The economic impact of the Tonnage Tax regime on the shipping industry

A report for Maritime UK

September 2017

Cebr

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London, August 2017

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This final section of the report sets out Cebr's estimates on the benefits of the Tonnage Tax regime. This system, a fully-approved EU State Aid, was introduced in 2000 as a means to support the UK shipping industry, seeking to boost the size of the declining UK fleet and to increase the levels of training imparted on UK seafarers. While the revenues raised through the Tonnage Tax regime for the UK Exchequer are minimal (as shown earlier in this report), Cebr estimate that the gains in terms of economic performance from introducing the regime far outweigh the associated costs of deferred Corporation Tax revenues.

As a counterfactual situation, it is ultimately impossible to determine the performance of the UK shipping industry in an environment in which the Tonnage Tax regime was not in place. However, it is clear that given the marked reversal in the performance and size of the UK shipping fleet followed the introduction of the Tonnage Tax regime, and the contemporaneous macroeconomic conditions and experience of other European countries, the impact of Tonnage Tax is highly unlikely to be coincidental. The analysis presented in this section therefore seeks to quantify the economic contribution that the UK would have forgone had the Tonnage Tax regime not been introduced. This economic contribution is measured through the GVA, UK employment and exports that would have been forgone, and draws upon the direct economic impacts analysis presented earlier in this report. The benefits from the higher levels of seafarer training imparted, while important, are not considered here.

1.1 About Tonnage Tax

In July 2000, the UK Government introduced a new optional tax regime for UK shipping sector - the Tonnage Tax regime. The Tonnage Tax regime allows shipping companies with qualifying vessels to pay Corporation Tax liabilities based upon the weight of tonnage for the ships they operate, rather than paying based upon the actual profits of the company (as is normally the case). In other words, the regime provides an alternative way of calculating the taxable profits of UK shipping businesses.

For those companies which opt in to using the Tonnage Tax regime, a fixed level of "profit" which is subject to Corporation Tax is calculated based on the net tonnage of a vessel and the number of days a year in which the vessel is in operation. A decreasing profit rate is applied for higher tonnage brackets. Therefore in some circumstances it is possible for a company which has opted into the Tonnage Tax regime to have to pay Corporation Tax to the UK Exchequer despite making a loss. The regime is attractive for both pecuniary and planning reasons. For the former, participating companies typically face net tax liabilities far lower than they would have under the standard Corporation Tax regime, thereby increasing flexibility in company financing options. For the latter, the regime provides certainty, with companies able to determine level of tax payable at any particular time.

Alongside supporting funding for seafarer training, the objective of the Tonnage Tax regime was to reverse the steady decline in UK-owned commercial vessels; with a strong relationship between international trade, employment and shipping, the UK's continuing prosperity is partly tied to the size of its shipping fleet. It is widely perceived that the introduction of the regime was a strong contributing factor in the marked uptick in the size of the shipping fleet and the net value of trade in shipping services. In 2005, the House of Commons Transport Committee noted that *"The tonnage tax regime has led to an increase in the number of ships on the UK register and a small increase in the UK owned fleet."*[1] In 2011, the Office for Tax Simplification (OTS) [2] argued for the regime to be maintained to allow the UK shipping industry to compete

