
# SEMINAR ON THE FUTURES OF MARITIME SUPPLY CHAINS IN SOUTHEAST ASIA

ITD Seminar

28 February 2023, Bangkok, Thailand

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- **Demand: Trade**
- **Supply: Services & Infrastructure**
- **Markets: Rates and Costs**

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# Maritime transport at a turning point

- A break in historical shipping and trade patterns?
- Cyclical or structural shift?
- New geography of trade?
- Supply chain reconfiguration?
- New maritime transport and logistics business models?
- Shift in fleet/supply profile and capacity?

✓ COVID-19 Pandemic
✓ Global supply chain logjam 2021-2022, unprecedented port congestion & shipping rates
✓ War in Ukraine and heightened geopolitical risks
✓ The imperatives of energy transition and climate change mitigation and adaptation
✓ Requirements brought about digitalization and e-commerce growth
✓ De-risking supply chains (resilience): globalization/regionalization; decoupling, near-shoring, friend-shoring, reshoring, risk management, preparedness.

# Demand

## International maritime trade

REVIEW OF MARITIME TRANSPORT

2022

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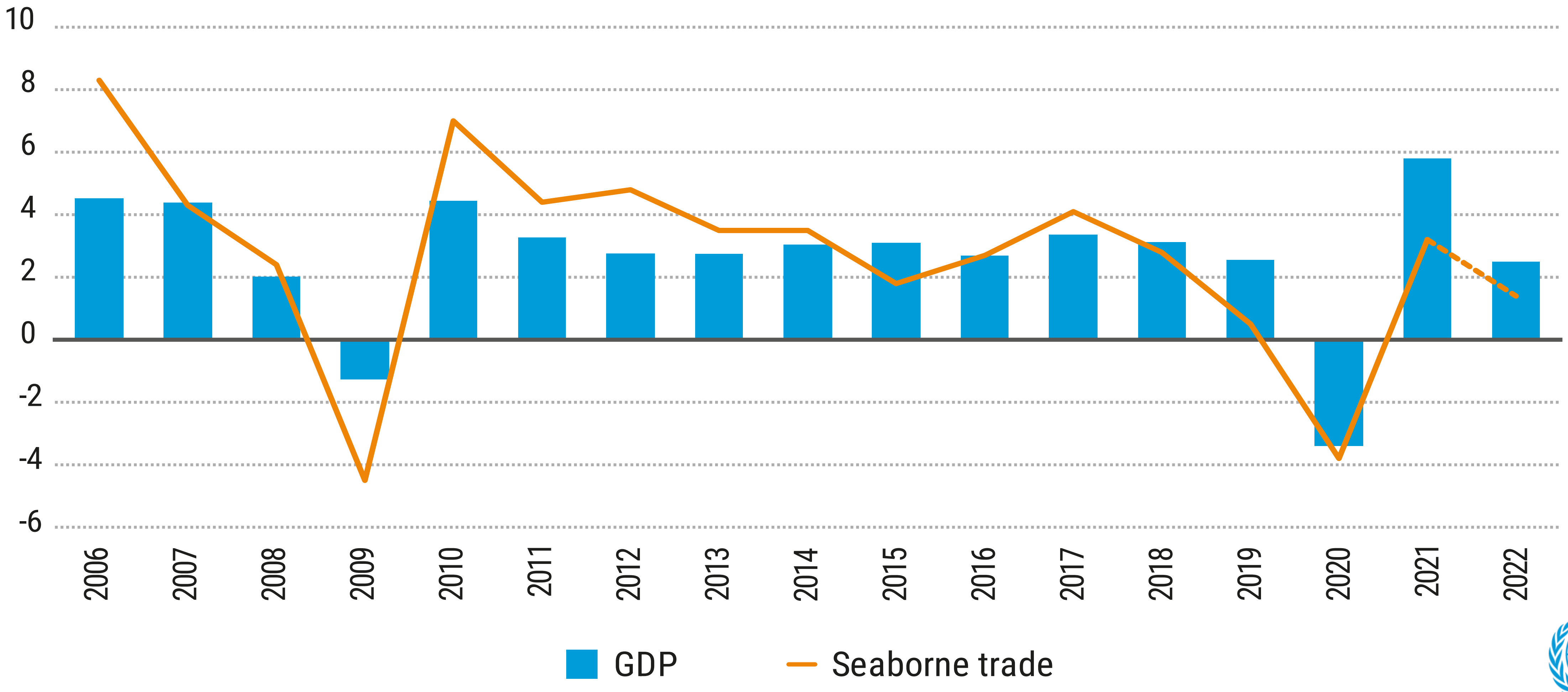
International maritime trade and global output, selected years (percentage annual change):

- GDP-Trade correlation
- Volumes bounced back
- Below pre-pandemic level

+ 3.2% in 2021; 11 billion tons



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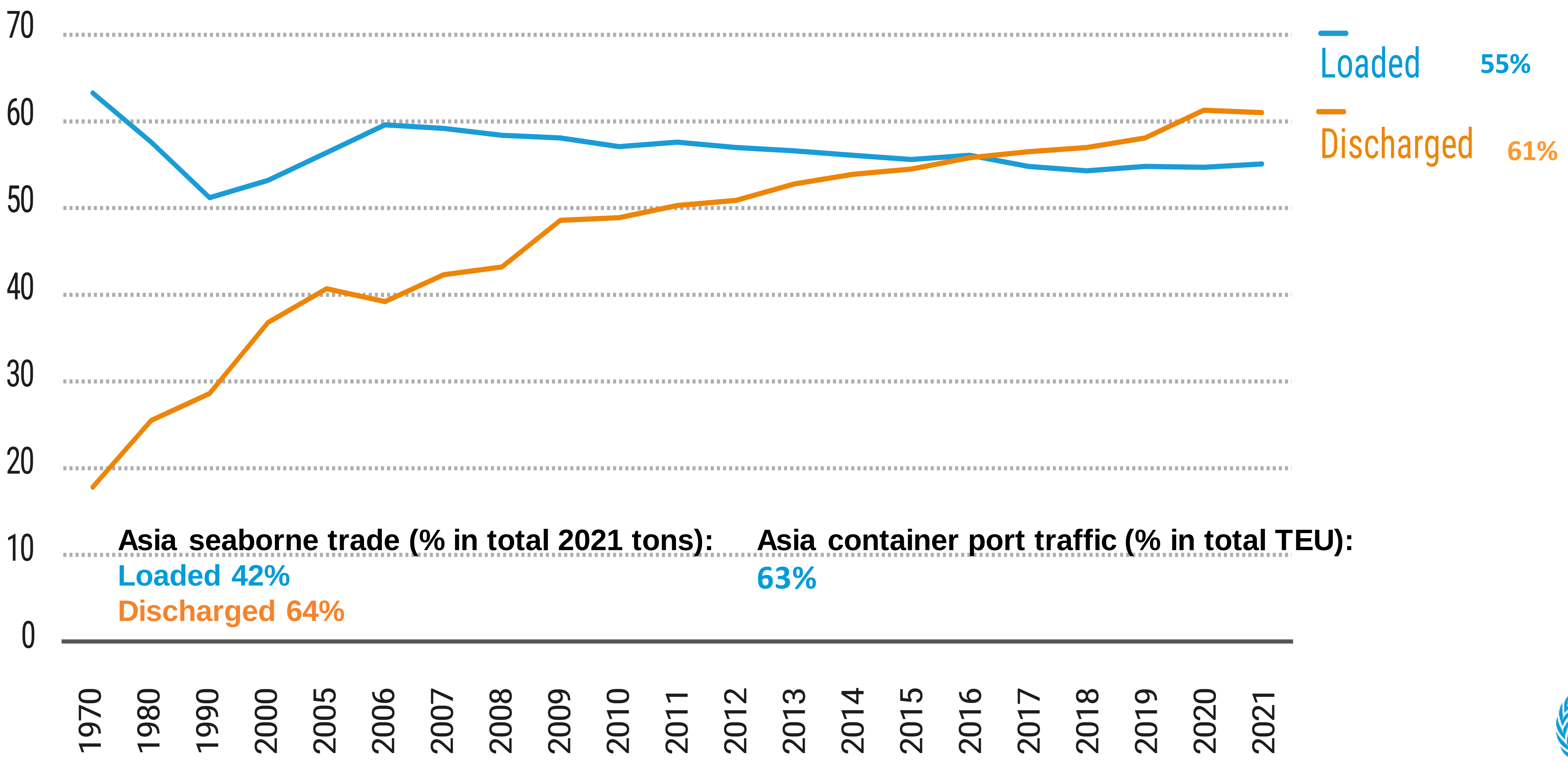
## Participation of developing countries in international maritime trade, selected years (percentage share in total tonnage)

