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## DEVELOPMENT OF MARITIME TRANSPORT IN THE UNITED KINGDOM, 2005–2016

### Abstract

The article presents the significance of the maritime sector for the UK economy. The rank of the country in the international maritime community in the field of business and financial services is indicated. The contribution of transport by sea to the trade exchange and to the Exchequer is discussed. The growing transshipments of goods in the major seaports in the United Kingdom in the period 2005 to 2016 and measured taken by the ports to increase productivity are analyzed. The state policy favouring the maritime sector development and integration with related sectors so as to contribute to achieving long-term development goals of the country, especially after leaving the European Union in 2019 is also discussed.

**Keywords:** United Kingdom, maritime transport, ports, trade exchange

### Introduction

The global volume of trading in goods by sea transport is determined to a significant degree by international trade and globalization. This industry handles 80% of the world trade. According to the UNCTAD data, transport of goods by sea increased by 2.6% or 260 million tonnes in 2016, and according to the forecasts, it will continue to increase by 3.2% per annum by 2022 (The Economist, 2018). Sea transport accounts for almost 100% of the total trade volume in island countries, such as the United Kingdom.

The United Kingdom plays the role of a leading centre of business and financial services for the international maritime community. The companies based in London include Lloyd's Market Association – the world's oldest insurance institution associating the largest group of shipping insurance agents. It is also banks offering financial services for maritime economy institutions such as the Royal Bank of Scotland,

numerous brokers including Clarksons as well and professional law firms providing services to shipowners, e.g. Norton Rose Fulbright that have their headquarters in London (logistyka, 2018). The International Maritime Organization (IMO) – a specialized agency of the United Nations responsible for the safety and security of shipping and the prevention of maritime and atmospheric pollution caused by ships is also based in the capital of the United Kingdom. As at 2017 the IMO had 172 Member States and Associate Members. 40 intergovernmental organizations have signed agreements of cooperation with the IMO, and 61 non-governmental organizations are in consultative status (IMO, 2018). The Baltic Exchange, one of the most important sources of maritime market information, regularly presenting the basic indicators of the dry cargo and oil tanker market and on the sale and purchase of merchant vessels is also based in London (Maritime London, 2018).

The development of maritime transport in the United Kingdom is directly related to its location close to the major shipping routes such as:

- Europe – North America;
- Europe – South America (directly linked with the above mentioned route);
- Europe – Suez Canal – Far East, with a branch to Australia;
- Europe – Africa, with the two most important regions for the United Kingdom – the Gulf of Guinea and South Africa.

The UK merchant fleet of 441 vessels with the DWT totalling 15.2 million is one of the largest in the world. The total port freight tonnage in ports is 484 million tonnes, including almost 473 million tonnes in major ports and over 11 million tonnes in smaller ports (Department of Transport, 2016).

## Significance of maritime transport for UK economy

International trade traditionally plays a major role in the United Kingdom's economy. The country is the tenth largest exporter and the fourth largest importer by volume in the world. The major trading partners of the United Kingdom are presented in Tables 1 and 2.

Table 1. Major import partners of the United Kingdom

No.	Country	Imports, 2016 (US\$)
1.	Germany	88 077 491 043
2.	China	59 575 883 133
3.	United States	57 103 332 370
4.	The Netherlands	47 382 169 489
5.	France	35 949 856 996
6.	Belgium	31 522 505 629
7.	Switzerland	26 596 303 166
8.	Italy	24 155 104 768
9.	Spain	21 251 195 907
10.	Ireland	18 158 772 440

Source: (globaleddge, 2018)

Table 2. Major export partners of the United Kingdom

No.	Country	Exports, 2016 (US\$)
1.	United States	61 568 659 268
2.	Germany	43 797 383 589
3.	France	26 461 827 772
4.	The Netherlands	25 484 748 059
5.	Ireland	22 901 408 456
6.	Switzerland	19 774 332 505
7.	China	18 142 280 186
8.	Belgium	15 715 522 064
9.	Italy	13 123 471 995
10.	Spain	13 029 685 111

Source: (globaleledge, 2018)

The most important commodities in the UK imports structure are fuels, machinery and highly processed products. The exports include highly processed products, fuels, chemicals, foodstuffs, beverages, tobacco.

