTERNATIONAL MARITIME TRADE AND PORT TRAFFIC

MARITIME TRADE AND PORT CARGO TRAFFIC

IN 2019

SEABORNE TRADE

Growth in maritime trade stalled

+0.5%

- ▶ below 2.8% in 2018
- ▶ lowest level since 2008–2009 downturn

Volumes reached
11.08 billion tons

IMPACTS OF TRADE TENSIONS



Trade tensions and great policy uncertainty undermined growth in maritime trade

Trade diversion and re-routing

CONTAINER PORT TRAFFIC

Growth in global traffic down from 5.1% in 2018

+2%

811.2 million TEUs handled in container ports worldwide



IN 2020

COVID-19 DISRUPTION



Risk assessment and management: key to future-proofed supply chains and maritime transportation



Existential questions for globalization



Supply chain and trade faced dual shock: supply and demand



Shockwaves through supply chains, shipping and ports



International maritime trade projected to fall by **4.1% in 2020**

LOOKING AHEAD

International maritime trade projected to recover and expand by **4.8% in 2021**

A. VOLUME OF INTERNATIONAL MARITIME TRADE AND PORT TRAFFIC

1. Maritime trade lost momentum in 2019 and came under pressure in 2020

Owing to the slowdown in the world economy and trade, growth in international maritime trade stalled in 2019 and reached its lowest level since the financial crisis of 2008–2009. After rising moderately (2.8 per cent) in 2018, volumes expanded at a marginal 0.5 per cent in 2019. A number of factors weighed on the performance of maritime trade. These included trade policy tensions; adverse economic conditions and social unrest in some countries; sanctions; supply-side disruptions, such as the Vale dam collapse in Brazil and *Cyclone Veronica* in Australia; and low oil demand growth. UNCTAD estimates the total volume of maritime trade in 2019 at 11.08 billion tons (tables 1.1 and 1.2).

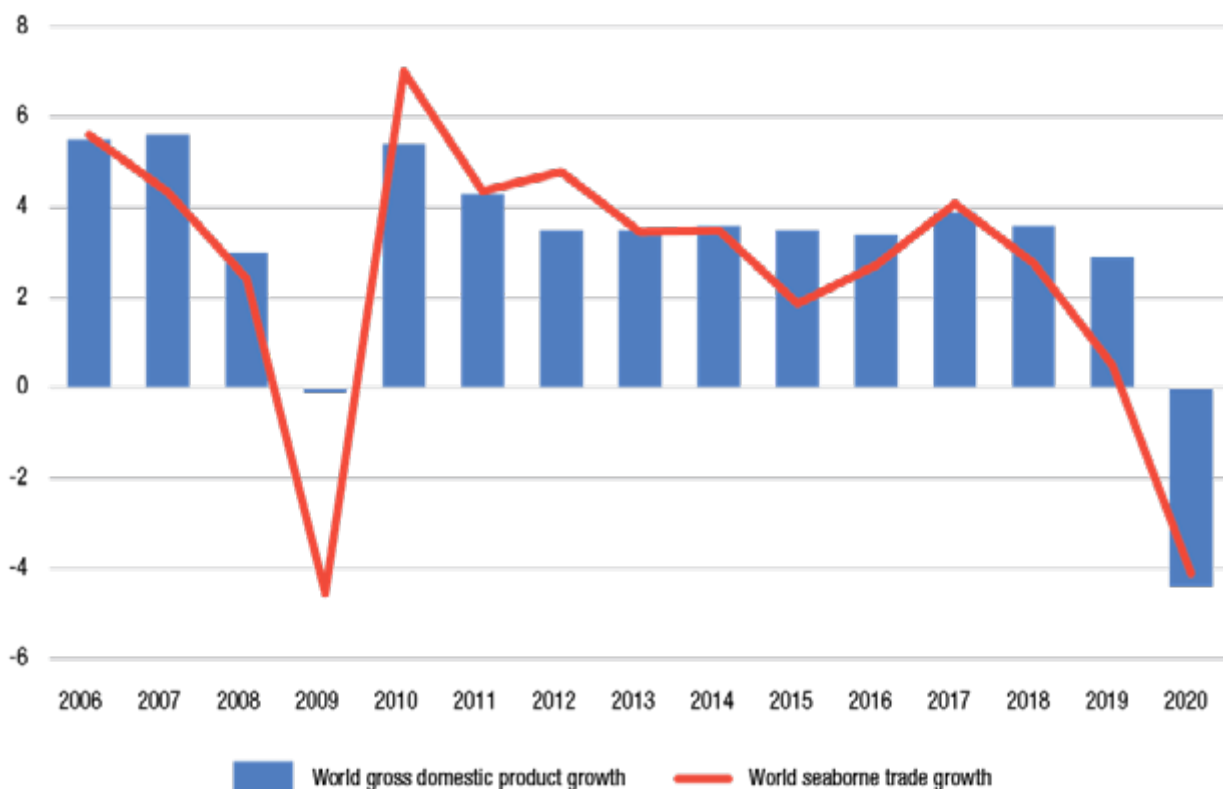
As shown in figure 1.1, growth in maritime trade decelerated in line with the slowdown in world GDP growth. Data also point to a negative outlook for 2020,

with world GDP and maritime trade projected to contract by 4.1 per cent. The onset of the pandemic in early 2020 and its fallout on world economies, travel, transport and consumption patterns, as well as manufacturing activity and supply chains, are causing a global recession in 2020. See section C for a more detailed discussion on the pandemic and its implications for maritime transport and trade.

2. Negative trends in the world economy and trade put a dent in international maritime trade

Shipping is a derived demand largely determined by developments in the world economy and trade. Therefore, negative economic and trade trends affected maritime trade growth in 2019. Global economic growth decelerated in 2019 against a backdrop of lingering trade tensions and high policy uncertainty. Growth in world GDP slowed down to 2.5 per cent, below 3.1 per cent in 2018 and 1.1 percentage point below the historical average in 2001–2008 (table 1.3). Developed and developing economies alike were affected, reflecting the continued trade tensions between China and the United States and the overall weakening of

Figure 1.1 Development of international maritime trade and global output, 2006–2020
(Annual percentage change)



Source: UNCTAD calculations, based on the *Review of Maritime Transport*, various issues, data from UNCTADstat and table 1.12 of this report.

Table 1.1 Development of international maritime trade, selected years (Million tons loaded)

Year	Tanker trader ^a	Main bulk ^b	Other dry cargo ^c	Total (all cargo)
1970	1 440	448	717	2 605
1980	1 871	608	1 225	3 704
1990	1 755	988	1 265	4 008
2000	2 163	1 186	2 635	5 984
2005	2 422	1 579	3 108	7 109
2006	2 698	1 676	3 328	7 702
2007	2 747	1 811	3 478	8 036
2008	2 742	1 911	3 578	8 231
2009	2 641	1 998	3 218	7 857
2010	2 752	2 232	3 423	8 408
2011	2 785	2 364	3 626	8 775
2012	2 840	2 564	3 791	9 195
2013	2 828	2 734	3 951	9 513
2014	2 825	2 964	4 054	9 842
2015	2 932	2 930	4 161	10 023
2016	3 058	3 009	4 228	10 295
2017	3 146	3 151	4 419	10 716
2018	3 201	3 215	4 603	11 019
2019	3 169	3 225	4 682	11 076

Sources: UNCTAD calculations, based on data supplied by reporting countries and as published on government and port industry websites, and by specialist sources. Dry cargo data for 2006 onwards were revised and updated to reflect improved reporting, including more recent figures and a better breakdown by cargo type. Since 2006, the breakdown of dry cargo into main bulk and dry cargo other than main bulk is based on various issues of the *Shipping Review* and *Outlook and Seaborne Trade Monitor*, produced by Clarksons Research. Estimates of total maritime trade figures for 2019 are based on preliminary data or on the last year for which data were available.

^a Tanker trade includes crude oil, refined petroleum products, gas and chemicals.

^b Main bulk includes iron ore, grain, coal, bauxite/alumina and phosphate. With regard to data as of 2006, main bulk includes iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under dry cargo other than main bulk.

^c Includes minor bulk commodities, containerized trade and general cargo.

the world economy. In developed countries, GDP growth decelerated to 1.8 per cent, down from 2.3 per cent in 2018, while developing regions expanded by 3.5 per cent, a relatively higher rate in comparison, but below the 4.3 per cent growth recorded in 2018. Growth in transition economies also stalled, expanding at 2.2 per cent in 2019 against 2.8 per cent in 2018.

In the United States, the supportive effect of fiscal stimulus measures (*New York Times*, 2018) and strong domestic demand that underpinned growth in 2018 diminished slightly in 2019. Growth in the European Union fell to 1.5 per cent, the lowest rate since 2013. Concerns in Europe and the uncertainty

surrounding a potential “no-deal” departure from the European Union by the United Kingdom of Great Britain and Northern Ireland (Brexit) had a negative impact on the economy. While the economy of China continued to gradually mature and diversify, trade tensions seem to have contributed to weaker GDP expansion in 2019. Growth slowed to 6.1 per cent, the country’s weakest performance since the early 1990s. Economic growth decelerated across East Asia, South Asia and South-East Asia in varying degrees. In particular, the economy of India slowed down to 4.2 per cent GDP growth in 2019, down from 6.8 per cent in 2018.

In the developing Americas, economic growth was hindered by adverse domestic and global conditions. In 2019, GDP growth in the region contracted by 0.3 per cent. Subdued growth (0.9 per cent) in Western Asia reflected weaker oil prices and geopolitical tensions in the region, including those arising from the sanctions placed on the Islamic Republic of Iran. Growth in Africa remained relatively steady, increasing by 3.1 per cent.

Global merchandise trade contracted in 2019 as manufacturing activity slowed over the course of the year. Rising tariffs have heightened policy uncertainty, undermined investment and weighed on global trade. In 2019, world merchandise trade volumes declined and fell by 0.5 per cent, its lowest level since the financial crisis a decade earlier (table 1.4). The negative trends were mainly driven by a contraction in imports from developing countries, including China, other emerging Asian economies and developing America (United Nations, 2020a).

Global trade tensions increased in 2019 and extended beyond China, the United States and Brexit. For example, complaints were made by several countries against Indian tariffs, reciprocal allegations of protectionism were put forward by the European Union and the United States, and a trade dispute occurred between Japan and the Republic of Korea. For example, in June 2020, the United States announced that it was considering imposing more tariffs on European goods in view of the contention over subsidies to Airbus and Boeing. The new list of goods that may face duties of up to 100 per cent, potentially doubling the price of certain goods, caused European stocks to fall, particularly those of beverage companies, luxury goods manufacturers and truck makers (Whitten and Ben-Moussa, 2020). Such developments, together with rising nationalist sentiment (MDS Transmodal, 2020a) and inward-looking policies, added to the uncertainty, caused business confidence to deteriorate, affected investment growth in many countries and undermined global trade. This environment also amplified the challenges in the electronics and automotive sectors, both of which have large international production value chains. These two sectors were hit particularly hard. However, some countries gained export market shares

Table 1.2 International maritime trade in 2018–2019 (Type of cargo, country group and region)									
Designation	Goods loaded					Goods unloaded			
	Year	Total	Crude oil	Other tanker trade ^a	Dry cargo	Total	Crude oil	Other tanker trade ^a	Dry cargo
Millions of tons									
World	2018	11 019.0	1 881.0	1 319.7	7 818.3	11 016.8	2 048.8	1 338.6	7 629.4
	2019	11 075.9	1 860.2	1 308.4	7 907.3	11 083.0	2 033.4	1 329.3	7 720.3
Developed economies	2018	3 862.8	206.2	507.5	3 149.1	3 844	931.9	494.8	2 417.8
	2019	3 935.2	242.9	506.9	3 185.4	3 780	913.6	472.6	2 394.0
Transition economies	2018	713.0	203.8	37.6	471.6	99.4	0.3	4.8	94.3
	2019	715.8	193.9	41.1	480.8	102.0	0.8	5.4	95.8
Developing economies	2018	6 443.4	1 471.1	774.6	4 197.6	7 072.9	1 116.6	839.0	5 117.3
	2019	6 424.8	1 423.3	760.3	4 241.2	7 200.7	1 118.9	851.3	5 230.5
Africa	2018	763.0	297.4	70.4	395.2	501.8	39.0	99.9	362.8
	2019	762.1	293.5	69.9	398.7	504.5	39.2	99.3	365.9
America	2018	1 385.4	200.6	88.7	1 096.1	638.1	47.1	149.3	441.8
	2019	1 386.3	204.2	82.3	1 099.8	621.7	47.8	138.8	435.1
Asia	2018	4 280.4	971.3	607.8	2 701.3	5 918.9	1 029.7	584.7	4 304.5
	2019	4 261.8	923.9	600.5	2 737.5	6 059.1	1 031.1	607.7	4 420.3
Oceania	2018	14.5	1.7	7.8	5.1	14.1	0.8	5.0	8.2
	2019	14.6	1.8	7.7	5.1	15.4	0.7	5.5	9.1
Designation	Goods loaded					Goods unloaded			
	Year	Total	Crude oil	Other tanker trade ^a	Dry cargo	Total	Crude oil	Other tanker trade ^a	Dry cargo
Percentage share									
World	2018	100.0	17.1	12.0	71.0	100.0	18.6	12.2	69.3
	2019	100.0	16.8	11.8	71.4	100.0	18.3	12.0	69.7
Developed economies	2018	35.1	11.0	38.5	40.3	34.9	45.5	37.0	31.7
	2019	35.5	13.1	38.7	40.3	34.1	44.9	35.5	31.0
Transition economies	2018	6.5	10.8	2.8	6.0	0.9	0.0	0.4	1.2
	2019	6.5	10.4	3.1	6.1	0.9	0.0	0.4	1.2
Developing economies	2018	58.5	78.2	58.7	53.7	64.2	54.5	62.7	67.1
	2019	58.0	76.5	58.1	53.6	65.0	55.0	64.0	67.8
Africa	2018	6.9	15.8	5.3	5.1	4.6	1.9	7.5	4.8
	2019	6.9	15.8	5.3	5.0	4.6	1.9	7.5	4.7
America	2018	12.6	10.7	6.7	14.0	5.8	2.3	11.1	5.8
	2019	12.5	11.0	6.3	13.9	5.6	2.4	10.4	5.6
Asia	2018	38.8	51.6	46.1	34.6	53.7	50.3	43.7	56.4
	2019	38.5	49.7	45.9	34.6	54.7	50.7	45.7	57.3
Oceania	2018	0.1	0.1	0.6	0.1	0.1	0.0	0.4	0.1
	2019	0.1	0.1	0.6	0.1	0.1	0.0	0.4	0.1

Source: UNCTAD calculations, based on data supplied by reporting countries and as published on government and port industry websites, and by specialist sources. Dry cargo data for 2006 onwards were revised and updated to reflect improved reporting, including more recent figures and a better breakdown by cargo type. Estimates of total maritime trade figures for 2019 are based on preliminary data or on the last year for which data were available.

Note: For longer time series and data prior to 2019, see UNCTADstat Data Centre (<http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=32363>).

^a Includes refined petroleum products, gas and chemicals.

Region or country	Average 2001–2008	2018	2019	2020 ^a	2021 ^a
World	3.6	3.1	2.5	-4.3	4.1
Developed countries	2.3	2.3	1.8	-5.8	3.1
<i>of which:</i>					
European Union (27)	2.1	2.1	1.5	-7.3	3.5
Japan	1.2	0.3	0.6	-4.5	1.9
United States	2.6	2.9	2.3	-5.4	2.8
Developing countries	6.6	4.3	3.5	-2.1	5.7
<i>of which:</i>					
Africa	5.8	3.1	3.1	-3.0	3.5
East Asia	9.2	5.9	5.4	1.0	7.4
<i>of which:</i>					
China	10.9	6.6	6.1	1.3	8.1
South Asia	6.7	5.1	2.8	-4.8	3.9
<i>of which:</i>					
India	7.6	6.8	4.2	-5.9	3.9
South-East Asia	5.7	5.1	4.4	-2.2	4.3
Western Asia	5.5	2.0	0.9	-4.5	3.6
Latin American and the Caribbean	3.9	0.6	-0.3	-7.6	3.0
<i>of which:</i>					
Brazil	3.7	1.3	1.1	-5.7	3.1
Caribbean	5.0	3.5	1.9	-6.4	2.3
Transition economies	7.2	2.8	2.2	-4.3	3.5
<i>of which:</i>					
Russian Federation	6.8	2.3	1.3	-4.2	3.4

Source: UNCTAD calculations, based on UNCTAD, 2020a, *Trade and Development Report 2020: From Global Pandemic to Prosperity for All – Avoiding Another Lost Decade*, chapter 1.