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# Supply

## Maritime transport services

REVIEW OF MARITIME TRANSPORT

2022

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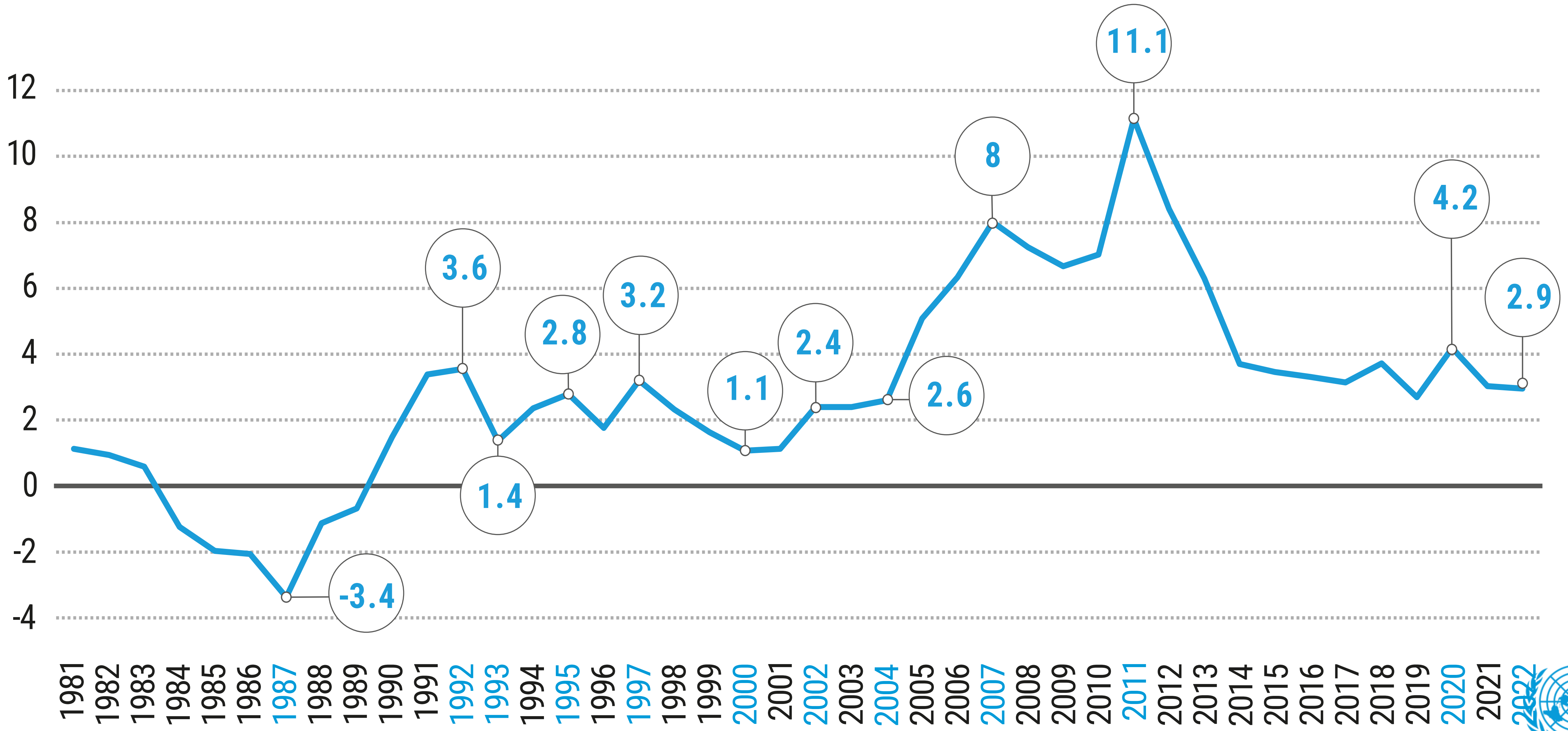
# Annual growth of the world fleet, 1981–2022
# (percentage of dead-weight tonnage)



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# The world’s shipping fleet is ageing

Average age of merchant fleet, 2011−2022


*Source:* UNCTAD calculations, based on data from Clarksons Research.
*Note:* Propelled seagoing vessels of 100 gross tons and above, as of 1 January 2022.

# Markets

## Freight rates and transport costs

REVIEW OF MARITIME TRANSPORT
2022
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# Supply chain crunch 2021-2022

**Pandemic, supply-demand imbalance, Suez Canal incident, war in Ukraine, zero-covid policy in China, strikes**

- Higher shipping costs, lower connectivity, delays, port congestion, labour shortages, equipment shortages, inflation, broken supply chains → Key features of the logjam

- By mid-2021, **rates reached 4X** their pre-pandemic levels

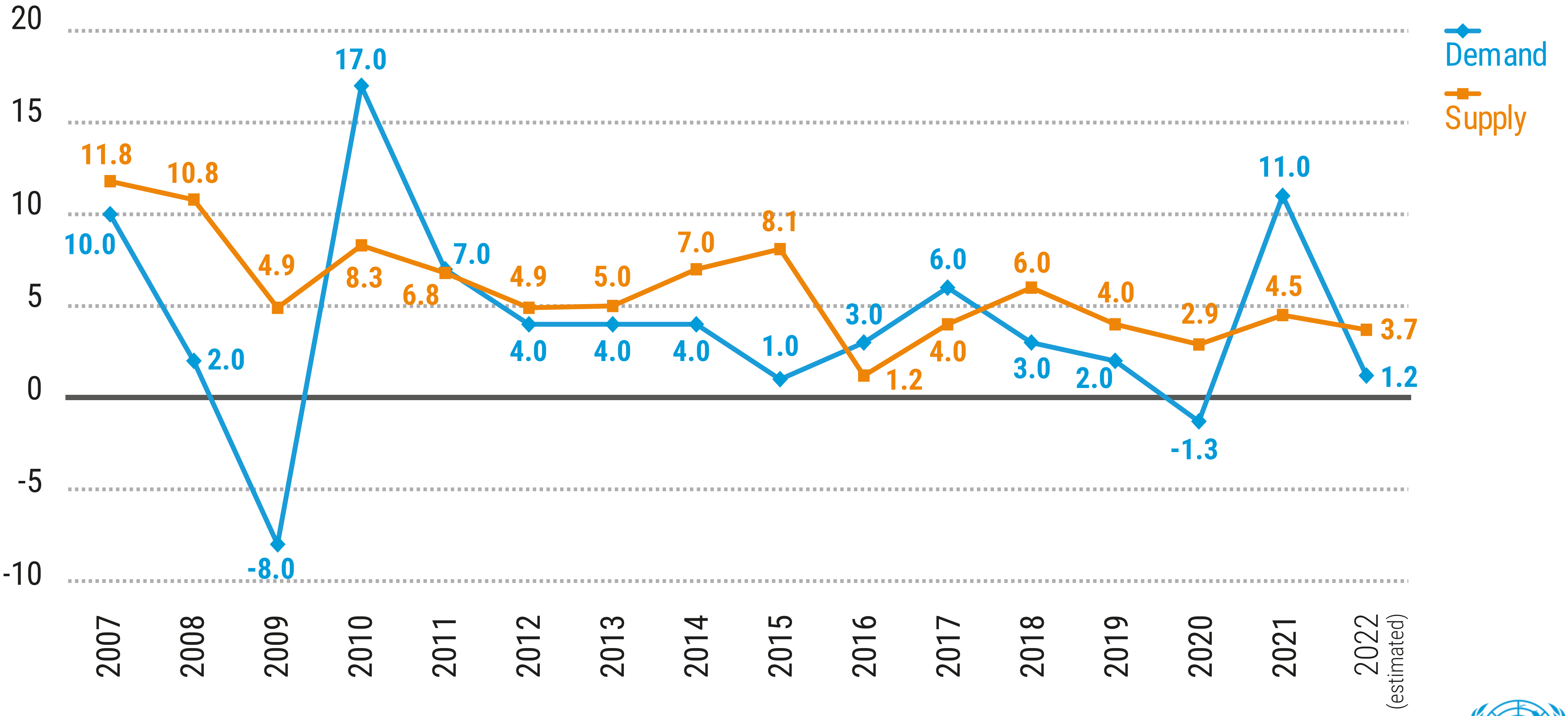
- **Unprecedented port congestion** with container ships spending **20% more time** in ports compared to pre-Covid era