In 2016, 95% of British imports (243 million tonnes) and exports (138 million tonnes) were transported by vessels, where 40% of these operations were carried out with the European Union (UK Chamber of Shipping, 2018). At the same time, the United Kingdom remained the leading EU country in short sea shipping, with more than 14% of the total EU tonnage, i.e. 315.5 million tonnes (Eurostat, 2018).

A growing demand for qualified employees in the maritime sector in Western European countries was observed as of 2005. Such a situation had been observed by 2009, when the international trade volume decreased following the global economic crisis which resulted in reductions in employment. Despite a decrease in the number of jobs after 2009, the number of employees in the maritime sector remained relatively stable in 2010–2015 as the British government implemented a number of measures to stabilize the financial market and boost the economy (European Parliament, 2009) (Figure 1). In the last five years, the British maritime sector has recorded an increase in turnover by 12.7%, an increase in the gross added value by 6.6% and an increase in employment by 3.9%. Currently, the sector contributes nearly £40 billion a year to the British economy and provides almost a million jobs in total (britishmarine, 2017).

According to the estimates of the Centre for Economic and Business Research (CEBR), one job in the maritime sector supports the creation of five new jobs in other segments of the UK economy (Cebr Maritime Sector Report, 2017). In 2015, 185.700 people were employed in this sector, including 23.000 seafarers (Department for Transport – Seafarer Statistics, 2016).

In 2015 the whole maritime sector contributed £4.7 billion in tax revenues to the UK Exchequer. For example, taxes from the shipping industry accounted for 12.8% of the total revenues of the maritime sector, which remained basically stable for six years (Cebr, 2017). Figure 2 shows the shipping industry's tax contribution to the UK Exchequer (Income Tax, National Insurance Contributions of employees and employers, Corporation Tax, National Non-Domestic Rates (Business Rates) – business tax rates on real property such as warehouses, stores, offices).

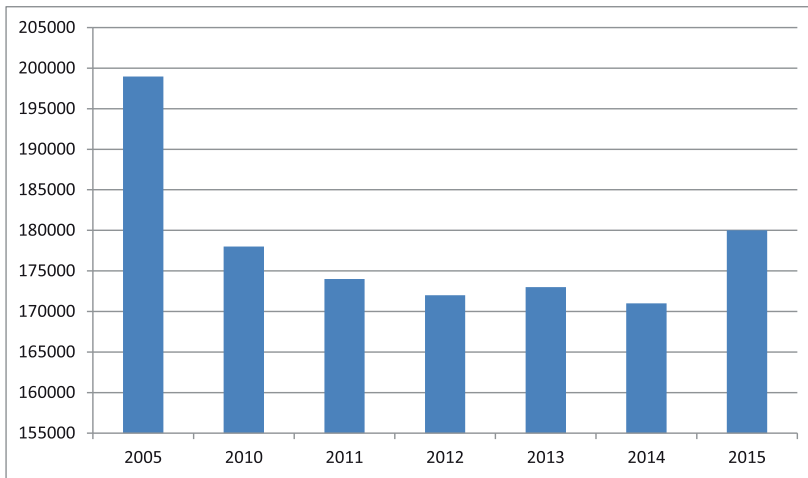


Figure 1. Employment in maritime sector, 2005–2015

Source: (maritimeuk.org, 2018; ec.europa.eu 2018)

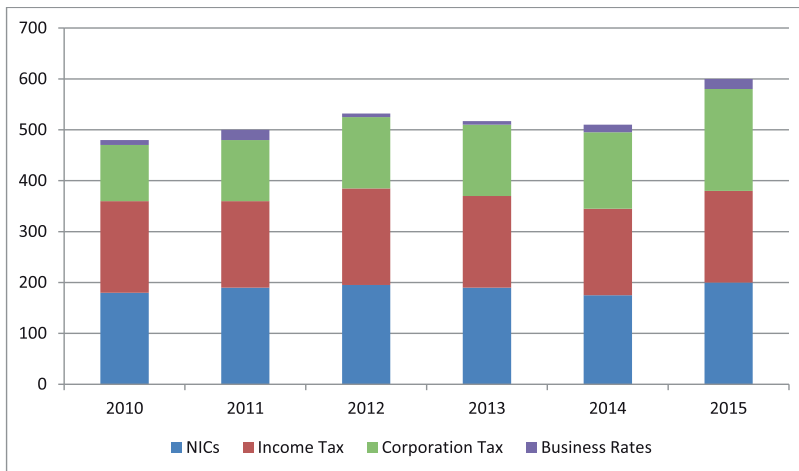


Figure 2. Contribution of the shipping industry to the UK Exchequer, 2010 to 2015 (£ million)

