The UK North Sea as a Global Experiment In Neoliberal Resource Extraction

THE BRITISH MODEL OF PETROLEUM GOVERNANCE FROM 1970 TO 2018

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Written by Juan Carlos Boué Edited by Mika Minio-Paluello of Transition Economics

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Juan Carlos Boué is counsel at the international law firm Curtis, Mallet-Prevost, Colt & Mosle LLC, focusing on oil and gas sector transactions, arbitration and litigation. He spent his professional life in the oil and gas sector, including sitting on the boards of various oil refining companies in Germany, Sweden and the United States, and having responsibilities for commercial aspects of all of Mexico's crude oil exports while with PEMEX. From 1991 to 2018, Boué was associated with the Oxford Institute for Energy Studies, and has written widely on the industrial economics of oil and gas exploration and production, petroleum refining, auction design for oil and gas bidding rounds, and the taxation and political economy of oil in general.

The opinions expressed in this text are those of the author and do not represent views of Curtis, Mallet-Prevost, Colt & Mosle LLP or its clients.



PCS is pleased to support the publication of this report putting a spotlight on the North Sea oil tax regime. A trade union with members in the Treasury, HMRC and the Oil and Gas Authority, we have always asserted that a strong and vibrant civil service has a key role to play, not only in the delivery of public services, but also in changing them. This is why tax justice has been at the heart of our campaigning for many years.

But tax justice applies across all sectors, and fiscal regimes for energy is an important way to ensure we can finance our way out of fossil fuels into a fully decarbonised economy, based on a just and transformational transition for workers and communities. As part of this, PCS is advocating for public ownership and democratic control of our entire energy system – energy democracy. This means reclaiming our energy system from the market, resisting the mantra of 'there is no alternative', and restructuring energy as a public good as part of a wider re-visioning of our public services.

John Moloney, Assistant General Secretary, PCS



Platform has challenged rip-off contracts from Uganda to Kazakhstan. These neoliberal fiscal regimes - that starved countries of revenue - were first tested in our own backyard. Any serious attempt to build energy democracy in the UK must confront the myths we are told about the North Sea. Today, Norway has an oil fund worth \$1 trillion. The UK has nothing. Instead, the public are liable for billions in decommissioning costs. The difference is not because the Norwegians put away the money for a rainy day. That fund was generated because Norway achieved higher tax revenues over the past 15 years, while UK governments prioritised corporate profits. Four decades of privatisation, tax breaks and subsidies have seen our oil transformed into private gains. Platform has campaigned on the North Sea since the early 2000s. We've challenged tax dodging by multinationals and supported trade union struggles for better conditions. At a time of climate transition and building new clean energy systems, we must understand what went wrong in the North Sea and why we failed to achieve social benefit from a public resource.

Anna Markova, Campaigner, Platform

Contents

Introduction	4
The Political Setting: First steps toward Petroleum liberalisation	6
The Creation of a North Sea fiscal system to serve the corporations –	
and a New Global Frame of Reference for oil extraction	8
Petroleum Revenue Tax – designed to safeguard corporate profits	9
The oil companies wanted more	10
Further liberalisation and weakening of the fiscal regime	11
Oil of zero value – an ideological fiscal regime	12
Fiscal Outcomes	14
Post-2016 Fiscal Outcomes: Curiouser and Curiouser	20
No Taxation, but Plenty of (Mis)Representation: Adoption	
of the British Reference in Other Jurisdictions	22
TABLE 1	
Comparative Effective Tax Ratios for Petroleum Production	
around the North Sea Basin, 1988-2017 (%)	24
TABLE 2	
Comparative Fiscal Income per Barrel of Hydrocarbons	
Production around the North Sea Basin, 1988-2017	
(USD/Barrel of Oil Equivalent)	25
Endnotes	26

Introduction

he UK North Sea has occupied a special place in the annals of both the international oil industry and the world petroleum market since 1973. This prominence is a reflection of the immense influence that North Sea exploration and production activities have had, on multiple dimensions.

Firstly – on the technological front, the UK North Sea was the place where the offshore petroleum industry not only first ventured into water depths significantly greater than those encountered in its birthplace (the US sector of the Gulf of Mexico) but also had to develop new ways of coping with an unprecedentedly harsh marine operating environment.¹

Secondly, on an industrial economics front, the genesis and expansion of forward and futures markets for Brent crude oil were at the forefront of marketisation and financialisation processes. This led to the international oil trade assuming an inverted pyramidal structure, with the bulk of the volume of oil traded being priced on the basis of signals emitted from a small set of paper and cash markets with a narrow output base, but whose joint trading volume is a large multiple of daily global crude oil production.²

Thirdly, in terms of global macroeconomics, the significant incremental North Sea flows at a time of rapidly contracting demand made a key contribution to the demise of the administered price structure that the Organisation of the Petroleum Exporting Countries (OPEC) had sought to erect after its most important members began to sell directly the oil formerly commercialised by their concessionaires, the major multinational oil companies.³

Finally, the UK North Sea was also at the forefront of the process of redefinition of the economic frontiers of the State: the disposal of state-held North Sea oil and gas assets – specifically, the upstream interests of both the British National Oil Corporation (BNOC) and British Gas and, arguably, the British government's majority shareholding in British Petroleum (BP) – proved to be the spearhead of a privatisation wave that was to sweep Great Britain, first, and then much of the rest of the world, during the 1980s and early 1990s.⁴

Each of the topics mentioned above has been the object of intense academic attention. Indeed, in the wake of the publication of a multi-volume official history of UK North Sea petroleum, it seems reasonable to ask whether there remains any significant aspect of North Sea upstream activities which might still be under-researched.⁵ The answer is yes. The purpose of this article is to provide some general reflections on the *lacunae* in the dominant literature devoted to the novel neoliberal governance structures that were designed in the UK (with a view towards their export and eventual adoption throughout the rest of the world), partly in response to the political and institutional challenges thrown up by the so-called OPEC Revolution.⁶

At first glance, my claim that the governance dimension of North Sea oil might be a neglected area seems suspect. After all, much of Alexander Kemp's voluminous official history is taken up by detailed expositions on the sometimes tortuous bureaucratic

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> routes whereby the institutional framework of British North Sea oil came into being. However, Kemp discusses these issues from a micro rather than a macro standpoint, and downplays the extent to which certain British policies, while sharing the same name as their equivalents elsewhere, actually represented a fundamental break from what had been the mainstream oil industry practice throughout the world up until that point.**?**

Consider, for example, the concept of "participation". In the Middle East countries, participation denoted the radical step of taking equity stakes in the concessions themselves as the only option open for oil-producing countries to secure the national public interest in the face of ballooning oil company profits in a rapidly tightening market, given the legal impossibility of unilaterally imposing tax adjustments (due to the contractualisation of all tax matters in the respective concessions).