^a Forecast.

as companies looked for new suppliers from countries that were not directly affected by the rising tariffs.

In December 2019, China and the United States agreed on the first phase of a trade agreement to help de-escalate the tensions between the two economies. On 15 January 2020, both countries signed the agreement on the understanding that China would increase its merchandise imports from the United States by \$200 billion (United Nations, 2020a). In return, the United States would cut by half its 15 per cent tariffs on \$120 billion of imports from China. In Europe, reduced uncertainty over Brexit was a welcome development, although the European Union and the United Kingdom still needed to define a new trading relationship before January 2021 (United Nations, 2020a). In June 2020, the United Kingdom outlined new customs and border arrangements for 2021 and indicated its commitment to introducing a three-phase plan of import changes,

Group/country	Volume of exports (percentage change)			Volume of imports (percentage change)		
	2018	2019	2020 ^a	2018	2019	2020 ^a
World	3.1	-0.5	-9.0	3.8	-0.4	-8.8
Developed countries	2.6	0.0	-12.4	2.5	0.2	-10.9
<i>of which:</i>						
Euro area	1.9	-0.2	-13.3	2.2	0.0	-12.1
Japan	2.6	-1.6	-11.3	3.1	0.9	-4.9
United States	4.2	-0.5	-13.3	5.2	-0.3	-9.8
Other developed countries	2.9	1.1	-10.8	0.5	0.6	-11.6
Developed countries	3.7	-1.7	-4.7	5.7	-1.2	-5.7
<i>of which:</i>						
China	5.4	0.5	-4.5	6.9	-0.4	-0.9
Africa and the Middle East	1.0	-3.9	-5.2	0.8	-0.2	-2.8
Asia (not including China)	3.7	-1.7	-3.9	6.9	-2.3	-7.1
Latin America	3.0	0.5	-7.0	4.8	-1.6	-12.8
Transition economies	3.9	-1.3	-4.1	2.2	3.1	-5.9

Source: UNCTAD calculations, based on CPB World Trade Monitor, August 2020. Data source and methodology are aligned with UNCTAD, 2020a, *Trade and Development Report 2020: From Global Pandemic to Prosperity for All – Avoiding Another Lost Decade*.

Note: Country coverage in the aggregated country groupings is not comprehensive.

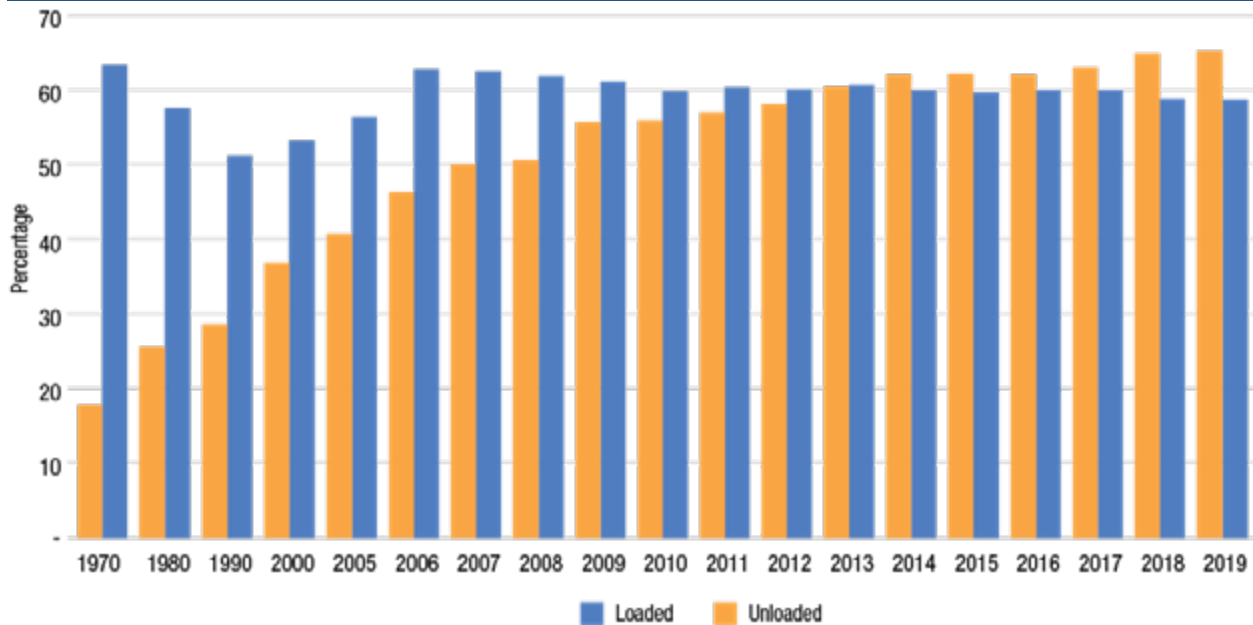
^a Percentage change between the average for the period January to June 2020 and January to June 2019.

building new border facilities for carrying out required checks and providing targeted support to ports to build new infrastructure (Lloyd's Loading List, 2020a). Further, the European Union is expected to impose full customs controls and checks on goods from the United Kingdom starting 1 January 2021 (United Nations, 2020a).

3. Regional and country grouping contribution to maritime trade

In 2019, developing economies continued to account for the lion's share of goods being loaded (58 per cent) and unloaded (65 per cent) in seaports worldwide (figure 1.2). Together, developed economies and economies in transition generated 42 per cent of global merchandise exports by sea (goods loaded) and imported 35 per cent (goods unloaded) of such global trade. While the role of developing regions as a source and destination for maritime trade is significant, developing economies are not a homogenous group. The grouping includes countries and economies in

Figure 1.2 Participation of developing economies in international maritime trade, selected years
(Percentage share in total tonnage)



Source: UNCTAD calculations, based on the *Review of Maritime Transport*, various issues and table 1.2 of this report.

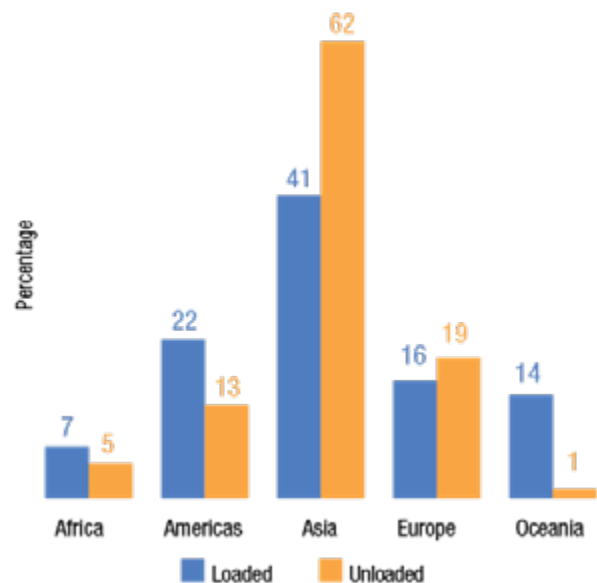
varying stages of development and degrees of integration in the world’s manufacturing and trading networks. Much of the growth recorded over the past decade is largely driven by fast growing emerging developing countries, most notably China. These countries have also been driving the structural shift in trade patterns observed since 2013, whereby volumes unloaded in developing countries exceeded volumes loaded. The shift is a reversal of a historical pattern where developing countries acted as suppliers of large-volume low-value raw materials imported by developed countries.

There is a predominance of Asian and intra-Asian trade in globalized production processes and value chain growth. A closer look at this trend indicates that the globalization of manufacturing processes has never been truly global. There is scope for other developing regions within and outside Asia to diversify their economies, expand their maritime transport capacity and participate more effectively in regional and international production processes. The marginal contribution of these economies to global value chains is reflected in their relatively limited contribution to container trade flows and global container port throughput. Maritime transport, combined with supportive trade and industrial policies, can be a catalyst for growth and greater integration in the world economy for a broader range of such developing countries.

In 2019, 41 per cent of the total goods loaded (exported) were sourced from Asia and 62 per cent of total goods unloaded (imported) were received in this same region (figure 1.3). The contribution of developing America and Africa to maritime trade flows remained marginal. In comparison, and as previously noted, Asia has benefited from a greater integration into global manufacturing

and trading networks, promoting intraregional trade. Capitalizing on the fragmentation of globalized production processes, Asia has become a maritime hub that brings together over 50 per cent of global maritime trade volumes.

Figure 1.3 International maritime trade, by region, 2019
(Percentage share in total tonnage)



Source: UNCTAD calculations, based on data supplied by reporting countries and as published on government and port industry websites, and by specialist sources.

Note: Estimated figures are based on preliminary data or on the last year for which data were available.

4. Maritime trade underperformed across market segments

Dry cargo continued to account for over two thirds of total maritime trade volumes, while liquid bulk commodities, including crude oil, refined petroleum products, gas and chemicals, accounted for the remaining share. In 2019, growth in all market segments decelerated. Trade in dry cargo expanded at 1.1 per cent over 2018, and tanker trade volumes contracted by 1 per cent. A look at how the various market segments have evolved since 1990 shows that growth in maritime trade over the past three decades has been sustained by bullish trends in containerized trade volumes starting in the 2000s, coinciding with the wave of hyperglobalization (figures 1.4 and 1.5). It was also supported by the swift growth of trade in dry bulk commodities that accompanied the rapid industrial expansion of China that accelerated with its accession to the World Trade Organization (WTO) in 2001.

When adjusted for distances travelled, international maritime trade grew at a slightly faster rate of 1 per cent in 2019, supported by growing long-haul oil exports from Brazil and the United States to Asia. Clarksons Research estimates seaborne trade in ton-miles to have reached 59,503 billion ton-miles in 2019 (figure 1.6).

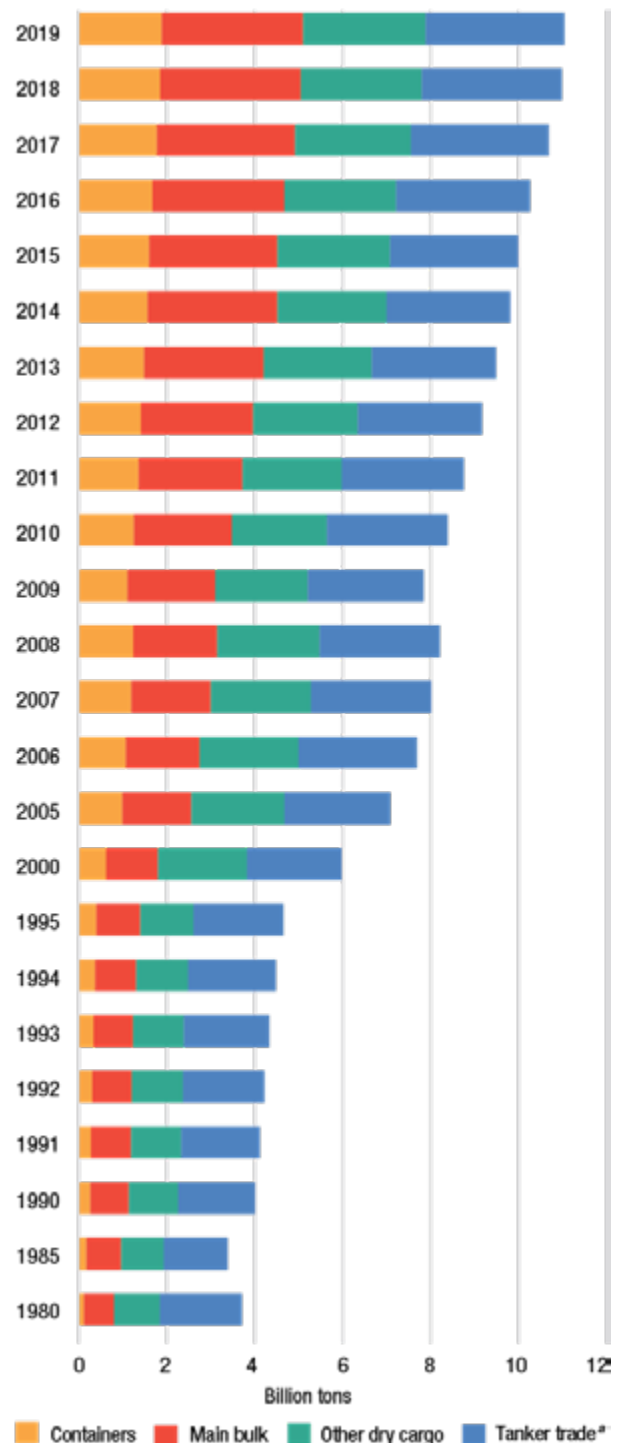
Figure 1.7 shows that trade in ton-miles by cargo expanded in varying degrees. Trade in container and dry bulk commodities has fuelled much of the growth over the past two decades. The number of cargo ton-miles generated by dry cargo has been rising steadily over the years. In 2002, China imported 121.7 million tons of iron ore and coal, accounting for 11.8 per cent of the global iron ore and coal trade by sea (Clarksons Research, 2006). In less than two decades, these volumes increased to 1.3 billion tons, bringing the country's market share to nearly 50 per cent of the world total (Clarksons Research, 2020b). Gas trade in ton-miles expanded swiftly to 9.9 per cent in 2019. Other segments recorded relatively smaller growth; ton-miles generated by trade in chemicals expanded by 3.2 per cent, followed by container trade (1.9 per cent) and other dry cargo (1.6 per cent). Growth in ton-miles produced by trade in oil and major bulk commodities contracted in 2019, reflecting declines in iron ore trade following the disruption to mining activities in Brazil caused by the Vale dam collapse.

5. Demand and supply-side pressures weighed on key market segments

Trade in oil weakened, while trade in gas remained robust

Since the onset of the shale revolution in the United States, developments in the country's energy sector have played a significant role in shaping global tanker trade. This was apparent throughout 2019, with a

Figure 1.4 Development of international maritime trade by cargo type, selected years (Billion tons loaded)

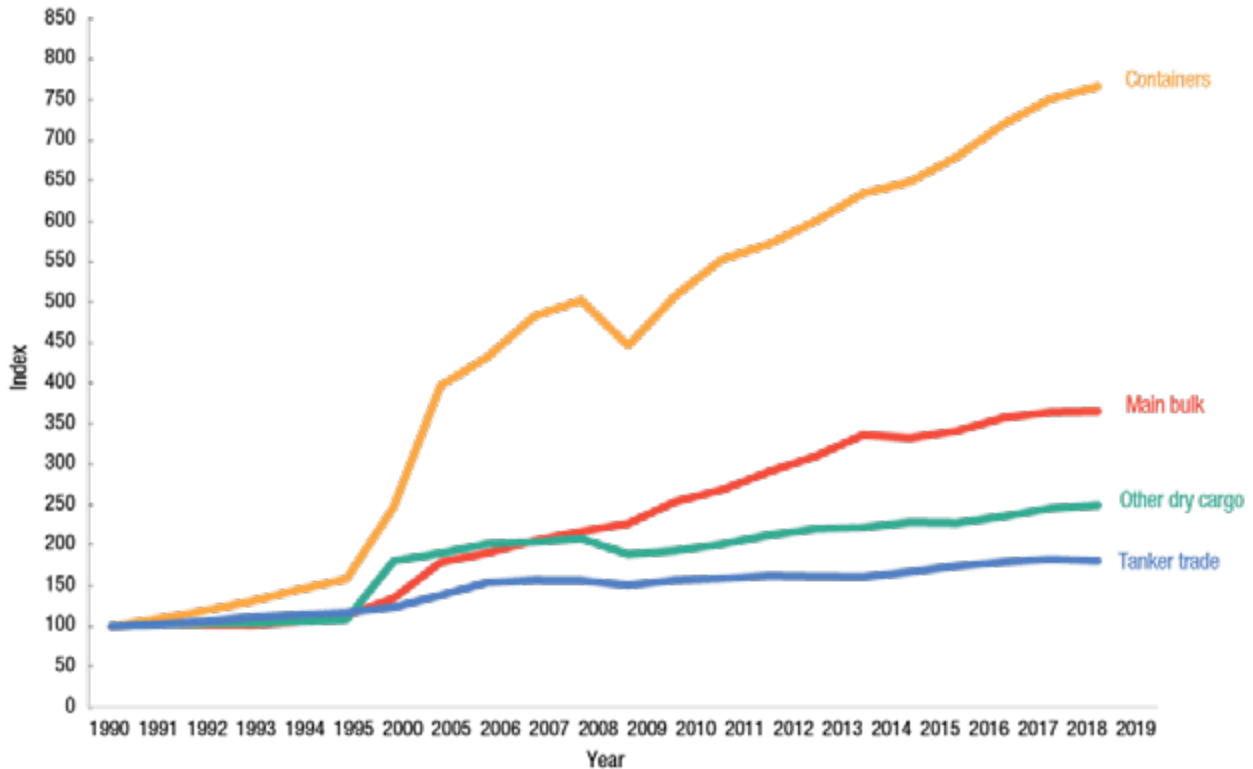


Source: UNCTAD, Review of Maritime Transport, various issues. For 2006–2019, the breakdown by cargo type is based on Clarksons Research, 2020a, *Shipping Review and Outlook*, spring 2020 and *Seaborne Trade Monitor*, various issues.