Source: (maritimeuk, 2018)

It is estimated that in 2015 the shipping industry generated almost 600 million pounds in tax revenues in the United Kingdom, with the contribution increasing steadily since 2010 – when it amounted to approx. 480 million pounds.

## Port structure in the United Kingdom

The process of deregulation has been the reason why the port sector in the UK has changed significantly over the past twenty years and it is unique within the EU. British ports have one of the three ownership categories:

- private;
- municipal;
- cartel (britishports, 2018).

All these three models are free-market and operate as independent, self-financed enterprises that do not benefit from regular government support or subsidies. These entities belong to port groups representing common interests of port owners, as well as operators of terminals and port facilities that are members of groups operating in the port areas. These include but are not limited to: the UK Major Ports Group (a trade association that owns most of the commercial ports, including but not limited to DP World, Forth Ports, PD Ports, Peel Ports, Hutchinson Ports, Associated British Ports, Port of London Authority), British Ports Association, European Sea Ports Organisation.

In addition to the traditional functions related to cargo handling and passenger service, the port industry offers a number of other services, for example, supporting offshore energy and maintaining ferry connections with island communities.

The most heavily loaded British ports are: Immingham (ranked 11<sup>th</sup> in the EU), London (ranked 13<sup>th</sup> in the EU) and Southampton, Milford Haven, Liverpool, Felixstove and Dover ranked beyond the top 20 in the EU (Eurostat, 2016).

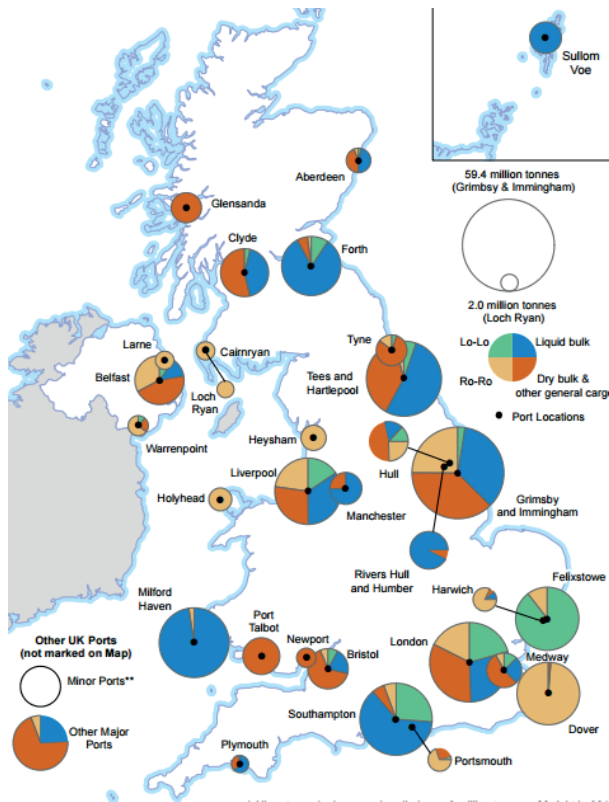


Figure 3. Major UK ports by cargo  
Source: (gov.uk, 2015)

Table 3. Major UK ports by cargo in terms of weight of goods handled (million tonnes)

