A New Framework for Public Finance

Addendum

The Economic Study Association

London

A New Framework for Public Finance

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Addendum

Levelling Up and

Natural Resources

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Summary

This addendum expands upon two important topics that were not fully developed in the main text of *A New Framework for Public Finance*, and provides some further supporting details.

The first section explores the relationship between the concept of economic potential and the economic upper limit of taxation under the heading of ‘levelling up’. It can be read as an extension of Chapter 4 on economic theory, and highlights the implications of rising taxation for equality of opportunity. It is consistent with the approach to spatial economics set out in Volume 3 of Public Finance and in the Addendum to that volume.

The second section briefly summarises the treatment of natural resources arising within the national catchment area administered by government, such as coal, oil, gas, offshore wind and fisheries; it is consistent with the principles set out in the main document, and includes a series of maps showing the extent of the resources currently known to be available for commercial exploitation. All of the maps are based on official reports and publications.

Supporting references can be found within the main document and in other related ESA publications.

1
Levelling up

The upper limit of taxation

When taxation as a share of GDP is increased above the economic upper limit, shown as T1 in the chart below, to a higher level T2, the economy contracts. Government income declines in real terms. Reducing the level of taxation from T2 back towards T1 allows the economy to expand. At this point, however, government income is unstable. A further reduction from T1 towards S provides the same government income as at T2, but with greater economic stability.

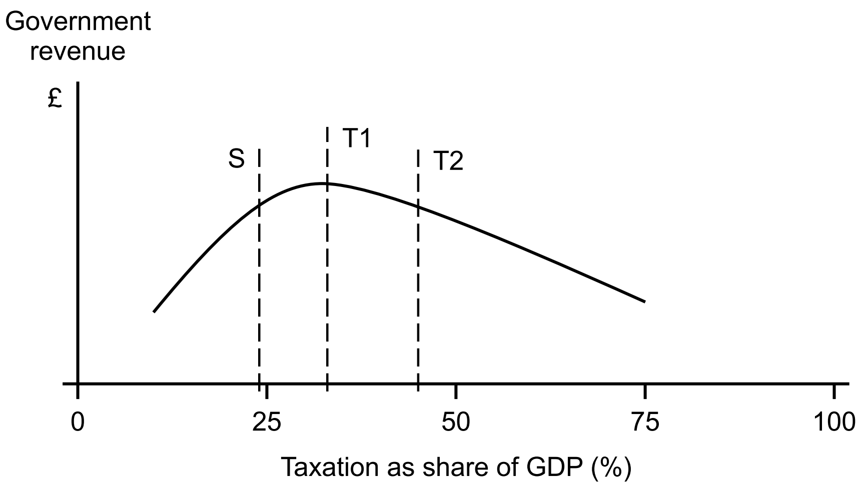

Figure 1: The upper limit of taxation

Economic potential

For a firm in a *foot-loose* industry, economic potential is the total effective demand that can be addressed from any given location. It takes into account the purchasing power of all potential customers after making due allowance for the effect of distance-related costs.

In the UK, the gradient of economic potential is aligned broadly from north to south, and can be illustrated by using an index of up to 100 units. Moray, Northumberland, Derbyshire and the Greater London area are positioned along the gradient with index numbers from 70 units up to the maximum of 100 units. This is shown as a cross-section profile in Figure 2, and geographically in Figure 3.

The gradient of economic potential is the result of geographical factors and historical development. It has been made more intense by a rising level of taxation, the continental customs union, and the concentration of new public infrastructure in the south-east region.

