Challenges Facing Trade and Supply Chains: A Maritime Transport Perspective

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Several short-term issues being addressed

A crisis does not create a new situation, it accelerates processes already taking place by exposing their weaknesses

- The continuity of shipping and port operations
- Trade of essential goods, crossborder and transit operations
- Paperless documentation and processes

Adapted from UNCTAD (2020) Policy Brief No. 79, April
Challenges Facing Maritime Shipping

1. Reconsidering derived demand
2. Massification versus atomization
3. Digitalization and automation
4. Servicing the hinterland
## Containerization Growth Factors

<table>
<thead>
<tr>
<th>Derived</th>
<th>Growth</th>
<th>Decline</th>
</tr>
</thead>
</table>
| ![Image](image1) ![Image](image2) | • Economic and income growth  
• Outsourcing and offshoring  
• Complex supply chains | • Economic recessions  
• Trade protectionism  
• Automation |

<table>
<thead>
<tr>
<th>Substitution</th>
<th>Growth</th>
<th>Decline</th>
</tr>
</thead>
</table>
| ![Image](image3) ![Image](image4) | • Capture of bulk and break-bulk markets  
• New niches (commodities and cold chain) | • Peak substitution  
• Composition of container fleet |

<table>
<thead>
<tr>
<th>Incidental</th>
<th>Growth</th>
<th>Decline</th>
</tr>
</thead>
</table>
| ![Image](image5) ![Image](image6) | • Trade imbalances  
• Repositioning of empty containers | • Trade protectionism  
• Automation |

<table>
<thead>
<tr>
<th>Induced</th>
<th>Growth</th>
<th>Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7" alt="Image" /> <img src="image8" alt="Image" /></td>
<td>• Transshipment (hubbing, relay and intersection)</td>
<td>• Changes in shipping networks (more direct services)</td>
</tr>
</tbody>
</table>
RWI/ISL Container Throughput Index, 2007-2020 (2015 = 100)

May 2020 (-7.4%)
Feb 2020 (-5.6%)
Monthly Container Traffic at the Port of Los Angeles, 1995-2020

January: -5%
February: -23%
March: -31%
April: -6%
May: -30%
June: -10%
Rate of Blank Sailings, Asia – United States, and FBX Index

- Lower container volumes
- Blank sailings
- Larger container ships
- Compression of operations
- More congestion at ports
- Footprint constraints
- Transshipment hubs
- New terminal facility
Opportunities and Challenges in Containerized Maritime Shipping

**Demand Push International Trade (Volume)**
- Niche markets.
- Additional container volumes.

**Shipping Network (Capacity)**
- Consolidation of existing routes (Suez and Panama).
- Transshipment, feeders and short sea shipping.

**Port Operations (Throughput)**
- Adding equipment and yard space.
- Automation.

**Hinterland (Accessibility)**
- Corridors, logistical zones and inland ports.

**Opportunities**
- Berth planning.
- Electrification of yard equipment.
- Environmentally differentiated port pricing.
- Locations (vmt), processes and packaging.

**Challenges**
- Imbalanced flows.
- Reshoring and technological changes in manufacturing.
- Less frequency and ports of call.
- Rationalization and alliances.

**Decarbonization**
- Modal shift (rail and waterways). Freight platforms / ITS. City logistics. Road tolls.

- Duplication of infrastructure.
- Compression of throughput.

- Zero-sum game competition.
- Congestion and externalities.
Thank you for your attention!

For more information: https://transportgeography.org/