Port	Port group	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Grimsby & Immingham	Associated British Ports	60.7	64.0	66.3	65.3	54.7	54.0	57.2	60.1	62.6	59.4	59.1	54.4
London	Port of London Authority	53.8	51.9	52.7	53.0	45.4	48.1	48.8	43.7	43.2	44.9	45.4	50.4
Southampton	United Kingdom Major Ports Group	39.9	40.6	43.8	41.0	37.2	39.4	37.9	38.1	35.8	36.7	37.7	36.0
Milford Haven	British Ports Association	37.5	34.3	35.5	35.9	39.3	42.8	48.7	39.8	41.1	34.3	37.7	34.8
Liverpool	Peel Ports	33.8	33.6	32.3	32.2	30.0	30.0	32.7	33.0	31.1	31.0	31.3	32.0
Felixstove	PD Ports	23.1	24.4	25.7	25.0	24.3	25.8	26.8	26.3	26.2	28.1	28.0	28.2
Dover	British Ports Association	21.1	23.8	25.1	24.3	25.1	24.1	24.3	22.9	25.3	27.6	27.3	27.3

Source: (Department of Transport, Transport Statistics Great Britain, 2017)

An analysis of the growth in transshipments of goods in major UK seaports in the period 2005 to 2016 shows a fairly high homogeneity. A slight slowdown in 2009 resulted from the global economic crisis. Regular growth of the transshipment volume can be observed in Felixstove, handling the largest container vessels, and Dover that specialises in handling, storage and shipping of temperature-controlled products.

**Port Immingham** is the largest port in the United Kingdom by tonnage (handling around 55 million tonnes of commodities per year) and it is the major port on the east coast, located on the south bank of the Humber River mouth. The port has two freight terminals – the Immingham deepwater container terminal to handle container transshipments from deep sea vessels, and DFDS Seaways ‘Nordic Terminal’ serving over 30 connections a week with Northern Europe and Scandinavia. The port is well connected with the main trade routes in the country with access to modern roads (M180, M18 and M1 motorways), railways (a modern railway infrastructure to ship/receive more than 260 freight trains per week including daily connections to/from Southampton and Felixstowe) and the inland waterway infrastructure (the Humber River). In addition to crude oil and coal it is general cargo, forest products, foodstuffs and steel that are transhipped and stored in the port. The international terminals, Humber 1 & 2, handle and store solid fuels for producers of energy, as well as other dry commodities such as biomass, animal feed, road salt and cereals (ABP Associated British Ports).

The port’s throughput capacity is continuously growing, nevertheless, the storage facilities should be expanded and investments in high-quality equipment have become indispensable to ensure further development. The port authorities have allocated almost 30 million pounds for upgrading the Hull container terminal, including the purchase of four new Liebherr cranes, two of which were delivered in 2016, and two more will enhance the machinery park in 2018. In the meantime, the Immingham Container Terminal, which was also retrofitted with a new Liebherr crane in 2016, will be additionally expanded owing to substantial investments in new

equipment and technology. In 2017, a 50-hectare area near the port was purchased. The area is well connected with route A180 and motorway M180 and is intended to accommodate the infrastructure which will be then offered to tenants.

**The Port of London** is the largest port in South East England and the third largest port in the United Kingdom (Port of London, 2018). It handles over 50 million tonnes of freight per year, mainly containers, timber, paper, vehicles, aggregates, crude oil, petroleum, oil products, liquid gas, coal, metals, cereals and other dry and liquid bulk materials.

The Port of London comprises about 680 former or existing quays, docks, piers and terminals, most of which are located in the Tideway of the Thames. Many docks were shut down following a massive increment in container transport. Currently, there are about 70 active terminals in the port area, however, the largest and main marine terminal built from scratch and commissioned in 2014 is the DP World London Gateway Port (DP World London Gateway, 2018). This technologically advanced deepwater port (16.5 m deep), adapted to receive the largest container vessels in the world, will ultimately occupy an area of over 6 km<sup>2</sup> with a wharf 2.7 kilometre long. The port has road connections in all directions (north, south, east, west) with access to an eight-lane motorway, and the railway terminal is linked to the main railway junctions in the country. At the present time, the port facilities comprise:

- three berths and a wharf 1250 m long;
- coastal cranes 138 m high, with high strokes;
- 60 automated double-deck cranes, including 30 cranes for on-shore operations;
- 180 transaction bays for trucks;
- the longest rail terminal in the United Kingdom with three rail gantry cranes.