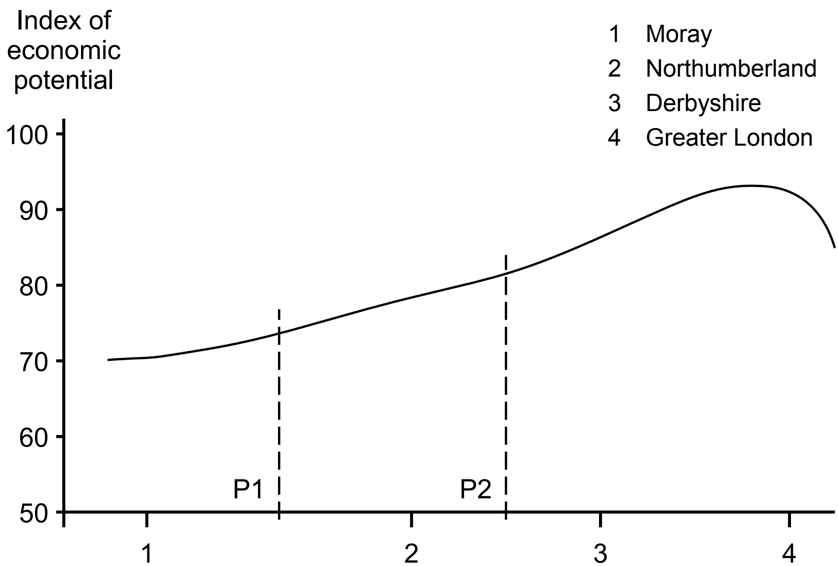

Figure 2: The profile of economic potential

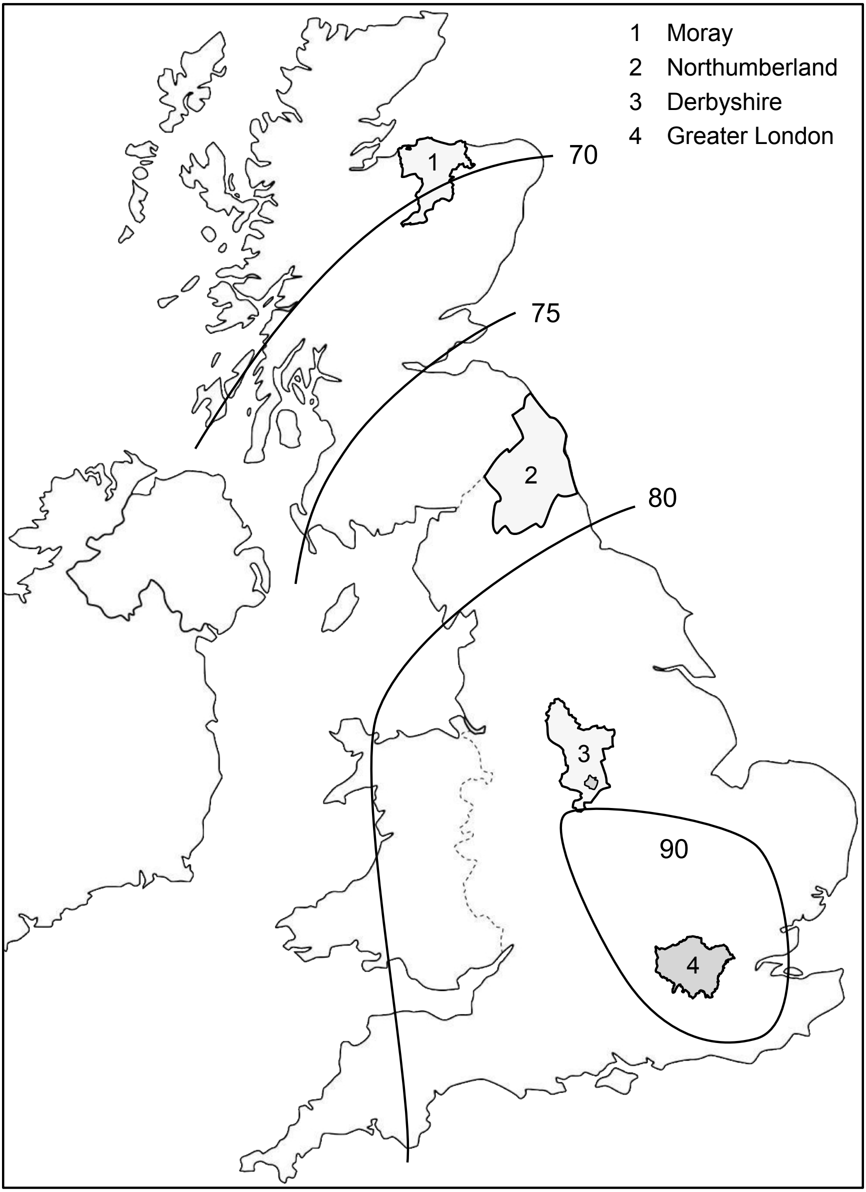

Figure 3: The distribution of economic potential

Taxable capacity

The index of economic potential provides a broad indication of the taxable capacity of firms having similar characteristics at different positions along the gradient of economic potential.