Note: 1980–2005 figures for main bulk include iron ore, grain, coal, bauxite/alumina and phosphate. With regard to data starting in 2006, main bulk figures include iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under "other dry cargo".

* Tanker trade includes crude oil, refined petroleum products, gas and chemicals.

Figure 1.5 Development of international maritime trade by cargo type, selected years
(Index: 1990 = 100)



Source: UNCTAD, *Review of Maritime Transport*, various issues. For 2006–2019, the breakdown by cargo type is based on Clarksons Research, 2020a, *Shipping Review and Outlook*, spring 2020 and *Seaborne Trade Monitor*, various issues.

Note: 1980–2005 figures for main bulk include iron ore, grain, coal, bauxite/alumina and phosphate. Since 2006, main bulk figures include iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under “other dry cargo”. Tanker trade includes crude oil, refined petroleum products, gas and chemicals.

decline in United States crude oil imports and a rise in its long-haul exports. Overall tanker trade contracted by 1 per cent in 2019, owing to lower volumes of crude oil and refined petroleum products (table 1.5). An overview of global players in the oil and gas sector is presented in table 1.6.

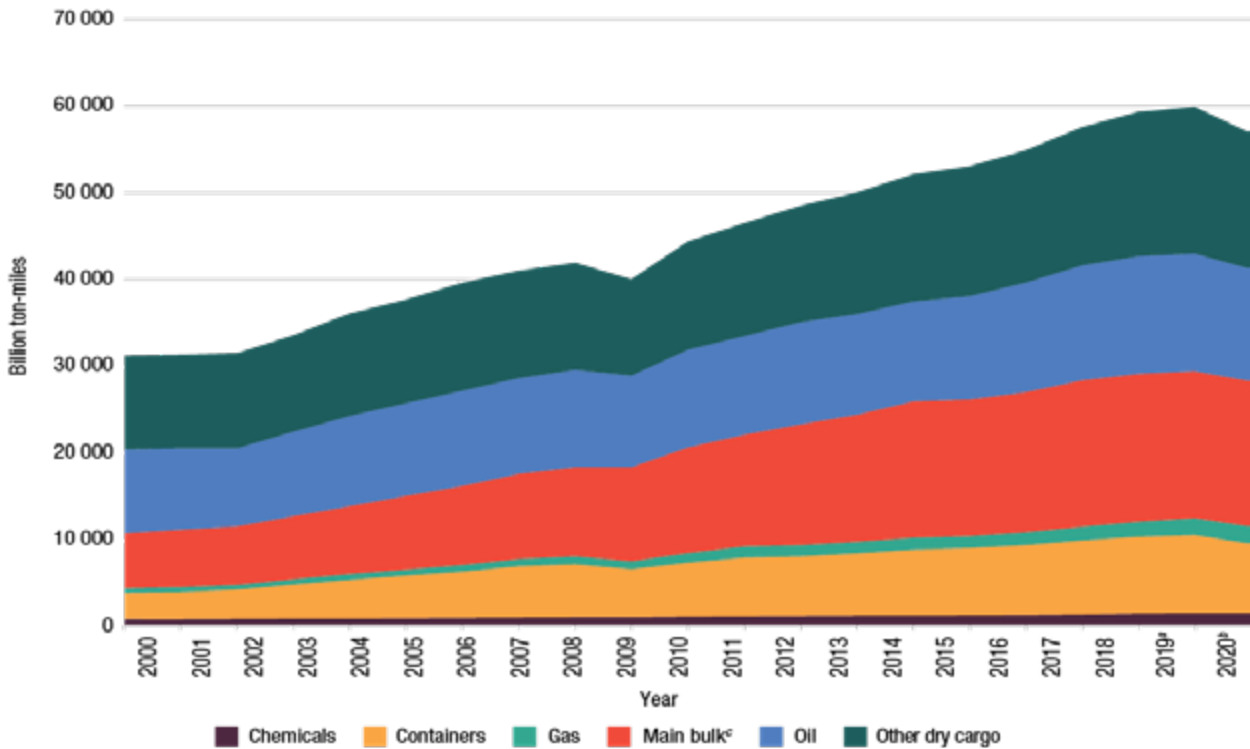
Crude oil trade decreased by 1.1 per cent in 2019. Downside factors include the cuts in supply by members of the Organization of the Petroleum Exporting Countries aimed at supporting oil prices, as well as disruptions affecting exports from the Islamic Republic of Iran and the Bolivarian Republic of Venezuela. The impact on exports from Western Asia resulting from the attacks on Saudi oil infrastructure was limited. Pressure on the demand side include lower global oil demand, a sharp reduction in United States imports and a decline in global refinery activity. However, expansion in exports from Brazil and the United States have supported long-haul journeys from the Atlantic to Asia. Crude oil imports to China increased by 10.6 per cent in 2019, compared with the previous year, while imports to the United States declined (Clarksons Research, 2020c). In Asia, extended refinery maintenance and smaller refining margins contributed to limiting import growth (Clarksons Research, 2020d).

Other tanker trade experienced difficulty in 2019, contracting by nearly 1 per cent. Major setbacks included slower global economic growth and extended refinery maintenance periods, with many refiners adjusting production in preparation for the coming into force on 1 January 2020 of the IMO 2020 regulation on a sulphur cap for marine fuels. In addition, naphtha faced competition from liquefied petroleum gas as a petrochemical feedstock, arbitrage opportunities were limited (Clarksons Research, 2020e) and fuel oil trade declined. The latter accounts for over 20 per cent of trade in seaborne refined petroleum products (Clarksons Research, 2020d).

Mexican imports, a key driver of global trade growth in recent years, dropped in 2019 as domestic supply increased. Growth in imports to Latin America and rising exports from China provided support to product tanker demand.

Trade in gas remained strong, with volumes expanding by nearly 11 per cent in 2019. Trade in liquefied natural gas increased by 11.9 per cent, supported by project start-ups in Australia and the United States. In comparison, trade in liquefied petroleum gas grew by 6 per cent, driven largely by growing supply in Australia, Canada and the United States (Clarksons Research, 2020c). Despite the

Figure 1.6 International maritime trade in cargo ton-miles, 2000–2020
(Billion ton-miles)



Source: Clarksons Research, 2020a, *Shipping Review and Outlook*, spring.

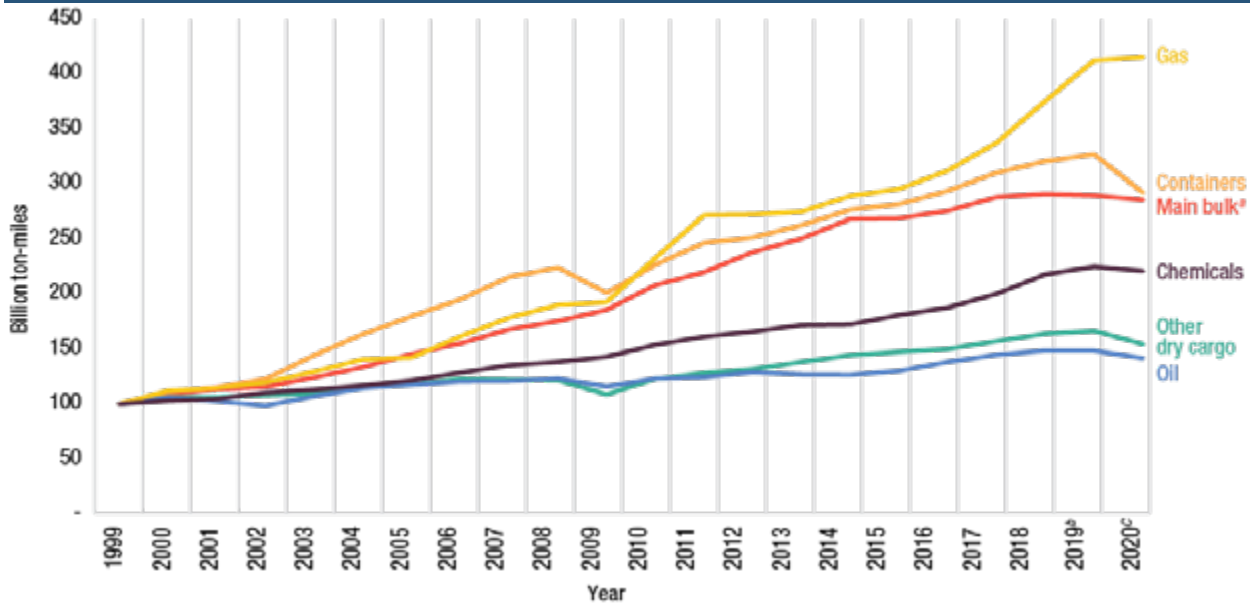
Note: Seaborne trade data in ton-miles are estimated by Clarksons Research. Given methodological differences, containerized trade data in tons sourced from Clarksons Research are not comparable with data in TEUs sourced from MDS Transmodal.

^a Estimated.

^b Forecast.

^c Includes iron ore, grain and coal.

Figure 1.7 International maritime trade in cargo ton-miles, 1999–2020
(Billion ton-miles; index: 1999 = 100)



Source: Clarksons Research, 2020a, *Shipping Review and Outlook*, spring.

Note: Seaborne trade data in ton-miles are estimated by Clarksons Research. Given methodological differences, containerized trade data in tons sourced from Clarksons Research are not comparable with data in TEUs sourced from MDS Transmodal.

^a Includes iron ore, grain and coal.

^b Estimated.

^c Forecast.

Table 1.5 Tanker trade, 2018–2019
(Million tons and annual percentage change)

Tanker trade ^a	2018	2019	Percentage change 2018–2019
Crude oil	1 881	1 860	-1.1
Other tanker trade ^a of which:	1 320	1 308	-0.9
Gas	416	461	10.8
Total tanker trade	3 201	3 169	-1.0

Sources: UNCTAD calculations, derived from table 1.2 of this report.

Note: Gas figures are derived from Clarksons Research, 2020c, *Seaborne Trade Monitor*, Volume 7, No. 6, June.

^a Includes refined petroleum products, gas and chemicals.

Table 1.6 Major producers and consumers of oil and natural gas, 2019
(World market share in percentage)

World oil production	Percentage	World oil consumption	Percentage
Western Asia	32	Asia and the Pacific	36
North America	23	North America	23
Transition economies	16	Europe	15
Developing America	9	Western Asia	9
Africa	9	Developing America	9
Asia and the Pacific	8	Transition economies	4
Europe	3	Africa	4
Oil refinery capacities		Oil refinery throughput	
Asia and the Pacific	35	Asia and the Pacific	37
North America	21	North America	22
Europe	15	Europe	15
Western Asia	11	Western Asia	11
Transition economies	8	Transition economies	8
Developing America	7	Developing America	5
Africa	3	Africa	2
World natural gas production		World natural gas consumption	
North America	27	North America	25
Transition economies	21	Asia and the Pacific	22
Western Asia	17	Transition economies	15
Asia and the Pacific	17	Western Asia	15
Europe	6	Europe	13
Developing America	6	Developing America	6
Africa	6	Africa	4

Source: UNCTAD calculations, based on data published in British Petroleum 2020, *BP [British Petroleum] Statistical Review of World Energy 2020*, June 2020.

Note: Oil includes crude oil, shale oil, oil sands and natural gas liquids. The latter term excludes liquid fuels from other sources such as biomass and coal derivatives.

trade tensions, long-haul United States exports to Asia continued to expand steadily due to substitution trends and limited growth in Western Asian exports stemming from sanctions and supply cuts. With regard to imports, China and India remained key markets. Imports into China picked up speed in 2019 compared with 2018, supported by its petrochemical sector demand and the coming online of new propane dehydrogenation capacity. Reduced shipments from the United States were offset by increased imports from Africa, Australia and Western Asia. In India, import demand for liquefied petroleum gas was supported by the continued rollout of liquefied petroleum gas infrastructure in rural areas under a government subsidy programme.

While trade in chemicals rose rapidly in 2018, there was little growth in the segment in 2019, reflecting pressure on demand. In China, demand for palm oil soared in 2019, given higher domestic soybean oil prices as a consequence of the trade tensions and the African swine fever affecting pig farming in China, causing a reduction in soymeal feed. Strong demand in India for palm oil, following a decline in import taxes in January 2020, supported growth in this segment. Trade in palm oil remains highly sensitive to policy shifts, such as the rise in Indian import duties on Malaysian palm oil (The Indian Express, 2020), the decision by the European Union to phase out palm oil-based biofuel by 2030 and higher taxes on Indonesian biofuel and liquefied petroleum gas.

The mainstay of maritime trade, growth in dry bulk commodity trade, faltered in 2019

Major bulk

Dry bulk commodities, in particular minerals and ores, are closely linked to industrial and steel production, as well as manufacturing and construction.¹ With many relevant indicators pointing downward in 2019, global trade in dry bulk lost momentum during the year and grew marginally, (0.5 per cent), bringing the total to 5.3 billion tons (table 1.7) (Clarksons Research, 2020f). An overview of global players in the dry bulk commodities and steel trade sector is presented in table 1.8.

For the first time in 20 years, iron ore trade fell by 1.5 per cent due to severe supply-side disruptions caused by the Vale dam collapse in Brazil and Cyclone Veronica in Australia. Other factors at play include a shift in the make-up of steel production in China, which favours scrap steel over imported iron ore. As China represented 72 per cent of global seaborne iron ore imports in 2019 (Clarksons Research, 2020f), changes affecting its import demand could have a strong impact on trade in global dry bulk commodities. Australia and Brazil are major suppliers of iron ore to China. However, growing Chinese investments in Guinea are likely to make this

¹ Detailed figures on dry bulk commodities are derived from Clarksons Research, 2020f.

	2018	2019	Percentage change 2018–2019
Major bulks^a of which:	3 215.0	3 225.0	0.3
Coal	1 263.0	1 293.0	2.4
Grain	475.0	477.0	0.4
Iron ore	1 477.0	1 455.0	-1.5
Minor bulk of which:	2 010.0	2 028.0	0.9
Forest products	380.0	382.0	0.5
Steel products	388.0	371.0	-4.4
Total dry bulk	5 225.0	5 253.0	0.5

Source: UNCTAD calculations, based on Clarksons Research, 2019d, *Dry Bulk Trade Outlook*, Volume 26, No. 6, June.

^a Includes iron ore, coal (steam and coking) and grains (wheat, coarse grain and soybean).

country an important alternative source of supply that may capture part of the Chinese market (Drewry, 2020a). Although growth in the economy of China continued to decelerate, its steel demand expanded by 7.8 per cent in 2019, largely driven by real estate investment (World Steel Association, 2019). By contrast, steel demand was low in the rest of the world. The Chinese manufacturing sector, similarly to that of many other countries, came under pressure due to the slowing economy and the effect of trade tensions, particularly on the manufacturing and automotive industries.

In 2019, growth in coal (coking and thermal) trade slowed to 2.4 per cent, reflecting fewer thermal coal imports into Europe and lower coking coal demand in China. With regard to exports of thermal and coking coal, Indonesia remained in the top position, with a share of 35.3 per cent, followed by Australia with 29.7 per cent (Clarksons Research, 2020g). In China, seaborne thermal coal imports increased by 9.2 per cent, supported by lower coal prices and government efforts to stimulate industrial activity and growth. The country's topping up of its domestic coal supply with imports is a key risk factor for global seaborne coal trade. Its import demand varies according to domestic output, prices and government policies, including decarbonization and air pollution control efforts. In India and countries of South-East Asia, imports continued to rise, given new coal-fired power generation capacities. India, the world's largest seaborne coking coal importer, and Viet Nam, which is becoming a major steel producer, increased their coking coal imports in 2019 to support growth in their steel sectors.