In the Middle East, "participation" was nothing less than the prelude to the nationalisation of concessions. In Norway, as incarnated in Statoil, it was the keystone for a policy of building from scratch a strong national presence in oil and gas exploration and production, and its ancillary activities. But in Great Britain "participation" eventually coalesced into a mere commercial arrangement giving BNOC a call option policies of the Labour government would be imbued with a statist and interventionist character, not least because those responsible for articulating such policies in public did so with the left-wing vocabulary that was common currency all over the world at the time.¹¹ Hence, when someone such as Dennis Healey (Chancellor of the Exchequer between 1974 and 1979) reflected on Britain's seemingly relentless economic decline and its proximate causes (such as the disruption following the First Oil Shock), and stated that "[i]f we do join the Third World, it will be

In Norway, "participation" was the keystone for building from scratch a strong national presence in oil exploration and production. But in the UK, it was a mere commercial arrangement giving the British National Oil Corporation a call option to purchase up to half of the output of a given field, at market value

to purchase up to half of the output of a given field, at market value, together with a right of representation on the operating committees of licence-holding consortia.⁸ Furthermore, in some cases, BNOC's right of pre-emption was "qualified by an undertaking to resell it [the acquired volume] to the private companies save in exceptional circumstances", making the British incarnation of 'participation' "little more than a device for monitoring operations and controlling the distribution of oil".⁹

For most of the formative period of the distinctive British approach to upstream oil and gas governance, a Labour government was in power, apart from the Heath government from 1970-74. And Tony Benn, no less, held the newly minted Energy portfolio.¹⁰ Given the policy agenda of the Labour party at the time, it would be natural to suppose that the oil and gas as a member of OPEC", it was not altogether unreasonable to take him at his word.¹² Today, with the benefit of hindsight, we are in a position to appreciate that, like so much else in the Labour policy agenda of the time, such statements were but political willo'-the-wisps that never came even remotely close to materialising. However, what this rhetoric did do was to mask, quite effectively, the uncompromising anti-OPEC character that imbued British petroleum governance structures from their inception.

In what follows, we shall examine the political background and market context of UK North Sea petroleum governance structures. It accounts for the manner in which the UK's structures and fiscal regime departed from the traditional principles of oil governance

5

that had mediated the interaction between resource owners and oil companies since the birth of the oil industry in the United States, and which had been transformed into a liability in the eyes of many policy makers in the developed nations as a result of the unexpected oil price rises of the 1970s. It then offers a characterisation of the new British governance structures and highlights their fiscal outcomes for the UK Treasury – mostly negative. Finally, by way of conclusion, it offers an account of both the manner in which this revolutionary British model was spread to other jurisdictions, and the problematic consequences that this has had.

The Political Setting: First steps toward Petroleum liberalisation

he impact that the First Oil Shock (and the subsequent nationalisation of petroleum concessions in the Middle East and Venezuela) had on industrialised consuming countries was immense.¹³ Their populations felt at first hand the effects of the OPEC Revolution at the level of brownouts, endless lines at petrol stations, stagflation and weakened currencies. The governments of Western consuming countries told their populations that responsibility for these indignities ought to be laid squarely at the door of OPEC, whose drive to increase fiscal revenues was characterised as a plot

culminating in the highhanded expropriation from their rightful corporate owners of the most valuable pieces of real estate on the planet. They argued that OPEC had compounded this outrage by stoking the furnaces of an overheated petroleum market in a variety of ways (notably through the oil embargo implemented by the Organisation of Arab Petroleum Exporting Countries, OAPEC) in order to push up oil prices. In this way, oil found itself thrust to the forefront of the economic and political agenda of developed countries, with the fulcrum of this agenda being, as Henry Kissinger put it, "the political, indeed

found and produced, and not only in Organisation for Economic Co-operation and Development (OECD) countries (the potential for incremental production in places like the USA, Canada, the UK, Australia and Norway were reasonable enough, but no one believed that OECD oil on its own would suffice). And the

expectations on the part of natural resource owners to be remunerated fairly for allowing the exploitation and concomitant depletion of their non-renewable oil and gas resources were characterised as the most significant obstacle standing in the way of oil companies being able to realise greater, re-investable, profits.

This point was unambiguously highlighted in an exchange which took place in December 1972, on occasion of the parliamentary debates surrounding the manner in which UK North Sea oil and gas was to be taxed, and which involved Sir Robert Marshall

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moral, conviction" that it was necessary "to bring about a reduction in oil prices by breaking the power of OPEC".¹⁴

A *sine qua non* requisite for such a price reduction had to be an increase in the oil output outside of OPEC's control. For such production to materialise, it was seen as imperative to clear any obstacles which might prevent oil companies from ploughing as much of their profits as possible into the expansion of capacity, wherever an additional barrel could be (at the time Second Permanent Secretary for Industry) and Conservative MP Martin Maddan. To Maddan's question of whether the British government wanted "to see a limit on the speed of exploitation of the United Kingdom Continental Shelf", Marshall answered in the negative. Maddan then asked whether this meant that the government did not "want to do things which will make that exploitation slower", to which Marshall replied "[t]hat is right". Maddan then asked whether "charging, whether for concessions

by auction or otherwise, and ... the imposition of royalties, have any effect on the speed with which organisations wish to exploit these resources?". To which Marshall replied: "in our judgment and in the judgment to the best of my knowledge of all the western countries with which we discuss these things, very much". So Maddan put it to Marshall that "if the United Kingdom Exchequer sought not to gain a penny from these things the exploitation would go ahead quicker?". The latter's answer was emphatic: "absolutely yes".¹⁵

Unfortunately for Kissinger's wider policy agenda, the process of decolonisation meant that Marshall's diagnosis for the UK could not easily be

This new reference would make company profits the exclusive centre of all attention, to constrain the freedom of decision and action of governmental actors

imposed on the Global South. Industrialised countries struggled to deny or question the sovereign rights of eminent domain, taxation and regulation that underdeveloped countries had over hydrocarbon resources located within their territories (especially since OECD countries themselves would never contemplate surrendering such rights). Furthermore, any suggestion that hydrocarbons were of no intrinsic value, and that their owners might just as well put them at the disposal of oil companies as a free gift of nature, would have been met with universal derision (at the time, academia had yet to make respectable the notion that countries with abundant petroleum resources are actually in thrall to a particularly insidious curse).

Finally, it was obvious that, in the wake of the Oil Shocks, the fondest desire of non-OECD countries with any hydrocarbon potential involved clambering atop the oil bandwagon, rather than derailing it by acting on behalf of the major oil consumers. All of which meant that if new petroleum provinces were to make a contribution to OPEC's weakening, the governments of the countries where they were located would have to be convinced somehow that their lot would improve only if they renounced OPEC's 'illiberal' approach to fiscal matters, despite its apparently resounding success.

For petroleum liberalisation to take root worldwide, the OECD consuming countries that stood to benefit the most from it had to avoid "dispersing resources in trying to secure favourable results piecemeal".¹⁶ Instead, it would be "more efficient and politically wiser to use those resources to influence the institutional mechanisms that produce future streams of valued outcomes" – i.e. to produce a new status quo.¹⁷ What was required was the leveraging of

the tremendous institutional strengths at the disposal of developed countries and the international oil companies to set up a new reference, a new model for the governance of upstream oil and gas activities.