The natural deepwater port of Southampton, located on the south coast of England, plays the role of both a passenger and freight port to which the largest container vessels can call. The container port covers 210 hectares of land and 152 hectares of older western docks – available for port operations. Constructing a new 500-meter wharf and dredging the main container terminal channel made it possible to carry out loading/unloading operations simultaneously on four large deep sea container vessels. The railway line between the Southampton container port and the Birmingham terminal has been upgraded to allow free movement of rail vehicles transporting higher than standard containers which have a wide range of applications now. The port has facilities for imports and exports of automobiles as well as five multi-level car parks in the eastern docks which play the role of ground warehouses, 12 ha in area. Moreover, the port has a multifunctional terminal for bulk cargo (glass cullet, wheat, aggregates, gravel, sand, fertilizers, grain, scrap, salt for biomass production), refrigerated warehouses for storing perishable food products and a terminal for vessels transporting crude oil processed at Esso, the largest refinery in the UK, located near Southampton (ABP Associated British Ports, 2018b).

**The Port of Milford Haven** specializes in transshipments of crude oil and natural gas as well as processed products made of these raw materials. The port which is located in the south-west part of the UK has access to the Welsh pipelines, gas pipelines and power grid. Currently, the port operates five major energy terminals:

the Valero Refinery, Puma Energy, South Hook LNG, Dragon LNG and SemLogistics, the largest oil terminal in the UK. Shipments to all terminals arrive from the North Sea, North and West Africa, the Middle East, Asia and Europe and are reshipped after processing. The port focuses on continuous development of the port infrastructure and services ensuring sustainable economic growth of the region, it also focuses on renewable energy sources. In recent years, 3 billion pounds have been invested in the private sector owing to the initiatives of the port authorities helping to support 4.000 local jobs.

**The Port of Liverpool** is one of the largest, busiest and diversified ports in the UK located on the north-west coast of the UK, on both sides of the Mersey River. In 2016, Liverpool 2, a new deepwater container terminal which can receive the largest container vessels was opened. The port has direct connections to motorways M53, M57, M62 and M6 (M58) and to the railway terminal. The port is used for transshipping automobiles, containers, dry bulk (including but not limited to biomass, aggregates, chemicals), energy, forest, mass liquids products, metals and steel, oversized loads. Recently, the port has been expanded to include a new biomass storage facility worth 100 million. The port owns and runs its own unique inland logistic node – the Manchester Ship Canal (Peel Ports Group, 2018).

**The Port of Felixstowe**, located north-east of London has two main container terminals: Trinity and Landguard, and also a ro-ro terminal. Each terminal has a railway terminal connecting the port with a railway line to Felixstowe. The wharf, which is more than 2.3 km long, is fitted with 29 overhead cranes. As the main navigation canal has been dredged, the largest container vessels can call at the port. The port is used by approx. 30 shipping lines, offering approx. 90 services to/from 400 ports around the world. By 2019, the port will have been additionally equipped with Ship-to-Shore gantry cranes. In the same year, it is planned to complete the construction of a new container storage area. The project includes ten warehouses for stacking containers to a height of 6 lines. The storage capacity will then increase by 18.000 TEUs expanding the already available 130.000 TEUs (Hutchison Ports, 2018).

**The Port of Dover** – one of the busiest passenger ports in the world, located in South East England near all major shipping routes – at a distance of only 34 km from France. The port is divided into two parts: east and west docks. The east docks accommodate a cargo terminal specializing in handling, storage and shipping of controlled-temperature commodities which can be quickly delivered to other parts of Europe. The natural conditions of the port enable efficient and fast mooring of vessels at any time of the day. At the present time, the cargo terminal has three berths fitted with specialized equipment for handling a wide variety of freight, ranging from fresh products to design loads as well as oversized freight for the power industry. The Port of Dover is considered to be the largest international ro-ro ferry port in Europe. The first stage of reconstruction of the Dover Western Docks Revival wharf, which was started in January 2017, will make it possible to use a new freight terminal and an innovative port-centric distribution centre, which will increase the port's capacities in terms of cargo and logistics. The project, estimated at USD 330 million, is co-financed by the European Union (Port of Dover, 2018).



## State policy concerning maritime transport development

The United Kingdom's policy is aimed at ensuring the maritime sector development and integration with associated sectors so as to contribute to achieving the country's long-term development goals.

