

Agenda

Advancing economics in business

Staying ahead of the game: measuring maritime competitiveness

Ensuring the success of domestic companies that are competing in an increasingly globalised environment is often a key priority for governments and policymakers. But how can the competitiveness of a nation be assessed within a particular industry in order to identify and prioritise policy responses? Oxera has developed a framework to answer this question in the context of the UK maritime sector

In a globalised economy, competitiveness and location decisions regarding economic activity are an important consideration for governments and policymakers, as vibrant and growing industries remain crucial for delivering sustained economic prosperity.

Based on a study for the UK Department for Transport (DfT), this article considers a framework to assess an industry's competitiveness, based on concepts from competition economics.

It is important to draw a distinction between competition between firms (which is within the domain of competition economics) and the competitiveness of different nations as a location for firms' operations (which is within the bounds of state aid rules).

Foundations of Oxera's framework

In essence, the assessment of competitiveness is concerned with what activities could be relocated to other countries, and what factors determine whether they are relocated. When assessing the international competitiveness of an industry, it is important to:

- define the relevant market (i.e. define the products, services or operations that could potentially be (re)located in other countries);
- identify the key drivers of international competition within the relevant market;
- consider the extent to which these key drivers are common to all countries (since some drivers might affect the performance of the industry overall but not the position of one country relative to its rivals).

Many of the techniques required to undertake such an assessment are drawn from competition economics, although some (such as the regulatory and policy context) are specific to the concept of competitiveness.

The framework consists of an assessment of five core market characteristics.

- **Product characteristics:** the availability of substitutes, and the ease and cost of switching, can broaden the definition of a market. If other products can be included in the product market, the behaviour and developments in these wider markets will also be relevant.
- **Geographic factors:** these define the area in which the product can be bought or sold. They are relevant for determining which other market players are active or can access the market—and therefore whether incumbent businesses have an advantage—and what scope there is for challengers to enter the market. In the assessment of competitiveness, they can help to identify the extent to which a nation may have a 'natural' competitive advantage.
- **Supply responsiveness:** this includes the speed at which capacity can be expanded to respond to changes in demand, or adapt to incorporate new technologies. Physical and financial capital intensity of an activity can provide a barrier to entry or to expansion, particularly if the costs are irrecoverable.
- **Regulatory and policy context:** administrative and regulatory requirements vary across countries, as do national priorities—and therefore also taxes, subsidies and other policy tools. If the costs of compliance (in terms of both time and money) vary between nations,

this can have a material impact on the costs faced by businesses, and therefore also location decisions.

- **Demand-side drivers:** the demand for the total market, as well as changes of preferences within it, can play an important role in the dynamics of supply and demand. The level and composition of demand can change the levels of risk and return, and therefore investment or entry decisions, as well as overall performance.

When considered together with the performance of a nation within a market, these core characteristics can provide a consistent way to assess the relative competitiveness of nations within an industry, and recommendations for policymakers to support and improve this national competitiveness.

Assessing the competitiveness of the ports sector

Ports and port services were one of the sub-sectors considered in Oxera’s framework for the DfT. Services provided at ports can be broad, and traditionally include sea-based services, such as pilotage, towage and vessel traffic management; terminal services, such as cargo/ passenger handling and storage; and repair services.

Product characteristics

The services required by different types of ship vary, and many ports therefore need to specialise. Bulk cargo, containers and liquefied natural gas all require different water depth, docking and unloading services. Cruise ships or passenger transport ships also require local amenities and onward transport. This article focuses on the two largest forms of freight transport: bulk cargo and containers.

While alternative transport routes can provide substitutes for ports and port services, the OECD notes that substitution from maritime to other modes is uncommon in freight, especially in terms of heavy or bulky goods.¹ Indeed, relatively low use of the Eurotunnel for bulk cargoes suggests that there is little international competition between ports in the UK and elsewhere in serving the UK market for bulk cargoes.

Geographic factors

Port services can serve inland markets (‘hinterland markets’) by connecting with inland transport infrastructure; or ports can act as an intermediate destination (‘transshipment’) to allow, for example, a transfer from a large ship to a smaller ship. Whether a port can operate in this way may be determined by, among other factors, geographical features or local transport infrastructure and connection to other modes. These factors also drive the resilience of the connections into a port and between the port and its hinterland, which may lead to costs associated

with the uncertainty of a connection. This is a key driver of port choice and therefore of the port’s competitiveness.