Agricultural bulk commodities, notably grains, are an important issue in trade tensions between China and

Steel producers		Steel users	
China	53	China	51
India	6	India	6
Japan	5	United States	6
United States	5	Japan	4
Russian Federation	4	Republic of Korea	3
Republic of Korea	4	Russian Federation	2
Germany	2	Germany	2
Turkey	2	Turkey	1
Brazil	2	Italy	1
Other	17	Other	24
Iron ore exporters		Iron ore importers	
Australia	57	China	72
Brazil	23	Japan	8
South Africa	5	Europe	7
Canada	4	Republic of Korea	5
India	2	Other	8
Sweden	2		
Other	7		
Coal exporters		Coal importers	
Indonesia	35	China	19
Australia	30	India	18
Russian Federation	12	Japan	15
United States	6	European Union	11
South Africa	6	Republic of Korea	11
Colombia	6	Taiwan Province of China	5
Canada	3	Malaysia	3
Other	2	Other	18
Grain exporters		Grain importers	
Brazil	25	East and South Asia	46
United States	22	Western Asia	14
Argentina	13	Africa	13
Ukraine	12	South and Central America	12
European Union	8	European Union	10
Russian Federation	7	North America	1
Canada	6	Other	4
Australia	3		
Other	4		

Sources: UNCTAD calculations, based on data from Clarksons Research, 2020f, *Dry Bulk Trade Outlook*, Volume 26, No. 6, June; World Steel Association, 2019, World Steel short range outlook October 2019, 14 October; World Steel Association, 2020, *2020 World Steel in Figures*.

the United States. In 2019, grain volumes expanded by 0.4 per cent. Soybean imports into China, which accounted for about 60 per cent of global soybean imports, continued to be affected by the new tariffs and the spread of swine fever in the country's pig population. In this context and through a substitution effect, Brazil overtook the United States as the world's largest seaborne grain exporter. The United States has long been the world's largest grain exporter and, if fully implemented, the first phase of a trade agreement between China and the United States could potentially support increased

soybean and other grain exports from the United States. Shipping can benefit from this development, with the two exporters complementing each other, since the grain export season in the United States runs from September to February, and that of Brazil, from March to September.

Minor bulk

A contraction of 4.4 per cent in the trade of steel products detracted from the overall growth in seaborne shipments of minor bulk commodities. In 2019, minor bulk volumes expanded by 0.9 per cent, down from 3.8 per cent in 2018 (Clarksons Research, 2020g). Exports from China, Japan, the Republic of Korea and the Russian Federation came under pressure as demand from Europe and the United States lessened. Imports into China of some minor bulk commodities, namely nickel ore, bauxite and cement, continued to support this type of trade. An important development with a potential impact on this segment is a ban placed by Indonesia on nickel ore exports that came into force in January 2020. However, exports from the Philippines and New Caledonia may help to partially bolster trade in these commodities.

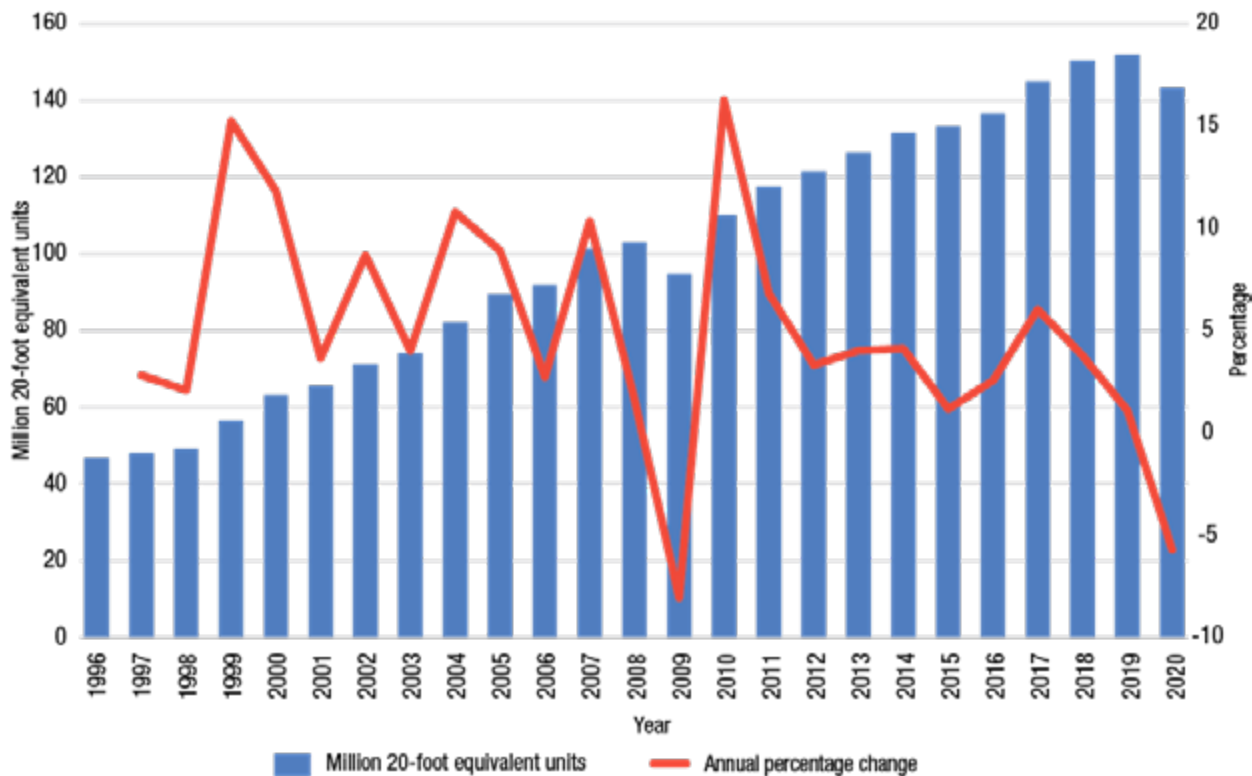
Other dry cargo: Containerized trade

In 2019, global containerized trade expanded at a slower rate of 1.1 per cent, down from 3.8 per cent in 2018 bringing the total to 152 TEUs (figure 1.8). Much

of the growth was driven by activity on non-mainlane East–West, South–South and intraregional trade routes. Excluding intraregional flows, global containerized trade increased by 0.4 per cent in 2019. The challenges facing the global car industry and motor manufacturing in 2019 have had some impact, as trade in automotive-related goods is an important sector for some individual trade lanes. Global car sales decreased for the first time by about 1.5 per cent in 2018, after steady growth for over a decade. Sales continued to decline in 2019. China, the largest market, recorded a double-digit drop. In addition to the slowdown in the economy, other factors came into play: new emissions standards, a shift towards electrification, greater durability of cars with an extended life cycle and the growing popularity of used cars and ridesharing (Drewry, 2019).

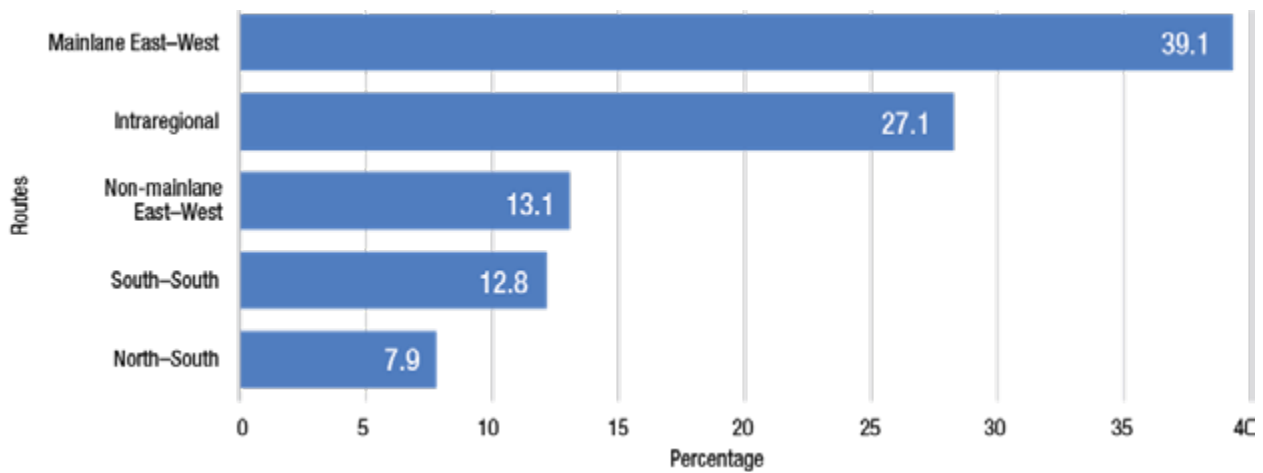
Mainlane East–West containerized trade routes, namely Asia–Europe, the trans-Pacific and the transatlantic, handled 39.1 per cent of worldwide containerized trade flows in 2019. Trade on other routes, which involves greater participation from developing countries, has gained in importance over time, as these countries accounted for 60.9 per cent of containerized trade in 2019 (figure 1.9 and table 1.9). Together, intraregional trade, principally intra-Asian flows, and South–South trade represented over 39.9 per cent of the total in 2019.

Figure 1.8 Global containerized trade, 1996–2020
(Million 20-foot equivalent units and annual percentage change)



Source: UNCTAD calculations, based on data from MDS Transmodal, 2020b, 19 August.

Figure 1.9 Market share of global containerized trade by route, 2019
(Percentage)



Source: UNCTAD calculations, based on data from MDS Transmodal, 2020b, World Cargo Database, 19 August.

Table 1.9 Containerized trade on mainlane East-West routes and other routes, 2016–2020
(20-foot equivalent units and annual percentage change)

	2016	2017	2018	2019	2020 ^a
	20-foot equivalent units				
Mainlane East-West routes	54 610 793	57 695 035	60 512 411	59 451 778	55 529 706
Other routes of which:	81 973 339	87 152 831	89 796 992	92 439 115	87 733 977
Non-mainlane East-West	17 928 632	18 977 780	18 961 472	19 869 413	18 099 717
North-South	11 108 989	11 753 235	11 963 148	12 018 424	11 576 259
South-South	16 251 689	17 619 241	18 898 303	19 433 908	18 007 289
Intraregional	36 684 030	38 802 575	39 974 069	41 117 369	40 050 711
World total	136 584 133	144 847 866	150 309 403	151 890 894	143 263 682
	Percentage change				
	2016	2017	2018	2019	2020 ^a
Mainlane East-West routes	4.06	5.6	4.9	-1.8	-6.6
Other routes (non-mainlane) of which:	1.59	6.3	3.0	2.9	-5.1
Non-mainlane East-West	2.7	5.9	-0.1	4.8	-8.9
North-South	-0.31	5.8	1.8	0.5	-3.7
South-South	-0.98	8.4	7.3	2.8	-7.3
Intraregional	2.83	5.8	3.0	2.9	-2.6

Source: UNCTAD calculations, based on data from MDS Transmodal, 2020b, World Cargo Database, 19 August.

Notes: Non-mainlane East-West: Trade involving East Asia, Europe, North America and Western Asia and the Indian subcontinent.

North-South: Trade involving Europe, Latin America, North America, Oceania and sub-Saharan Africa.

South-South: Trade involving East Asia, Latin America, Oceania, sub-Saharan Africa and Western Asia.

^a Forecast.

The continued prominence of Asia as the world's factory continued to boost expansion in intra-Asian container trade, with a growing contribution from South-East Asia.

Non-mainlane, or secondary East-West trade routes and North-South routes accounted for 13.1 per cent

and 7.9 per cent of the market, respectively. Trade on the non-mainlane East-West routes involves flows between the Far East and Western Asia, the Far East and South Asia, South Asia and Europe, and Western Asia and Europe, for example. Sanctions on the Islamic

Republic of Iran and geopolitical tensions in the region create volatility on these types of trade. Cargo bound for Saudi Arabia and the United Arab Emirates make up over 50 per cent of the containers carried from the Far East to Western Asia. In 2019, trade on the westbound leg of this route increased, reflecting the gradual economic recovery in these two countries. Imports into Iraq also improved, which may reflect an element of diverted trade away from the Islamic Republic of Iran. The number of imports on the Eastern Asia–South Asia lane diminished in 2019 in line with poor economic performance in India. Lower consumption demand, as well as bans on waste imports, and declining vehicle sales and car manufacturing contributed to lower growth. It appears at the time of writing (September 2020) that India, unlike Viet Nam, has not yet capitalized on the trade tensions between China and the United States to attract the production moving away from China (Drewry, 2019).

In 2019, main East–West trade lanes contracted by 1.8 per cent, compared with positive growth on other routes (+2.9 per cent growth). Trade tensions and escalating tariffs between China and the United States took a toll on trans-Pacific containerized trade. Volumes on this key East–West lane contracted by 4.7 per cent in 2019. This reflected a decrease of 7.4 per cent on the peak leg, East Asia–North America, on the one hand, and a 3.8 per cent drop on the return leg from North America to East Asia, on the other (table 1.10). Although significant, the slump in trade flows was moderated by the substitution of Chinese volumes by exports to the United States from other Asian economies. The substitution impact became clear: the number of shipments from China and Hong Kong, China declined, while those from several other countries rose (Malaysia, Thailand and Viet Nam – and to a lesser extent – Indonesia, Japan, the Republic of Korea and Taiwan Province of China).

Table 1.10 Containerized trade on major East–West trade routes, 2014–2020
(Million 20-foot equivalent units and annual percentage change)

Year	Trans-Pacific			Asia–Europe			Transatlantic		
	Eastbound	Westbound	Trans-Pacific	Eastbound	Westbound	Total Asia–Europe	Eastbound	Westbound	Transatlantic
	East Asia–North America	North America–East Asia		Northern Europe and Mediterranean to East Asia	East Asia–Northern Europe and Mediterranean		North America–Northern Europe and Mediterranean	Northern Europe and Mediterranean–North America	
2014	16.2	7.0	23.2	6.3	15.5	21.8	2.8	3.9	6.7
2015	17.4	6.9	24.3	6.4	15.0	21.3	2.7	4.1	6.8
2016	18.2	7.3	25.5	6.8	15.3	22.1	2.7	4.3	7.0
2017	19.4	7.3	26.7	7.1	16.4	23.4	3.0	4.6	7.5
2018	20.8	7.4	28.2	7.0	17.3	24.3	3.1	4.9	8.0
2019	20.0	6.8	26.8	7.2	17.5	24.7	2.9	4.9	7.9
2020	18.1	7.0	25.1	6.9	16.1	23.0	2.8	4.7	7.4
Annual percentage change									
2014–2015	7.9	-2.0	4.9	1.4	-2.6	-1.4	-2.4	5.6	2.2
2015–2016	4.4	6.6	5.1	6.3	2.5	3.6	0.4	2.9	1.9
2016–2017	6.7	-0.5	4.7	4.1	6.9	6.0	7.9	8.3	8.1
2017–2018	7.0	0.9	5.4	-1.3	5.7	3.6	5.8	6.8	6.4
2018–2019	-3.8	-7.4	-4.7	2.9	1.4	1.8	-5.0	-0.2	-2.1
2019–2020	-9.7	2.6	-6.6	-3.6	-8.3	-6.9	-5.3	-5.8	-5.6

Source: UNCTAD calculations, based on MDS Transmodal, 2020b, World Cargo Database, 19 August.

Volumes on the Asia–Europe trade lane grew by 1.8 per cent. Volumes on the westbound leg expanded by 1.4 per cent, supported by the replenishment by European importers of their own stocks, inventory building in the United Kingdom before Brexit and an increased export focus by China on Europe (Clarksons Research, 2020h). Eastbound volumes from Europe to Asia rose by 2.9 per cent, strengthened by an uplift in refrigerated pork shipments in response to the outbreak of African swine fever in China (Drewry, 2019). Shipments of wastepaper and plastic also increased in

2019, as loads destined for recycling in China reflected greater compliance with the country's new regulations on waste contamination levels or, alternatively, were redirected to markets outside China, such as Indonesia and Malaysia.