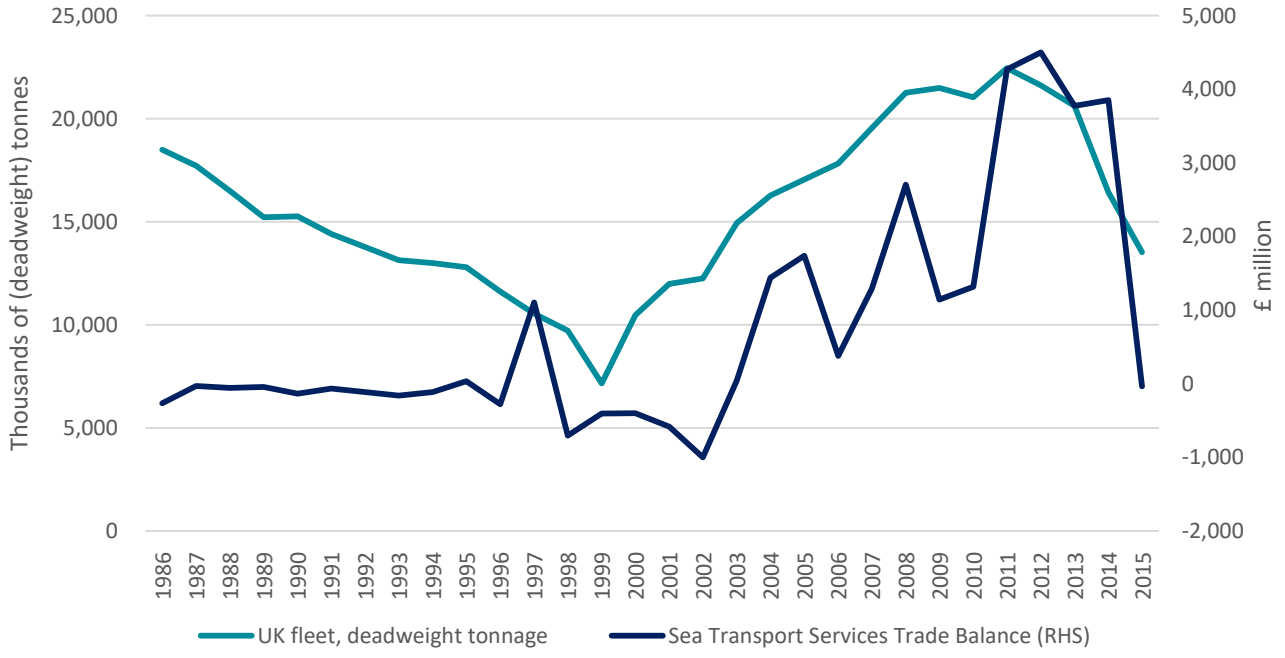
[1] House of Commons Transport Committee (2005). *"Tonnage Tax: Second Report of Session 2004-05"*

[2] Office for Tax Simplification (2011). *"Review of tax reliefs, Final Report"*

effectively, also noting that *"If tonnage tax were to be abolished there is a danger that, in a highly mobile industry where shipping companies can migrate from the UK and register their ships in foreign jurisdictions at short notice, companies would abandon the UK."* The UK has not been alone in bringing in such a regime to support its domestic shipping industry. As identified in the paper, "Tonnage tax: it is working?"[3], almost all maritime EU countries now operate a similar regime, including: Greece; Netherlands; Norway; Denmark; Finland; Spain; Ireland; Belgium; and France, alongside many other countries across the world.

To further highlight the significant tangible impact that Tonnage Tax is likely to have had, Figure 24 below shows the trend in deadweight tonnage[4] of UK-owned shipping vessels up to 1999 (just before the Tonnage Tax regime was introduced), as well as the trade balance in sea transport services as recorded in the ONS Pink Book (including disbursements in ports). An important caveat to note here is that only ships of 500 gross tonnes[5] and above are included here in the total deadweight tonnage (so some smaller vessels will be omitted) and secondly that it only includes trading vessels, (those that carry cargo or passengers), and will therefore not include vessels such as those operating in offshore oil and gas, for instance.

Figure 24: Deadweight tonnage of UK-owned shipping vessels, 500 gross tons or over, thousands of deadweight tonnes; UK trading balance in sea transport services, £ million (unadjusted, right hand axis)



Source: UKCoS, Department for Transport, ONS, Cebr analysis

From 1986 and prior to 2000, the total deadweight tonnage of UK-owned vessels was declining year-on-year by an average of 6.8% per annum; this decline accelerated in 1999 to 26.3%. Similarly, the UK trade balance in sea transport services was in deficit in every year with the sole exception of 1995 (where growth in exports exceeded that of imports), with a period of average of £88 million. We then observe a marked reversal in trends for both series after 2000. The total level of deadweight tonnage immediately recovered to 10.5 million tonnes. Year-on-year growth since then has averaged at 5.1%, although there has once again been a decline following 2011. The trade balance also improved after 2000, with exports exceeding imports in 2003 and the trade balance peaking at £2.7 billion in 2008.

[3] Leggate and McConville, 2006. *"Tonnage tax: is it working?"*, Maritime Policy & Management

[4] Deadweight tonnage is the weight, measured in tons, of all the cargo, fuel, dry provisions, and supplies carried on board a ship. In other words, it refers to the weight of the volume of water displaced by a vessel in normal seagoing condition.