- In July 2022, container ship capacity held up in ports reached **37%** (up from 32% in 2016-2019)

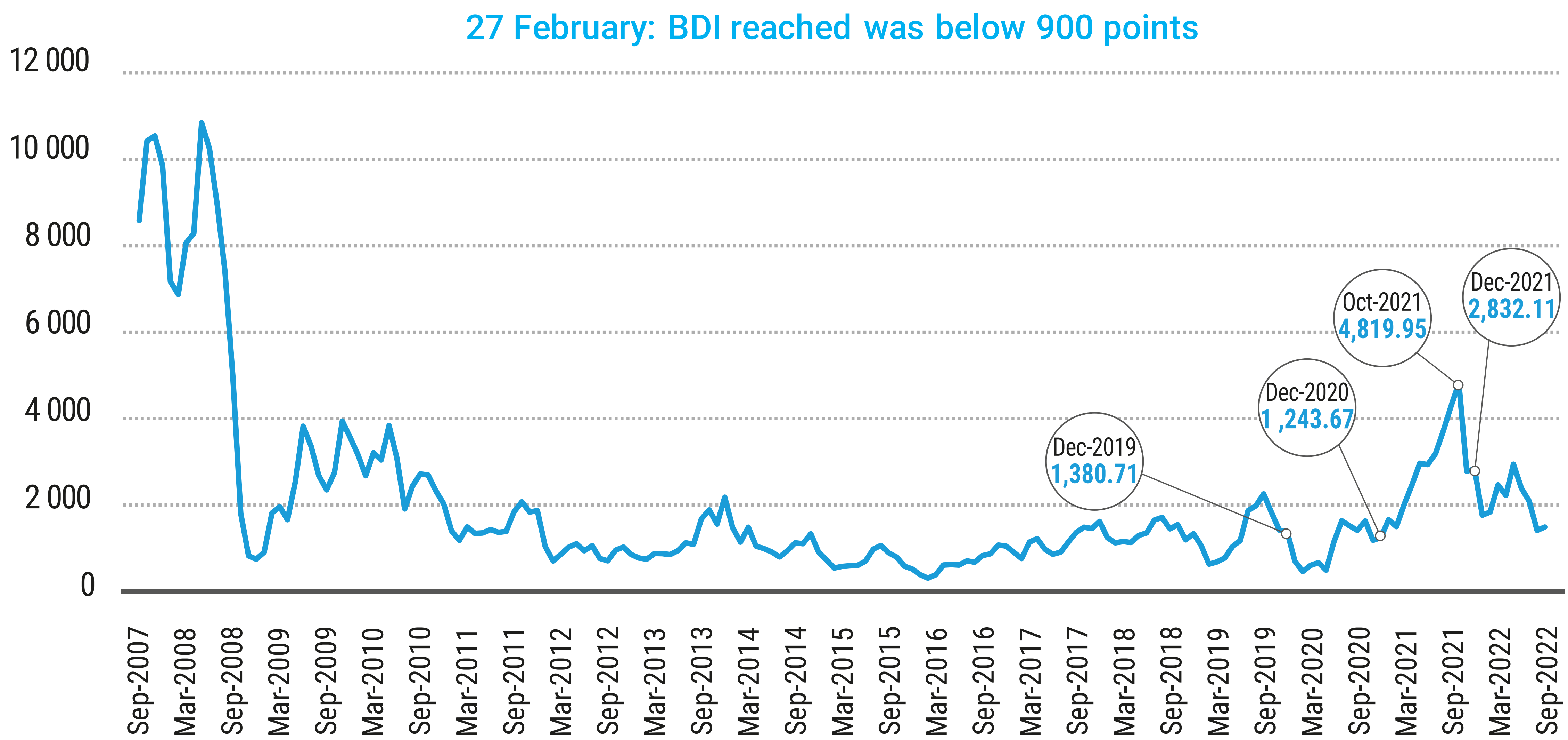
- Carriers seeking more profitability changed their shipping patterns, **stopping calls at certain ports**

- Fall in schedule reliability resulted in losses to shippers **totaling $5-10 billion**

# Growth of demand and supply in container shipping, 2007–2022 (percentage change)



# Baltic Exchange dry index, September 2017–September 2022



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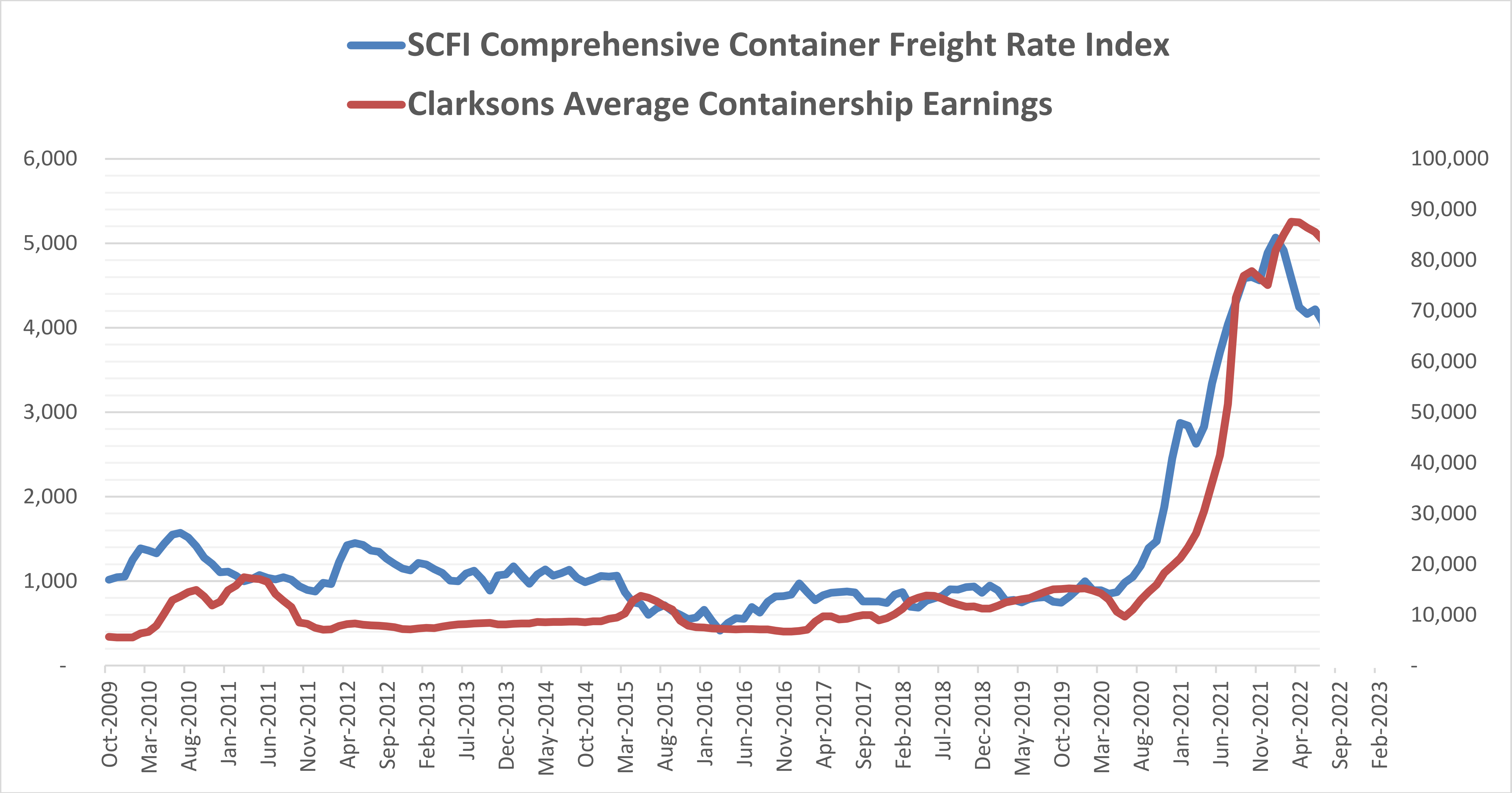