This new reference would make company profits the exclusive centre of all attention, so as to channel all political discussion down very clearly defined pathways, constrain the freedom of decision and action of governmental actors and, last but by no means least, crowd out any notion that the natural resource in itself might be of some value. In a nutshell, the new reference would seek to

redefine the manner in which states approached the exercise of their property rights over the hydrocarbon resources within their territories, above all at the level of the fiscal regime applicable to upstream oil and gas activities.

The ultimate objective, to use a sporting metaphor, was not to make a couple of inspired substitutions in order to overturn an adverse scoreline, so much as to change the rules of the game itself, in a way that would thenceforth make it difficult for the opponent to get anywhere near the goal mouth in the first place.

G reat Britain was to be the crucible where this new reference was forged. Offshore commercial production of natural gas in the UK Continental Shelf had begun in 1967 and, after 1969, very significant finds of crude oil began to be made. The development of the early British natural gas finds (like West Sole) had gone ahead on the basis of a simple fiscal regime, consisting of a 12.5 per cent royalty and corporation income tax (then at a rate of 52 per cent), but only because the existence of a monopsony state-owned buyer for this gas (and a statutory obligation to sell to it at the

prices it nominated) reassured the British government of the time that rent would be captured in a way that would roughly translate into a 50/50 profit split.¹⁸ However, the prospect of large scale crude oil

However, the prospect of large scale crude oil production seemed to make the adoption of a special tax regime imperative, to preempt the deduction against UK oil income of costs incurred in other jurisdictions and/or activities (especially after oil prices quadrupled in the wake of the Yom Kippur war and the OAPEC embargo).

Great Britain was to be the crucible where this new reference was forged

This was a major issue in the February 1974 election that took the Labour Party into office, and the newly inaugurated government lost no time in announcing that it intended to change the fiscal regime for all extant and future licences.¹⁹ However, the opinions of the British contingent within the Seven Sisters (BP and Shell) carried a great deal of weight in the discussions on the desirable features for the new fiscal regime. An even more decisive factor than this, and one that ensured that the new regime would have a radically anti-OPEC liberal *ethos*, was the fact that these discussions took place after the First Oil Shock in 1973.

The impact that this event had on policy discussions comes across clearly in an account written by prominent Labour politician Edmund Dell MP, Paymaster General from 1974 to 1976 The Creation of a North Sea fiscal system to serve the corporations – and a New Global Frame of Reference for oil extraction

(and No. 2 at the Treasury to the Chancellor of the Exchequer).²⁰ As Dell saw matters: "if the choice had been available between the possession of North Sea oil and the continuance of the oil prices prevailing pre-1973, *I would have chosen to do without North Sea oil*".²¹ That Dell should express such an unambiguous preference is telling, especially when one recalls the unprecedentedly wretched state of British public finances at the time. Dell thought that, however beneficial North Sea oil resources might prove for Britain, the country's long term future was inextricably tied to the well-being of its non-oil-endowed peers in the OECD, and for whom low oil prices were essential.²²

It is worth recalling the opinion of Robert Marjolin (who was European Commissioner for France on the first European Commission and, together with Dell, one of the "Three Wise Men of Europe" entrusted by the European Council in 1978 with the mission of reporting ways of promoting progress towards a European Union):

the European economy's stupendous development, from the end of the war to 1973, was possible only because energy, mainly in the form of oil, was available in virtually unlimited quantities and at prices which seem extremely low in the light of experience in 1973. Even so, as the one in charge of Common Market energy matters, I still considered those prices to be too high and I used such influence as I had to bring them down, or at any rate to prevent them from rising.²³

The *Oil Taxation Act* (1975) can be said to be the statutory incarnation of Marjolin's policy imperative. And the keystone of this act was the Petroleum Revenue Tax (PRT), designed and implemented under Dell's leadership and responsibility.²⁴

Petroleum Revenue Tax – designed to safeguard corporate profits

used by its owners to extract very significant revenues from third parties which were not connected in any way to the project that such infrastructure

RT was a 'resource rent' (i.e. windfall or excess profit) tax, ring-fenced both by field and by country.²⁵ PRT was also creditable against US income tax obligations.²⁶ PRT was designed to allow companies a quick recovery of their costs and investments, essentially by treating the latter as current expenses (multiplied by a significant uplift). Although the PRT rate was set at a relatively high level (initially 45 per cent, increased to 75 per cent by 1983), no taxable income would be generated until such time as all the original outlays had been recouped with interest (and the applicable rate worked out to be generous, thanks to volume exemptions and uplift).²⁷

Just as importantly, PRT could flow in both directions: from companies to the state, or *vice versa*. If at any point over the lifetime of the license, the sum of the oil companies ' costs and cumulative investment (with uplift) were to exceed their cumulative profits (with applicable deductions), then the state would have to pay PRT back to the oil companies in the amount necessary to bring the two sides of the equation into balance – safeguarding corporate profits. This would also apply, crucially, to the period of decommissioning oil rigs and other petroleum production installations.

PRT receipts have to be seen not as income as such but, rather, as *a contingent liability of the UK government*. They effectively constitute a reserve to fund any incremental investments/costs associated with Acts of God, exogenous market developments, the costs of decommissioning of petroleum production installations, and even negligence on the part of some operators (as the bulk of such investments/costs will end up being paid out of the government's share of revenues, with the excess profit rate determining the magnitude of its contribution in percentage terms).

For instance, the basin-wide precautionary shutdowns and mandatory investments that followed the Piper Alpha disaster of 6 July 1988 (plus the cash flow effects of the disaster itself) shrank the PRT obligations of the British oil industry to such an extent that, in Fiscal Year 1990-91, the UK government recorded **negative** PRT receipts for the not inconsiderable sum of £216 million. Thanks to the existence of PRT, the UK government often ended up funding investments in infrastructure subsequently was meant to serve (the prime instance of this being the Forties pipeline).²⁸

This innovation signaled an unequivocal intention on the part of the British government that, under no conceivable circumstance (including accident, oversight, and even negligence) would the taxation of excess profits be allowed to bite into the returns due to oil capital.²⁹

The UK North Sea regime transfers risk to government alongside assured rates of return for investors. The risk profile that investors face once a commercial discovery has been made is highly

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favourable, on two grounds. The first one is that excess profit levies are meant to be the sole means whereby government obtains fiscal revenues from upstream activities (other than general taxation). The second one is that payment of such levies is made contingent, and subordinated, to the recoupment of all investments and costs – usually assessed on an annual basis (this is the practice in Norway, say). But the more generous UK fiscal regime assesses them over the *lifetime* of licenses – plus an assured rate of return (enough to surmount with ease the hurdle rate requirements that an oil company would have for a project in a province with a very low level of political risk such as the UK).³⁰

Thanks to these two factors, the government (in its capacity as recipient of excess profit tax payments) is shifted to the very last place in the line of residual claimants for project funds, behind not only the most unsecured creditors but even equity holders.

