International Transport Forum

What has caused the container shipping disruption?

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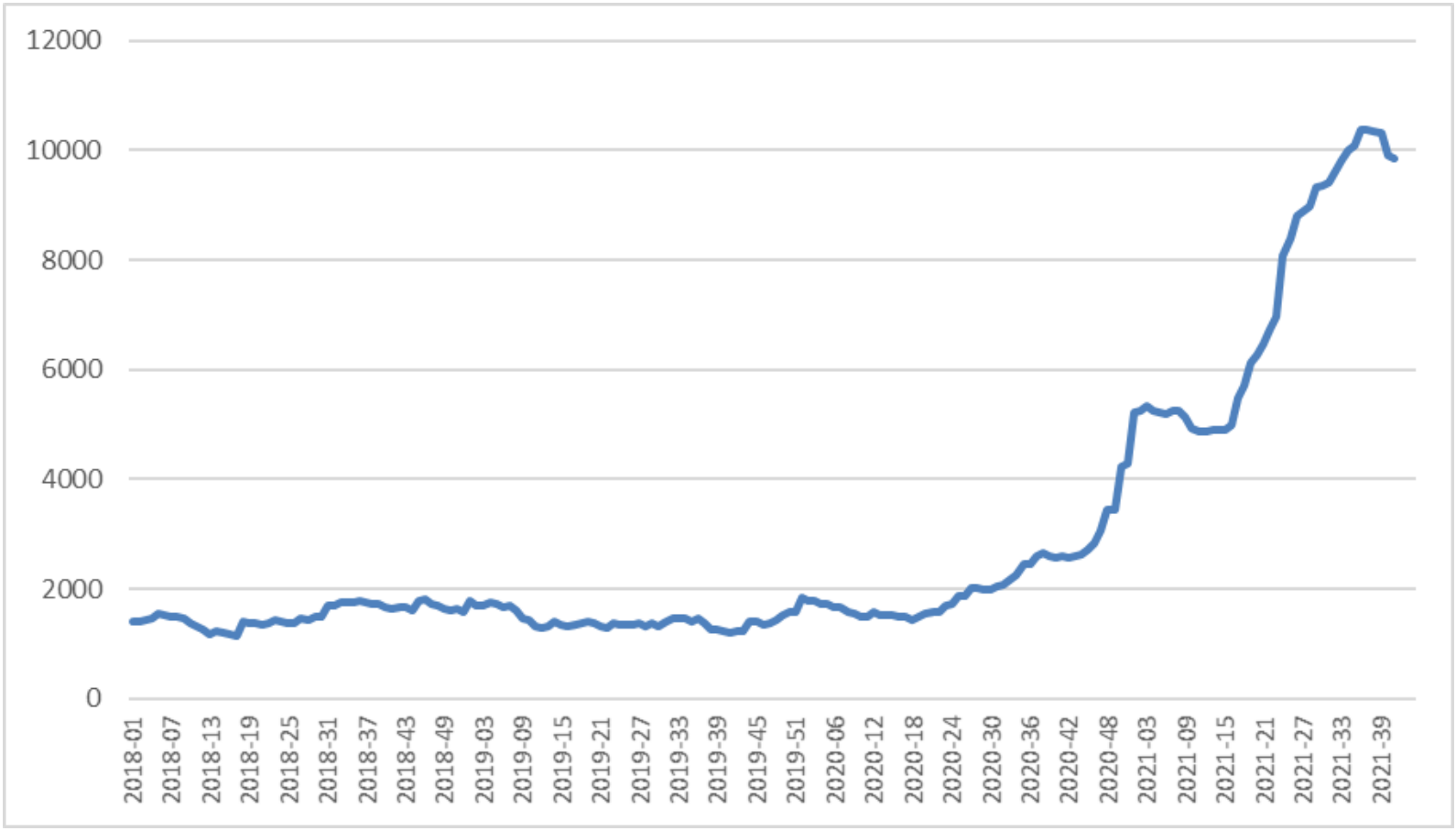
Busan International Port Conference
5 November 2021

OECD

Outline of presentation

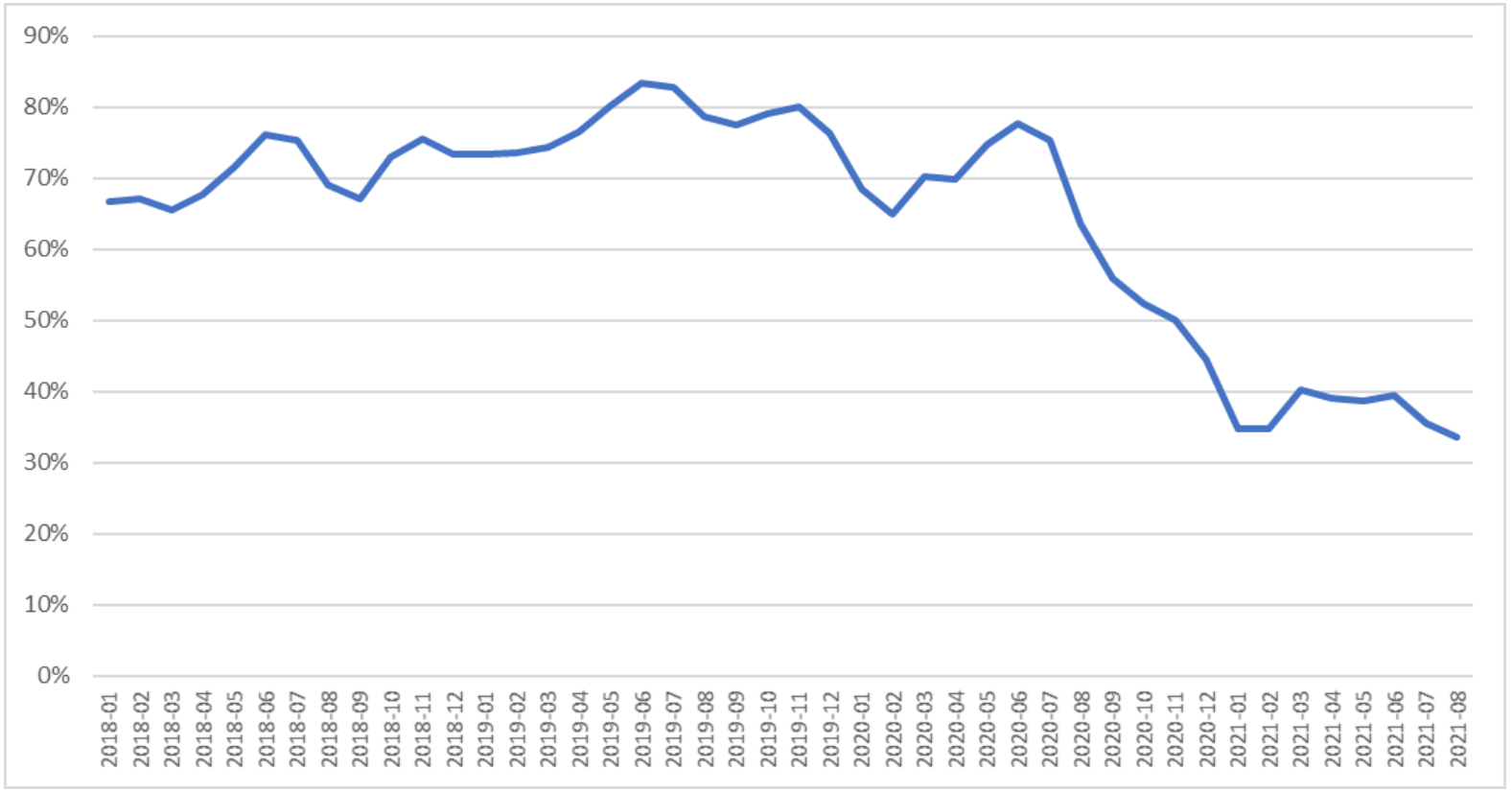
- Mapping the container shipping disruption: freight rates, schedule reliability, port congestion
- Has it been caused by unprecedented demand and port congestion?
- What has caused the container shipping disruption? A phased, differentiated approach.
- What does the disruption reveal about the current container shipping model?