For bulk cargoes, ports can have a geographic market of as little as 30 miles.² Diversion of cargoes to European ports before onward travel to the UK, or vice versa, could result in significant additional transport costs. As bulk cargoes generally have a low value relative to their weight, it is unlikely that UK ports will compete directly with European ports for the shipment of bulk cargoes serving either the hinterland market or the transshipment market.

For container traffic, analysis by the European Commission suggests that the UK and Ireland are considered a separate market to Northern Europe and the Mediterranean in terms of serving the hinterland market.³ The transshipment market for containers allows ports to compete within or across countries—although ports need not compete directly with neighbouring ports, as a hub port could facilitate transshipment to smaller ships that can distribute cargo around the region. Figure 1 summarises the interaction between cargo types and geographic markets in the UK.

The assessment of international competition would therefore be restricted to transshipment of containers, and key competitor countries for this market are likely to be in Northern Europe.

Supply responsiveness

Ports may need to expand to meet increasing demand, or to invest to be able to adapt to changes in the shipping fleet. The building or expansion of port terminals can cost upwards of £100m.⁴ The additional costs of supporting

Figure 1 Competitiveness of market segments

	Bulk cargoes	Containers
Hinterland market	Re-routing bulk via the UK for Northern European destinations, or vice versa, would add significant cost: the UK is unlikely to compete with Northern European ports	The geographic market is the UK and Ireland: the UK is therefore unlikely to compete directly with Northern European ports
Transshipment market	Re-routing bulk via the UK for Northern European destinations, or vice versa, would add significant cost: the UK is unlikely to compete with Northern European ports	The UK competes with Northern Europe

Source: Oxera.

infrastructure, such as dredging and constructing access roads and quays, can present a barrier to entry for prospective entrants. The lead time for building or expanding infrastructure can also be several years. Other barriers to entry include constraints on land, including planning permission; the port's proximity and connection to markets; and natural constraints such as water depth.

Port services are capacity- and capital-intensive. Given the time and cost required in constructing or expanding a port, these services exhibit a low degree of supply responsiveness, although other auxiliary services might be more responsive. Nations with strong ports are likely to benefit from the inertia of their previous performance in the short to medium term, with successful and competitive ports remaining so, at least where there is still excess capacity available to meet demand.

Within the transshipment market, the capacity of an individual port is an important determinant of a country's attractiveness as a hub. For example, the capacity of Felixstowe, the UK's largest container port, is 40–60% that of its largest competitors in Northern Europe, which may limit the competitiveness of UK ports in serving the Northern European transshipment market.

Regulatory and policy context

The planning process is an important component of the regulatory landscape due to its impact on the development of new and existing ports. In a 2010 study on UK infrastructure markets, the UK Office of Fair Trading noted that, in the ports sector, expansion is usually a more viable supply response than entry, citing the lack of suitable sites, high capital investment costs and high regulatory and planning costs.⁵ The DfT's National Policy Statement for Ports currently forms the basis for decision-making on port development consent, establishing a high-level framework for assessing the need for new capacity and the case for particular developments.⁶ This Statement and its predecessor replace the need for multiple planning consents.

The European Commission is currently considering a regulatory proposal affecting port services, to enable market access for port service providers and to improve financial transparency. The UK Major Ports Group, a trade association representing commercial ports, estimates that, based on the Commission's impact assessment, the cost of the proposal to the UK could be €275,000 per year plus €100,000 in one-off costs—although industry stakeholders suggest that this is a significant underestimate.⁷ Public ownership is more common in continental Europe, and the financial transparency requirements of the proposal might reduce the scope for direct support of ports by their respective governments, making it more costly for these ports than for UK ports to comply with regulations.

Demand-side drivers

Changes in trade patterns or distribution networks can affect the demand for ports and port services. New trading relationships between countries, or increased trade between two regions, can increase demand for particular freight corridors, and therefore for particular ports. These external factors can dramatically change the relative performance of ports. With strong forecast long-term growth in the UK's trade in goods—for both bulk and container freight—there remains a strong incentive for UK ports to compete for UK-bound traffic.⁸

Who are UK ports' key international competitors?