The oil companies wanted more

Radical as the new British approach to hydrocarbon taxation was, the oil companies wanted more. The chief criticism concerned the retention of royalties, on account of two factors. Firstly, the manner in which royalties allegedly distort both investment decisions and returns (allegedly because such effects arise under thoroughly unrealistic assumptions about optimal allocation of risk, perfect foresight and perfect competition, and become much attenuated or disappear altogether under conditions of uncertainty and asymmetric risk preferences). Secondly, there was the undeniable, but ultimately irrelevant, dilatory effect of royalties on investment.

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Irrelevant because the need for profit on the part of an investor and the requirement for patrimonial compensation on the part of a resource owner both have a similar dilatory effect on investment, and since no one seriously suggests that investment should be undertaken without expectation of profit, it seems unreasonable to expect that resource holders should grant access to resources without expectation of remuneration for such access.³¹

By way of a palliative gesture to the oil companies and their many champions in Parliament, the Secretary of State for Energy was given the power to remit royalties (with any amount remitted to be regarded as paid for tax purposes) but, as Dell observed, "the oil companies never liked [this arrangement] because it was discretionary".³²

The oil companies would also have liked to see a so-called 'pure flow-of-funds tax' (PFFT), in preference to PRT, as a vehicle for excess profit taxation. Whereas taxable income under PRT only materializes once the accumulated cash flow has become positive, a PFFT gives rise to negative taxes for as long as it takes a project to get to the breakeven point.³³ As Edmund Dell observed, "no such tax had ever been imposed on any resource industry anywhere in the world", doubtless because as its own champions acknowledged, "the period between initial expenditure and substantial profits being earned is long, [so] a pure flow-of-funds tax would require large

refunds to be paid out long before tax receipts".34

Accepting large net outflows from the treasury as a *consequence* of oil production would have strained the patience of almost any electorate (let alone the electorate of a country that had just gone cap in hand to the International Monetary Fund), so the alternative was advanced that "losses should instead be carried forward in real terms, plus some interest mark-up reflecting overall market performance, and offset against future profits, and this would prevent the subsidy of loss-making activities ... the government would borrow, through the normal channels to overcome the problem that tax revenue occurs late in a field's life".35

Dell and his ministerial colleagues gave no serious consideration to the idea of a PFFT (the financial position

of the UK government was simply too precarious). However, the fact that the PFFT proposal never amounted to much in a British context does not mean that the ideas behind it sank without a trace. Indeed, the cost oil and profit oil distribution formulae that underlie the majority of the production sharing agreements (PSAs) in force in the world are essentially 'synthetic' PFFTs, as they closely replicate (and, on occasion, even improve upon) the typical tax profile that a private party would enjoy were they subject to a genuine PFFT.³⁶ U ltimately, the oil companies active in the UK North Sea managed to extract from subsequent Conservative chancellors and cabinet ministers an even better deal than an alternative method of excess profit

Further liberalisation and weakening of the fiscal regime

taxation such as PFFT.³⁷ This took the form of ever more comprehensive and valuable tax breaks and loopholes, including the selective elimination of royalties (1983, 1989), the relaxation of the PRT ring-fencing conditions (in 1983 for exploration and in 1987 for development) and then, the complete abolition of royalties, the abolition of PRT for new fields, and the reduction in the prevailing PRT rate to 50 per cent (1993).³⁸

The abolition of royalties and the exemption from PRT meant that fields developed after 1993 would enjoy the same fiscal arrangements as any run-ofthe-mill corporation. Thus, the British government was content to receive a compensation of precisely *zero* from the exploitation of certain hydrocarbon

Corporation Tax was the only levy on the liquidation of a non-renewable patrimony of the Crown and the British people. The UK government had to a large extent given up on the idea of collecting resource rents on behalf of the public. This explains the significant differences between oil fiscal income in the UK and countries like Norway or Denmark

resources belonging to the Crown. Corporation Tax was the only levy on the liquidation of a nonrenewable patrimony of the Crown.

At this point, the UK government had to a large extent given up on the idea of collecting resource rents on behalf of the owner of the natural resource, the Crown and the British people. It is this factor which explains the significant differences between oil fiscal income in the UK and in oil producers like Norway or Denmark, which also have in place fiscal regimes aiming to maximise investment.³⁹

The vertiginous rebound of the oil price from its catastrophic 1998 cycle lows made this sort of generosity politically unsustainable. In 2002, the British government enacted an additional

> Supplementary Charge of 10 per cent to the Corporation Tax rate, applicable only to 'ring-fenced' profits from oil and gas exploration activities. But this was not a serious attempt to capture windfall gains, as PRT was allowed to continue withering away.

> Eventually in March 2016, the government decided to zero rate PRT on a permanent basis, backdated to January 2016, whereupon the curtain finally fell on the unseemly charade that PRT was the lynchpin of the UK fiscal regime.

Oil of zero value – an ideological fiscal regime

t the core of the British model of petroleum governance is the idea

that a country's petroleum resources can be best developed by making sure that a state's claim to receive petroleum rent never compromises or comes into conflict with any upstream investment that an oil company believes could be profitable, and might therefore be willing to undertake. Should this free and frictionless flow of investment encounter an obstacle that *might* drive up costs, then it is incumbent upon government to address this potential cost problem, preemptively, through the tax rate. The state is expected to do this by reducing - if necessary all the way down to zero - the effective tax rate, so as to make the investment in question profitable. In other words, the supposedly market-driven British model rests on the dubious premise that, at the margin, it is ultimately taxation (rather than costs and/or prices) that sways investment decisions.

This article of faith, in effect, transforms the fiscal regime itself into an adjustment variable, to

In the new British frame of reference, natural resource owners are characterised as having nothing of value to offer, so their governments in turn are cast in the role of mere consumers of capital (almost invariably imported)

be manipulated in order to secure the profitability of submarginal investment projects (in the process turning all other projects intra-marginal). By extension, government take is conceptualised as "the 'price' that investors are willing to pay for exclusive access to concession or contract areas for petroleum exploration, development and production". This 'price' was supposedly "determined by the market forces through ... the supply of concession and contract areas by governments, and the demand for concession and contract areas by [international oil companies]".40

In reality of course, market forces do not determine supply and demand of North Sea oil contracts, and there is no *open market mechanism*, with government on one side and prospective or incumbent investors on the other.

The starting point for the new British frame of reference was that the value of oil and gas resources in the ground can only be realised through investment. This viewpoint is articulated by McPherson and Owens in the following terms: "mineral resources ... do not become resources in the economic sense unless and until capital, entrepreneurial skill and labour are jointly put together to create the value".⁴¹ From this premise, the conclusion is then drawn that, in a situation where no capital is as yet present, oil and gas in the ground are, to all intents and purposes, of no value "because natural resources do not become economic resources until they are found and put

to use".⁴² Consequently, "[if] economic rent, in fact, exists, it may well be in the profits arising from ... technological skills, refining and marketing assets, or entrepreneurial ability; or it may well be in wages as a result of superior skill, or bargaining power, or both. To conclude that economic rent exists and that it has been appropriated away from land is too facile a conclusion".⁴³

The logical corollary of the position sketched above is to confer the attribute of scarcity *solely* to capital. This, in turn, is what supposedly allows investors to name their price regarding the fiscal regime that has to be in place for them to be induced to invest. And if one is prepared to accept that capital is indeed scarcer than hydrocarbon resources, then the role of government in the finding and development of hydrocarbons can

be understood exclusively in terms such as these: *"Fostering Investment: The Role of a Petroleum Regime".*⁴⁴

Saying that fostering investment is the role of a fiscal regime is tantamount to turning on its head the political relationship between resource owners and the companies exploiting such resources. Traditionally, governments (in their capacity as representatives of natural resource owners) were considered stewards of a valuable natural resource, in charge of setting the terms and conditions whereby access to it would be granted at a certain point in time, and with which companies had to comply if they wished to exploit these resources.