[5] Gross tonnage is a non-linear measure of a ship's overall internal volume (defined by the International Maritime Organization as "the moulded volume of all enclosed spaces of the ship"), and is by definition not a measure of a ship's weight or mass.

1.2 Quantifying the economic impact of the Tonnage Tax regime

Summary of the approach

The objective of this section is to compare what has happened to the shipping industry in the current circumstances (i.e. following the introduction of the Tonnage Tax regime) against a scenario in which the Tonnage Tax regime had not been introduced.

The first step involves estimating the size of the UK shipping fleet in this counterfactual scenario in the years following 2000, as measured through deadweight tonnage. After determining the likely path of the UK shipping fleet after 2000 without the Tonnage Tax, the relationship between the key macroeconomic indicators of interest – GVA, employment, tax revenues and exports – and this level of deadweight tonnage is then determined, drawing upon the direct economic impacts outlined earlier in this report. The difference between deadweight tonnage outturns and deadweight tonnage in the counterfactual can then be translated into the direct and aggregate economic contribution that would have been forgone had the Tonnage Tax regime not been introduced.

The impact of Tonnage Tax on the UK-owned shipping fleet and the key macroeconomic indicators

In order to determine the likely path of the UK shipping fleet in an environment where the Tonnage Tax regime had not been introduced, Cebr have presented the following three scenarios alongside the actual path of the size of the UK-owned shipping fleet:

- **Outturn** – this is the deadweight tonnage of the UK shipping fleet (comprising vessels of 500 gross tons or above) under the current regime (in other words, what has actually happened to the total deadweight tonnage of the UK-owned shipping fleet between 1986 and 2015).
- **Low Scenario** – this scenario assumes that the size of the UK shipping fleet would be half that as under the current regime. For example, in 2015 the deadweight tonnage of the UK-owned shipping fleet was just over 13.5 million tonnes; under the Low Scenario deadweight tonnage is assumed to have fallen to 6.8 million tonnes (subject to rounding).
- **Central Scenario** – this scenario assumes that deadweight tonnage followed a declining fitted exponential trend between 1986 and 1999, with this trend assumed to continue after 2000. The Central Scenario reflects the persistent fall in the size of the UK-owned shipping fleet prior to 2000.
- **Upper Scenario** – this scenario utilises a fitted econometric model which attempts to control for other factors which are likely to have influenced growth (or decline) in the size of the UK-owned shipping fleet. These other factors, expressed in growth terms include growth in world trade and the oil price; a dummy variable to represent the introduction of the Tonnage Tax regime in 2000 has been included.

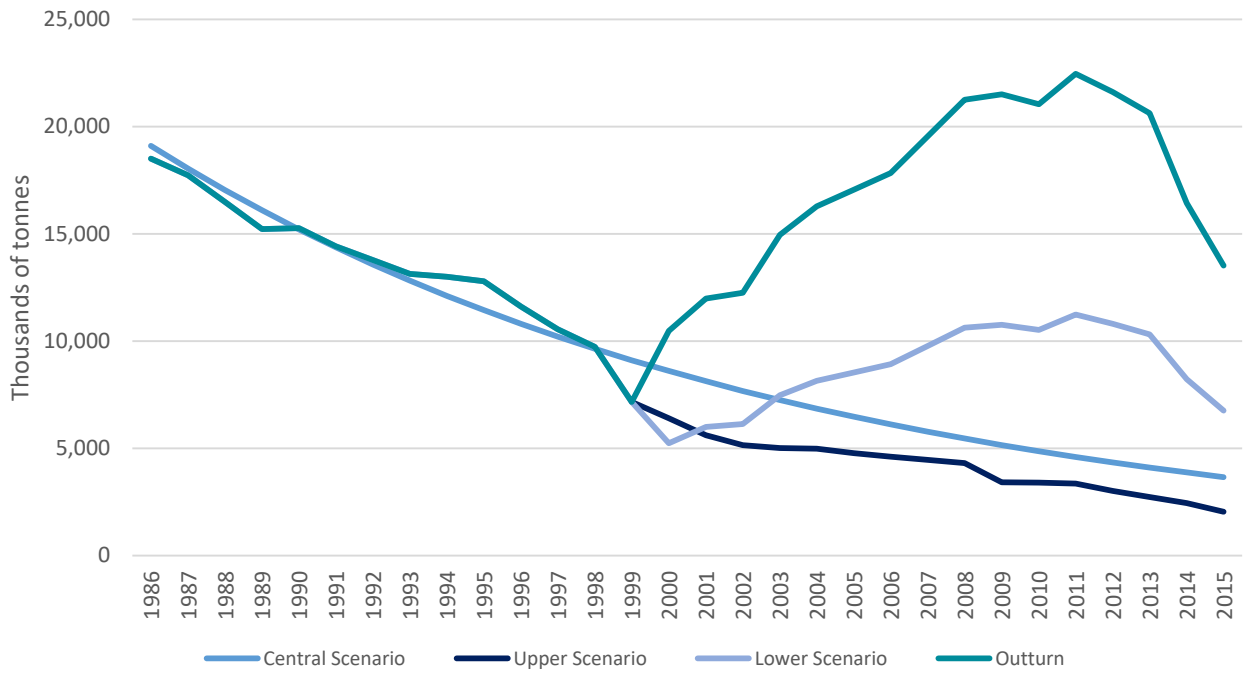
After quantifying the impact on the total level of deadweight tonnage under the three scenarios described above, it is assumed that there is a proportional relationship between the direct contribution that the shipping industry makes through GVA, UK employment, the contribution to the UK Exchequer (tax revenues) and exports.