Based on the financial and time costs of landing cargoes, UK ports compare well in terms of efficiency against rival countries with large container port activity. This places the UK in a strong position to serve the UK hinterland, in competition with Northern European ports providing land-based onward transport.

The UK faces challenges in its role as a container transshipment hub for Europe, since the largest UK container port is significantly smaller than all of its European competitors. The financial cost and potential planning restrictions in building or expanding capacity place the UK at a disadvantage in this market.

The majority of the UK's container traffic comes directly from its largest trading partners, including China and the USA; however, in 2013, around 16% of the UK's container imports were transhipped from the Hamburg-Le Havre region in Northern Europe.⁹ This represents an opportunity for the UK to compete with transshipment hubs in mainland Europe when serving UK-bound traffic.

What are the key drivers of competitiveness in the port services industry?

The following could be considered key drivers in determining the competitiveness of UK ports.

- **Resilience of the connection into a port and its hinterland**, and therefore the costs associated with uncertainty over the reliability of a connection, is a key underlying factor that can affect the attractiveness of a port.
- **Ongoing investment would allow capacity in UK ports to keep pace with any forecast increase in UK trade in goods** in order to compete with larger transshipment hubs on the continent.
- **Expansion can be aided or hindered by the national and local planning system:** there is a key

role for national policymakers to support international competitiveness, for example by allowing ports to expand or adapt to changes in shipping fleet.

- **Upcoming EU regulation of ports services will increase compliance costs** for businesses based in the UK; however, this should have minimal effect on competitiveness with key rivals as the regulation will apply equally to other member states.

The drivers identified above can be directly influenced by policymakers. In particular, ensuring the resilience of connections, ongoing investment, and providing a supportive planning system are crucial considerations for policymakers when looking at the competitiveness of UK ports relative to those of key Northern European countries.

This article is based on Oxera (2015), 'International competitiveness of the UK maritime sector', final report, prepared for Department for Transport, May, <http://www.oxera.com/Latest-Thinking/Publications/Reports/2015/On-behalf-of-the-Department-for-Transport,-Oxera-e.aspx>.

¹ OECD (2011), 'Competition in Ports and Port Services Policy Roundtables'.

² Office of Fair Trading (2002), 'Acquisition by Peel Ports Ltd of Clydeport plc', ME/1656/02.

³ Commission Decision of 21 December 1993 relating to a proceeding pursuant to Article 86 of the EC Treaty (IV/34.689 - Sea Containers v. Stena Sealink - Interim measures). Judgment of the Court (Sixth Chamber) of 17 July 1997. *GT-Link A/S v De Danske Statsbaner (DSB)*. Reference for a preliminary ruling: Østre Landsret - Denmark. Maritime transport - Port duty on shipping and goods - Import surcharge - Abuse of a dominant position. Case C-242/95.

⁴ *World Port Development* (2012), 'Port of Liverpool's £300m giant dock project set to get underway', 19 October, http://www.worldportdevelopment.com/index.php?option=com_content&view=article&id=1813%3Aport-of-liverpools-p300m-giant-dock-project-set-to-get-underway&Itemid=434. Invest Essex, 'London Gateway Port: place study', <http://investessex.co.uk/studies/place-studies/london-gateway-port/>.

⁵ Office of Fair Trading (2010), 'Infrastructure ownership and control stock-take—final report: case study annexes', December.

⁶ Department for Transport (2012), 'National Policy Statement for Ports', presented to Parliament pursuant to section 5(9) of the Planning Act 2008, January.

⁷ European Commission (2013), 'Commission staff working document: impact assessment accompanying the document "Proposal for a Regulation of the European Parliament and of the Council establishing a framework on the market access to port services and the financial transparency of ports"', SWD(2013) 181 final, volume 1, 23 May. The United Kingdom Major Ports Group Ltd (2013), 'Commission proposal for a port services regulation: impacts', letter to Andrew Kelly, Department for Transport, 7 August.

⁸ Department for Transport (2012), 'National Policy Statement for Ports', presented to Parliament pursuant to section 5(9) of the Planning Act 2008, January, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/3931/national-policy-statement-ports.pdf.

⁹ Eurostat (2014), 'Freight Transport Statistics', http://ec.europa.eu/eurostat/statistics-explained/index.php/Freight_transport_statistics.