In contrast, in the new British frame of reference, natural resource owners are characterised as having nothing of value to offer, so their governments in turn are cast in the role of mere *consumers of capital* (almost invariably imported), and the policy levers which are supposedly expressions of their sovereignty are transformed into the constituent elements of alleged bargains struck for the sole purpose of inducing investment.

Crucially, any movement in such levers can then be depicted not as an exercise of a state's police powers, but as a breach of contract.

In this British model of mineral governance, the imputation of zero value to subsoil resources is presented in *economic* terms. Paradoxically, this very reliance on economic arguments is the explanation

behind the remarkable lengths to which British licensing authorities have been prepared to go in order not to allow 'the Market' anywhere near the assignation of exploration and drilling rights (these have always been assigned through administrative fiat, a puzzling feature in what is a supposedly market-driven model).⁴⁵

At the outset of exploration and production activities in the North Sea, the argument was advanced that the assignation of licenses by means of open auctions would lead to a lower participation by British entities than that which would obtain from assignation through administrative procedures (in which the criterion of nationality could be made to count, even if not openly).

In fairness, it was probably true that at that time, most British bidders other than BP or Shell would have been unable to hold their own in open cash bonus bidding against much more experienced and better capitalised American competitors.⁴⁶ However, the beauty

contest procedure adopted for these early licensing rounds, centred on work programme bidding, continues in use today, more than four decades later (and even after the UK government has used the auction mechanism with spectacular success in areas such as cellular telephony).⁴⁷

This can only be explained on ideological grounds.⁴⁸ After all, the conceit that oil in the ground

has zero value will be very difficult to sustain to the extent that genuinely open acreage auctions reveal that companies are ready to part with very substantial sums of cash merely on the off-chance that they might find hydrocarbons resources.⁴⁹ Thus, the reason why there is no place for cash bidding rounds in the British reference is that, perhaps to a greater degree than any other fiscal instrument, such rounds serve to highlight the fact that petroleum is an exhaustible, non-renewable – and hence inherently valuable – natural resource.

Cash bidding rounds allow resource owners to capture significant option value even on highly speculative acreage, in locations where capital might be entirely absent. A good example of this is the 464.7 million USD that an affiliate of Royal Dutch Shell paid the government of Alberta for 10 leases covering a total of 88,576 hectares of the Grosmont formation, which contains vast amounts of in situ

No economically viable method has yet been found to separate this very immobile bitumen from its carbonate matrix. However, this fact clearly did not prompt the Alberta government to conclude that it had to give Shell access to these potential resources for free

> natural bitumen in a matrix of carbonate sediments, buried at depths of around 300 meters. Shell paid this money to obtain rights even though no economically viable method has yet been found to separate this very immobile bitumen from its carbonate matrix. However, this fact clearly did not prompt the Alberta government to conclude that it had to give Shell access to these potential resources for free.⁵⁰

Fiscal Outcomes

ffective tax rates in the British upstream sector were aggressively reduced from the mid-1980s onwards. As mentioned beforehand, the expansion of UK North Sea production made a major contribution in terms of the progressive weakening of the international oil market, first in 1982 and then, cataclysmically, in 1986.⁵¹ However, this production profile was a reflection of the incipient stage of development of the North Sea as an oil province, and not of the benevolent tax environment.

Official statistics leave no room for doubt that the British tax incentives did not translate into increased exploratory drilling activity or, especially, higher rates of profit re-investment when compared to those

achieved in other jurisdictions with similar endowments at similar stages of development, but where much higher taxes prevailed (notably Norway).

As a matter of fact, investment in real terms began to stall as a consequence of the 1986 fall in oil prices and never really recovered (apart from a brief spurt of **mandatory** investment derived from oil companies' need to comply with the improvements required by the Cullen report into the Piper Alpha catastrophe), such that by 1999 it was well below what it had been in 1987.52 Likewise, in the 39 years elapsed between 1976 and 2015, Norwegian investment per barrel of hydrocarbons produced has only been less than that of the UK in seven years, and in two of those seven years (1991 and 1992), the effect of required investments post-Piper Alpha can clearly be seen to have been the cause.

In large part this was because, as oil companies themselves accepted, the laxity of the British fiscal regime made it possible for them to use the copious cash flows generated by their upstream activities in the UK in order to fund exploration programmes outside the country.⁵³

The cost of the British North Sea governance model in terms of UK fiscal income has always been significant. As early as 1978, for example, in an intervention in the House of Lords, Lord Balogh (an economic advisor to Harold Wilson who found himself on the losing side on the question of just how favourably oil companies were to be treated) rued the fact that "any oil man would admit in private – but not in public – Britain is one of the most hospitable of all countries in the world for oil

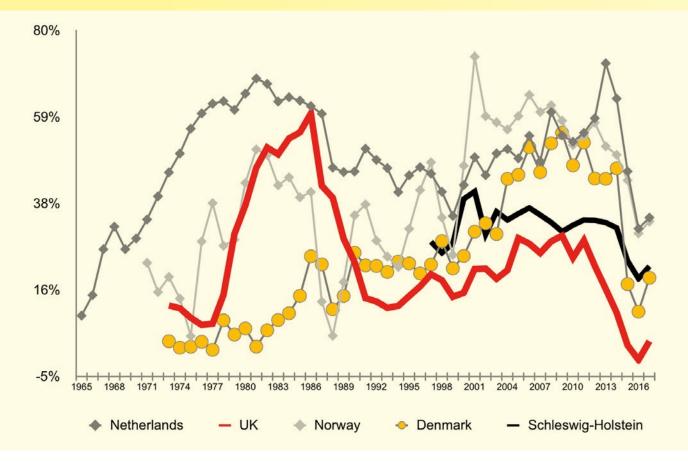
companies. It has one of the lowest, if not the lowest, tax-take and most advantageous depreciation rules".⁵⁴

Of course, Lord Balogh did not contest that, for the oil industry, "the North Sea, with its rough climate and greater depth [compared to the coast of the Gulf of Mexico], challenged existing technical knowledge to its limits, if not beyond".⁵⁵ Furthermore, he understood perfectly well why oil companies preferred to "put the best – or rather the worst – possible construction on the facts as they emerged ... and insisted on the best possible terms".⁵⁶

What Lord Balogh could never come to grips with, though, was the enduring "governmental aspect of the failure to safeguard British interests", which was

The British tax incentives did not translate into increased exploratory drilling or higher rates of profit reinvestment when compared to those achieved in other jurisdictions with similar endowments at similar stages of development, but where much higher taxes prevailed (notably Norway)

> all the more remarkable given that governments elsewhere proved quite capable of learning the relevant lessons. In Lord Balogh's words, "the Norwegians ... [a]t first gave terms which were not unlike ours. Once they saw the improvement in the prospects they stiffened them very considerably since and increased their 'take' to roughly OPEC levels. The much publicised threat of stagnation in the Norwegian sector did not materialise".⁵⁷



Effective Tax Ratios for Hydrocarbons Production in the North Sea, 1965–2017

Lord Balogh's lamentations fell on deaf ears and the situation he decried only changed for the worse throughout the 1980s and 1990s (and all the while, the predicted slump in the Norwegian sector of the North Sea stubbornly continued not to happen).