Transatlantic trade volumes declined by 2.1 per cent in 2019. Volumes on the eastbound journey from North America to Europe contracted at 5.0 per cent. On the westbound leg, the number of imports into the United States fell slightly (0.2 per cent), reflecting a reduced

need to ship parts and components for motor vehicle manufacturing in the United States. The potentially negative impact of escalating trade tensions between the European Union and the United States remained a major reason for concern. In October 2019, WTO authorized the United States to apply new tariffs of 25 per cent on \$7.5 billion worth of imports from the European Union, following a 15-year dispute over subsidies granted to Airbus. The European Union has since threatened to also apply tariffs to the United States, and WTO is expected to make a decision regarding the United States subsidies to Boeing (Drewry, 2019). The possibility that tariffs may be applied to European exports of cars and motor vehicle parts to the United States remains a concern.

6. Trade tensions curbed maritime shipments and caused trade patterns to shift

In 2019, the United States increased its merchandise exports to the rest of the world, which helped offset to a certain extent reduced exports to China. Less than 2 per cent of world maritime trade in metric tons and 7 per cent of containerized cargo are estimated to be subject to the new tariffs introduced by China and the United States between 2018 and 2019 (Clarksons Research, 2020a). It is estimated that additional tariffs curbed maritime trade by 0.5 per cent in 2019, the overall impact of which was mitigated by substitution trends, that is to say, by exporting and/or importing from alternative markets, and the extent to which demand for tariffed goods is sensitive to increased tariff levels. The quest for alternative markets and suppliers resulted in changing trade patterns and a redirection of flows away from China towards other markets, especially in South-East Asia, thereby promoting the deployment of smaller vessels in intra-Asian trade (Clarksons Research, 2020a).

Between 2017 and 2019, all major shipping segments experienced declines in exports of tariffed goods. Although United States exports of such goods were redirected to new markets, they failed to fully compensate for the volumes lost to China. This is the case for dry bulk commodities exports, for example. A greater number of exports to the rest of the world may have added volumes but did not support maritime trade in ton-miles, as countries importing more dry bulk commodities from the United States were at a shorter distance, compared with China.

Viet Nam benefited the most from the changing trade patterns triggered by trade tensions. Although there has been some migration in sourcing to other countries in South-East Asia since 2018, the market shares of Cambodia, Indonesia, Malaysia, the Philippines, Singapore and Thailand did not increase at the same pace as those of Viet Nam. The share of China in United States imports from Asia dropped to 63.8 per cent in 2019, down from 69.1 per cent in 2018 (JOC.com, 2020a).

The production of some goods, such as electronics and footwear, had already been delocalized to Viet Nam as the country continued to boost its capacity to receive new business by developing port and inland transportation infrastructure and upgrading manufacturing skills. In a parallel development, carriers added trans-Pacific services at ports in Viet Nam. Other South-East Asian nations were also expanding their manufacturing base, but at a slower pace. Different patterns are associated with each of the containerized and bulk trades. In general, the bulk commodities and raw material cargoes sectors seek different markets, while the containerized and manufactured goods sectors seek alternative suppliers.

7. Slower growth in port traffic in 2019 and shifts in port-call patterns

UNCTAD estimates that growth in global container port throughput decelerated to 2 per cent in 2019, down from 5.1 per cent in 2018. In 2019, some 811.2 million TEUs were handled in container ports worldwide, reflecting an additional 16.0 million TEUs over 2018 (table 1.11).

Table 1.11 World container port throughput by region, 2018–2019
(Million 20-foot equivalent units and annual percentage change)

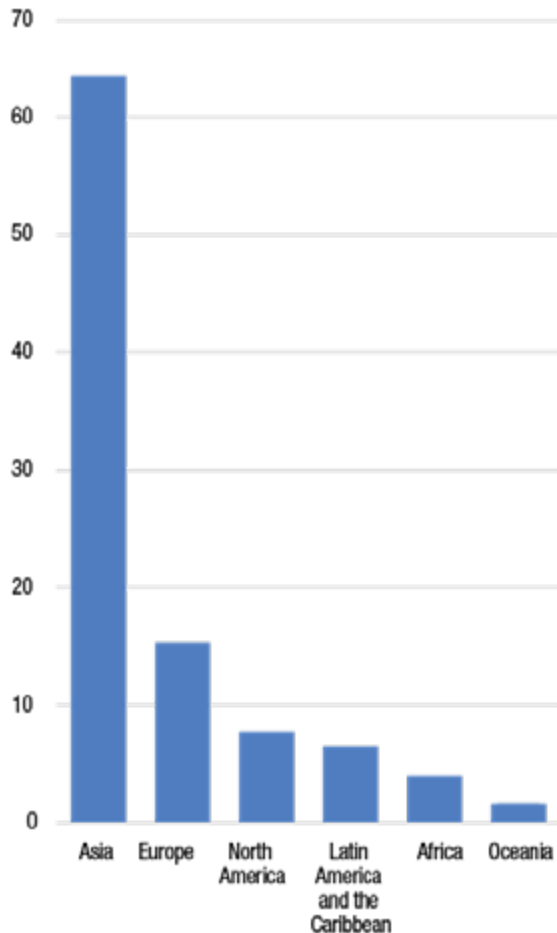
	20-foot equivalent units		Annual percentage change 2018–2019
	2018	2019	
Asia	514.9	526.7	2.3
Europe	121.7	123.6	1.5
North America	61.6	62.5	1.6
Latin America and the Caribbean	52.3	52.6	0.7
Africa	31.3	32.5	3.9
Oceania	13.5	13.2	-2.2
Small island developing States			
Oceania	13.5	13.2	-2.2
World total	795.3	811.2	2.0

Sources: UNCTAD calculations, based on data collected by various sources, including Lloyd's List Intelligence, Dynamar B. V., Drewry, as well as information published on the websites of port authorities and container port terminals.

Note: Data are reported in the format available. In some cases, estimates of country volumes are based on secondary source information, reported growth rates and estimates based on correlations with other variables, such as the liner shipping connectivity index of UNCTAD. Country totals may conceal the fact that minor ports may not be included. Therefore, in some cases, data in the table may differ from actual figures.

In 2019, nearly 65 per cent of global port-container cargo handling was concentrated in Asia – the share of China alone exceeded 50 per cent (figure 1.10). Europe ranked second in terms of container port-handling volumes,

Figure 1.10 Estimated world container port throughput by region, 2019
(Percentage share in total 20-foot equivalent units)



Sources: UNCTAD calculations, derived from table 1.11 of this report.

behind Asia, whose share was more than four times greater. Other regions in descending order are North America (7.7 per cent), Latin America and the Caribbean (6.5 per cent), Africa (4 per cent) and Oceania (1.6 per cent).

Although the rankings of the world's top 20 container ports in 2019 changed little compared with 2018, slower growth in the world economy and trade translated into moderated growth in global container port throughput. As shown in figure 1.11(a) and (b), there were reductions in volumes handled in some ports such as Dalian, China; Dubai, United Arab Emirates; Hong Kong, China; and Long Beach, United States. In comparison, container port activity continued to grow in other ports such as Antwerp, Belgium; Hamburg, Germany; Klang, Malaysia; Qingdao, China; and Tianjin, China (Lloyd's List, 2020).

In China, growth in Shanghai lagged behind that of Ningbo in 2019, as the latter benefited from feeder and

rail traffic growth. During the year, six new rail connections came into operation and helped attract more traffic from neighbouring provinces, reflecting government policy to concentrate container trade in selected ports to prevent unhealthy port competition. Volumes in Hong Kong, China dipped by 6.3 per cent, as the political crisis had a negative impact on the economy. The port has also been losing market share to ports in mainland China. Qingdao and Tianjin, China have seen more domestic traffic move by sea as a result of government anti-pollution measures to restrict trucking operations.

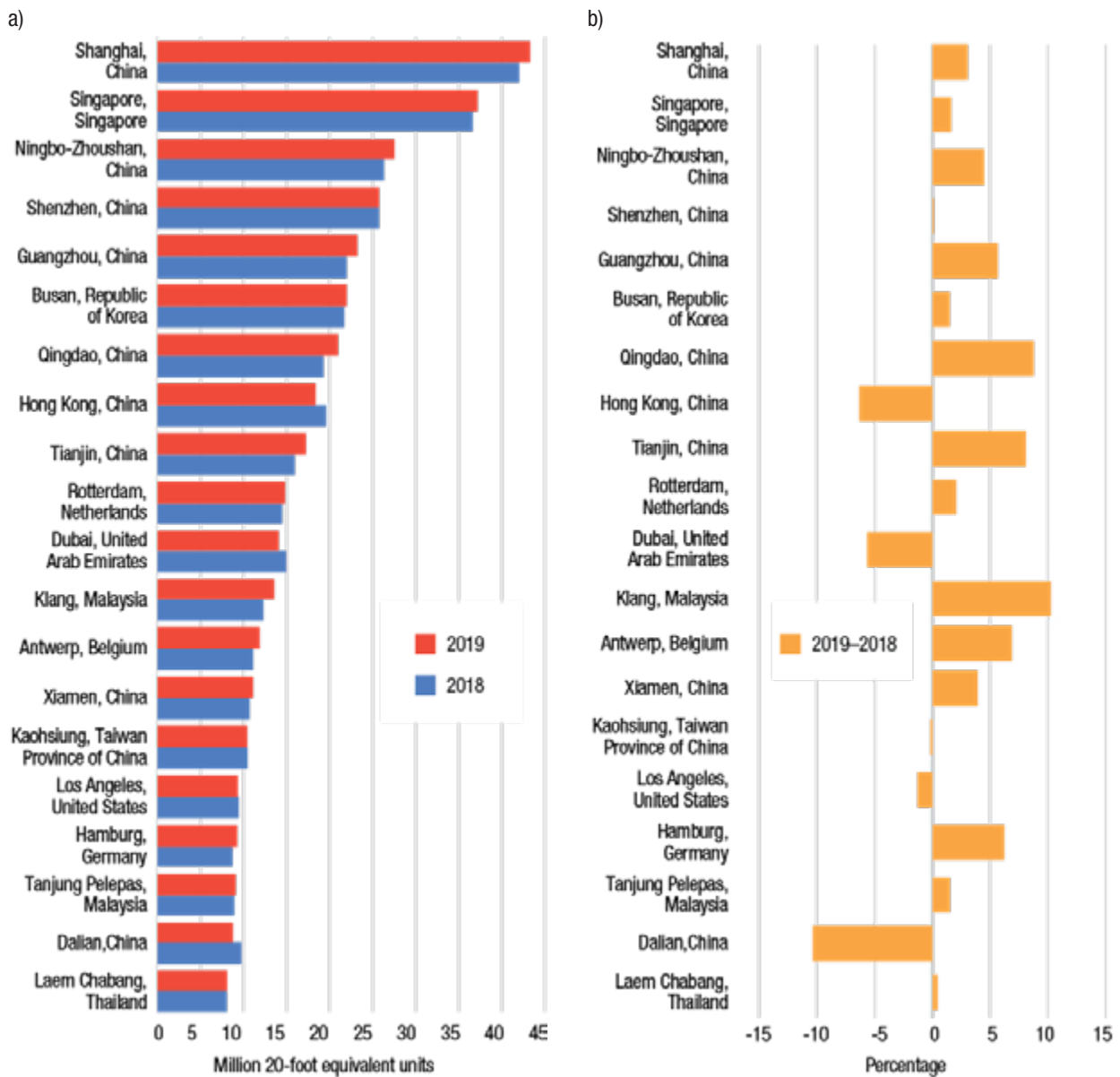
In South-East Asia, the port of Klang, Malaysia continued to capture more trans-shipment market share. However, this was not sufficient to recover the entire volumes that had been moving to Singapore for some time. Cargo handled by the port of Tanjung Pelepas, Malaysia increased by 1.55 per cent, while growth in Singapore remained at 1.63 per cent.

European ports recorded less volume growth, reflecting the persistent weakness that had plagued the manufacturing sector and importers drawing from stocks and inventories. Rotterdam, the Netherlands expanded volumes by 2.1 per cent compared with 2018, while Antwerp, Belgium achieved 6.8 per cent growth. The move of THE Alliance's Atlantic services in Germany from Bremerhaven to Hamburg, is reflected in the 2019 throughput of these ports. Hamburg recorded an increase of 6.1 per cent in volumes handled, supported by the addition of new connections to Baltic services, while Bremerhaven recorded a decline in volumes (Drewry, 2020b).

Container port throughput at North American ports moderated in 2019. West coast ports performed poorly, compared with the east coast and the coast of the Gulf of Mexico. Ports on the United States west coast lost market share in the combined import-export market. While the trend accelerated with the trade tensions, there was already a tendency for cargo to move away from the west coast of North America. In 2019, the share of the ports of Los Angeles and Long Beach, United States dropped to 22.9 per cent, down from 26.5 per cent in 2015. Cargo migration has also had an impact on the west coast ports of Canada and Mexico, in particular, the ports of Vancouver, Lázaro Cárdenas and Manzanillo, which also lost some market share.

In the United States, exporters looked for other export markets to avoid the increased reciprocal tariffs imposed by China (JOC.com, 2020b). As previously noted, trade tensions required shippers to find alternative markets and source imports from locations outside China, such as South-East Asia. Thailand and Viet Nam benefited from the change in trade patterns and routing, while the market share of China shrank. Ports on the Atlantic and Gulf coasts are better positioned to handle shipments arriving from other parts of Asia. The performance of the ports of Houston and Savannah, United States, for example, whose market share increased, is a case in point.

Figure 1.11 Leading 20 global container ports, 2018–2019
in (a) million 20-foot equivalent units and (b) annual percentage change



Sources: UNCTAD calculations, based on Lloyd's List, 2020a, *One Hundred Ports*.

Challenging economic trends in Argentina, recession in Brazil and social unrest in Chile constrained cargo volumes in ports of Latin America and the Caribbean. However, some ports such as Freeport in the Bahamas; Itajaí, Sao Francisco do Sul and Paranaguá in Brazil; and two Panama Pacific terminals recorded positive growth. In Western Asia, container port volumes continued to be affected by sanctions and political tensions. In 2019, the gradual recovery of the economies of Saudi Arabia and the United Arab Emirates provided some support to port-handling activity, while in the Islamic Republic of Iran, volumes in Bandar Abbas decreased. In the United Arab Emirates, Khalifa port activity rose, as both the China Ocean Shipping Company (COSCO) and

the Mediterranean Shipping Company moved more business over to their respective terminals, away from Jebel Ali (Drewry, 2020b).

Growth in container activity in South Asia stalled in 2019, reflecting slower economic growth in India and austerity measures in Pakistan. While the ports of Jawaharlal Nehru and Mundra reported some growth, Chennai port continued to lose traffic to newer east coast ports such as Kattupalli. Other Indian ports such as Visakhapatnam and Krishnapatnam are benefiting from increased trans-shipment and coastal traffic generated by a relaxation of the country's cabotage rules. In Sri Lanka, subdued growth in Colombo reflected a declining trend in gateway traffic and some erosion in trans-shipment

cargo because of the amended cabotage rules in India. In Africa, a weakening in the economies of Nigeria and South Africa constrained container port volume growth. In Oceania, container port activity declined by 2.2 per cent as the economy of Australia slowed down and consumer confidence fell (Drewry, 2019).

8. Adapting port strategies and seeking new opportunities

Today, ports are showing more interest in strengthening connections with the hinterland to get closer to the shippers and tap the cargo volumes that could be committed. Providing intermodal access, warehousing and other logistics services illustrates the type of actions that may help ports capture local market volumes. For example, the port of Savannah, United States has, for three decades, been a pioneer in driving port centric logistics and is growing as a hub for retail import distribution. In the Republic of Korea, the port of Busan is investing in port-distribution centres (“distriparks”) to strengthen its position as a regional logistics centre. In Egypt, the port of Damietta is focusing more and more on its gateway market as opposed to the trans-shipment business. This is illustrated by the development of recent dry port and rail connection projects (Drewry, 2019). This change in strategy, as well as a gradual shift towards further mergers and acquisitions, as opposed to the development of new projects, reflects the uncertainty surrounding the outlook for port growth and the need to diversify business strategies and respond to the evolving landscape (Drewry, 2020b). For example, China Merchants Port Holdings concluded an agreement with CMA CGM to transfer 10 terminal assets to Terminal Link.

