

Performance of Maritime Logistics

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Case-Specific Policy Analysis





Main topics of the report

- 1. Performance of containerised shipping
- 2. Causes and effects of maritime performance
- 3. Impact: trade, modal shift, vertical integration
- 4. Policy implications
- 5. Policy recommendations



1. Performance







1. Performance

- **Price**: Spot rates on average 6 times higher. Contract rates 2.9 times higher.
- **Reliability**: Two thirds of containerships arrive with a delay of more than one day; one fifth of the ships in 2019.
- **Speed**: Handling time in ports has gone up: 100% in US, 15% in Europe
- **Direct liner connectivity**: declined in most world regions, in particular Latin America, Europe, Sub-Saharan Africa.



Price: huge increases since Covid-outbreak

- Spot rates: on average 6 times higher. Asia-Europe: 5.9; Transpacific: 5.5
- Contract rates: 2.9 times higher. Asia-Europe: 5.4; Transpacific: 3.2
- Higher demurrage and detention charges in many countries, plus new additional charges



Containerised spot rates by trade lane

Source: Drewry



Reliability: ships with record-high delays

- Two thirds of containerships arrive with a delay of more than one day; this was only one fifth of the ships in 2019.
- The average delay of a containership is now around 7 days; this was 4.9 days in the beginning of 2020.



Schedule reliability of container shipping



Speed: longer port times in US and China

- Time at anchor: globally 3 times higher since Covid; 7x in US, 2x in EU
- This is related to carriers' blank sailings and waiting times at ports
- Handling time in ports has gone up: 100% in US, 15% in Europe.
- Time at sea has nevertheless gone up, possibly due to lower ship speeds and cancellation of port calls in intermediate-sized ports

Time in port and time at anchorage in global container ports (2019-2021)



Source: MDS Transmodal



Connectivity: declined in most world regions

- Direct liner connectivity declined in most world regions, in particular Latin America, Europe and Sub-Saharan Africa.
- Direct liner connectivity refers to the number of countries that can be reached directly (without transshipment).
- This connectivity index is stable in North America and Oceania.



Development of direct liner connectivity, 2019-Q2 -2022-Q2

Number of countries with direct connections increased by less than 50%

Number of countries with direct connections increased by more than 50%



2. Causes and effects







2. Causes and effects

- **Demand/supply balance**: "demand explosion" occurred in the US, but not in most other world regions.
- **Port congestion**: a few world regions (US and China) suffer from port congestion, arguably due to poor ship reliability that has disrupted berth planning.
- Ship capacity management: capacity withdrawal during lockdowns and beyond; capacity repositioning, e.g. from Asia-Europe to Transpacific.



Demand: huge differences between regions

- Global growth of demand for container transport in line with trend growth. Exceptions: US that witnessed a demand catch up effect until mid-2021.
- Ship utilisation rates are not exceptionally high.

Container volumes (TEUs) transported to/from North America per month (2019-2021)



Source: ITF, Container Trade Statistics



Source: Sea Intelligence

Port congestion due to poor ship reliability

- A few world regions (US and China) suffer from port congestion.
- This is arguably due to poor ship reliability that has disrupted berth planning.
- For example: in Los Angeles/Long Beach ship reliability deteriorated since June 2020, well before waiting times at anchor started to go up in November 2020.



Schedule reliability on Shanghai-Los Angeles route (2020-2021)



Containerships at anchor at Los Angeles/Long Beach (2020-2021)

Source: Marine Exchange



Capacity shortages due to limited deployment

- Idling ship capacity (blank sailings) between February and September 2020.
- Ship capacity follows a pattern of limited ship deployment since 2017.



Idle containership capacity (in TEUs) (2009-2021)

Supply-demand balance in container shipping (2010-2020)



Source: Alphaliner, MDS Transmodal



Lack of competition?

Consortia act as "bridges" between alliances

Large majority of trade routes to/from Europe operated by one conglomerate





Joint capacity withdrawal



Freight rates started to rise in May 2020, but ship capacity was back to normal only in September 2020.

Source: ITF, Alphaliner, Drewry



Global capacity repositioning



In the fourth quarter of 2020, carriers deployed 4% less capacity on Asia-Europe than the year before (but 19% more YoY on China-USWC). Is there a link to the freight rate hike on Asia-Europe in Q4 of 2020?

Source: ITF, Shanghai Shipping Exchange, MDST



Net shift from Asia-Europe to Transpacific



Capacity reallocation year-on-year comparison



3. Impacts







3. Impacts

- **Trade patterns:** some industries have seen changes in trade patterns. E.g. less exports of textiles from Asia to Europe, more near sourcing.
- **Modal shift:** large increase in Asia-Europe containerised rail traffic in 2021.
- Vertical integration: carriers investing in logistics companies, terminals, forwarders, e-commerce, aviation.



Price rises result in record profits boosting vertical integration

- The top 10 carriers made USD 160 bn in profits in 2021.
- They acquired logistics companies and forwarders, raising competition issues.



Operational profit margins (%) of the ten largest container carriers

Source: Alphaliner 2021



4. Policy implications







4. Policy implications

- Local supply chain problems (US demand explosion and port congestion) have spilled over to other regions and created world-wide problems.
- Globally integrated networks have undermined resilience and buffers that could have stopped spillovers.
- Public policies have facilitated this, e.g. by allowing joint capacity management via consortia and alliances.
- Actions by one regulator have consequences for other jurisdictions.
- Global liner networks, but no global regulation or coordination.



5. Policy recommendations







5. Policy recommendations

- Improve competition monitoring in container shipping
- Reconsider the competition arrangements for liner shipping
- Focus regulatory attention on fair competition in door-todoor container transport
- Increase transparency of container shipping rates and charges
- Collect performance information on the containerised transport chain
- Secure the strategic value of container shipping
- Charge users of public maritime infrastructure more to increase cost coverage



Thank you

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