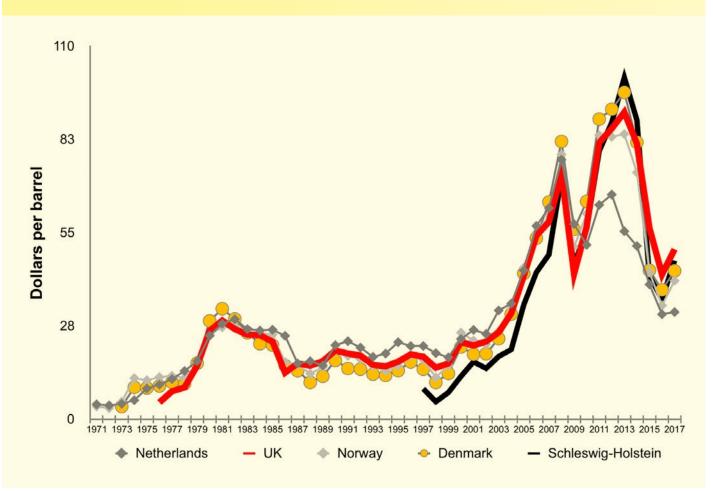
Then, as oil prices skyrocketed from 2000 onwards, the differences in the amounts that the UK levied compared to other producers (not only in the North Sea) reached astonishing proportions.

A straightforward way of appreciating this point consists in calculating and comparing the effective tax ratios ("ETR") for petroleum exploration and production activities in all the jurisdictions producing oil and natural gas from the North Sea. The ETR is defined as the sum of tax revenues divided into the

Any oil man would admit in private – but not in public – Britain is one of the most hospitable of all countries in the world for oil companies value of gross production.

Unlike the marginal rate of tax (which is a forward looking measure that relies on assumptions about prices, revenues and production profiles), ETR is a retrospective indicator calculated on the basis of observed data for all of these parameters (this is a useful feature, as the taxes that companies liquidate may be a very small fraction of what they would have theoretically had to pay had the marginal rate of taxation applied, as the recent cases of Google, Facebook, Amazon, Apple and other multinational companies have so poignantly demonstrated). Thus, ETR is a device that allows the comparison of the real incidence of taxation across jurisdictions, not least because it makes it unnecessary to track and itemise the myriad exemptions, incentives, special features (and tax bases) granted against the various taxes faced by the oil and gas industry in different countries, at different times. ETRs, in other words, permit the translation of dynamic tax policies across jurisdictions into a tractable analytical form.

ETRs incorporate no information on industry costs, so a disparity in ETRs cannot necessarily be taken as diagnostic that the tax burden in one jurisdiction might be too light in comparison to that of some other jurisdiction, because it is costs that ultimately determine the share of gross revenues available to be divided between taxes and industry profits. But ETRs can certainly give a good idea of just how large



Unit Price for Hydrocarbons Production in the North Sea, 1971–2017

differences in cost structures (exploration, production and so on) would have to be in order to account for a given tax gap between jurisdictions. Moreover, the calculation of ETRs is straightforward, requiring no adjustments either to capture the fluctuating values of currencies or to express natural gas volumes in oil equivalent terms. Thus, for the layperson, ETR is an intuitively easy concept to grasp.

As shown in the Figure below, the UK ETR is currently (and has been for a long time now) the lowest observed for any of the four major North Sea hydrocarbons producers (the other three being Norway, Denmark and The Netherlands).

Indeed, it is considerably lower even than the ETR of the fifth North Sea hydrocarbons producer,

UK ETR is currently (and has been for a long time now) the lowest observed for any of the four major North Sea hydrocarbons producers

the German Federal *Land* of Schleswig-Holstein.⁵⁸ This last datum is highly counterintuitive, for a number of reasons. Firstly, German North Sea petroleum production only started in 1987, whereas hydrocarbons production in the UK sector began twenty years earlier. Secondly, German North Sea hydrocarbons output has always been minuscule in comparison to UK output: the former peaked in 2003 at around 60 thousand barrels of oil equivalent per day (BOED) and is currently running at around 25 thousand BOED (of which oil accounted for about 23 thousand BOED), whereas the latter peaked in 1999 at 4.7 million barrels of oil equivalent per day, and in 2015 was running at around 1.63 million BOED (i.e. twenty-seven times more than Schleswig-

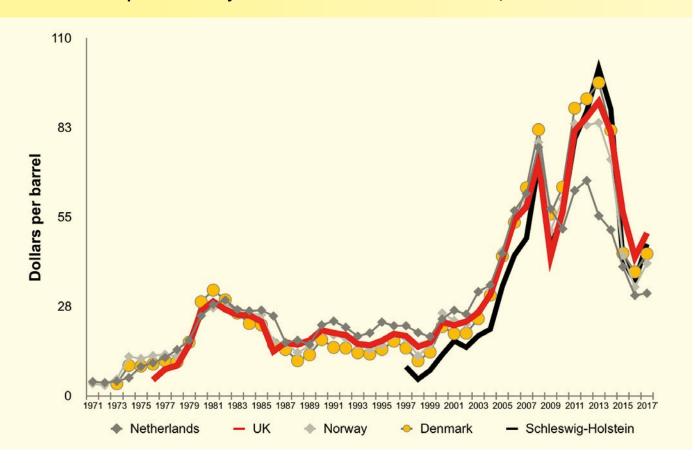
Holstein production at its peak). Thirdly, Schleswig-Holstein unit costs are high because oil production takes place in an estuarine setting of exceptional environmental fragility through a quite complex production system, and the quality parameters of the oil produced are poor (i.e. it is a heavy oil with a relatively high sulphur content, unlike most crude oils produced in the UK and Norway).⁵⁹

The comparison between the ETR for Schleswig-Holstein and that for the UK

Continental Shelf is revealing precisely because it implies that both unit costs and geological prospectivity in the UK are higher and poorer, respectively, than they are in Germany. Since the exact opposite happens to be true, this suggests that it is warranted to conclude that the UK fiscal regime for hydrocarbons is too lax (and has been for a very long time now). After all, in FY2015-16, the UK's net tax receipts derived from a hydrocarbons output of around 1.6 million barrels of oil equivalent per day (a figure slightly *higher* than the output for 2014) came to minus 3 million dollars, and total government revenues (which include the acreage fees that license holders have to pay) came to 103 million dollars.60 In contrast, Schleswig-Holstein received 70 million dollars in royalties

"The Norwegians ... [a]t first gave terms which were not unlike ours. Once they saw the improvement in the prospects they stiffened them very considerably since and increased their 'take' to roughly OPEC levels. The much publicised threat of stagnation in the Norwegian sector did not materialise"

Fiscal Income per Barrel of Hydrocarbon Production in the North Sea, 1971–2017



alone in 2015, on a modest production level of only 25,000 BOED.⁶¹ In FY 2016-17, total UK government revenues amounted to minus 322 million dollars, once again on an output of 1.6 million BOED.⁶² For its part, in 2016, Schleswig-Holstein received 57 million dollars in royalty payments, on an output essentially identical to that recorded in 2015.⁶³ In other words, Schleswig-Holstein's oil production was around 2% of the UK's, but the region received \$57 million from the companies, while the UK paid \$322 million to the companies.