Disruption: freight rates



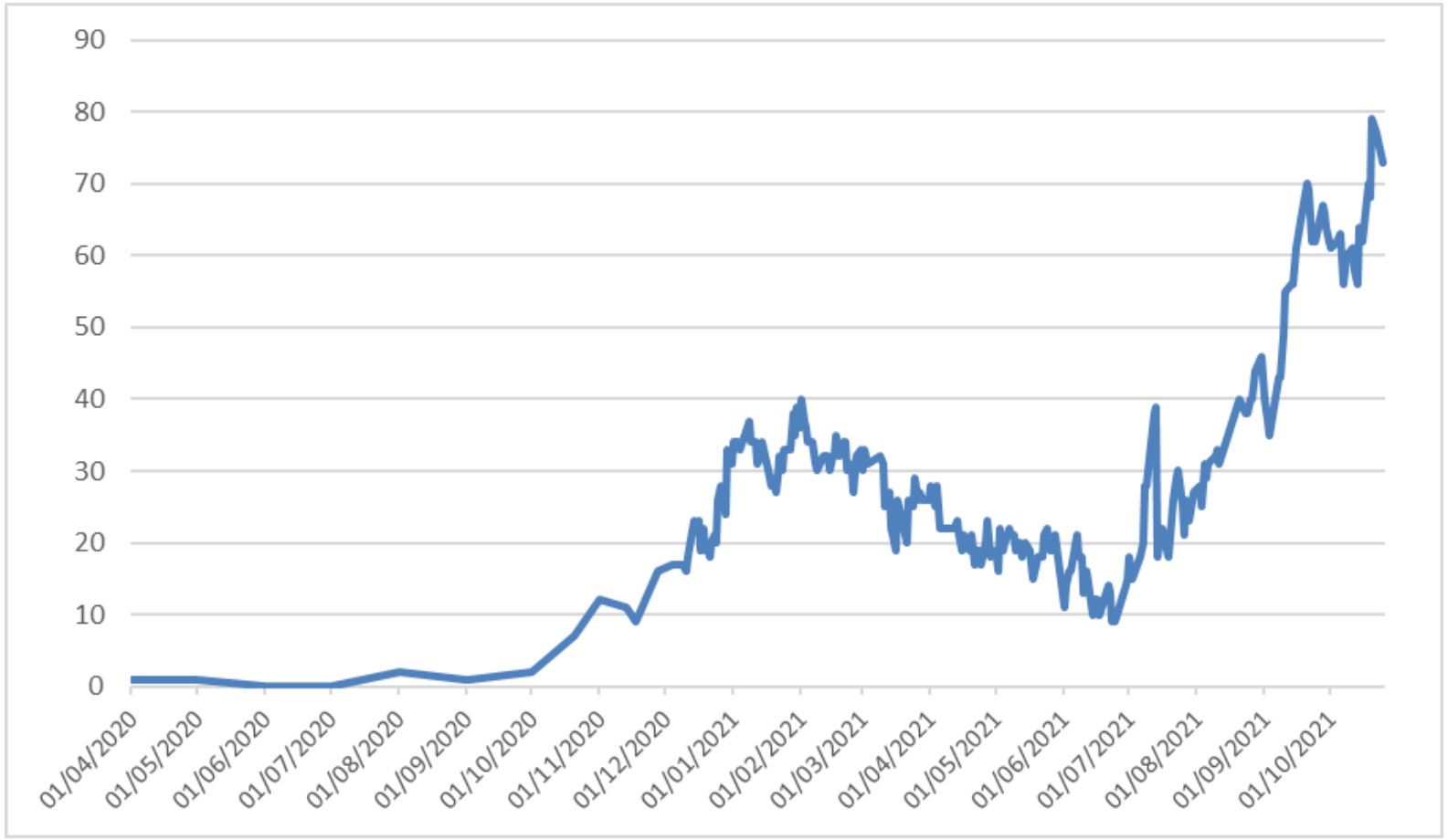
Source: Drewry

Disruption: schedule reliability



Source: Sea Intelligence

Disruption: congestion



Containerships at anchor at Los Angeles/Long Beach

Source: Marine Exchange

What has caused the disruption?