The impact of Tonnage Tax on the aggregate economic impact of the shipping industry has been estimated by assuming that, with the sole exception of the Ports industry, all other industries in the shipping industry's supply chain would have been negatively affected by the reduction in shipping activity. We assume that the ports industry would not have been affected by the reduction in economic activity from the UK shipping industry, as UK ports could have continued to provide their services to foreign-owned ships; the aggregate economic impact of the shipping industry relating to Ports has therefore been maintained.

1.3 The impact of Tonnage Tax on the UK-owned shipping fleet

Figure 25 below shows the path of total deadweight tonnage for the UK-owned shipping fleet under three different scenarios since 2000, alongside the outturn since 1986. As a fitted trend based on data from 1986 to 1999, the Central Scenario necessarily does not map neatly onto the outturn values prior to 2000. Under the Lower Scenario, total deadweight tonnage would have fallen as low as 6.8 million tonnes by 2015; under the Central and Upper Scenarios the levels of deadweight would have been 3.7 million and 2.0 million tonnes respectively.

Figure 25: Total level of deadweight tonnage for UK-owned shipping fleet, outturn versus Lower, Central and Upper Scenarios



Source: UKCoS, Department for Transport, ONS, Cebr analysis

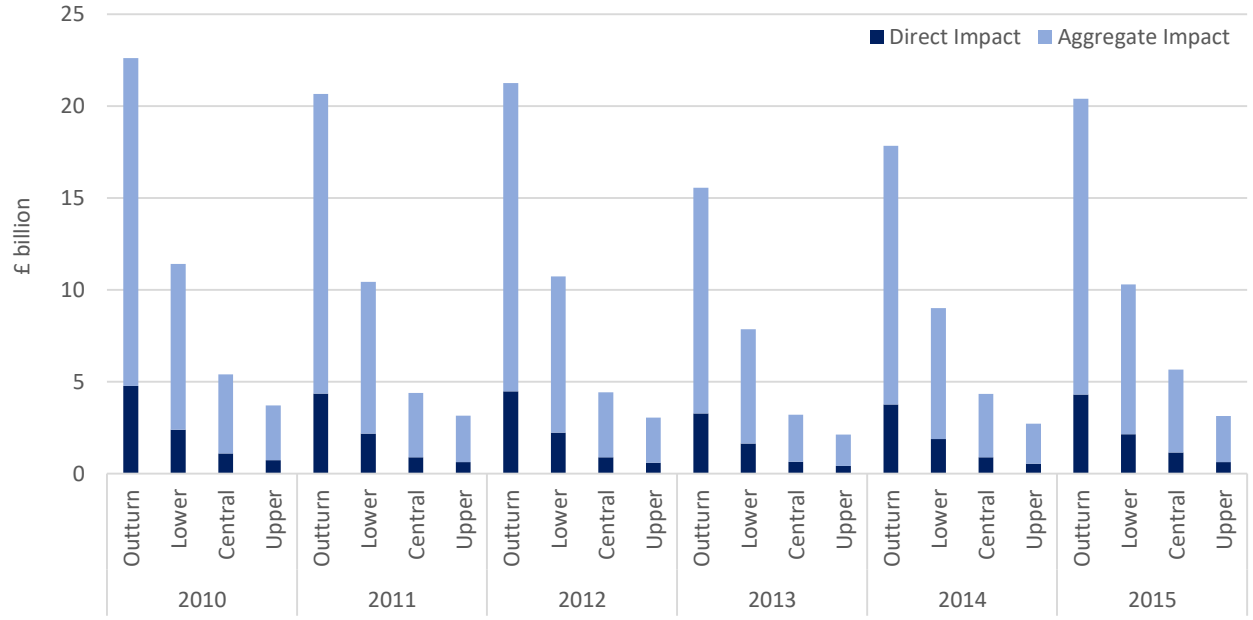
Under all three scenarios, deadweight tonnage would have been markedly lower than under the outturn; in 2015 total deadweight tonnage had fallen but was still recorded at 13.5 million tonnes, in comparison to 7.2 million tonnes in 1999. Given the large discrepancies in deadweight tonnage, it is clear therefore that is a good deal of evidence to suggest that the economic contribution of the shipping industry would have been considerably lower without the introduction of the Tonnage Tax regime.