On a per barrel basis, the picture does not look any less dismal from the perspective of the UK tax payer. UK gross income per barrel of hydrocarbons produced has, through time, been more or less comparable to that of other North Sea producers (see figure above). However, in terms of the tax contribution per barrel of oil produced, the UK is in a league of its own (as the figure below clearly shows).

The laxity of the UK fiscal regime is put into an even starker perspective by analysing the fiscal yields against those of the larger North Sea producers (whose production volumes, unlike those of Schleswig-Holstein, are comparable to those of the UK). Consider the following:

in the eight years going from the outbreak of the global financial crisis to 2015 inclusive, UK government receipts from taxation on petroleum exploration and production activities came to 65.6 billion dollars, representing an average ETR of 20.3 per cent on a gross industry income of 323 billion dollars.⁶⁴

If the quantum of gross income generated in the UKCS oil and gas activities during these years had attracted the ETRs which oil and gas activities attracted in Denmark and Norway during this same period (49 and 54 per cent, respectively), then the UK would have received an additional 92 or 108 billion dollars more in fiscal income (i.e. an average of 11.6 billion or 13.6 billion dollars, respectively, per year).⁶⁵

Indeed, over the period beginning in 2002 (the year when the UK fiscal regime was supposedly "toughened" with the introduction of the Supplementary Charge) and ending in 2015, the difference between the hydrocarbon taxes actually levied by the UK government, and the fiscal yield if the UK had achieved the same ETR as Norway, was a staggering 324 billion dollars. This could have formed the basis for a substantial national Oil Fund – in fact, this was the period during which Norway paid

into its fund.

It is not possible to conclude, solely on the basis of the above data alone, that petroleum activities in the UK North Sea could shoulder a fiscal burden identical to that which they have borne in Norway, say. However, given that Danish hydrocarbons production is but a fraction of that of the UK and, as a consequence, Danish unit costs are also very high, it is difficult to accept that petroleum activities in the UK North Sea could not have withstood taxation at Danish

Schleswig-Holstein's oil production was around 2% of the UK's, but the region received \$57 million from the companies, while the UK paid \$322 million to the companies

levels (certainly in recent years).

Furthermore, the burden of proof in terms of this particular hypothetical would appear to lie on the side of those who suggest otherwise, not least because among the ETRs of all the significant North Sea hydrocarbons producers, the UK's is the only one not to have increased over the ascending cycle of oil prices spanning the 2000-2014 period.⁶⁶ With the post-2014 price downturn, all of the North Sea fiscal regimes adjusted sharply downwards, but none more so than that of the UK.

Neither can the differences in ETRs highlighted above be explained in terms of a greater adherence to the principles of tax neutrality on the part of the UK fiscal regime. Tax neutrality is an attribute whereby the economic merits of a given investment or course of action are not changed by the incidence of a tax (i.e. the investment or action appears the same whether considered on a pre- or on a post-tax basis).⁶⁷ This sort of tax neutrality is certainly a feature of the UK North Sea fiscal regime, but also of those of the three other substantial North Sea oil producers: Norway, The Netherlands and Denmark.⁶⁸ There are differences in detail as regards to specific components of the four The difference between the hydrocarbon taxes actually levied by the UK government, and the fiscal yield if the UK had achieved the same effective tax ratio as Norway, was a staggering 324 billion dollars. This could have formed the basis for a substantial national Oil Fund – in fact, this was the period during which Norway paid into its fund

tax regimes but, in terms of neutrality, they are all broadly comparable.

Likewise, it should be pointed out that differences highlighted above take account of different output levels across North Sea producers: in 2011, to take a year at random, observed Norwegian fiscal income (62.6 billion dollars) was actually 3.8 times greater than the annualised UK fiscal income for that year (16.5 billion dollars), because Norwegian production was significantly larger in absolute terms (mainly because Norwegian resources were exploited with a more conservative depletion profile). By the same token, observed Danish fiscal income in 2011 (5.6 billion dollars), was considerably less in absolute terms than UK income (albeit much higher in relative terms).

The economic analysis presented above is conceptually very simple, which might suggest to some that it cannot capture the highly complex interactions (both at the financial and the temporal level) between the myriad levers, reliefs and cost deductions that make up the UK fiscal regime. That is true to an extent but, by the same token, the comparative dimension to the analysis undeniably reveals the UK fiscal regime to be an outlier (by a significant margin) when its outcomes are set against those produced by other fiscal regimes which are just as complex and pursue analogous policy imperatives (notably the desire to promote maximum ultimate recovery), against a fundamentally similar geological backdrop.

The belief, in the face of such evidence, that the UK fiscal regime is not aberrant seems akin to the drunken driver's conviction that it is everybody else who is going the wrong way down the motorway.

Nevertheless, when in 2014, Sir Ian Wood published the results of his governmentsponsored review on how to maximise the economic recovery of oil and gas from the UK Continental Shelf, his conclusions were endorsed by the Conservative, Labour and Liberal Democrat parties in Westminster, as well as the Scottish National

Party in Edinburgh.⁶⁹ Given the fiscal premises that underpinned Sir Ian's analysis – i.e. the need for a simplified fiscal regime to incentivise investment and drilling activity, as well as to ease the burden on a proposed independent regulatory agency for the upstream sector – it seemed inevitable that, before long, the UK fiscal regime would be returned to the *status quo* that prevailed before the enactment of the Supplementary Charge, with Corporation Income Tax levied at the standard rate as the only impost on income from oil and gas fields.

This essentially happened in March 2016, with the zero rating of PRT on a permanent basis.⁷⁰ Thus, an already generous fiscal regime was relaxed pretty much to the utmost, at a time of austerity (and a high burden of personal taxation), not to mention relatively high petroleum prices (in real terms, even after the price downturn of 2014, the international price of crude oil is still significantly higher than it was all throughout the decade of the 1990s).⁷¹

Post-2016 Fiscal Outcomes: Curiouser and Curiouser

iscal Year 2015-16 marked the second time in history that negative PRT receipts were recorded, to the tune of 847 million dollars, because the zero rating for PRT announced in March 2016 was backdated to be effective from 1 January 2016, giving rise to reimbursements to oil companies. However, whereas the negative PRT figure recorded in FY1990-91 was a one-off due to the Piper Alpha accident, that of 2015-16 marked the beginning of a long-term trend, reflected in the Table below.