The South Asian company Adani acquired 75 per cent of shares in Krishnapatnam Port Company in India. With regard to future developments, ports will need to expand environmental facilities in line with the accelerated environmental sustainability agenda. Similarly to ports, shipping companies such as Maersk, for example, are also showing increasing interest in integrating their services with ports and inland logistics (The Loadstar, 2019).

9. Challenges ahead for the sector with the onset of the pandemic

All in all, 2019 was a weak year for shipping and maritime trade. On the upside, a hard Brexit was avoided or delayed, as it remains to be seen how the new trade relations between the European Union and the United Kingdom will evolve. There was also an apparent easing in the trade tensions between China and the United States that may be associated with the first phase of a trade agreement between the two countries signed in January 2020.

Initial expectations were that a moderate improvement in global economic conditions would occur in 2020.

However, the unprecedented global health and economic crisis triggered by the COVID-19 pandemic in early 2020 undermined the growth prospects for maritime transport and trade. A black swan event that is extremely rare and unpredictable, with potentially severe consequences (Drewry, 2020c), the pandemic and its global fallout transformed the world. While making a precise assessment of the immediate impacts and longer-term implications is a challenging task, there is no doubt, however, that the outlook has significantly deteriorated and has become more uncertain.

B. MARITIME TRADE IN THE ERA OF PANDEMIC

Initially localized in China, the pandemic evolved rapidly and became a global game changer by the first quarter of 2020. The spread of the disease worldwide and the consequent disruptions to societies and economies have far-reaching implications, including for transport and trade. Amid supply-chain disruptions, falling global demand and global economic uncertainty caused by the pandemic, the global economy has suffered dislocation, first at the supply end, then at the demand end.

While disruptions such as natural disasters, conflicts, strikes and security incidents are common in maritime transport, the pandemic is exceptional, given its scale, speed and direct impact on global supply chains, transport and trade. Historically, no disruption has ever resulted in a global lockdown of people and business. Restrictions on mobility, travel and economic activities worldwide, although in varying degrees, are unprecedented. By mid-April 2020, nearly 90 per cent of the world economy had been affected by some form of lockdown (United Nations, 2020b), and by month's end, about 4.2 billion people or 54 per cent of the global population (International Energy Agency, 2020). As many as 100 countries closed their national borders, disrupting supply and suppressing global demand for goods and services. No country was prepared to face the combined health and economic crisis.

Risk assessment and management are common practice in business and policymaking processes, especially with the emergence of various risks – security threats, environmental risks, changing weather patterns and rising social unrest. However, it would appear that the likelihood of a disruption of the type and scale of the COVID-19 outbreak was not foreseen or it was underestimated. Many factors may be at play, including competing policy priorities, immediate versus longer-term concerns, budget pressures and institutional capacity constraints. However, research on behavioural economics suggests that limitations inherent to human minds may also be interfering with relevant risk assessment and decision-making processes (see box).

By June 2020, it appeared as if the brunt of the economic shock was going to be concentrated in the

first half of 2020 and that impacts were going to vary by region in line with the gradual geographical spread of the pandemic. Breaking out in stages and gradually moving from one region to another, the pandemic has had a particular impact on supply chains. These have been affected multiple times as goods cross borders and in different ways, depending on where the pathway of the pandemic is in each region. As a result, instead of managing the pandemic response based on a single location, responses had to take into account multiple locations.

Box 1.1 Blind spots in risk assessment and management

The frequency and severity of supply-chain disruptions is on the rise. Supply chains are vulnerable to a broad range of threats, including pandemics, extreme weather events, cyberattacks and political crises. Risk management has become more widely known in recent years, given events such as the terror attacks of 11 September 2001 in the United States, tsunamis and the 2008–2009 global financial crisis. Yet the COVID-19-induced disruptions revealed the extent to which the world was ill-prepared in the face of a rapidly evolving global pandemic. This calls into question the effectiveness of relevant risk assessment and management plans, especially in the current context of highly interdependent and interconnected world economies. Paradoxically, there is no lack of pandemic plans. However, they generally failed to account for the full importance and ramifications of global supply chains. Research on behavioural economics, pioneered by Nobel Prize winner Daniel Kahneman, suggests that when it comes to evaluating risks, biases inherent to the human mind often interfere. Thinking critically is important when assessing risks. However, humans are prone to making errors in reasoning, as many fallacies and cognitive illusions clutter the thinking. Examples of such cognitive blind spots include relying on intuition to evaluate evidence, assess probabilities and take risks; being on autopilot – that is to say, being primed by certain social and cultural conditions; making snap judgments; using shortcuts to make quick decisions based on trial and error, rule of thumb or educated guess; ignoring facts, hard data and statistics; being influenced by vivid mental images; and being motivated by emotional factors and gut feeling and not necessarily rational and objective thinking. Understanding these biases and how they shape judgments and decisions is therefore important when assessing risks and devising response measures and plans. To help overcome these limitations, policymakers and business executives could start by becoming aware of the various cognitive biases that may undermine sound policies and decisions, and adopt potential mitigation measures, as deemed appropriate.

Sources: Economic and Social Commission for Asia and the Pacific, 2013; Kahneman, 2011; Piattelli-Palmarini, 1994; Rodrigue, 2020.

Since more than 80 per cent of world merchandise trade by volume is carried by sea, the impact of the pandemic on maritime transport can have far-reaching implications. The impact is magnified by the role played by China in maritime trade, as prosperity within the shipping sector has long been strongly tied to that country. In 2003, amid the outbreak of severe acute respiratory syndrome, China made up 5 per cent of global GDP. Today this figure stands at 16 per cent. In 2019, China accounted for over 20 per cent of world imports by sea, up from less than 10 per cent in 2003. While its share of total exports has remained stable at 5 per cent of the world total since 2003, its share in global container exports has increased. In this context, its maritime trade has ripple effects on all shipping market segments, and supply-chain disruptions involving China naturally send shockwaves across shipping and ports worldwide.

As the pandemic weighed down on the maritime trade of China, especially during the first quarter of 2020, global maritime trade was bound to be affected. In addition to the sector's high exposure and sensitivity to developments in China, restrictions on vessels and crew in many ports, labour force shortages and restrictions on their movement, and operational challenges have sent shipping into unchartered waters. Impacts are being felt across the board, ranging from maritime trade flows to vessel movements, vessel crew changes, capacity deployed, port operations, warehousing capacity, hinterland connections and inland logistics.

By June 2020, leading economic and shipping indicators were showing resumed activity in China. However, this only partly helped the recovery, as consumers and business in export markets were still in lockdown. Even as major economies eased out of lockdown, the situation remained problematic and continued to evolve amid uncertainty about the pandemic and possible new spikes.

Against this background, the following section considers the implications of the pandemic for maritime transport and trade. While not exhaustive, the following four main issues highlight the type of challenges ahead and emphasize the need for maritime transport to act as a trade facilitator, supply-chain connector and key partner in promoting more resilient, robust and sustainable transport and trade patterns:

- The pandemic sent shockwaves through supply chains, shipping and ports.
- World output and merchandise trade are projected to fall in 2020.
- Global merchandise trade receives both supply and demand shocks.
- Disruptions caused by the pandemic raise existential questions for globalization.

With regard to the first issue, that of the pandemic's disruptions to supply chains, shipping and ports, these

disruptions inevitably invite comparisons with the global financial crisis of 2008–2009. The two crises are similar in certain respects but diverge in others. First, in both cases, governments intervened by injecting funds into the economy to stimulate recovery. Second, the two crises were accompanied by rising protectionist sentiment and scepticism about globalization. However, they differed in their type, scope, speed and scale. A crisis like no other, surpassing the 2008–2009 financial crisis, the COVID-19 crisis has been dubbed the “Great Lockdown” (International Monetary Fund, 2020a). The touch points of the financial crisis were more limited, whereas the pandemic swept the entire world in record time. The 2020 crisis was a double-hit disruption, which morphed from being a supply-side disruption in China to becoming a global cross-sectoral demand shock. Third, restrictions on economic activity and travel did not occur during the previous crisis. Fourth, the pre-existing trade and finance trends were different. Fifth, while the 2008–2009 crisis began in mid-2008, its worst effects became evident eight months later, while the impact of the 2020 crisis were almost immediate.

With regard to shipping and maritime trade, a fundamental difference was also the industry’s response to suppressed demand. While carriers focused on safeguarding market shares during the months leading up to the outbreak of the pandemic, the focus shifted to managing supply to maintain rates. Also, in the case of the financial crisis, the size of the orderbook was much higher (see chapter 2). Although the precise impact on shipping and maritime trade is still difficult to gauge, the picture for 2020 is nonetheless not optimistic, given that key forecasting entities are predicting contractions in world GDP and merchandise trade.

With regard to the second issue, that world output and merchandise trade will most likely decline in 2020, existing estimates of the economic fallouts of the pandemic vary, given the high degree of uncertainty involved. Yet all converge and point to a global recession in the making. Bearing in mind the uncertain times, differences in forecasting techniques and assumptions, as well as the potential for revisions depending on how the pandemic continues to evolve and whether the various policy interventions have been effective in mitigating the pandemic and its effects, UNCTAD expects world GDP to fall by 4.3 per cent in 2020. The International Monetary Fund predicts a decline of 4.4 per cent (International Monetary Fund, 2020b) (figure 1.12). In comparison, UNCTAD analysis shows that world GDP contracted by 1.3 per cent in 2009. In both cases, GDP in all countries, developed and developing countries alike, is expected to decrease, except for East Asia, including China, which will see a marginal growth of 1.1 per cent. According to UNCTAD analysis, the pandemic-related recession is likely to translate into a \$12 trillion loss in global income relative to the end of 2019. This is based on the UNCTAD baseline scenario for world GDP growth and takes into account that the average growth rate of the world economy – the trend prior to the

Figure 1.12 Varied forecasts of gross domestic product growth for 2020
(Percentage change)



Source: UNCTAD calculations, based on reports issued by the entities listed.

outbreak of the pandemic – was 3.0 per cent in 2017–2019 (UNCTAD, 2020a). Another estimate suggests that the cumulative output losses during 2020 and 2021 will approach \$8.5 trillion (United Nations, 2020b).

Many developing countries will be affected by declining demand and export revenues, remittances, foreign direct investment and official development assistance. The least developed countries are hit hard, given their limited resources and exposure to supply-chain disruptions such as in exports of textiles and clothing products (for example, Bangladesh). For the economies of Africa, developing America and Western Asia, and transition economies, an added concern is the sharp fall in commodity prices. Commodity-dependent countries and small island developing States, which depend heavily on external flows, are particularly vulnerable to external shocks. For the latter, external flows account for nearly 35 per cent of GDP (United Nations, 2020b). Fiscal measures and stimulus packages introduced worldwide stand at \$9 trillion, equivalent to over 10 per cent of global GDP in 2019. Further, several developing countries are also implementing limited fiscal stimulus, not exceeding 2 per cent of GDP. Many lack the fiscal resources to

address the economic impact with large relief and stimulus measures (United Nations, 2020b).

With respect to the third issue, that global merchandise trade receives shocks to both supply and demand, trade is typically more volatile than output and tends to fall particularly sharply in times of crisis (World Bank, 2020). By mid-2020, the full impact of the outbreak of the pandemic on international trade remained uncertain, in line with projections for GDP growth. However, preliminary estimates and some leading indicators provide some useful pointers. While trade had already weakened in 2019, it became clear that disruptions brought by the pandemic had significantly suppressed trade and volumes had collapsed to record lows. Forecasts have varied with differences in assumptions, scenarios and models but all concur that international merchandise trade can be expected to decrease beyond the contraction levels of 2009.

UNCTAD estimates that the value of international merchandise trade declined by about 5 per cent in the first quarter of 2020 and that it will diminish further by 27 per cent in the second quarter (UNCTAD, 2020b). In the first quarter of 2020, the value of trade in textiles and apparel diminished by almost 12 per cent, and that of the office machinery and automotive sectors, by about 8 per cent. In April 2020, trade in energy and automotive products fell by about 40 per cent and 50 per cent in value, respectively. Significant declines were also observed in the value of trade in chemicals, machineries and precision instruments, with drops above 10 per cent. By contrast, trade in agrifood products and electronics fared comparatively better (WTO, 2020). For the full year, WTO projections point to reductions in world merchandise trade ranging from 13 to 32 per cent in 2020, depending on the scenario, before recovering at rates ranging from 21.3 to 24 per cent in 2021 (WTO, 2020). Overall, these numbers are do not bode well for maritime trade.

The fourth issue is that disruptions caused by the pandemic raise existential questions for globalization. This is because maritime transport is the backbone linking global supply chains, supporting trade and enabling participation in global value chains. When a pandemic of the magnitude of the COVID-19 crisis occurs, the sector works as a transmission channel that sends shockwaves across supply chains and regions. Restrictions introduced in response to the pandemic have raised obstacles that undermine the smooth movement of trade flows and supply-chain operations and can significantly erode the transport services trade liberalization and trade facilitation gains achieved over the years. In this context, the pandemic and its fallout have accelerated an existing debate on the benefits of globalization and extended supply chains. This debate was sparked by heightened trade tensions between China and the United States since 2018. The disruption caused by the pandemic has brought to the fore concerns regarding outsourcing production to distant

locations and the need to diversify production and manufacturing sites and suppliers.

About 70 per cent of international trade is linked to global value chains (OECD, 2020b), with China predominating not only as a manufacturer and exporter of consumer products, but also as a supplier of intermediate inputs for manufacturing companies located in other countries. UNCTAD estimates intermediate products at half of the trade in world goods in 2018 – about \$8.3 trillion (UNCTAD, 2020c). In 2020, an estimated 20 per cent of global trade in manufacturing intermediate products originated in China, up from 4 per cent in 2002 (UNCTAD, 2020d). The volume of intra-Asian containerized trade and its rapid growth over recent years reflect this trend. In this context, any disruption to supply chains in China is bound to affect production in the rest of the world, with wide-ranging impacts on machinery, automotive products, chemicals, communication equipment and precision instruments. Japan, the Republic of Korea, Taiwan Province of China, the United States and Viet Nam will be affected the most.

Preliminary analyses suggest that electronics and electrical equipment are the highest risk sector on a global scale. Although the automotive industry maintains low inventory levels, it does, however, depend less on China than the electronics industry (Aylor et al., 2020). Electronics manufacturing is global to a large degree, which adds to its complexity, as goods cross many borders. According to the OECD database of 2018 on trade in value added, the share of foreign value added in electronics exports was about 10 per cent for the United States, 25 per cent for China, 34 per cent for the Republic of Korea, 44 per cent for Singapore, more than 50 per cent for Malaysia and Mexico, and over 60 per cent for Viet Nam.

Constraints on transportation and logistics and lack of workers prevented timely delivery of components from China and other countries to factories in South-East Asia during the pandemic. As a result, response measures such as sourcing directly from Viet Nam, switching from land to air freight and rerouting shipping lanes that previously included stops at Chinese factories had to be taken (Aylor et al., 2020). For shipping, these measures translate into rerouting of vessels, changes in schedules and port calls, as well as variations in volumes. Further, they illustrate the challenges involved in the transport of time-sensitive trade when disruptions to supply chains occur and how the level of integration with the country's supply chain and level of inventories can change the outcomes.

Less sophisticated manufacturing in countries such as Bangladesh, Pakistan and Viet Nam, which have recently attracted factories to move their production away from China, is also highly exposed to COVID-19-induced disruptions. A case in point is Bangladesh, where about 85 per cent of its exports are composed of textile fibres, textiles and made-up articles, clothing and accessories

(categories of standard international trade classification) (UNCTAD, 2020e). The shock to this supply chain is demand driven and reflects cuts in spending on non-essential goods and store closures. One estimate expects global sales for fashion and luxury brands to drop by 25 to 35 per cent in 2020, compared with 2019 (Seara et al., 2020).

Factory closures, including in China and other East Asian countries, and lockdowns implemented worldwide, resulting in supply-chain disruptions, have revealed the shortcomings of extended and single-country-centric supply chains. They have rekindled the debate on the risks associated with an internationalization of production networks and overreliance on a few countries such as China for manufacturing production, as well as the predominance of low-inventory and just-in-time supply-chain models.