1.4 The impact of Tonnage Tax on GVA

Here we examine the impact of Tonnage Tax on the direct and aggregate impact on GVA from the shipping industry. Figure 26 overleaf shows the projected impact across the years 2010 to 2015 under the three scenarios described earlier in this section.

Under the most conservative (Lower) scenario, the direct impact through GVA would have been £2.2 billion lower in 2015 in comparison to the outturn. This discrepancy would have been at its highest in 2010 (£2.4 billion), when the direct impact was at its highest. Under the Upper Scenario, GVA would have been £3.7 billion lower in 2015, or 85% below the outturn level. To place the 2015 Lower Scenario direct impact in context, this is equivalent to a loss of 0.11% of UK GDP in 2015; expressed in terms of the contribution of a sector, this would be equivalent to the UK economy losing the entire direct GVA contribution from the dairy manufacturing (£2.0 billion) or beer manufacturing (£2.1 billion) industries, or most of other services incidental to water transportation (£2.5 billion).

Figure 26: The direct and aggregate GVA impacts of the UK shipping industry under alternative scenarios



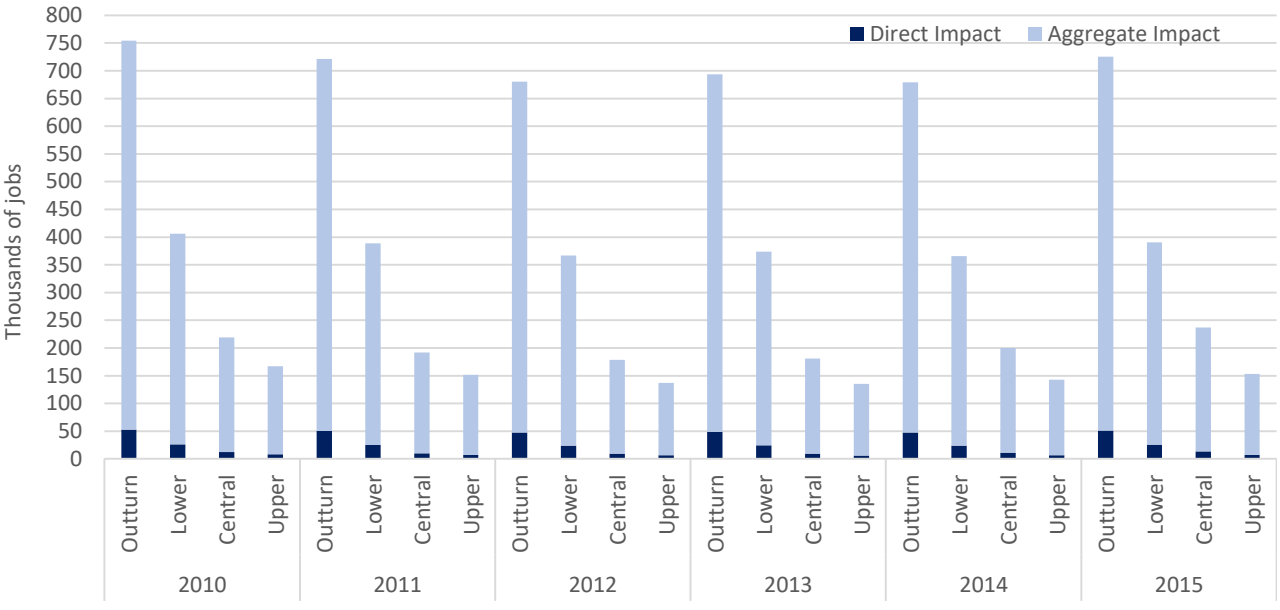
Source: UKCoS, Department for Transport, ONS, Cebr analysis