One of the measures aimed at facilitating further development of ports and boosting the economy within the country was to prepare the report entitled *Transport Infrastructure for our global future* commissioned by the Department of Transport (2017). This document, published in early 2018, will help influence financial and planning decisions to improve road and rail connections that can ensure more efficient movement of goods between key economic areas and ports. It is assumed that these works are intended to contribute to increasing productivity, reducing costs and ensuring greater access of distributors and manufacturers to international markets. As the report shows, the already implemented wide-scale government projects (£235 million allocated in 2014–2019 to improve railway connections and £23 billion to upgrade and develop roads) improve access to ports, unblock private sector investments and stimulate economic growth across the country. The private owners of British ports also develop the pipeline infrastructure (a project worth £1.7 billion). It should also be noted that members of the UK Major Ports Group invest in the British ports and infrastructure more than £0.5 billion a year.

*Transport Infrastructure for our global future* also contains a number of recommendations for the government and the industry, encouraging, *inter alia*, closer cooperation in the field of freight transport and improving the exchange of information. According to the authors of the report, this will provide an ambitious prospect for port connections, integrated with Maritime 2050, the government's long-term strategy (Department of Transport, 2018).

The Maritime 2050 strategy is aimed at exchanging views on the priority tasks enabling development in areas of fundamental importance for the British maritime sector, which include: technologies, trade, infrastructure, environment, people and security. As part of the strategy, a series of objectives will be set up to help examine the progress in each of these areas. A team of industry and academic experts has been also appointed to advise on the future of the UK maritime sector, including employment of new technologies such as autonomous ships and digital ports. In addition to the panel of experts, also British entrepreneurs operating in the maritime sector can submit innovative ideas that will secure the future of the UK maritime sector.

At the same time, the United Kingdom will strive to implement a strategy to reduce greenhouse gas emissions in the process of shipping, including the call for the fastest possible implementation of zero-emission shipping in the entire maritime sector.

## Conclusions

The United Kingdom is the undisputed world leader in professional maritime services, having extensive experience in vessel chartering, insurance, legal, financial and educational services. At the same time, the maritime sector makes a significant macroeconomic contribution to the UK economy through the turnover, gross added value, employment and so-called employee compensation (including, but not limited to, employer contributions for social, health or pension insurance). It is estimated that in 2015 the direct participation of this sector in the trade was over £40 billion, and the gross added value was £14.5 billion. The marine and shipping industries extended the greatest influence on the economy among all industries in the United Kingdom, contributing 6.5 billion pounds to the Exchequer and 4.3 billion pounds in gross added value, as well as directly supporting around 99.900 and 50.800 jobs, respectively (Maritime UK, 2018).

In 2017 the Global Innovation Index recognized the United Kingdom as one of the most innovative countries in the world and a world leader in innovation in the field of communication technologies. Innovations and new technologies are continuously introduced in the British maritime sector. The United Kingdom is at the forefront of the development of autonomous vessels.

Having decided to exit the European Union, the United Kingdom has to prepare to solve new problems related to the maritime sector, including customs and trade arrangements. A specifically painful issue seems to be the introduction of customs duties, as most of imports and exports between the EU and the UK are by sea. The UK government intends either to pursue a 'highly streamlined' or enter into a new customs partnership with the EU. Nonetheless, before finalising the agreement, they would like to apply a transitional period that would be in line with the applicable procedures to the closest possible extent (World Maritime News, 2017). The concerns raised claiming that possible customs and bureaucratic border checks may cause delays in some ports increasing the cost paid by traders, manufacturers and consumers are justified. Another problem concerns British seafarers who are uncertain whether they will still be able to work on vessels registered in other EU Member States based on the training and qualifications acquired in their country. According to some of the leading operators – port owners (Peel Ports, ABP) the United Kingdom's exit from the EU will decrease the container traffic in British ports.

The United Kingdom will cease to be part of the Union on 29 March 2019 and there is no guarantee that the European Commission and the British government will reach an agreement for a transitional period. European ports are currently getting prepared for increased obstacles to trade that may result from a 'hard Brexit', employing more customs officials and inspectors, and the port of Rotterdam expects that they will have to hire more than 100 extra agents (The Maritime Executive, 2018).

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