Some observers argue the need to revisit existing supply-chain patterns and reflect on strategies to shift away from the model that had been promoted by hyperglobalization (1999–2009). Others assert that the re-nationalizing of global value chains could, to some extent, insulate countries from the fallout of a pandemic (OECD, 2020b). In the United States, incentives to encourage companies to shift business away from China include tax breaks and a new reshoring fund (Lloyd's Loading List, 2020b). Japan announced that it will allocate \$2.2 billion to attract Japanese manufacturers to shift production out of China, \$2 billion of which will be earmarked for their relocation back to Japan. These developments could accelerate the move towards the China plus one² manufacturing hub model, which evolved amid rising labour costs in that country and has recently intensified trade tensions. The developments could also prompt further regionalization of supply chains and growth in intraregional containerized flows. It is likely that no single country can easily absorb the massive export manufacturing capacity of China.

Moving production home or closer to home is a complex process and should take into account factors other than labour costs. Analytical research suggests that the contraction of GDP would have been worse with re-nationalized global value chains, as government lockdowns also affect the supply of domestic inputs (OECD, 2020b). That said, it is becoming increasingly evident that a slowdown in globalization has taken place over the past decade. Prior to the pandemic, structural shifts, such as digitalization, the “servicification” of manufacturing (Haven and Van Der Marel, 2018), a growing sustainability imperative and the rise of protectionist sentiment, have been taking hold and increasingly re-shaping globalization trends. Companies have already been adding new operations to supplement current production.

Viet Nam is the largest country in the region to see new manufacturing growth from offshoring, as illustrated by agreements with Intel and Samsung. Others, such as Indonesia, Malaysia, the Philippines, Singapore and Thailand, are prime candidates. India is also contemplating a larger role and looking to establish itself as a regional manufacturing hub and to attract companies seeking to move their supply chains out of China (Bloomberg, 2020a). Tax incentives and easy access to land and other infrastructure are being considered. While these efforts pre-date the pandemic (Bloomberg, 2020b), trade tensions between China and the United States and the supply-chain vulnerabilities exposed by its outbreak will most probably accelerate the process.

Nonetheless, China is likely to remain a key player, given its strong supply-chain network and infrastructure and knowledge base, as well as its massive labour force, which has no match. For instance, even though Intel opened a new facility in Viet Nam, the company has maintained several assets in China. Viet Nam was simply added as an assembly and testing operation (Procurement Bulletin, 2020). This is further illustrated by the rise in United States imports from China in May 2020, reflecting the fact that retailers were rushing back to China for inventory replenishment and showing how difficult it would be to shift entire sourcing elsewhere (JOC.com, 2020c). The manufacturing activity that had already migrated to South-East Asia is tied to low-wage and low-skill workers who produce footwear and apparel. For higher-end products such as electronics, workers will require greater skills (JOC.com, 2020c). On the other hand, Chinese companies have also been shifting some of their production to neighbouring countries, reflecting in part the impact of tariff escalation since 2018.

The globalization process based on low labour-cost differentials and on an extensive outsourcing of production that stimulated trade may have reached its limits, with factors other than developments in the world economy and population likely to shape the maritime trade patterns of the future transport.

These include the global decarbonization agenda, which has implications for the two largest commodities transported at sea: crude oil and coal. Another driver would be the growing demand for smaller and low-value packages of physical goods that are increasingly bundled with services and require faster transit time. These shifts in demand patterns are expected to question the cost advantage of shipping compared with other means of transport (Port Economics, 2020).

In summary, the pandemic-induced disruption may trigger shifts in globalization patterns, supply-chain configuration and production models, with implications for transport and inventory decisions – all of which are of strategic importance for shipping. They have the potential to reshape the operational landscape, especially for

² A business strategy that aims to avoid investing and concentrating business only in China.

container shipping, including with regard to vessel size, capacity deployed and operations. For example, greater regionalization would lead to the increased fragmentation of trade flows which, in turn, would make the use of larger vessels more challenging (JOC.com, 2020d).

C. OUTLOOK

1. Poor short-term outlook for maritime trade

Uncertainty remains an overriding theme in 2020. Predicting the impact on maritime trade and the timing and scale of the recovery is fraught with uncertainty. Many factors are at play, significantly influencing the outlook. These include the pathway of the pandemic, the effectiveness of the efforts to control further outbreaks, continued shifts in spending patterns, trends in consumer and business confidence, developments in commodity prices and the ability of stimulus packages to give an impetus to growth and put the world economy back on track. Bearing this in mind and extrapolating from past trends, UNCTAD expects the volume of maritime trade to decline in 2020. Based on the maritime trade-to-GDP ratio for the period 1990–2019 and the forecast of GDP growth by the International Monetary Fund (October 2020), UNCTAD predicts that international maritime trade will fall by 4.1 per cent in 2020 (table 1.12). Seaborne trade forecasts for 2021 also depend on economic growth projections, and these vary.

For example, UNCTAD expects world GDP to rebound by 4.1 per cent in 2021 (see table 1.3 above), the Department of Economic and Social Affairs in its May 2020 forecast projects a global GDP expansion of 4.2 per cent and the International Monetary Fund in its June 2020 forecast predicts that growth will bounce back to 5.4 per cent in 2021. By contrast, the WTO forecast of April 2020 points to a recovery in world merchandise trade volume in 2021 ranging from 21.3 to 24 per cent, depending on the scenario (WTO, 2020). For 2021, UNCTAD estimates that maritime trade flows will recover by 4.8 per cent.

2. Falling containerized trade volumes and rising service cancellations in 2020

Container shipping is strongly affected by the disruptions induced by the pandemic, as containerized trade is closely linked to world economic developments, consumer activity and supply chains. Reflecting the negative impact of the combined demand and supply shocks, volumes are coming under pressure in 2020. The large share of ship capacity idled and the number of services cancelled are a good indication of the slowdown. To provide a general picture, 10 per cent of global vessel-carrying capacity was sitting idle in April 2020 (Drewry, 2020d).

As shown in figure 1.8 and tables 1.9 and 1.10, global containerized trade is projected to contract across all trade routes, with intra-regional trade faring relatively better than the others.

Data available for the first and second quarters of 2020 highlight the impact of the pandemic on containerized trade originating from China across the three main East–West containerized trade routes (figure 1.13 (a) and (b)). Journeys involving the Far East, especially the export leg (westbound Asia–Europe, eastbound trans-Pacific), contracted in the first quarter of 2020, compared with the same quarter in 2019. These numbers were more pronounced during the second quarter when the slump in demand in Europe and North America was felt. On the transatlantic route, where automotive goods are a staple of container flows, the outlook has also deteriorated. As shown in figure 1.13 (b), double digit-drops on the transatlantic route were recorded during the second quarter of 2020.

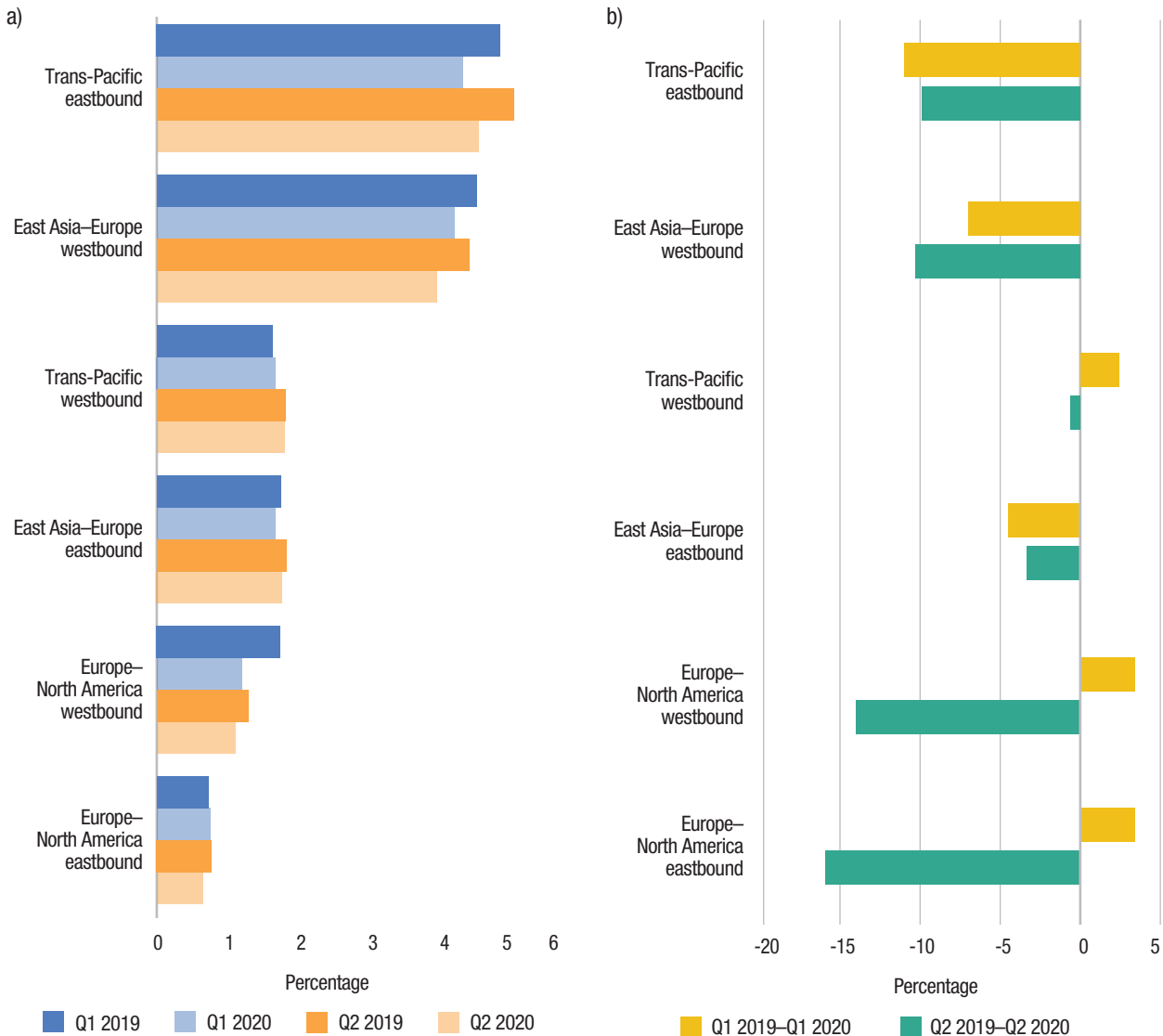
Owing to diminishing trade volumes as factory output in manufacturing regions slowed down and consumers reduced discretionary spending on non-essential items in Europe and North America, carriers cut capacity by introducing blank sailing, idling capacity and re-routing via the Cape of Good Hope to pare down costs while taking advantage of lower fuel prices (see chapters 2 and 4). This makes it possible to avoid the cost of transiting the Suez Canal (\$600,000 and more for a one-way trip for ultralarge container ships) and absorbing excess capacity by extending sailing times. Re-routing vessels could

Table 1.12 International maritime trade development forecasts, 2020–2021
(Percentage change)

Forecasting entity	Annual growth (percentage)	Years	Source
UNCTAD	-4.1	2020	International Monetary Fund world GDP growth forecast
UNCTAD	4.8	2021	International Monetary Fund world GDP growth forecast
Clarksons Research Services	-4.0	2020	<i>Seaborne Trade Monitor</i> , October 2020
Clarksons Research Services	4.7	2021	<i>Seaborne Trade Monitor</i> , October 2020

Source: UNCTAD calculations, based on own analysis and forecasts published by the indicated institutions and data providers.

Figure 1.13 Containerized trade growth on main East–West routes
 (a) in million 20-foot equivalent units;
 (b) percentage change, first quarter 2019–first quarter 2020,
 second quarter 2019–second quarter 2020



Source: UNCTAD calculations, based on MDS Transmodal, 2020b, World Cargo Database, 19 August.
 Abbreviation: Q, quarter.

imply over \$10 million in lost charges for the Suez Canal Authority. While a rebate scheme was announced in early May 2020, it failed to curtail the longer journeys via the Cape of Good Hope (DHL, 2020).

Blank sailing and service cancellations announced by the carriers without the usual notice periods affect service reliability and the ability of shippers to plan their supply chains. Deploying larger vessels means that any missed port calls caused by blank sailing has a greater impact on available capacity (JOC.com, 2020e). In June 2020, many ports reported that blank sailing had resulted in mega-sized vessels calling less often but when they did, the large volumes created peaks and operational challenges. These operational hurdles affect ports (ship-

to-shore operations and yard activity), as well as landside distribution (Notteboom and Pallis, 2020).

Since container vessels move on a scheduled rotation, the cancellation of a sailing from the first port in the rotation cascades down to all the other ports served by that carrier in that rotation. Some smaller ports are particularly hard hit by multiple cancellations from different services. Ship capacity into and out of the ports of Manila and Odessa, the Russian Federation, for example, was reduced by 25 per cent in May 2020, that of the ports of Beirut and Visakhapatnam, India by 20 per cent, and larger ports such as Hamburg, Germany and Rotterdam, the Netherlands, by 10 per cent. Trans-shipment ports such as Colombo and Djibouti are also affected by such

reductions, 13 per cent and 11 per cent, respectively (Clipper Data, 2020). In this context, it is argued that blank sailing could increase the bargaining power of carriers compared with terminals and canals, owing to increased arrears for terminal-handling charges, for example (International Transport Forum, 2020).

Shippers also contribute to the disruption by cancelling bookings without prior notice to carriers, thereby making any planning to optimize vessel capacity difficult. At the port level, less traffic sometime results in the cancellation of work shifts without advance notice to inland carriers. The operational challenges are combined and amplified by growing detention and demurrage charges for exceeding free storage time and the late return of equipment to marine terminals (see chapter 2). The experience shared by the Northern Corridor Transit and Transport Coordinating Authority in Eastern Africa highlights some of these challenges in the case of a cross-border corridor and underscores the need for effective trade-facilitation measures (see chapter 4). Pressure on warehousing capacity, such as shipments of non-essential merchandise idled, are also reported (JOC.com, 2020e). Rebalancing of empty containers is another challenge, as empties were in shortage in Europe, while they stagnated at ports in China (JOC.com, 2020f). Information sharing, transparency and communication are key to avoiding the hurdles and inefficiencies that arise while responding to disruptions (Lloyd's Loading List, 2020c).

In April 2020, reports that some carriers had reinstated cancelled sailings and announced rate increases for the Asia–Europe route were met with some optimism as early signs of a recovery. However, others argued that sailings had been reinstated in part because carriers had overestimated the fall in demand and that activity could be explained by a clearing of the backlog that had accumulated when China was in lockdown (JOC.com, 2020g). In all likelihood, the announced extension of blank sailings through August 2020 points to the expected pressure on demand and recovery in maritime trade volumes. Blank sailings could give some indication about trends in demand. (Drewry, 2020e). While a decline in the number of blank sailings could be one of the earliest signs that global trade may be picking up (Clipper Data, 2020), conclusions should not be drawn quickly. Blank sailings alone do not provide the full picture and should be assessed against scheduled supply capacities and other relevant indicators.

3. Oil and gas trade declines with restrictions in travel and transport in 2020

The pandemic has had a significant impact on trade in oil and gas. Global oil demand fell with the freezing of large parts of the global economy, restrictions on travel and transport, and cuts in industrial activity and refinery output. Together, these factors have depressed demand, as volumes of both crude oil and refined petroleum

products have declined. Supply-side factors are another consideration. A surplus in oil production has practically filled all oil inventories, with many vessels being used as floating storage (see chapter 2). The implementation of supply cuts by the extended group of the Organization of the Petroleum Exporting countries in early May 2020 is expected to reduce the availability of crude oil. Disruptions in oil infrastructure in Libya, alongside declining outputs in the Islamic Republic of Iran and the Bolivarian Republic of Venezuela, are also curtailing growth (Clarksons Research, 2020j). The outlook for liquefied natural gas shipping is also affected by the pandemic. Disruptions in early 2020 depressed import demand in China during the first quarter. With the global outbreak of the pandemic in March 2020, global demand for liquefied natural gas also came under pressure.