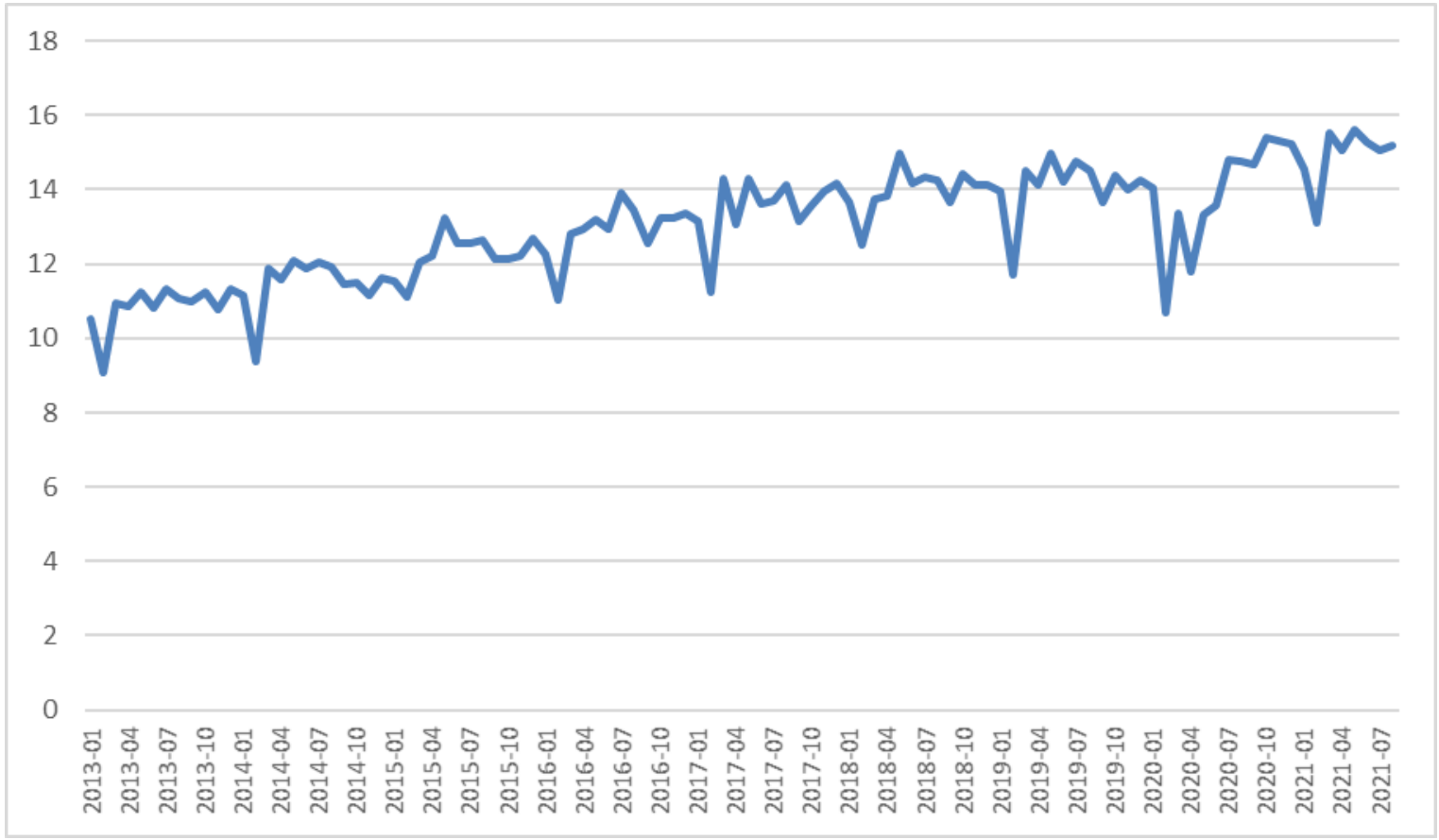
Frequent explanations:

- Unprecedented "demand explosion"
- Port congestion

Do these explanations make sense?

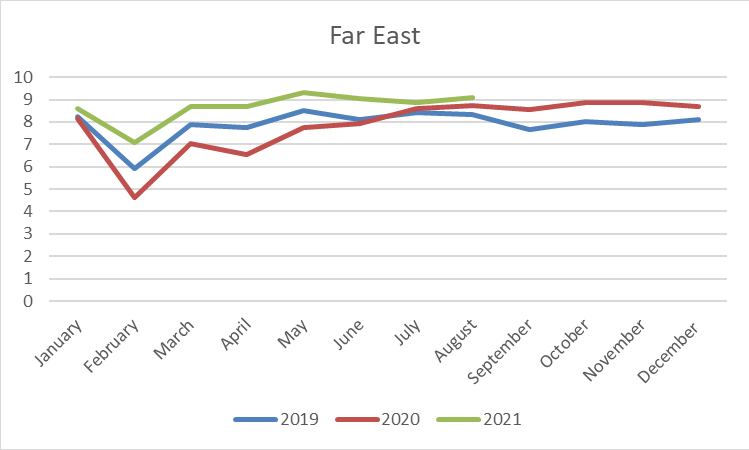
Or is something else going on?

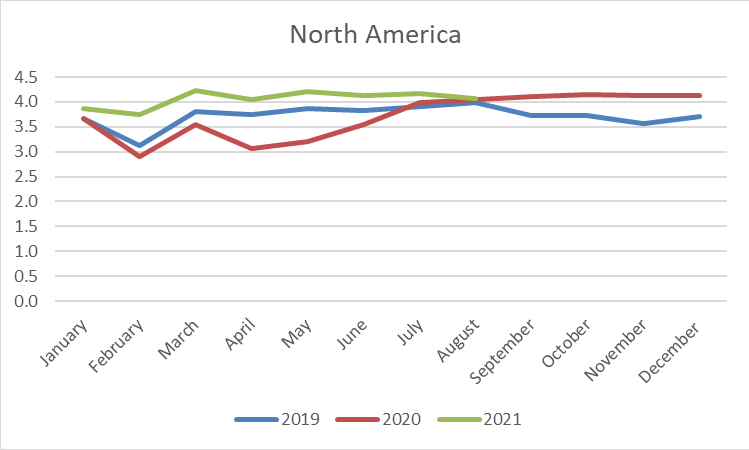
"Demand explosion" causing disruption?