UNCTAD, based on data sourced from Clarksons Research Intelligence Network, Accessed 26 February 2023.

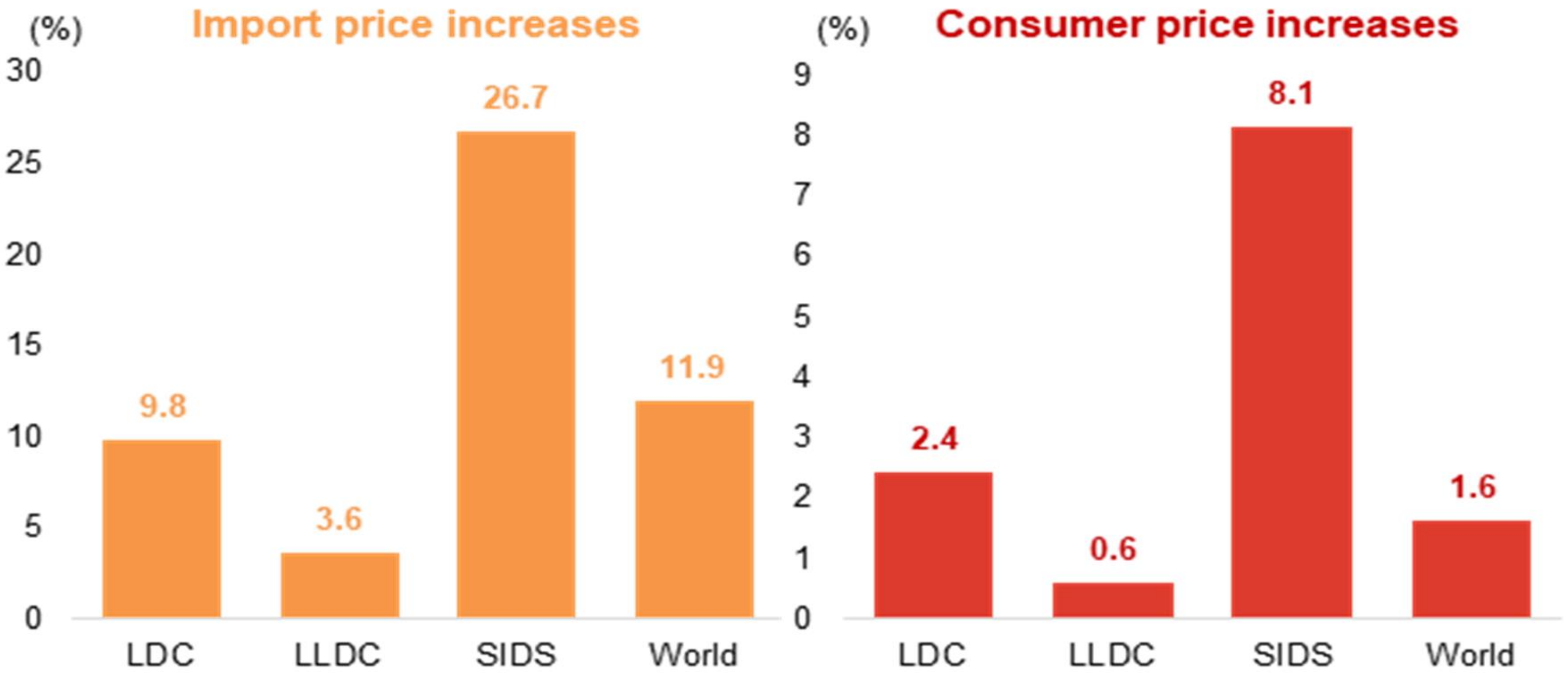
# Important implications for consumer prices and inflation according to UNCTAD analysis

- High container freight rates of 2021–2022 will be passed on to consumers and lead to an additional increase in global consumer prices **of 1.6%. SIDS** hardest hit

- **Higher grain prices and dry bulk freight rates** in early 2022 contribute to **a 1.2 per cent increase in consumer food prices**

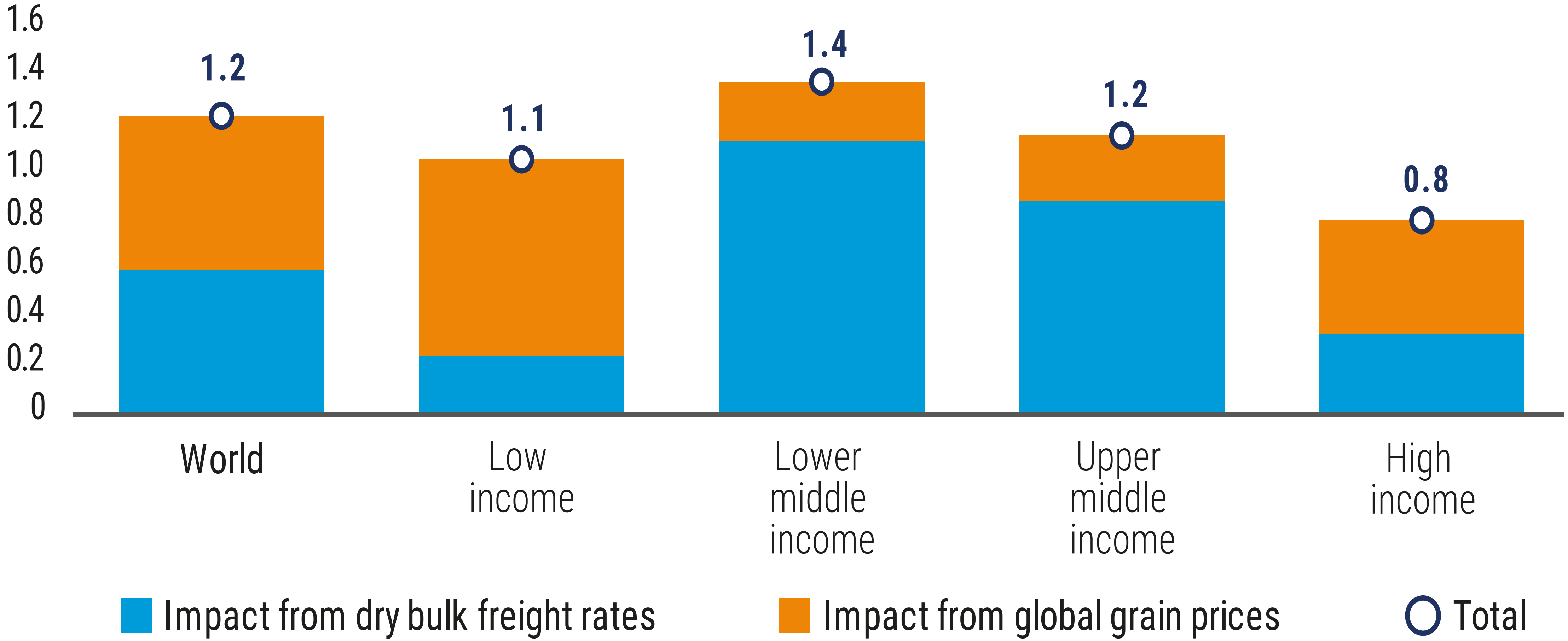
- Strong nexus between shipping costs and headline inflation. **Effect more persistent**

**Simulated impact of the container freight rate surge on import and consumer price levels**




*Source*: UNCTAD (2022), *Sustainable and resilient transport and trade facilitation in times of pandemic and beyond: key challenges and opportunities*.