After indirect and induced impacts are considered, the difference in the GVA contribution is accentuated under the three different scenarios. Under the Central Scenario, the loss of indirect and induced impacts means that the shipping industry would have only had a total GVA impact of £3.1 billion in 2015, in comparison to the £16.1 billion impact in the outturn. This is equivalent to an approximate reduction of 0.6% in GDP in 2015.

1.5 The impact of Tonnage Tax on UK employment

Here we examine the impact of Tonnage Tax on the direct and aggregate impact on UK employment from the shipping industry. Figure 27 below shows the projected impact across the years 2010 to 2015 under the three scenarios against the outturn.

Figure 27: The direct and aggregate employment impacts of the UK shipping industry under alternative scenarios



Source: UKCoS, Department for Transport, ONS, Cebr analysis

In 2015 the shipping industry directly supported 51,000 jobs for UK employees, but under the Central Scenario this direct employment contribution would have only been 13,700 jobs; this is equivalent to a reduction of 73%. This difference would have been more pronounced in 2010, when the difference in the direct level of employment supported would have been 40,600 jobs. Even under the more conservative Lower Scenario, there would be 25,400 fewer jobs for UK employees in the shipping industry in 2015 had the Tonnage Tax regime not been introduced.

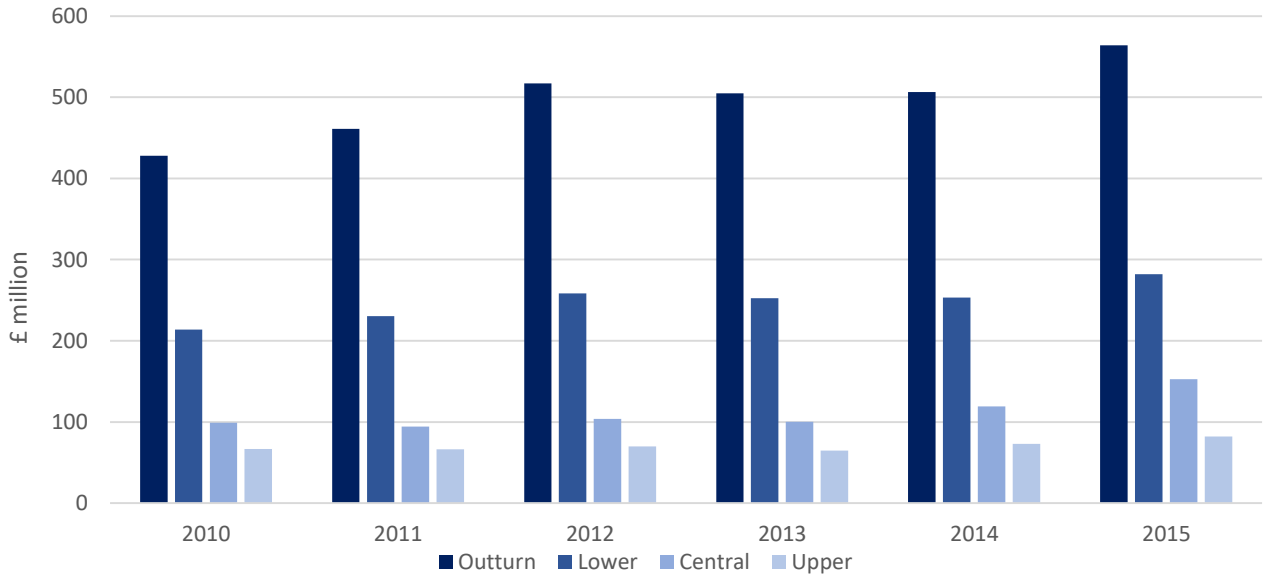
To place the Central Scenario direct employment impact of 37,000 jobs in context, this is equivalent to a loss of 0.12% of total UK employment in 2015; expressed in terms of the contribution of a sector, this would be equivalent to the UK economy losing the entire direct employment contribution from the entire concrete, cement and plaster manufacturing (29,000 jobs), general purpose machinery manufacturing (22,000 jobs) or programming and broadcasting (32,000 jobs) industries in 2015.