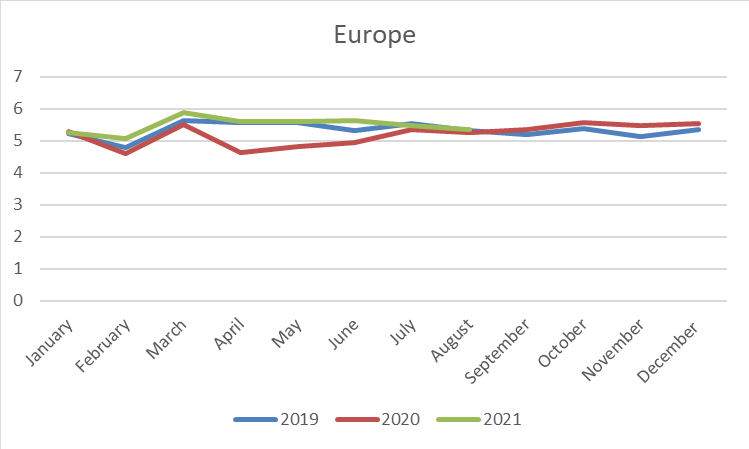


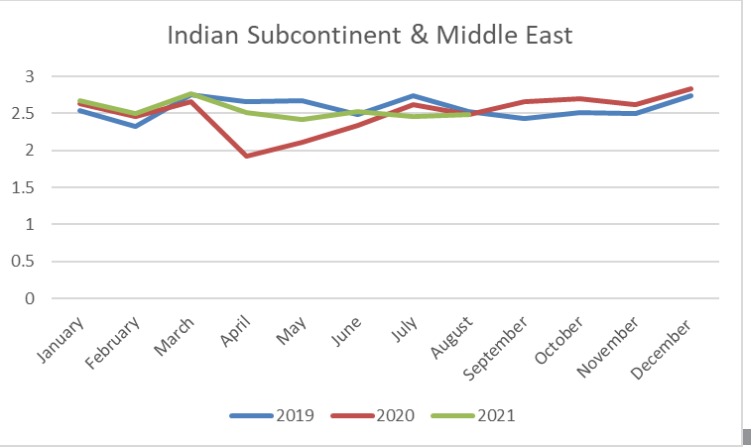
Source: CTS

"Demand explosion" causing disruption?