The taxable capacity of a firm is assumed to be the total amount of tax collected and forwarded to government, plus residual profit after tax. It therefore includes all payroll taxes, national insurance contributions, VAT, business rates, taxation applied directly to the profits of the firm, and any other special taxes or levies.

The geographical distribution of the taxable capacity of firms tends to follow the pattern of economic potential, as illustrated in Figure 3, and is also broadly aligned from north to south.

High taxation

In Figure 2, positions P1 and P2 represent two alternative locations with different levels of economic potential. At very high levels of taxation, only those firms in areas where the economic potential is greater than P2 are able to remain profitable in the longer term.

Under these conditions, firms in foot-loose industries will tend to move towards areas of higher economic potential. Firms which are unable to do so will be under pressure to increase their prices, reduce costs, or cease to operate as independent business units.

With increasing taxation, economic activity will tend to reduce as the gradient of economic potential becomes more pronounced.

In this way, a high level of taxation may act as one of the causes of inequality between areas of different economic potential.

Reduced taxation

Tax reductions which increase both take-home pay and the profits of firms increase the prosperity of areas of low economic potential and may contribute significantly towards the aim of ‘levelling up’.

Levelling up

When taxation as a share of GDP is reduced then, in the example of Figure 2, firms located in areas where the economic potential is greater than P1 are once more profitable. As the economy expands, there is a progressive dispersal of economic activity away from the Greater London area and the south-east. The gradient of economic potential is diminished and the contours shown in Figure 3 become less pronounced. The risk of persistent inflation is also reduced.

Equality of opportunity

It is not possible to eliminate the gradient of economic potential, nor is it necessary. An optimum condition is reached when taxation has been fully removed and all public goods and services are paid for at their full market price by a system of public revenue.

After the removal of all taxation, firms will move towards those locations where the public goods and services available best suit their needs. Under these conditions, local areas are able to provide those public goods and services which are specific to their own particular requirements, and equality of opportunity is enhanced.

2
Natural resources

General principles

The treatment of natural resources within the national catchment area depends upon their specific characteristics. After the removal of all taxation, payments made to government for access to natural resources may include rent, charges for local and national public goods and services, and the market price of any resources removed from public ownership.

The national catchment area

As stated in the main text, government is the custodian of public property which it holds on behalf of the citizens on an indivisible basis. In the case of the UK, this includes certain minerals, such as reserves of coal, oil and gas, and all of the surrounding oceans up to a distance of 200 miles or the boundary of another nation.

Within this area, which is recognised internationally as the EEZ (Economic Exclusion Zone), the UK exercises sovereign rights in respect of natural resources, fishing stocks, and access to the sea bed for such purposes as offshore wind energy generation. These activities are typically subject to the issue of government licences for both exploration and extraction.

Whilst some natural resources lie onshore, the offshore domain forms an important part of the national catchment area. As noted in the main policy proposals, this area consists of some 250,000km^2 of dry land, and about 500,000km^2 of ocean, as shown in Figure 4.