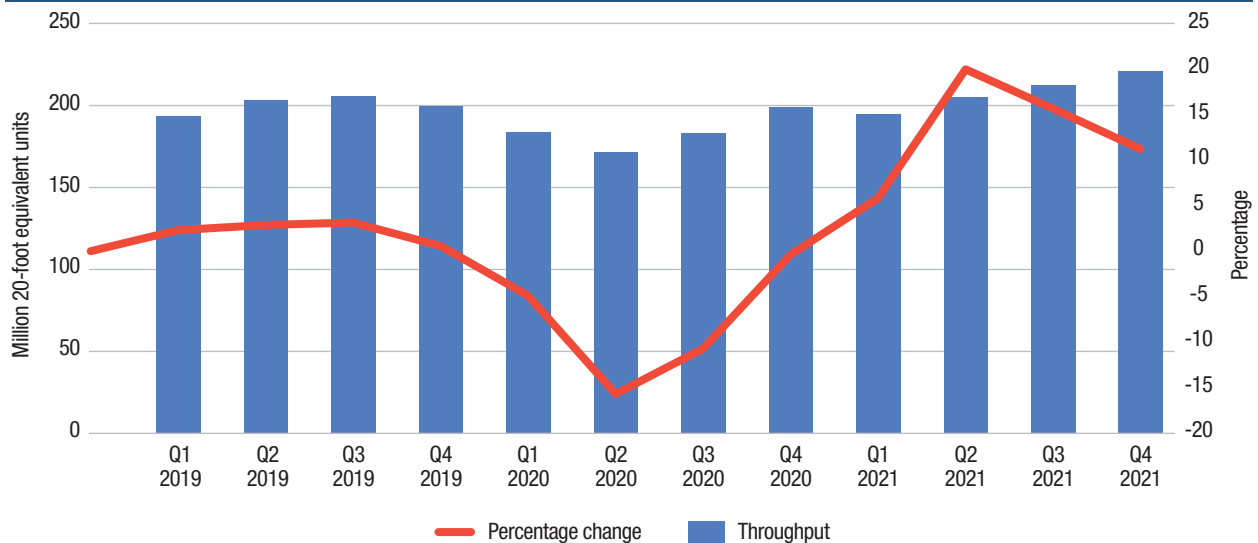
4. Dry bulk trade affected by decline in industrial and automotive sector activities

Reductions in mining and industrial activity had an impact on dry bulk trade but to a relatively lesser extent than containerized trade. Global dry bulk trade came under pressure in 2020, owing to suppressed economic activity and demand. Nonetheless, a partial recovery in Brazilian iron ore exports and the rebuilding of stockpiles in China should support iron ore trade flows after a decline in 2019, the first in two decades. Trade in coal is projected to shrink, due to weaker power demand in many regions, and lower oil and gas prices are making coal power generation less competitive. Minor bulk trade commodities, such as steel products, cement and scrap metal, which are associated with construction and steel manufacturing, generally suffer from a weakening of the economy. The steel and aluminium sectors, on which the automotive industry depends, collapsed, and the automotive sector was hit hard (Baltic and International Maritime Council (BIMCO), 2020). Trade in minor bulk commodities is expected to deteriorate in 2020, although some of the stimulus measures that concentrate on infrastructure and housing investment may boost demand for such commodities. Overall, assuming commitments set out in phase 1 of the trade agreement between China and the United States are implemented, grain shipments from the latter are likely to pick up. Generally, food-based agricultural commodities are less exposed to a decline in economic output.

5. Shrinking port volumes in 2020 and need for more storage space

According to a baseline scenario provided by Drewry, global port container throughput is expected to contract by 7.3 per cent in 2020. The contraction could amplify and reach 12 per cent if the negative scenario is upheld. As shown by the quarterly trends depicted in figure 1.14, global container port volumes collapsed in the second quarter of 2020 at the height of the

Figure 1.14 World port-handling forecast, 2019–2021
(Million 20-foot equivalent units and percentage change)



Source: Drewry baseline forecast; Drewry, 2020e, 2020 Container Forecaster Update, quarter 1, May.

Abbreviation: Q, quarter.

pandemic. Port volumes in 2021 will vary, depending on the scenario. Projected figures range between another contraction of 3 per cent and a jump of more than 10 per cent (Drewry, 2020f). The range of scenarios shows how unpredictable and volatile the short-term outlook can be.

Several ports reported an increase in port and terminal utilization due to a rise in imported essential goods, such as grains (rice, wheat). Other ports reported that traders began storing liquid bulk commodities in anticipation of future commodity price developments. Another situation faced by ports relates to the automotive industry, as many new cars were not collected, due to a collapse in sales, which resulted in the overcrowding of relevant storage areas. Storage space has also been used in cases where transit container shipping programmes have been suspended. For example, the Mediterranean Shipping Company applied the suspension of transit while using some of the world's leading trans-shipment hubs (Bremerhaven, Germany; Busan, the Republic of Korea; King Abdullah port, Saudi Arabia; Lomé; Rodman port, PSA Panama International Terminal, Panama; and Asyaport, Tekirdağ, Turkey). As reported in the experience shared by the Mediterranean Shipping Company, this allowed shippers to benefit from advance yard storage and start moving goods early in anticipation of a resumption in demand (see chapter 4).

Unlike shipping lines, which could mitigate the effect of volume reductions through, for example, blank sailings, service suspensions or capacity cuts, ports have no mitigation tools at their disposal and are likely to focus increasingly on costs. Developments in production and supply-chain-design choices are of relevance to ports. As noted above, the disruptions brought by the

pandemic are likely to hasten a shift away from single country-centric sourcing. However, and as previously noted, while there may well be a shift away from China as a supplier, its supply chains have from some angles proved more resilient throughout the pandemic experience, compared with other locations.

Container ports will have an important role to play in servicing the migrating trade. The new locations will need to prepare for the potential growth in volumes. For example, Cambodia and Indonesia are said to have shortfalls in port capacity, that is, to handle more traffic and larger vessels. In Viet Nam, the major beneficiary of recent changes in container trade patterns, port capacity is considered suitable, although the country may need to invest in deepwater berths capable of handling larger vessels and direct calls. Closing the infrastructure gap in the region is estimated to require over \$12 billion in investment (Drewry, 2020g).

6. Shifts in consumption and shipping patterns with the rise of e-commerce likely to continue

The pandemic revealed how e-commerce can be an important instrument to sustain consumption during crises. The pandemic and the lockdown may have boosted e-commerce uptake, which may continue as consumption patterns evolve. The potential for growth is significant. UNCTAD puts global e-commerce sales in 2018 at \$25.6 trillion, up 8 per cent over 2017. In 2018, the estimated e-commerce sales value, which includes business-to-business and business-to-consumer sales, was equivalent to 30 per cent of global GDP. The United States continued to dominate the overall e-commerce

market and remained among the top three countries in business-to-consumer e-commerce sales, namely China and the United Kingdom (UNCTAD, 2018). Global cooperation in the area of e-commerce, which would facilitate the cross-border movement of goods and services, narrow the digital divide and level the playing field for small businesses, will have to be enhanced (Lloyd's Loading List, 2020d).

Growing e-commerce shipping will put more pressure on warehousing and distribution capacity, as business will want to ensure the availability of safety stocks and buffers. In turn, this will increase demand for storage and space. Demand for logistics space continues to outpace supply in Asia, where consumer demand for e-commerce is growing much faster than the logistics infrastructure supporting it. More than \$4 billion have been poured into Asia-based logistics development funds since the beginning of 2020 (JOC.com, 2020h). Demand for distribution centres and warehouses is also expected to increase, given the changes brought about by COVID-19-induced disruptions. For example, supply chains were re-appraised, inventories were increased and the geographical diversification and decentralization of supply chains pursued.

D. SUMMARY AND POLICY CONSIDERATIONS

The recovery is likely to vary with differences in the disruption caused by the pandemic, countries' levels of development and capacity to support economic growth, while providing social safety nets. International support and cooperation will be of paramount importance for developing countries, especially the least developed countries and small island developing States. Trade is a key component of recovery, and the maritime transport industry, which carries much of it, has a major role to play.

1. Maritime transport remains pivotal in an interdependent world

The COVID-19 outbreak revealed the high levels of global interdependency and is setting in motion new trends that will reshape maritime transport and trade. The sector is at a pivotal moment, as it needs to face the immediate concerns raised by the pandemic. However, longer-term considerations are also necessary: potential shifts in supply-chain design, globalization patterns, consumption and spending habits and, in general, a growing focus on risk assessment and vulnerability reduction. Further, the sector will need to continue mitigating the impact of inward-looking policies on trade and protectionism and to carry forward the sustainability and low-carbon agenda.

Various trends are likely to unfold and affect maritime transport and trade. In the post-COVID-19 pandemic world, there will probably be an element of shortened

supply chains (near shoring, reshoring) and redundancy (maintaining excess inventory) (Flock Freight, 2020). The pandemic and its fallout will probably accelerate the transformation of supply chains that started in recent years (see *Review of Maritime Transport 2019*). Many aspects of supply chains, such as sourcing, inventory and transport, will be reassessed with a view to strengthening resilience and optimizing robustness in the event of future disruptions.

Investing in warehousing and storage, and therefore space, will become more important to ensure the sufficiency of safety stocks and inventories. The established just-in-time supply-chain model will be reassessed to include considerations such as resilience and robustness, for example, stocks and buffers, especially for strategic and necessary goods and commodities. Diversification in sourcing, routing and distribution channels will grow in importance. Moving away from a single country to multiple-location sourcing that is not only focused on cutting costs and delays but also on risk management and resilience will further evolve (JOC.com, 2020i). While the pandemic has brought into focus the notion of self-sufficiency, which is often equated with reshoring or near shoring, this approach is also not without vulnerabilities in case of localized disruptions. Decisions to uproot supply chains depend on more than labour costs and could be difficult to readily achieve.

2. Aftermath of the pandemic: Some potential implications

The pandemic will have a lasting impact on maritime transport and trade. The following five key trends in maritime transport and trade will be part of the pandemic's legacy:

- An accelerated shift in globalization patterns and supply-chain designs. While outright de-globalization may not occur because of the complexity and costs involved in uprooting and reshuffling highly integrated supply chains, the slower wave of globalization that started during the post-2008 financial crisis may decelerate further and the regionalization of trade is likely to gain momentum.
- A swifter uptake of technology and digitalization, with technology increasingly permeating supply chains and their distribution networks, including transport and logistics. Adopting technological solutions and keeping abreast of the most recent advances in the field will become a requisite, no longer an option. The pandemic and its disruptions have shown that first movers in terms of technological uptake are better able to weather the storm, for example, e-commerce and online platforms, blockchain solutions and information technology-enabled third-party logistics.

- Continued shifts in consumer spending and behaviour and evolving tastes that may change production and transport requirements. Examples include a further rise in online shopping in the post-COVID-19 era and a requirement for more customized goods. These trends are likely to emphasize the last-mile transport leg and promote shorter supply chains through the use of three-dimensional printing and robotics. These trends will trigger more demand for warehousing and space for stocks.
- Heightened importance of new criteria and metrics such as risk assessment and management on relevant policy agendas and industry's business plans and strategies. Risk assessments are likely to integrate considerations such as global interlinkages and interdependencies, including those underpinned by intertwined supply chains and financial channels.
- Adjustments in maritime transport to allow adaptation and change in line with the changing operating landscape. Industry stakeholders will probably continue to tap new business opportunities. Authorities at international maritime passages such as the Panama Canal are already assessing options on how to ensure preparedness in case of the reconfiguration of supply chains prompted by the pandemic (JOC.com, 2020j). The tapping of new business opportunities is a trend that had started before the pandemic. For instance, some shipping lines such as Maersk and port operators such as DP World, have been taking greater interest in business opportunities that may lie further down the supply chain through inland logistics. The aim is to be closer to shippers and emerge as reliable end-to-end logistics service providers (Riviera Maritime Media, 2019).

3. Priority action areas in preparation for a post-COVID-19 pandemic world

There are several priority action areas that can help address the ongoing challenges affecting the maritime transport and trade of developing countries, as well new challenges arising from the pandemic and its fallout. These are as follows:

- Fostering economic recovery. It is necessary to support economies on their path to recovery, especially developing countries that are more fiscally constrained, and to help them respond to the multiple shocks triggered by the crisis. Existing pledges and support packages are falling short of expectations. UNCTAD has called for a massive liquidity injection through extraordinary special drawing rights tailored to developing country needs and for re-scheduling and restructuring their external debt. Further, UNCTAD proposes that a \$500 billion Marshall Plan be instituted for health care in developing countries to support their medical and social response to the pandemic.
- Allowing trade to support growth and development effectively. Trade tensions, protectionism and export restrictions, particularly for essential goods in times of a crisis, entail economic and social costs. These should be limited, to the extent possible. Further, non-tariff measures and other trade barriers should be addressed, including by stepping up trade-facilitation measures and customs automation.
- Helping reshape globalization for sustainability and resilience. It will be important to carefully assess all options regarding changes in supply-chain design to ensure the best economic, social and environmental outcomes, in line with the Sustainable Development Goals and the 2030 Agenda for Sustainable Development. For example, a shortening of supply chains through re-shoring or near shoring may reduce transport costs and fuel consumption, but it does not necessarily future-proof supply chains against disruptions that could occur anywhere, whatever the location. Multiple-sourcing approaches could prove more effective in resilience-building than concentrating all production in one location, whether at home or abroad. Strategies should aim to find ways in which unsustainable globalization patterns can be mitigated to generate more value to a wider range of economies.
- Strengthening international cooperation. The pandemic is a litmus test not only for globalization but for global solidarity as well (United Nations, 2020b). Addressing the impacts of the pandemic on global supply chains will require strengthened and coordinated global cooperation and action.
- Assisting shipping and ports in preparing for and adapting to the supply chains of the future. Maritime transport will need to adapt and ensure that it is prepared to support changes in supply chains that promote greater resilience and robustness. Shipping and ports will need to reassess business strategies and investment plans, including in terms of port capacity, shipping network configuration, vessels and capacity deployment. For example, investment in vessel capacity should take into account the shortening of some supply chains (for example, in critical and essential goods such as pharmaceuticals) and further regionalization in trade flows. Port and logistics capacity in countries receiving new businesses that have moved out of China should be upgraded and expanded as needed. More importantly, a key lesson drawn from

the pandemic experience is that cooperation, information sharing and the use of technology to support transport and coordinated action are crucial.

- Promoting resilience-building, including through investment in risk assessment and preparedness. It will be necessary to expand the visibility of supply chains through, among others, control towers and tools that allow for supply-chain disruptions to be predicted and analysed (Aylor et al., 2020). Plans should provide for how to respond to crises, as well as how to ensure business continuity through a set actions and protocols to be followed at different stages of a crisis (Knizek, 2020). For shipping, this may mean establishing priority lanes for handling critical cargo (for example, food, medicine or medical equipment) or limiting restrictions that affect labour such as crew changes and leave. Lessons learned from the pandemic should serve as guidance for informing preparedness and future-proofing maritime transport to allow for more resilient supply chains (see chapters 2, 4 and 5). Relevant actions could also include collecting and sharing information on potential concentration and bottlenecks, developing stress tests for essential supply chains and fostering an enabling regulatory framework that ensures greater certainty (OECD, 2020b). For example, following the 2008–2009 financial crisis, Governments developed stress tests for specific supply chains. These tests could be carried out in the context of policies related to the creation of strategic stockpiles to correctly assess the inventories and buffer stocks needed to prevent shortages in the future.
- Getting the priorities right and avoiding short-sighted policies. While the pandemic has been an overriding theme throughout 2020 and probably for years or decades to come, other important and potentially disruptive global issues should not

be overlooked. For example, climate change is at risk of being pushed to the back burner, given the need to address the immediate concerns raised by the pandemic. Momentum on current efforts to address carbon emissions from shipping and the ongoing energy transition away from fossil fuels should be maintained. Governments could potentially direct the stimulus packages to support recovery while promoting other priorities at the same time, including climate-change mitigation and adaptation. Thus, policies adopted with a view to preparing for a world beyond the pandemic should support further progress in the shipping industry's transition to greening and sustainability. In particular, sustainability concerns such as the connectivity of small island developing States and progress made by the least developed countries towards the realization of Sustainable Development Goal 8.1 are ever more important in building their resilience to cope with future disruptions.

- Enabling greater uptake of technology while minding the digital divide. This means promoting efforts to accelerate the digital transformation to improve and build the resilience of supply chains and the supporting transportation networks. Digitalization efforts should enable enhanced efficiencies and productivity in transport, such as smart ports and shipping, but should also help countries to tap e-commerce capabilities and transport facilitation benefits that boost trade. Developing countries will need support to minimize the divide and ensure that they can also exploit the advantages of digitalization to build their resilience. For maritime transport to play its role in linking global economies and supply chains, it should leverage the crisis by investing in technology and adopting solutions that meet the needs of the supply chains of the future while supporting resilience-building efforts (Egloff, 2020).

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