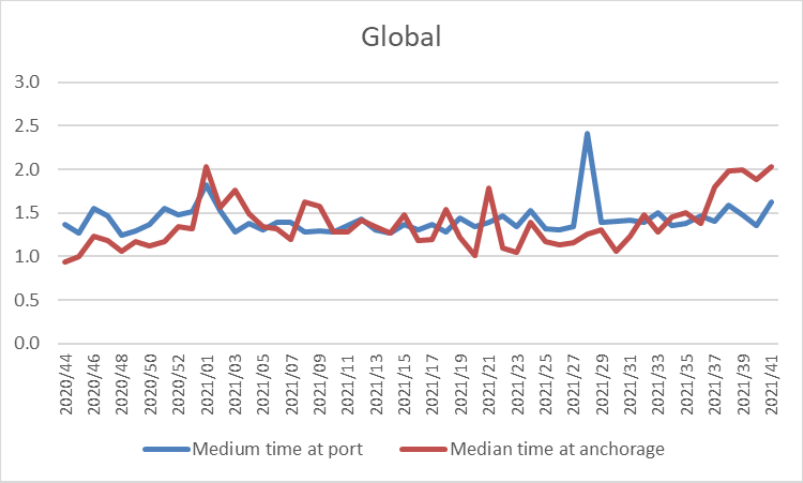


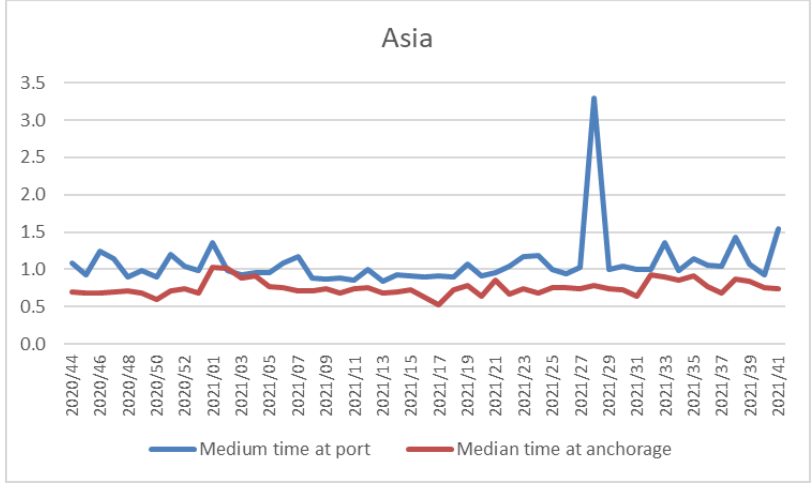


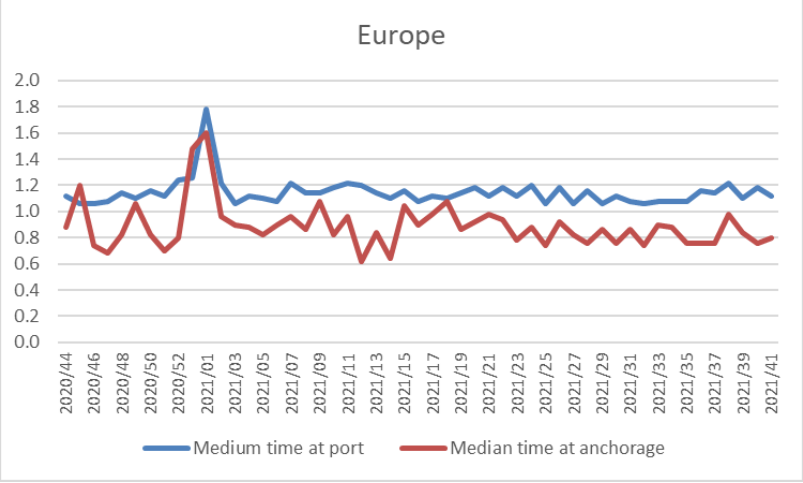


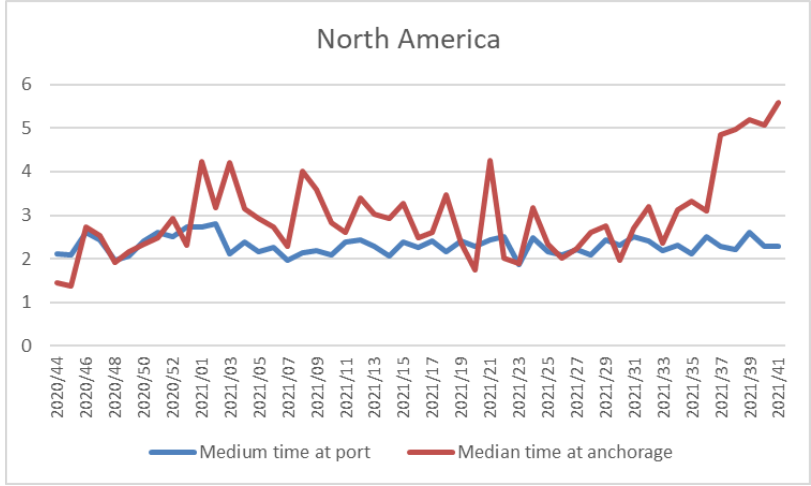
Source: CTS

Port congestion causing disruption?



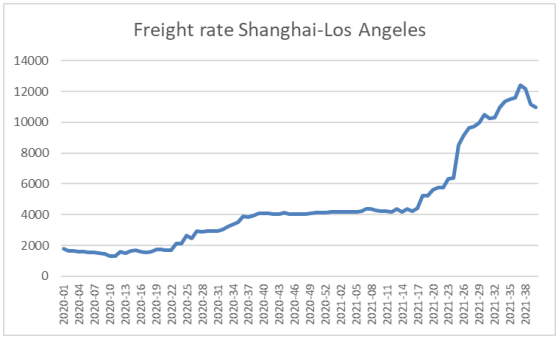


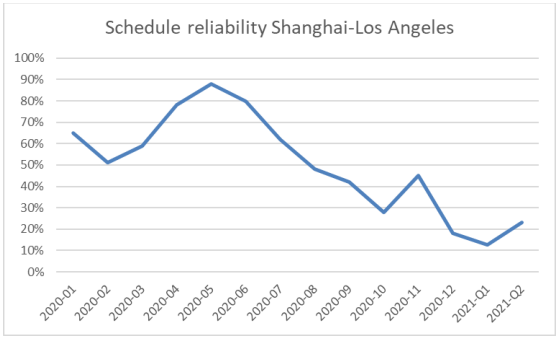


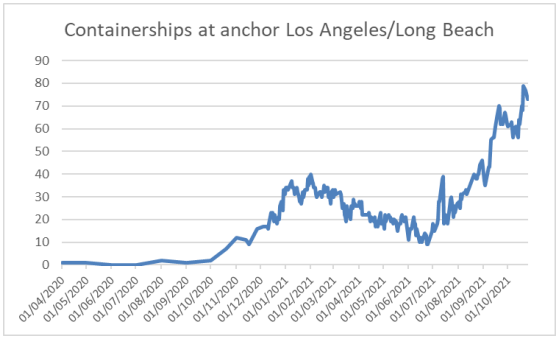


Source: ITF, Marine Traffic

Port congestion causing disruption?







Freight rate Shanghai-Los Angeles started to rise in May 2020

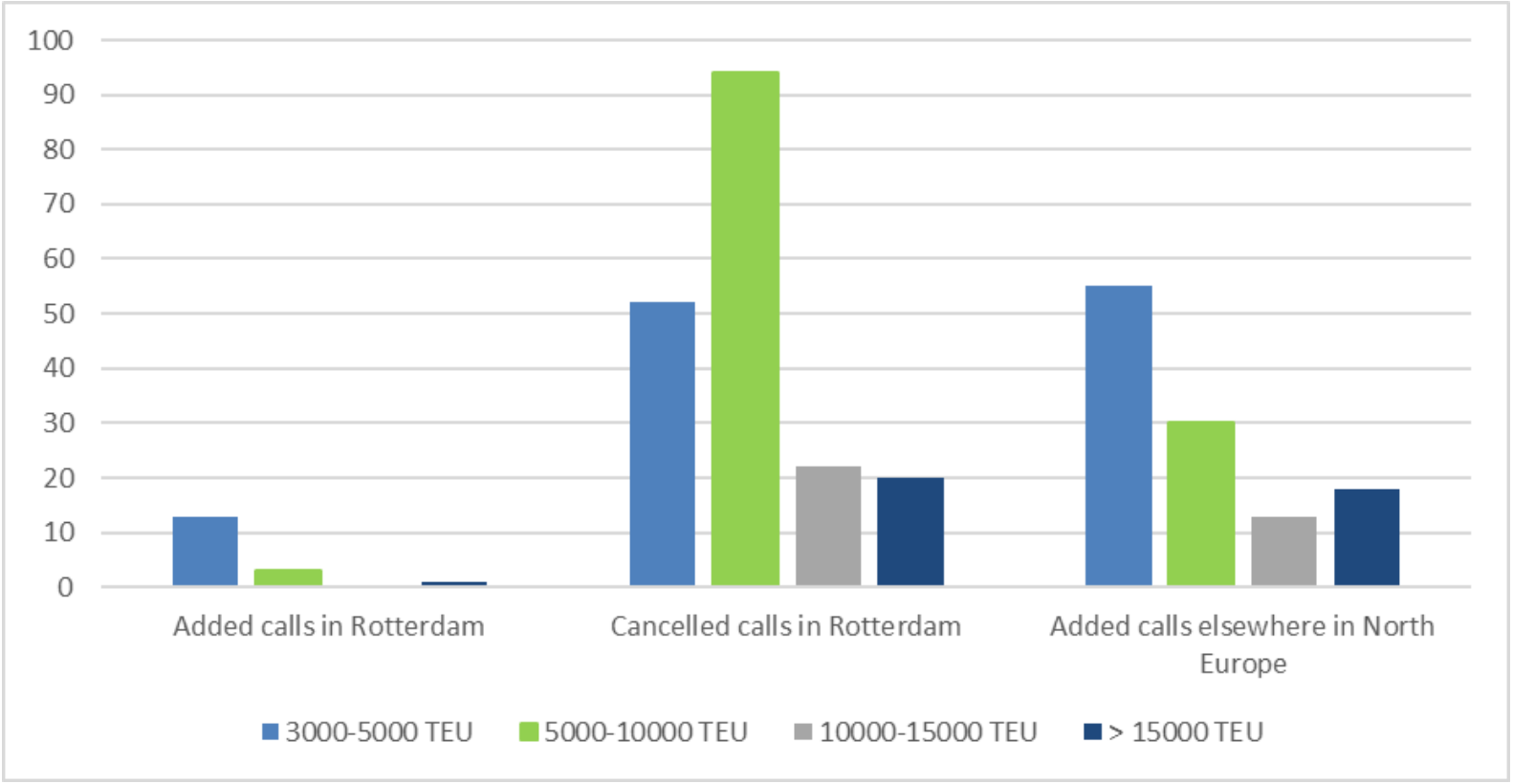
Schedule reliability Shanghai-Los Angeles started to decrease in June 2020.