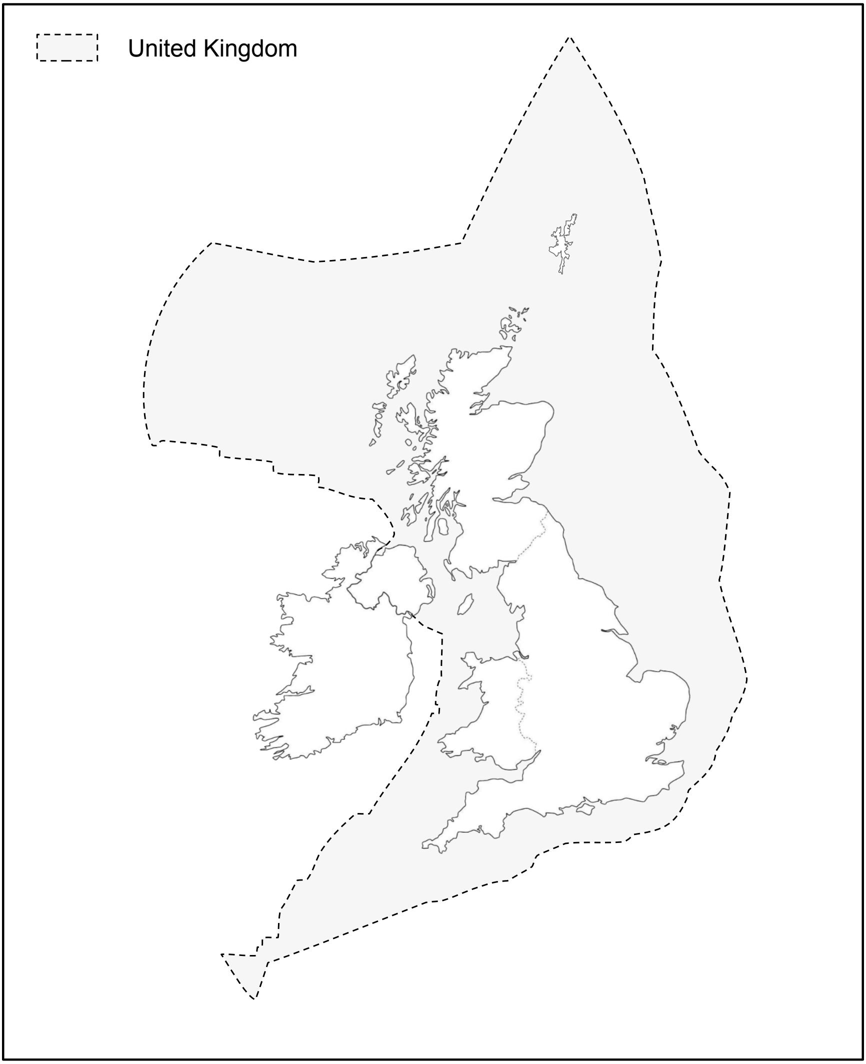

Figure 4: The national catchment area

Payments for natural resources

With all taxation removed, the principles of public revenue can be applied to natural resources within the national catchment area.

Table 1 below shows the types of payments made for different categories of natural resource. Local and national rate charges are payments made for public goods and services, and form a part of public revenue, whereas charges for resource depletion, and rent payable for access to a sea-bed lease, both accrue to the sovereign wealth fund. The payments are justified either by published costs, or by reference to market prices, and are not a form of taxation.

Table 1: Types of payment

	Public revenue		Sovereign wealth fund	
	Local and national rate	Licence fee	Sea-bed lease	Resource depletion
Coal, oil and gas	✓	✓	✓	✓
Offshore wind	✓	✓	✓	
Fisheries	✓	✓		

Firms operating offshore will receive a single annual invoice for all government services. This will include the different elements of rent, local and national rate charges, debt interest and repayment, and licence fee administration according to circumstances, and an example of such an invoice is given in the main document.

The viability of a natural resource depends upon the economic conditions under which the licence is granted. After the removal of all taxation, a greater proportion of known reserves will be suitable for development, and payments into the sovereign wealth fund are likely to be greater than current activity levels would suggest.

Coal, oil and gas reserves

Figures 5 and 6 indicate the approximate location and extent of the reserves of coal, oil and gas within the national catchment area of the UK. All payments made for the permanent extraction of these reserves, and the rent payable for exclusive access to the sea bed, will accrue to the sovereign wealth fund as discussed above.

Offshore wind generation

Figure 7 illustrates the approximate location and extent of offshore wind generation in shallow water. The removal of all taxation will reduce the current need for subsidy, but future developments will necessarily take place at a greater distance from land and in much deeper water. This will lead to progressively higher marginal costs.

Under these proposals, the rent payable for sea bed leases used for offshore wind generation accrues to the sovereign wealth fund, and is determined by the market price for offshore generation.