## Impact of higher dry bulk freight rates and global grain prices on consumer food prices, selected country groups (percentage)



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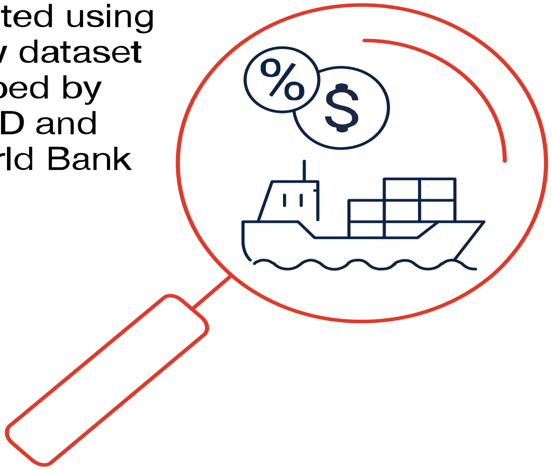
# Simulated impact: improving maritime transport costs

Simulation is conducted using the new dataset developed by UNCTAD and the World Bank

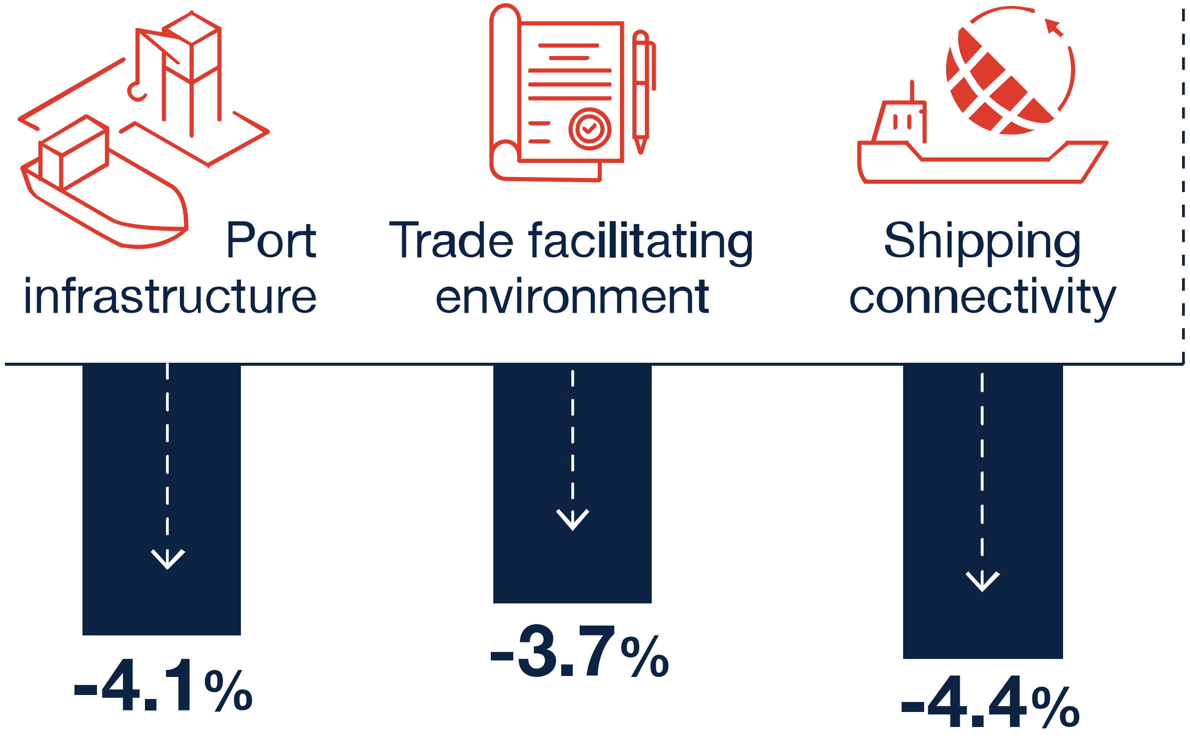


**Simulation assumption:**

Improving structural determinants

**Simulation results:**

Reduction in maritime import transport costs




UNCTAD (2021). *Review of Maritime Transport 2021.*

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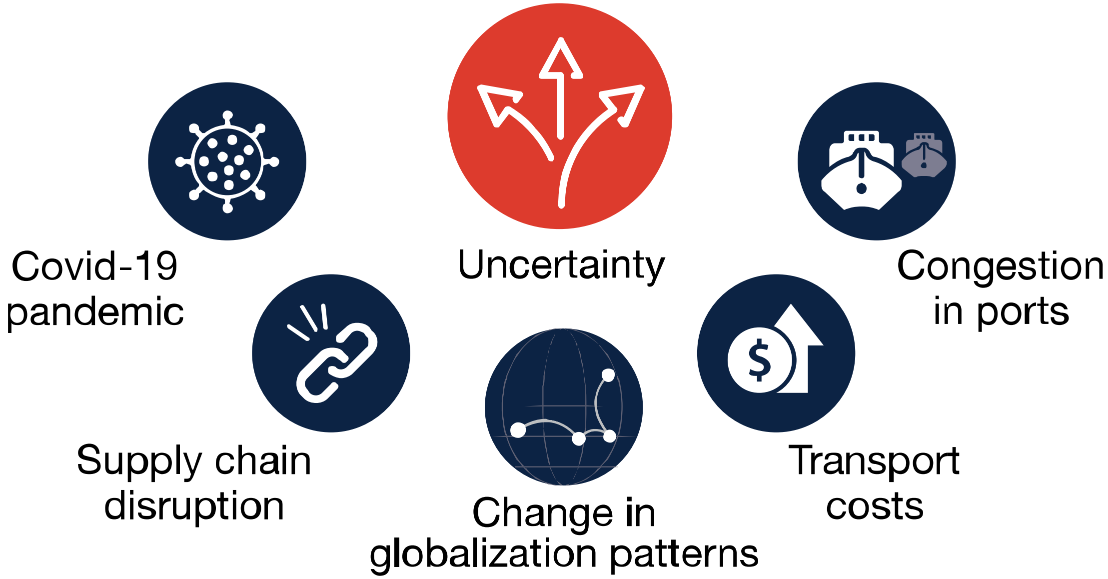
# Outlook