Container waiting times at Los Angeles/Long Beach started to go up in November 2020.

Source: Drewry, Sea Intelligence, Marine Exchange

Port congestion causing disruption?

Added, cancelled and shifted calls in port of Rotterdam 2021-Q1



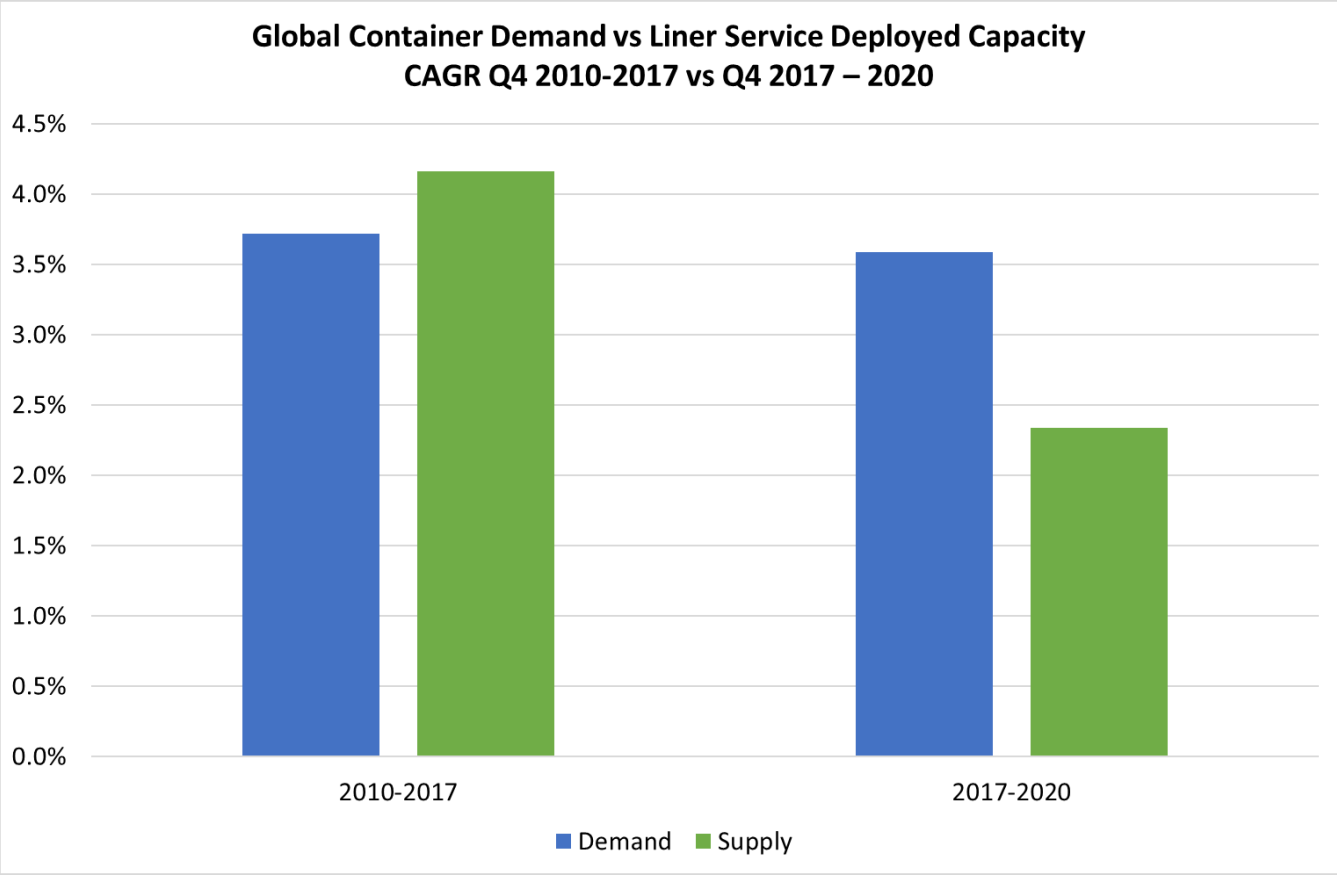
If one European hub port is full, other ports function as back up.