Once indirect and induced impacts are considered as part of the Central Scenario, without the Tonnage Tax regime, only a total of 223,300 jobs would have been supported by the shipping industry across the UK economy in 2015, in comparison to the outturn of 674,400 jobs. This is equivalent to a reduction of 1.4% in the total level of UK employment in 2015.

1.6 The impact of Tonnage Tax on the UK Exchequer Contribution and Trade

After considering GVA and employment impacts, Figure 28 below shows the contribution of the shipping industry to the UK Exchequer under each of the scenarios against the outturn. A total of just over £560 million in tax revenues was raised from the industry in 2015; under the Central scenario, this contribution would have fallen to only £150 million, with the most pessimistic (Upper) scenario projecting a yield of only £85 million in the same year.

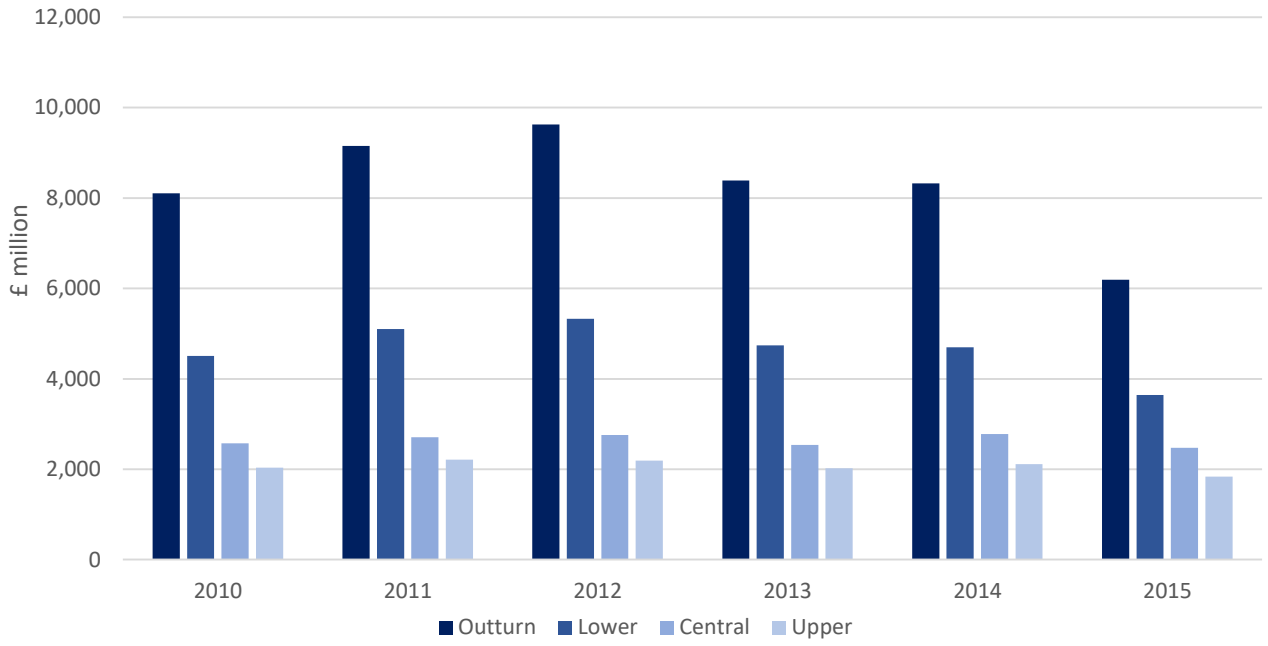
Figure 28: The contribution of the UK shipping industry to the UK Exchequer under alternative scenarios, £ million



Source: UKCoS, Department for Transport, ONS, Cebr analysis

Figure 29 overleaf shows the contribution of the shipping industry through the exports of services under each of the scenarios against the outturn. It is assumed that exports of disbursement services would not have been affected by the introduction of the Tonnage Tax regime (on the assumption that UK ports would continue to export disbursements services to foreign ships); however, all other exports of services are linked to the tonnage of the UK shipping fleet. Conversely, it is assumed that imports of shipping services, aside from disbursements, would have been unaffected if the Tonnage Tax regime had not been introduced; however, imports of disbursement services would have been reduced in line with the reductions in the size of the UK-owned shipping fleet.