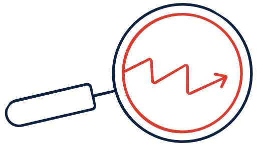
# UNCTAD projections

**1.4% projected growth for 2022. Risks and uncertainty remain**




**Geopolitics, energy transition, climate change, …**

**Slow down over 2023-2027 (2.1%): Below the average of the past three decades (3.3%)**



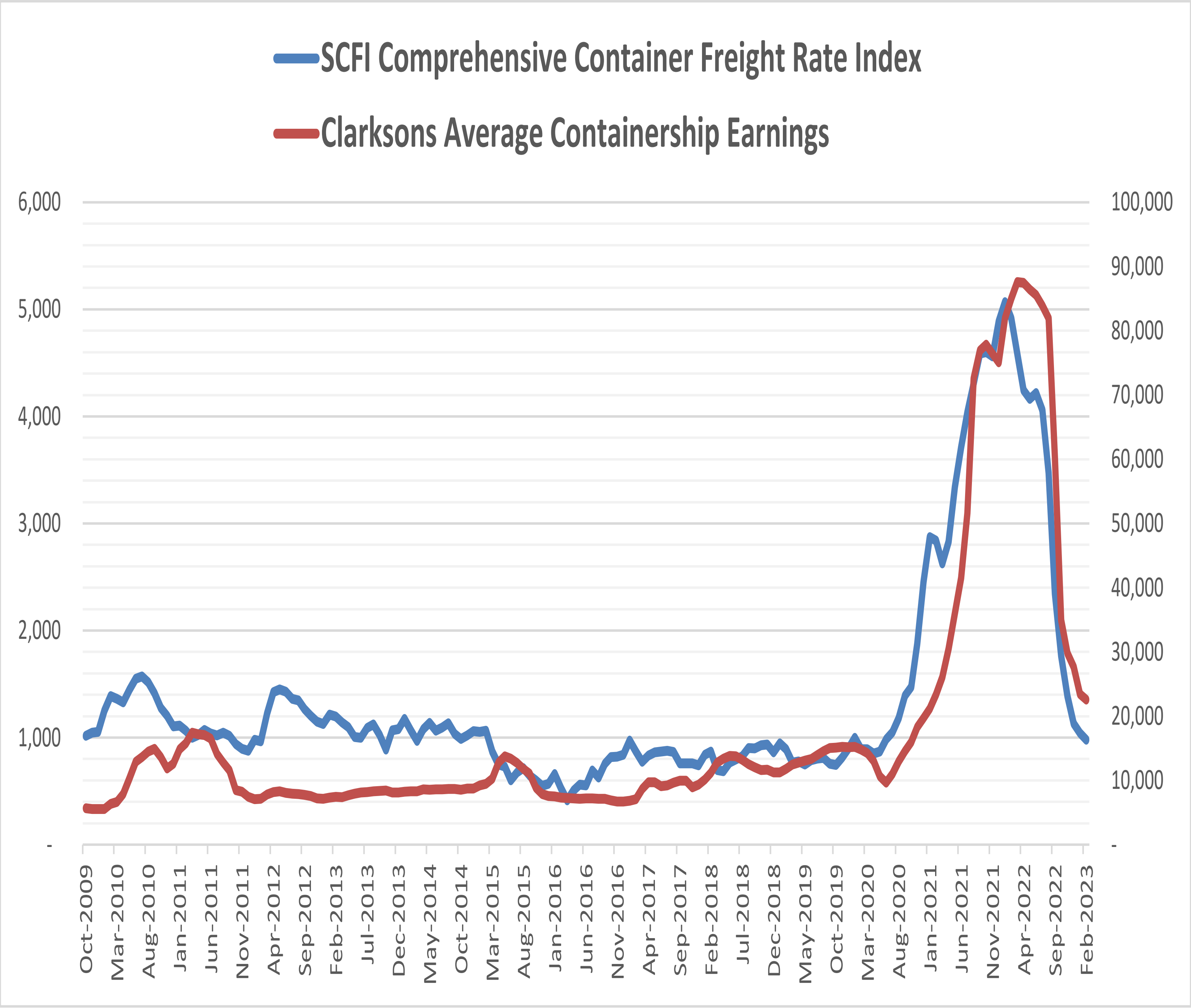
- GDP growth
- Spending on Goods vs. Services
- Stimulus effect fading away
- Inflation & cost-of-living crisis
- Easing of pandemic restrictions
- Trends in China's economy
- War in Ukraine
- Labour strikes

# Freight rates

- Down and normalizing. In late 2022, still elevated compared to the pre-pandemic level.

- Normalization in February but risks remain including in connection with more disruption e.g.,
    - Strikes
    - war in Ukraine
    - Weather events/climate impact
    - Regulatory changes and related impact on the supply of ship carrying capacity (ship scrapping, retrofitting, sailing speed)

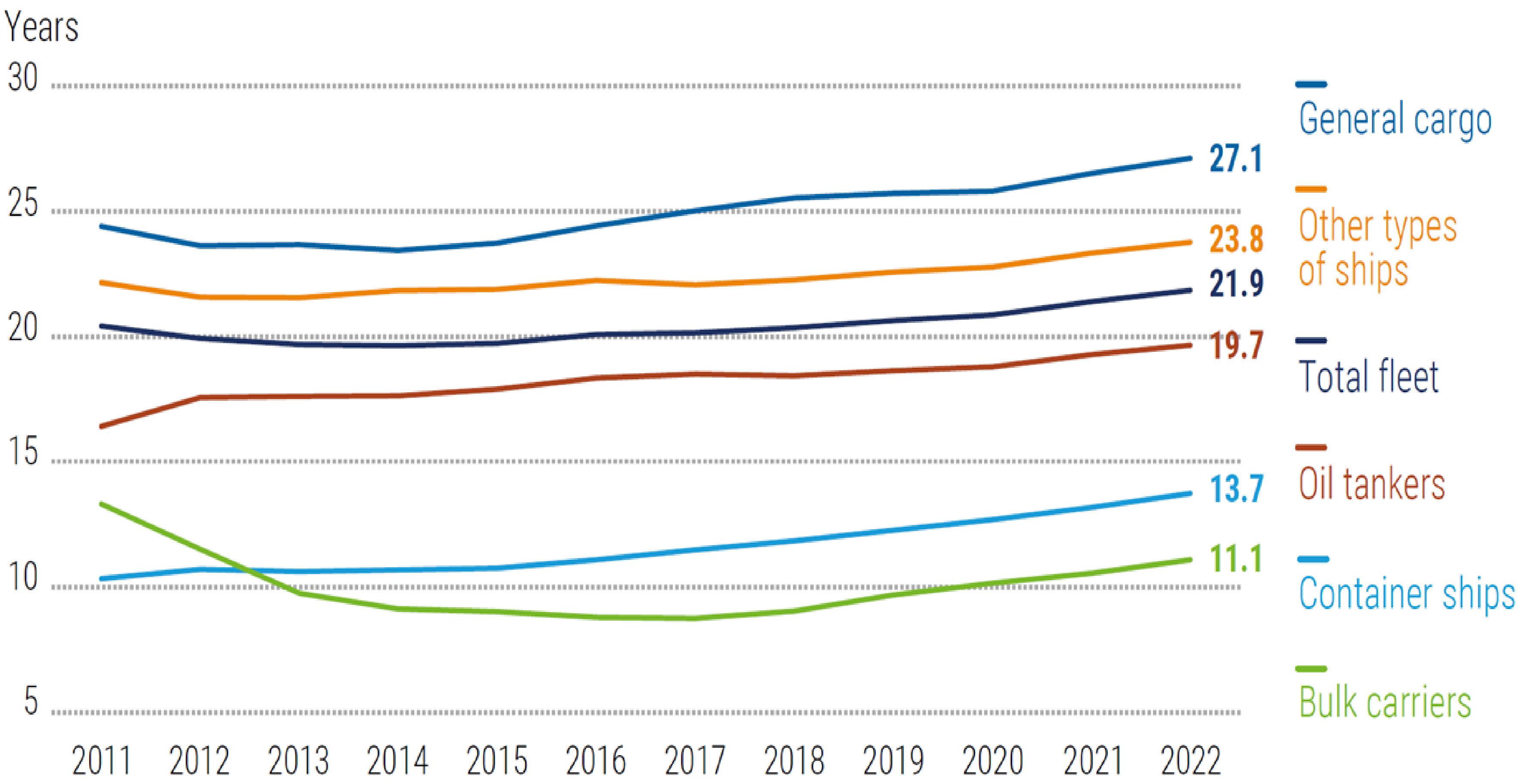
Tanker rates are another story




UNCTAD, based on data from Clarksons Research Intelligence Network, Accessed 26 February 2023.

# Ageing Fleet

Figure 2.2 Average age of merchant fleet, 2011–2022




*Source:* UNCTAD calculations, based on data from Clarksons Research.

*Note:* Propelled seagoing vessels of 100 gross tons and above, as of 1 January 2022.