Source: MDS Transmodal Container Database, June 2021

Different phases of disruption

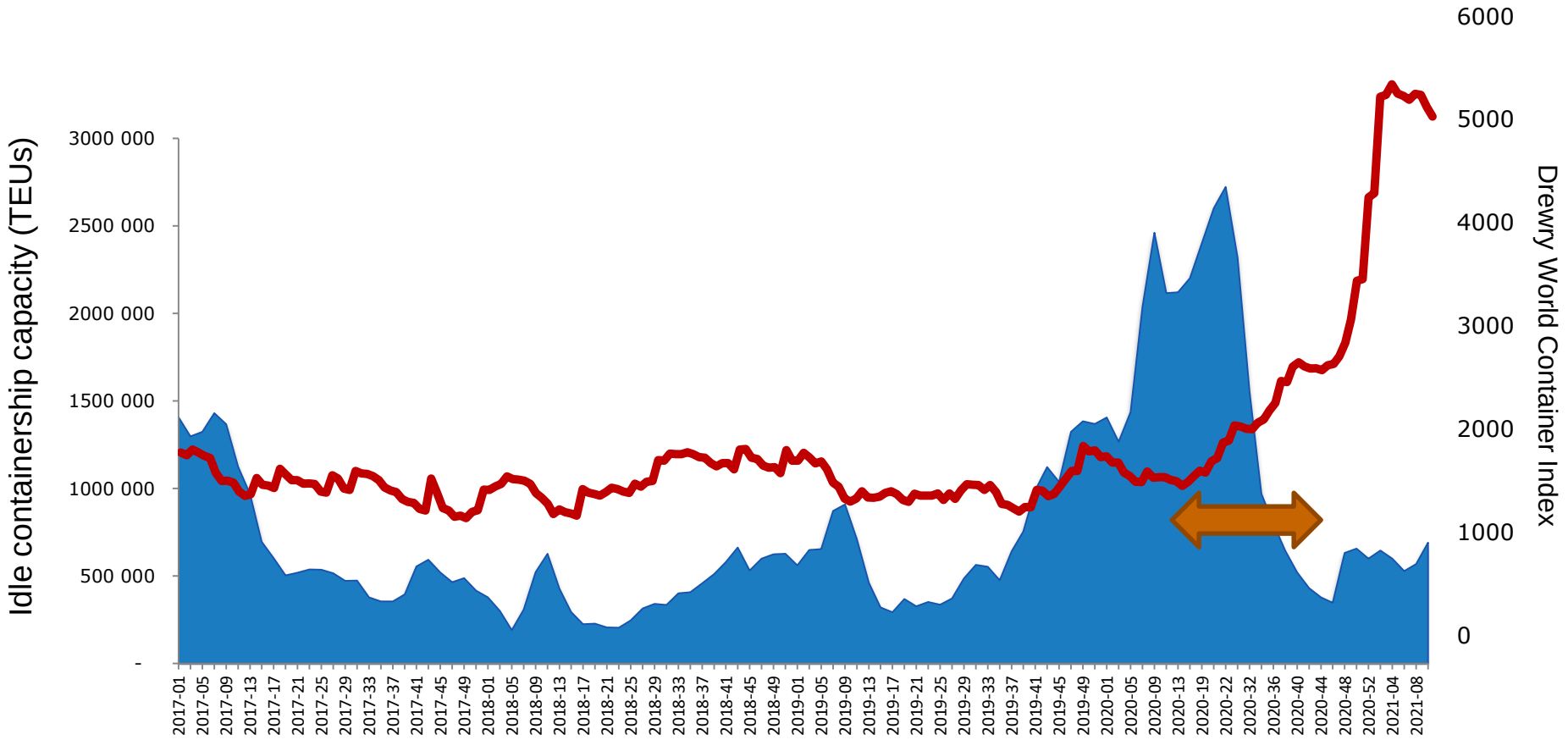
1. Pre-Covid: capacity tightening
2. Economic lockdowns: capacity withdrawal
3. Post-lockdowns: capacity repositioning
4. Searching for normality: supply chain spillover effects