Fisheries

Figure 8 shows the extent of control over fishing stocks. Although this extends across all of the maritime regions within the national catchment area, there are again distinctions based on water depth, with the more productive fishing grounds being in shallow water.

It is assumed that good ecological management will ensure that there is no long term depletion of stocks, so that the licence fee is an administrative charge only; payments made for the allocation of fisheries licenses are therefore a part of public revenue and do not contribute to the sovereign wealth fund.

The national and local payments for the supply of public goods and services are, however, still applicable for all types of natural resources, as shown in Table 1.

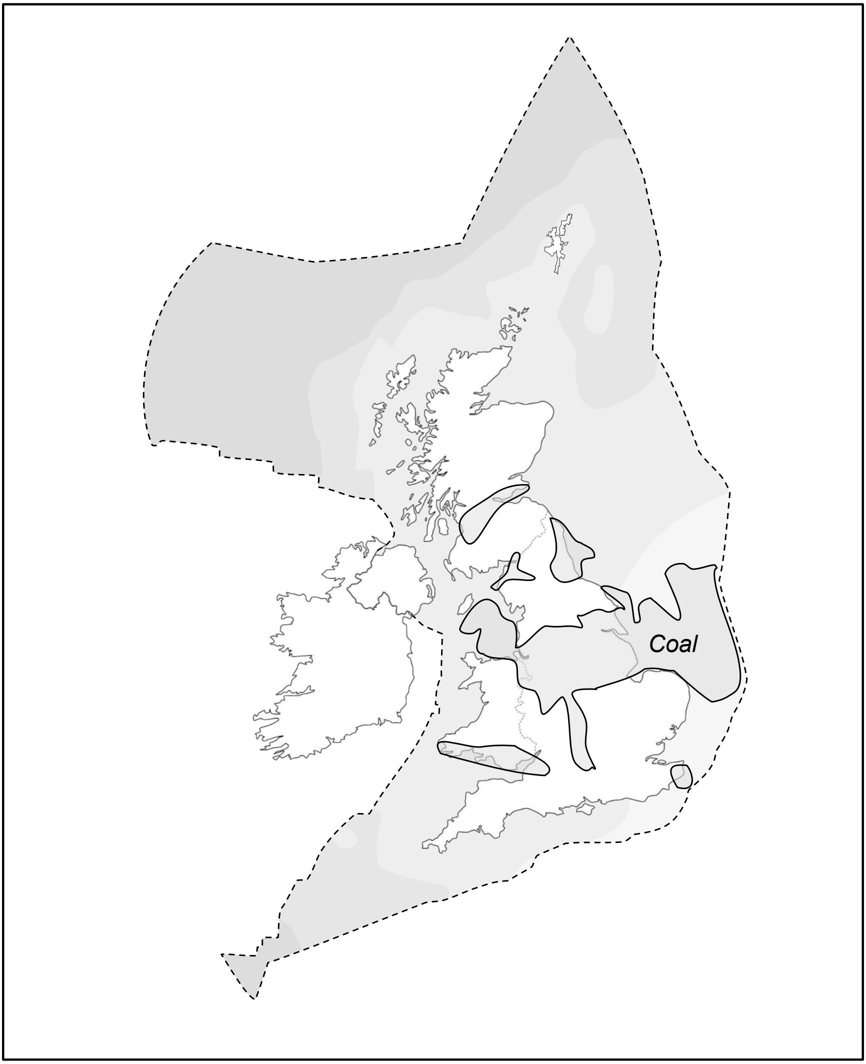

Figure 5: Coal reserves

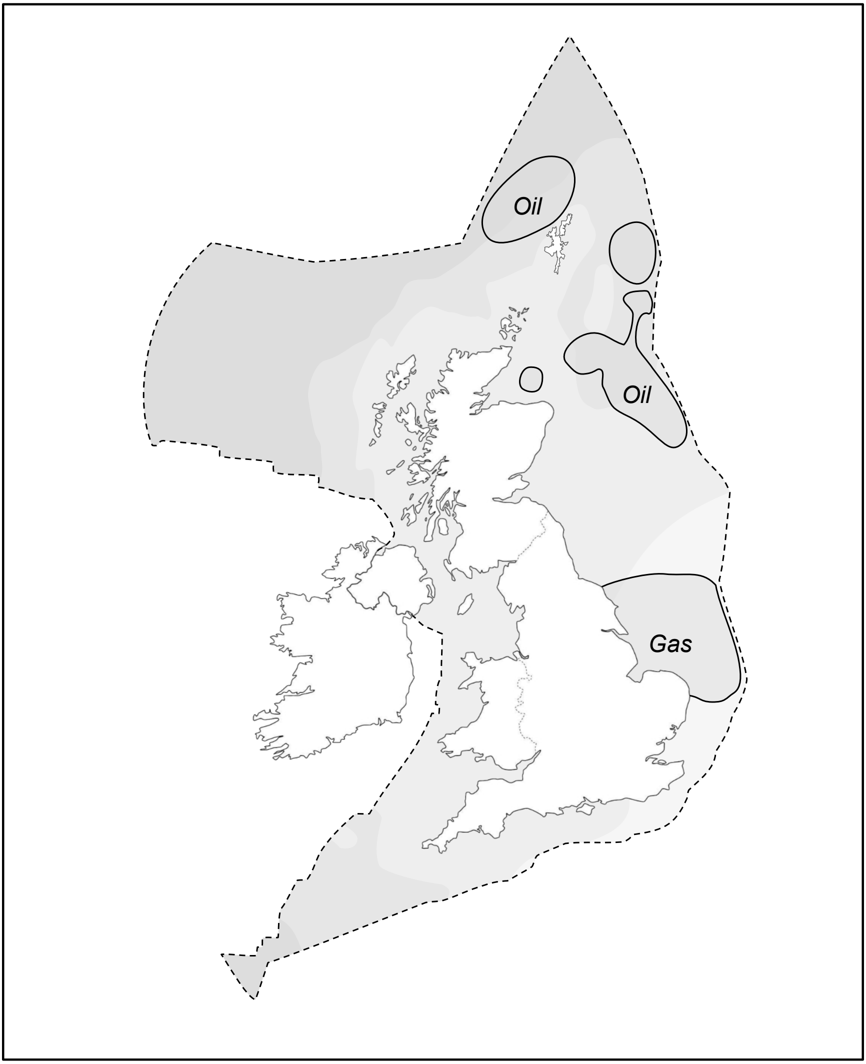

Figure 6: Oil and gas reserves

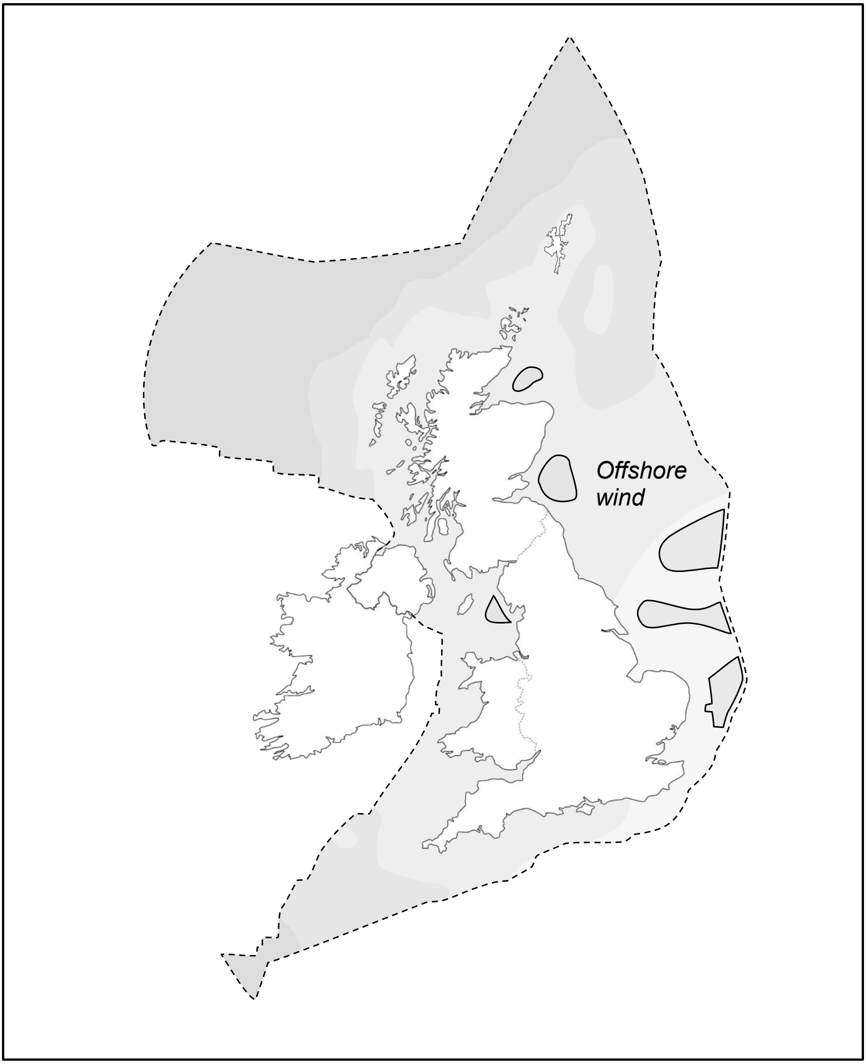

Figure 7: Offshore wind in shallow water

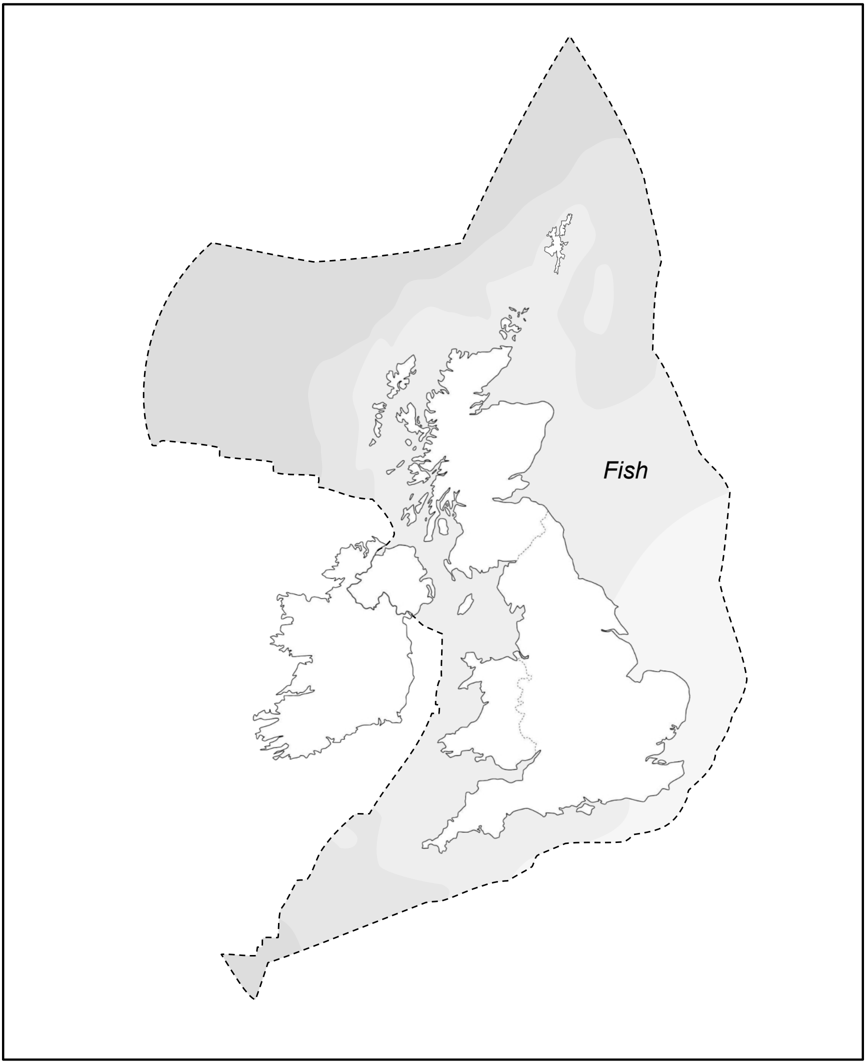

Figure 8: Fisheries