- Future of globalization: regionalization, fragmentation, decoupling
- E-commerce and e-logistics
- Digitalization
- Decarbonization, climate change adaptation
- Resilience building

# Looking ahead:

❶ Legacies of disruption: some ***short lived*** but others have ***longer-term effects***

❷ Maritime transport and trade will continue to be reshaped by ***evolving trends***

❸ ***Transport costs***, ***energy transition***, ***climate change*** mitigation and adaptation, **digitalization**, and ***geopolitical forces*** are key drivers

❹ ***Resilience and self-sufficiency:*** shortening of supply chains and diversification of suppliers (reshoring, near-shoring); change in the geography of trade, and associated change in fleet and port requirements

# Looking ahead:

❺ Changes in ***production*** AND **consumption patterns** i.e. e-commerce and tangibles versus intangibles

❻ Need to better understand and control ***shipping costs*** in light of the new insights regarding their ***impact on headline inflation***

❼ A ***clear regulatory framework*** is required to promote ***investment in low-carbon shipping*** and ensure sufficient supply capacity

**Vulnerable/structurally weak/small economies require special attention**

# UNCTAD recommends, among other actions:

Supporting economic **growth**

Enabling **trade,** monitoring rates & controlling **costs**

Tackling infrastructure and services **constraints**

Transitioning to **clean energy** and a **low carbon** future

Promoting **preparedness** and **resilience** building

- Demand
- Supply
- Markets

230 maritime country profiles:
Http://stats.unctad.org/maritime

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## MARITIME PROFILE: THAILAND

### GENERAL INFORMATION FOR 2021

**Population**
71.601 Millions

**GDP**
504 491 Millions current US$

**Merchandise trade**[1]
538 888 Millions current US$

**Land area**[2]
(o) 510 890 Km²

**GDP growth**
0.95 %

Basic data

**Transport services trade**[3]
90 003 Millions current US$

### MARITIME KEY FIGURES FOR 2021

**Coast/area ratio**[2]
13.8 m/km²

**Ship building**[4]
0.000 GT

**Ship recycling**[4]
0.000 GT

**Fleet - National flag**[5]
6 059 Thousands DWT

**Fleet - National flag**[5]
846 ships

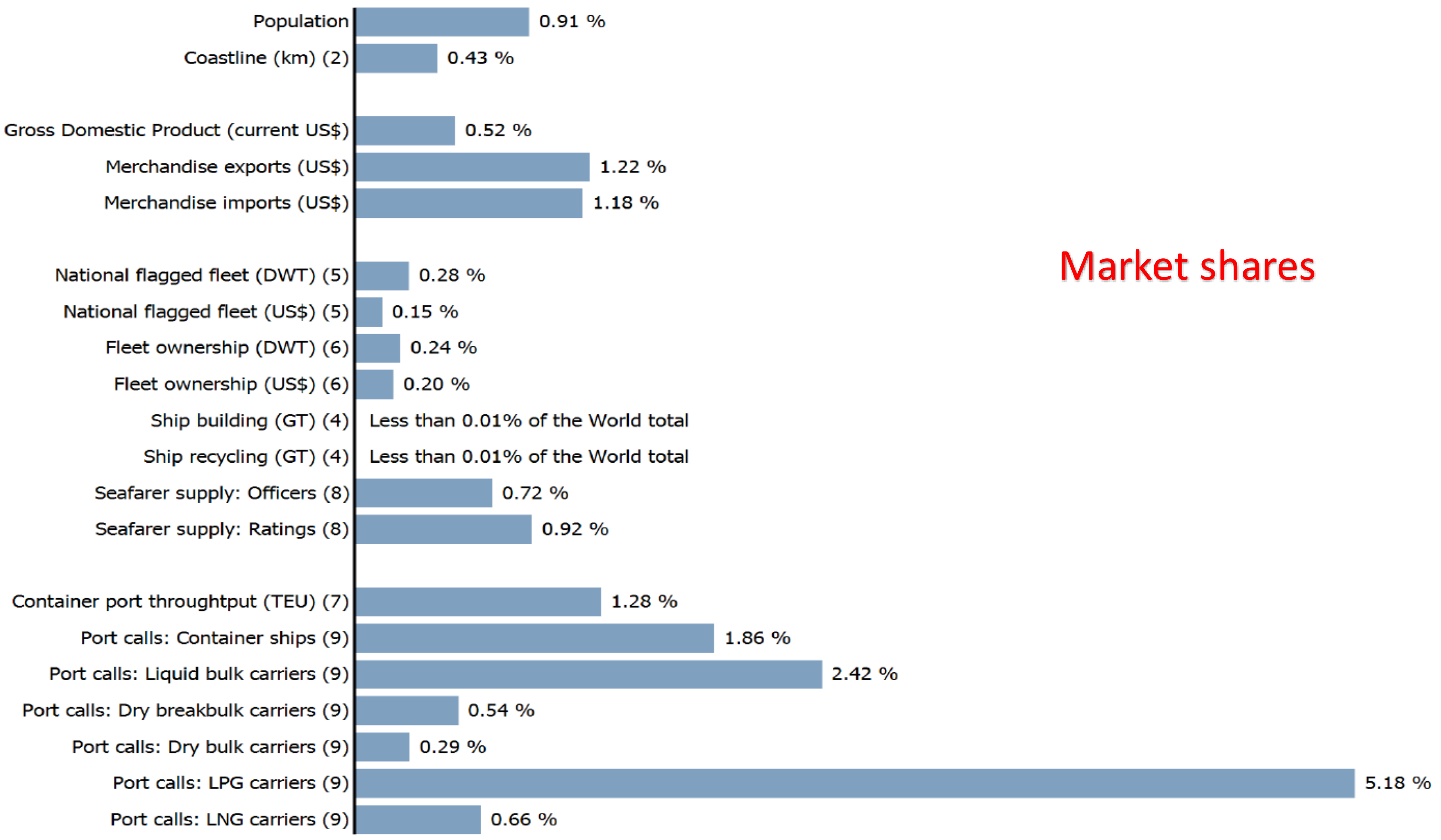
**Fleet - Ownership**[6]
5 049 Thousands DWT

**Container port throughput**[7]
10 213 905 TEU

**Number of seafarers**[8]
(l) 15 682

**Number of port calls**[9]
29 505

# WORLD SHARES FOR 2021




Market shares

# THAILAND

## INTERNATIONAL MERCHANDISE TRADE

**Total merchandise trade**

| *(millions of US$)* | 2005 | 2010 | 2015 | 2021 |
|---|---|---|---|---|
| Merchandise exports | 110 936 | 193 306 | 214 310 | 272 006 |
| Merchandise imports | 118 178 | 182 921 | 202 653 | 266 882 |
| Merchandise trade balance | -7 241 | 10 385 | 11 657 | 5 124 |

**+17.4 %**

Merchandise exports growth rate in 2021

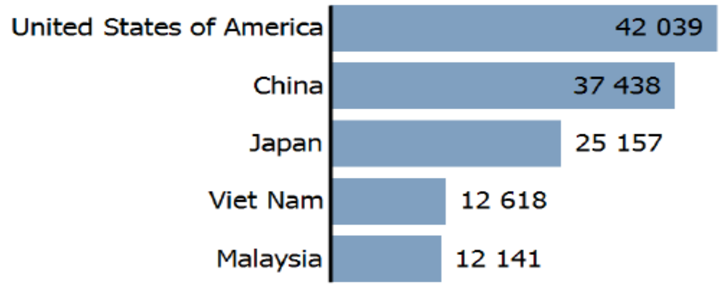
**Export structure by product group in 2021**

*(as % of total exports)*

Merchandize trade


**Top 5 partners in 2021**

*(exports, millions of US$)*




## INTERNATIONAL TRADE IN TRANSPORT SERVICES

Transport services

**Services exports by main category**[10]

| *(as % of total services)* | 2005 | 2010 | 2015 | 2021 |
|---|---|---|---|---|
| Transport | 23.2 | 17.2 | 9.9 | 17.6 |
| Travel | 48.1 | 58.5 | 71.0 | 19.6 |
| Other services | 28.7 | 24.2 | 19.1 | 62.7 |