Phase 1: Pre-Covid capacity tightening



Source: MDS Transmodal

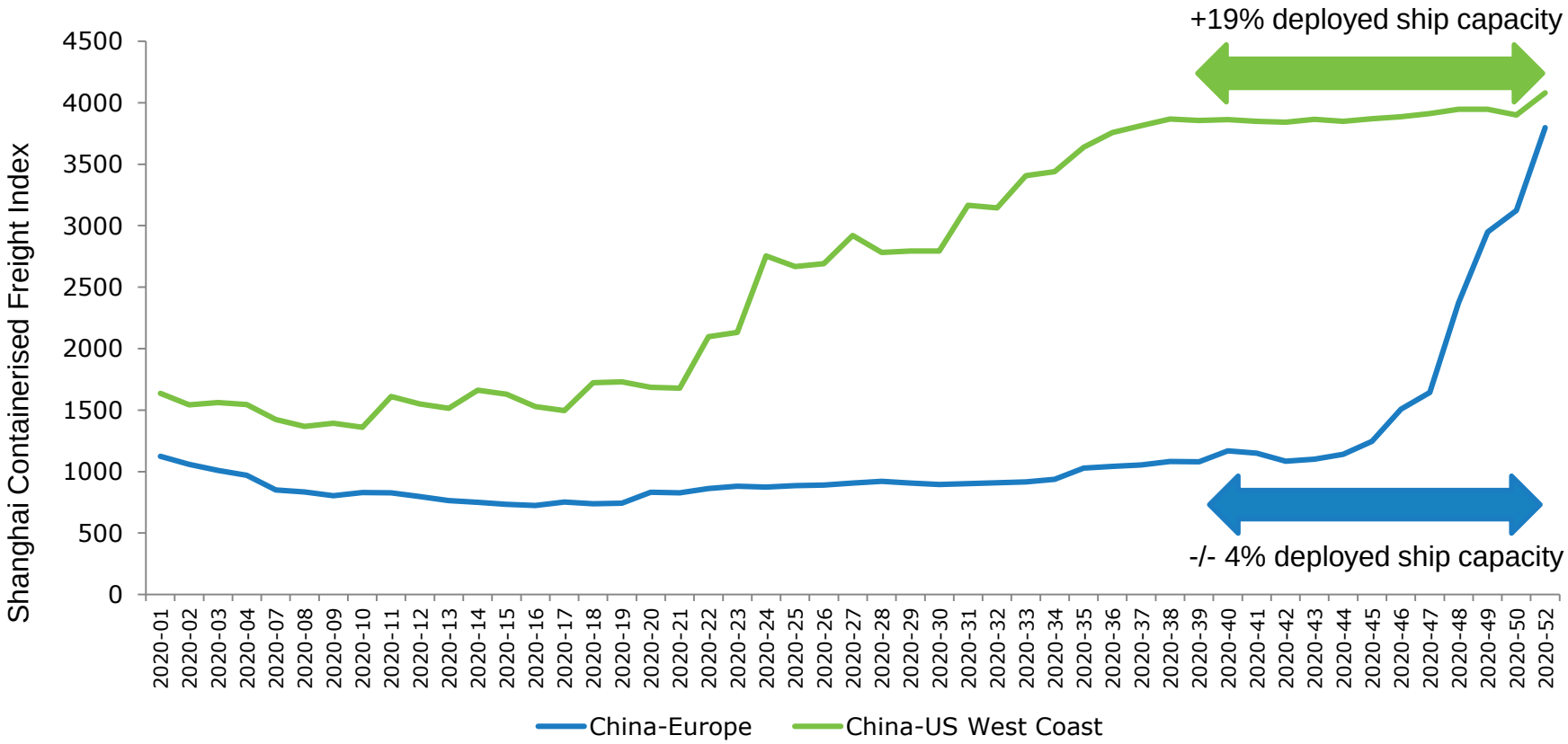
Phase 2: Capacity withdrawal



Freight rates started to rise in May 2020, but ship capacity was back to normal only in September 2020. What is the explanation?

Source: ITF, Alphaliner, Drewry

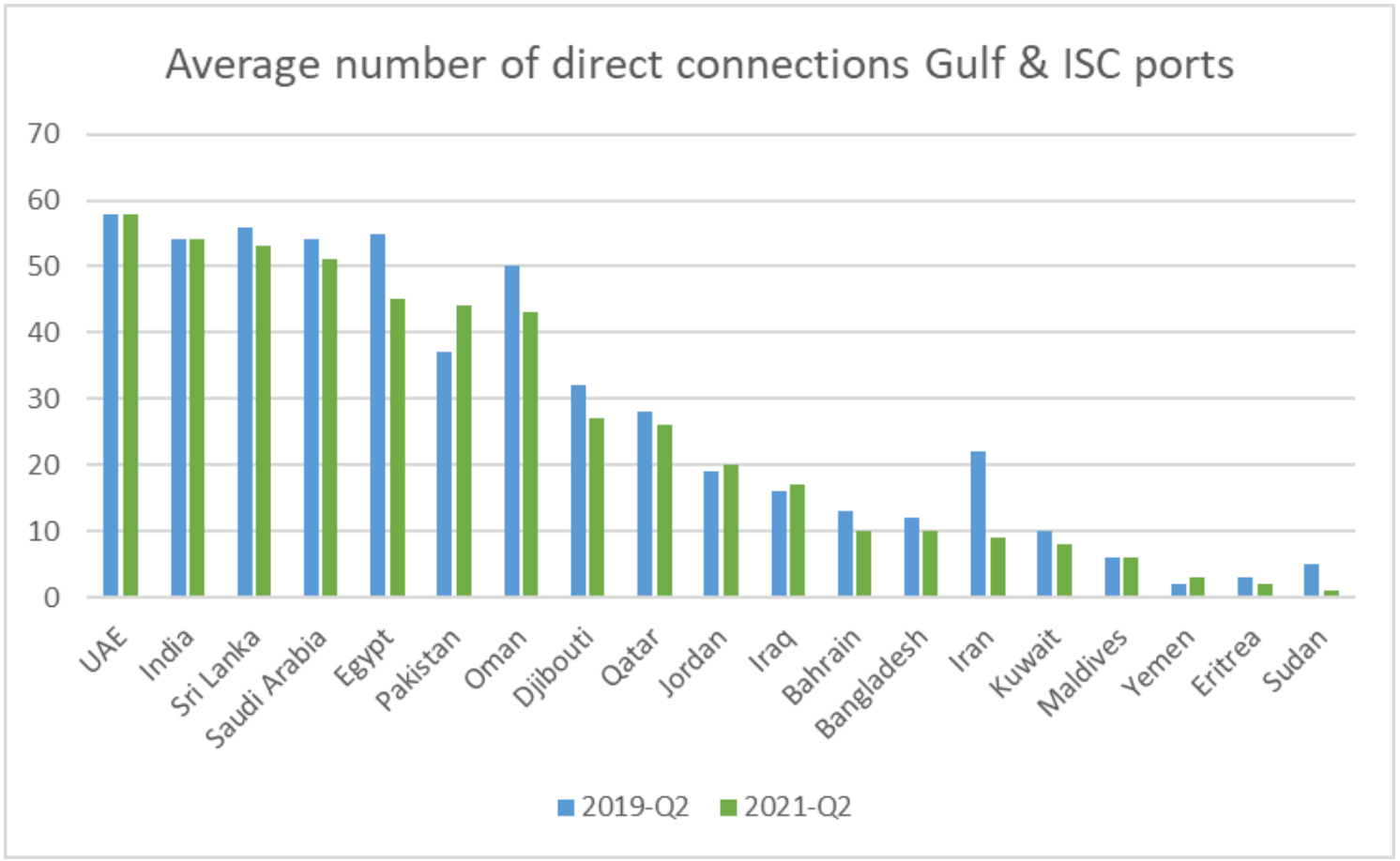
Phase 3: Global capacity repositioning



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). Why? Could this be related to the freight rate hike on Asia-Europe in Q4 of 2020?

Source: ITF, Shanghai Shipping Exchange, MDST

Phase 4: Spillover effects



Source: MDS Transmodal

What did the Covid-crisis reveal?

Misalignment of capacity and incentives to solve bottlenecks:

- Who benefits from incidents and "port congestion"?
- Possibilities to divert traffic to other ports in case of congestion is complicated in some parts of the world by constant upsizing of ships and carriers' terminal interests
- Why bother taking export cargo if an empty brings in more revenue?
- Why bother ordering more containers with the current steel prices?

Carriers have remarkable joint capacity management:

- Coordinated capacity withdrawal used to avoid losses or make profits?
- Most consortia exceed the 30% threshold in EU regulation. Legality?

Is the current model resilient to shocks?

Conclusion

- Problems with schedule reliability of mega-ships in Los Angeles can lead to supply chain problems in Europe.
- Freight rates for European cargo can get ten times higher, even if there is no more demand for ocean freight, or a port congestion problem.
- Carriers can collectively re-deploy capacity between trade corridors in order to maximize profits.
- The current containerised shipping model is vulnerable to disruption to hubs.

International Transport Forum

Thank you!

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