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Developments in International Seaborne Trade:
An overview

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Key trends in international transport and implications for development:

Developments in international seaborne trade: an overview

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Outline

I. Derived demand

II. Seaborne trade: some figures and trends

III. Some issues to monitor
Shipping is the lifeblood of world trade and much more...

Source: Simon Bennett, ICS, presentation at UNCTAD Ad Hoc Expert Meeting 2011

Key drivers

Economic growth and merchandise trade
International seaborne trade

Some figures

Seaborne trade by commodity sector

**Tanker (liquid bulks):** Crude oil, refined petroleum, gas

**Dry Bulk:** Iron ore, coal, grain, phosphate/rock, bauxite/alumina, metals and minerals

**Containerized:** Manufactures, intermediate goods

**Other:** Break-bulk, Ro-Ro
Some issues to consider/monitor
Some key issues currently affecting shipping and seaborne trade, include:

- Uncertainty and downside risks
- Supply-demand imbalance
- Piracy
- New routes/infrastructure developments: Panama Canal 2015
- Northern sea routes (NWP)
- Geopolitical developments/political unrest
- Natural disasters/disruptions

But, the interconnected issues of energy and climate change call for particular attention → have the potential to deeply transform shipping and trade

“Globalization, climate change, and escalating energy costs are a strategic nightmare for shipping companies and they all have one thing in common – fossil fuels.” Martin Stopford, Clarksons

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Maritime transport and the climate change debate

Two sides of the “climate change coin”: causes (mitigation) – effects (adaptation)

Mitigation

- International shipping estimated to contribute about 3% of the global CO2 emissions. (IMO GHG Study, 2009) – Set to grow by a factor of 3 by 2050
- Oil dependency! High carbon intensity!
- Yet, emissions from international shipping not covered by Kyoto Protocol: negotiations on future emissions regime underway at IMO and UNFCCC
- IMO: package of technical/operational measures adopted in July 2011 (not by consensus) - amendments to MARPOL, Annex VI; In force January 2013
- Market-based instruments: way forward not uncontroversial
Impacts and adaptation

- Much of international debate/policy action focuses on climate change mitigation
- Relatively little focus on study of impacts and development of adaptation policies/actions
- Climate change/extreme events likely to have direct (infrastructure, equipment, operations, networks, etc.) and indirect impacts (change in demand) on maritime transport and related infrastructure (ports!!)
- Open new arctic sea-lanes due to polar ice melting
- Require a better understanding of impacts (which vary by type of extreme event, region, environment, sector) and assessment of vulnerabilities (ports particularly exposed and vulnerable — location, asset value, strategic value)
- Design and adoption of adequate and effective adaptive measures are key

The special case of ports

OECD study (Nicholls et al, 2007)

✓ Exposure of 136 port megacities to coastal flooding (population/assets) in 2005
✓ Estimated asset exposure: **USD 3 trillion**

Allianz/WWF study (Lenton et al, 2009) [http://knowledge.allianz.com](http://knowledge.allianz.com)

✓ Assuming SLR of 0.5 m by 2050 (tipping scenario)...
✓ Estimated asset exposure in same 136 port megacities: **USD 28 trillion**
Top 20 port cities with highest increase in exposed assets under tipping scenario (US$ billion) by 2050

Source: Lenton et al. 2009

Example: The US Gulf Coast

A relative sea level rise of ~1.2 m (4 feet) could permanently inundate more than:

- 2400 miles of roads
- Over 70% of the existing port facilities
- 9% of the railway lines
- 3 airports

In the case of a ~5.4-7 m storm surge:

- More than 50% of interstate and arterial roads
- 98% of port facilities
- 33% of railways
- 22 airports in the US Gulf coast would be affected (CCSP, 2008).
Ex: 2010 Pakistan flood: unusually intense monsoon rains

Summary of key points (1)

✓ Maritime transport is a strategic economic sector, a trade enabler and a driver of globalization

✓ Volumes expanded more than three-folds since 1970s

✓ Growth fueled by containerized trade and major dry bulks (China factor)

✓ Containerized trade accounts for the largest share in value terms (over 50%)

✓ Developing countries contribute larger shares and growth to world GDP and merchandise trade; growth in SS links → multipolar world economy

✓ Seaborne trade patterns are changing with: shifting economic influence, growth in intra-regional trade, deepening in South-South cooperation (investment, trade, finance, mining, energy)
Summary of key points (2)

Challenges:

✓ Economic uncertainty/other downturn?
✓ Trade protectionism; shortage in trade finance
✓ Supply-side pressures and excess ship supply capacity – profitability?
✓ Ability to effectively meet the demands arising from projected growth (infrastructure investment)
✓ Vulnerability to external shocks/natural disasters
✓ Climate change concerns (mitigation and adaptation), growing sustainability imperatives and energy (costs, access and sustainability)
✓ Rising oil prices entail important implications for transport costs and trade

Summary of key points (3)

Opportunities:

✓ Arising in connection with greater South-South cooperation
✓ Diversified sources of supply – enabled by transport and technology
✓ New trading partners/access to new markets (e.g. trade and cooperation deals)
✓ New routes: e.g. Panama Canal 2015, northern sea routes
✓ Move up the value Chain (China/other Asian economies)
✓ Projected growth: population, middle class; development process; boom in dry bulk trade (in 2025)
Summary of key points (4)

Energy and climate change challenge: an opportunity to

✓ Move away from existing unsustainable patterns of production, consumption and transportation

✓ Reduce dependency on finite fossil fuels through inter alia, energy efficiency, technology, operational measures and economic instruments

✓ Keep down transport costs as rising oil prices can have significant impact on freight costs (Oil Prices and Maritime Freight Rates: An Empirical Investigation (UNCTAD/DTL/TLB/2009/2).

✓ Build the resilience to climate change-induced disruptions and preserve the integrity of transport infrastructure and systems through adaptation action – relevant to all countries developed and developing alike in view, in particular, of the global interconnectedness and interdependency

Summary of key points (5)

✓ Developing countries have an advantage: as they embark on the development path, climate change considerations could be incorporated at early stages of the planning and design process of transport infrastructure

→ Meet sustainability targets while reducing retro-fitting and maintenance costs

✓ Action (energy efficiency/green energy, climate change mitigation and adaptation) requires, among other things: financial resources and investments, technology, innovation, information, data, cooperation, ... while not undermining growth

Timely action is key!

Taking action now = good returns on investment in the long run
References and additional information

- See www.unctad.org/ttl/legal for information/documentation/presentations re:
  - UNCTAD Expert Meeting 2009 Summary of the proceedings (UNCTAD/DTL/LB/2009/1)
  - UNECE-UNCTAD Workshop 2010 Background note by UNECE and UNCTAD secretariats
  - ECE/TRANS/WP.5/2010/3
  - UNCTAD Ad Hoc Expert Meeting 2011 Main outcomes and Summary of Discussions
  - (UNCTAD/DTL/LB/2011/3)
  - On UNECE Expert Group on CC Impacts and Adaptation for International Transport
    - Networks, see http://www.unece.org/trans/main/wp5/wp5_ge3_02.html
Thank you for your attention

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