**+29.6 %**

Transport services exports growth rate in 2021

**Total trade in transport services**[10]

| *(millions of US$)* | 2005 | 2010 | 2015 | 2021 |
|---|---|---|---|---|
| Transport services exports | 4 626 | 5 914 | 5 743 | 4 322 |
| Transport services imports | 14 439 | 18 858 | 15 662 | 38 445 |
| Transport services trade balance | -9 813 | -12 944 | -9 919 | -34 123 |

# NATIONAL FLEET

## National fleet

### Carrying capacity by type of ship[5]

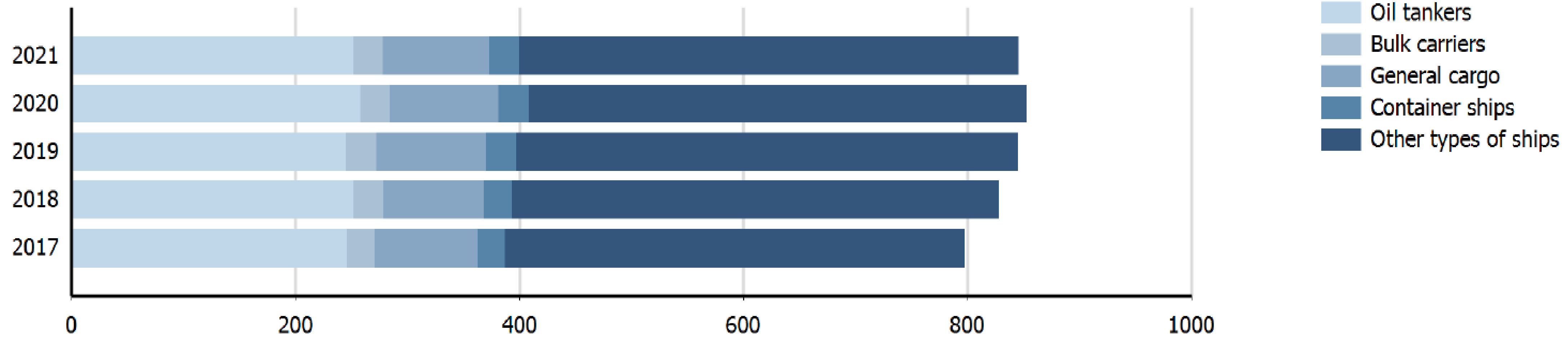
| *(Thousands DWT)* | 2005 | 2010 | 2015 | 2021 |
|---|---|---|---|---|
| Total fleet | 4 382.0 | 3 746.8 | 5 366.3 | 6 058.9 |
| Oil tankers | 619.0 | 1 037.8 | 2 823.1 | 3 461.0 |
| Bulk carriers | 1 562.0 | 882.6 | 1 333.4 | 1 119.8 |
| General cargo | 1 805.0 | 1 300.2 | 436.3 | 352.7 |
| Container ships | 274.0 | 313.7 | 268.2 | 336.8 |
| Other types of ships | 122.0 | 212.4 | 505.4 | 788.7 |

**-9.6 %**

Fleet growth rate in 2021

### Fleet by type of ship[5]

*(Number of ships)*



# THAILAND

## LINER SHIPPING CONNECTIVITY

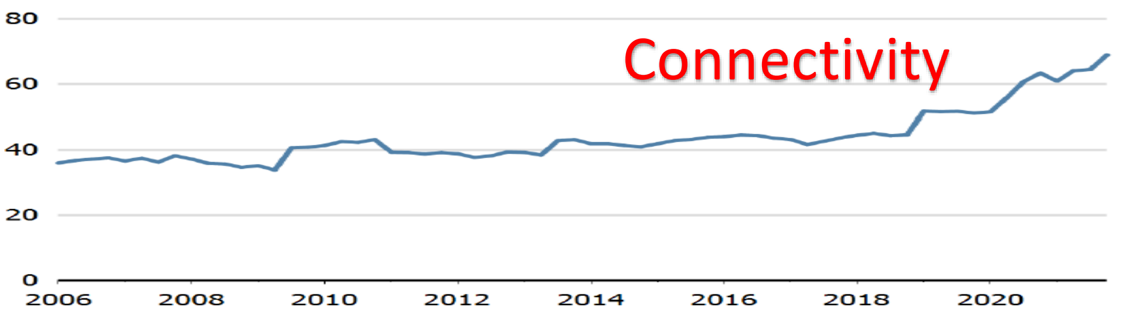
**Bilateral connectivity index - Top 10 partners in Q1 2021[11]**

*Can only take values between 0 (minimum) and 1 (maximum)*

| | |
|---|---|
| China | 0.446 |
| Singapore | 0.438 |
| Korea, Republic of | 0.422 |
| Malaysia | 0.419 |
| Viet Nam | 0.416 |
| United States of America | 0.395 |
| China, Hong Kong SAR | 0.390 |
| Belgium | 0.377 |
| United Kingdom | 0.375 |
| France | 0.373 |

**Liner shipping connectivity index[11]**

*Maximum 2006=100 for China*



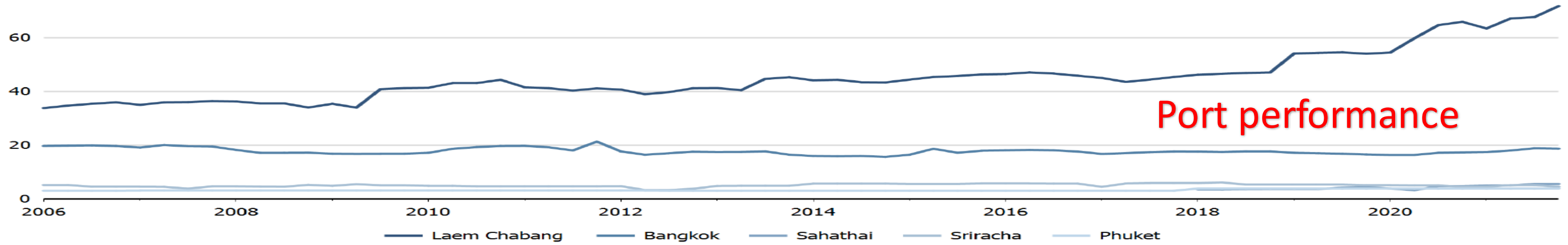

## PORT CALLS AND PERFORMANCE

**Port calls, time spent in ports, vessel age and size in 2021[9]**

| | Number of arrivals | Median time in port (days) | Avg age of vessels | Avg size (GT) of vessels | Avg cargo carrying capacity (DWT) per vessel | Avg container carrying capacity (TEU) per container ship | Maximum size (GT) of vessels |
|---|---|---|---|---|---|---|---|
| All ships | 29 505 | 0.72 | 17 | 11 989 | 11 599 | 2 059 | 214 286 |
| Liquid bulk carriers | 12 551 | 0.65 | 17 | 6 745 | 11 478 | .. | 167 578 |
| Liquefied petroleum gas carriers | 3 027 | 0.48 | 31 | 2 370 | 2 480 | .. | 50 676 |
| Liquefied natural gas carriers | 89 | 1.15 | 12 | 116 037 | 92 643 | .. | 163 922 |
| Dry bulk carriers | 818 | 3.36 | 12 | 24 106 | 41 209 | .. | 107 720 |
| Dry breakbulk carriers | 2 351 | 2.22 | 16 | 7 845 | 10 347 | .. | 54 567 |
| Roll-on/ roll-off ships | 844 | .. | 16 | 36 694 | 12 350 | .. | 76 420 |
| Container ships | 8 321 | 0.75 | 12 | 21 703 | .. | 2 059 | 214 286 |
| Passenger ships | 1 504 | .. | 30 | 1 240 | .. | .. | 7 003 |

**Port liner shipping connectivity index - Top 5 ports in 2021[11]**

*Maximum 2006=100 for China, Hong Kong SAR*




# Thank you!

**Download the report:**

http://unctad.org/rmt

**Access our data:**

http://stats.unctad.org/Maritime