Figure 29: The contribution of the UK shipping industry to service exports under alternative scenarios, £ million

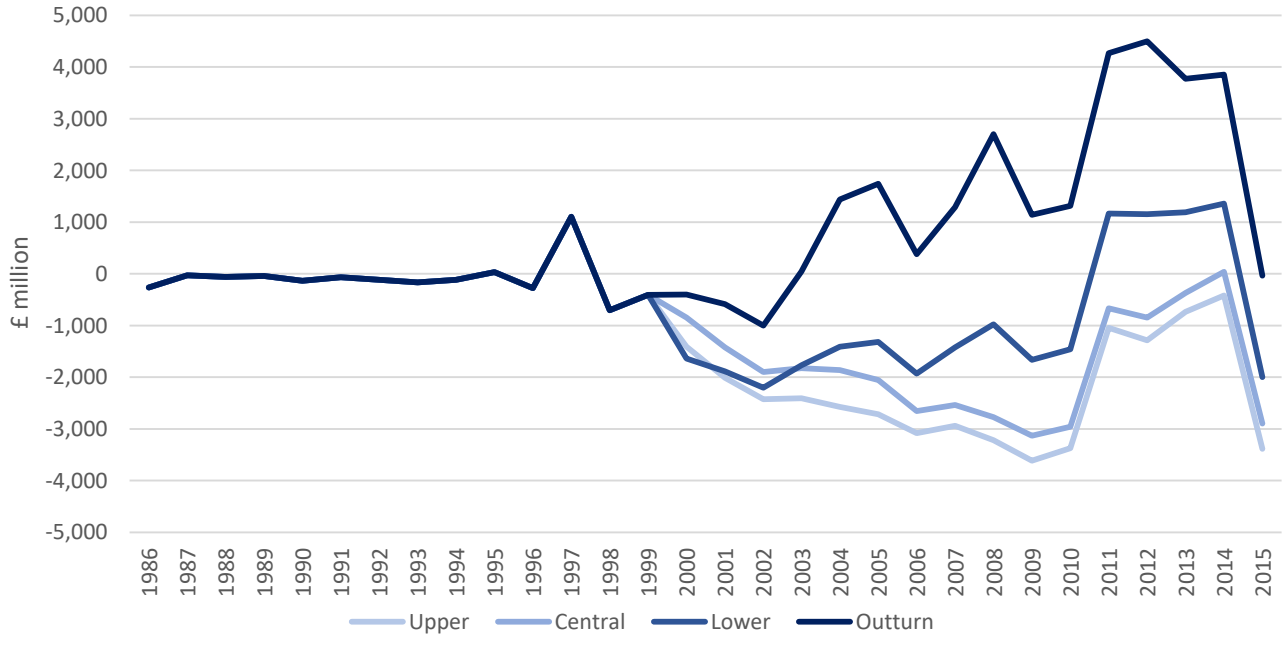


Source: UKCoS, Department for Transport, ONS, Cebr analysis

Under the Central Scenario, it is estimated that the value of exports from the shipping industry and exports of disbursements from Ports would have been £2.4 billion in 2015, in comparison to the outturn of £6.2 billion. Even under the optimistic Lower Scenario, service exports would have fallen to £3.6 billion.

Finally, following Figure 24 earlier in this section, Figure 30 below shows the projected trend in the trade balance of Sea Transport service exports after 2000 based on the three different scenarios against the outturn. Under each of the three scenarios, the trade balance would have been negative (i.e. the value of sea transport imports would have exceeded that of exports) throughout the period 2000 to 2010. Under the Central Scenario, the trade balance would have £2.9 billion in deficit in 2015, in contrast to the outturn value of -£37 million.

Figure 30: The Sea Transport exports trade balance under alternative scenarios, £ million



Source: UKCoS, Department for Transport, ONS, Cebr analysis