That Table, drawn from the 2017 Spring Budget, shows that during the FY2016-2022 period, the Office for Budget Responsibility (OBR) expected negative PRT annual receipts of around £500 million, as oil and gas output further declines and the decommissioning of production installations gathers pace.⁷² These sizable outflows are a direct consequence of the manner in which the UK government went about dismantling what, at that point, was still implausibly hailed as the main petroleum rent targeting device in the UK North Sea.⁷³

In his 2016 Budget Speech, then Chancellor of the Exchequer George Osborne stated that, as part of a raft of measures meant "to help one of the most important and valued industries in our United Kingdom that has been severely affected by global events", he would be "effectively abolishing Petroleum Revenue Tax too".⁷⁴ The key to unpicking the ramifications of Osborne's decision lies in the use of the word "effectively". PRT could have been abolished *in toto* – as opposed to just effectively – by, for example, being repealed outright. Instead, by being zero rated on a permanent basis,

the other constituent elements of the tax itself remained in the statute books. Thus, qualifying expenditures (notably those associated with the decommissioning of PRT-liable fields,

such as Brent) can still be carried back against past PRT payments.⁷⁵

This means that the UK government will be footing the bill for around 45 per cent of the future decommissioning costs in the North Sea.⁷⁶ Major oil companies, which accounted for a large proportion of cumulative PRT payments, are obviously prime beneficiaries of the fact that a high proportion of the cost of decommissioning of UK oil and gas facilities is to be defrayed by the public purse through tax relief.

Moreover, these benefits are likely to be augmented by the UK government's Transferable Tax History (TTH) initiative, due to take effect in November 2018. TTH would be an unprecedented tax break allowing the tax histories of North Sea oil and gas assets to be sold along with the assets themselves. Allowing the transfer of a tax history from sellers to buyers of North Sea assets will enable the latter to offset tax paid across the life of the field against the eventual bill for decommissioning, at further great cost to the public purse.⁷⁷

Osborne also helped pass two pieces of legislation intended to ensure that his fiscal breaks would not be reversible through executive action, and would instead require the passage of new legislation in Parliament. The first of these was the Infrastructure Act 2015, which statutorily enshrined the objective of "maximising the economic recovery" of the UK's oil and gas resources. The second was the Energy Act 2016, which provides the legislative basis for the attainment of this objective by establishing an independent economic regulator for the sector (the

Forecast of Current Receipts for the UK Government (£ billion)

	Outurn 2015-16	Fore 2016-17	<mark>cast</mark> 2017-18	2018-19	2019-20	2020-21	2021-22
Petroleum Revenue Tax Receipts	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5
Total UK Oil and Gas Revenues	-0.2	0.1	0.9	0.8	1	1	0.9

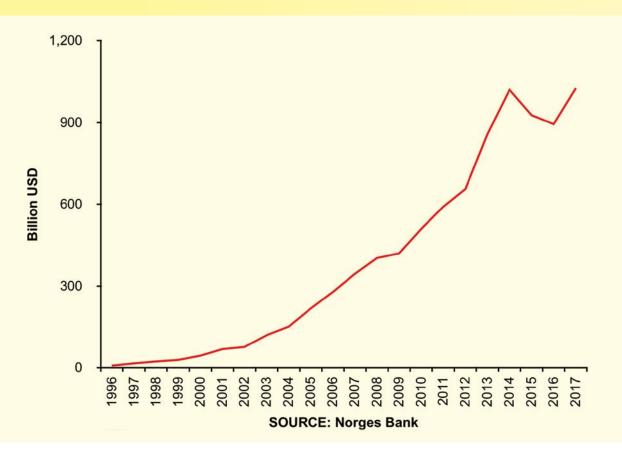
Source: Office for Budget Responsibility, Economic and Fiscal Outlook (March 2017)

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Oil and Gas Authority, or OGA), as well as making it a requirement that the OGA and the petroleum industry act pursuant to this overall strategic objective.⁷⁸ Through the transfer of regulatory powers to OGA in this fashion, these two acts ensure that, as a matter of English administrative law, oil and gas companies will be able to challenge in the courts any action or decision of the regulator which could be construed as undermining the statutory objective of maximising the "economic recovery" of the UK's oil and gas resources.⁷⁹

To conclude this section, it is worthwhile to return to the comparison between the UK and Norway. The latter country has produced approximately 43 billion BOE from inception to 2016 and, thanks to the way in which it went about taxing upstream petroleum activities and investing the resulting proceeds, it has come to own a petroleum fund worth around one trillion dollars as of 2017 (as the figure below shows).⁸⁰ In contrast, the UK has produced a larger amount of petroleum (48.6 billion BOE) than Norway, but has no comparable fund because it elected to channel its petroleum windfall to fund tax breaks for oil and gas companies. To add insult to injury, British taxpayers can look forward to a future in which the country will still be producing quite substantial volumes of oil and gas, but the petroleum fiscal income that the UK government will derive therefrom will be at best marginal, or more likely be negative.

Balance of the Government Pension Fund Norway (formerly The Government Petroleum Fund) since Inception, 1996-2017



No Taxation, but Plenty of (Mis)Representation: Adoption of the British Reference in Other Jurisdictions

he unimpressive long-term fiscal outcomes of UK oil policy may still be rationalised, however tenuously, when considered from the vantage point of a developed country whose current oil and gas production accounts for 2 per cent or less of gross domestic product (GDP) and which is still as firmly ensconced in the oil consumer camp as it was in Edmund Dell's day. For a country in such circumstances, it is at least arguable that oil and gas production is valuable whether or not it produces any fiscal revenues, due to its impact on the balance of payments (and, given the time value of money, this impact would be greater to the extent that petroleum extraction were quicker).⁸¹

However, imitation of the UK model of petroleum governance can be nothing but a recipe for disaster in the case of countries for which, as Silvan Robinson ingeniously put it, the overhead costs of the oil industry generally include "the cost of running the whole country".⁸²

Up until the First Oil Shock, the governance structure of the international upstream oil industry rested on the explicit recognition not only of the legitimacy of claims to profit by oil capital but also of claims for patrimonial compensation by natural resource owners. The reason behind this was that the oil industry had been born in the United States (a country where the private property of subsoil resources prevailed), and access to mineral rights for the purposes of exploring for and producing petroleum would simply not have been forthcoming unless surface owners derived a tangible benefit from the enterprise. The fulcrum of the American approach to petroleum governance was that these mineral resources were valuable in themselves because, if they were not, why would anyone go to the trouble of extracting them? Hence their owner could only be expected to allow their exploitation upon receipt of adequate remuneration.83

In other words, within this governance structure, oil projects and private investors had to adapt to the exigencies of the fiscal regime, and government take was invested with the character of the price that the owners of the natural resource had to be paid as a *condition* to grant access to their property. Such a governance structure can therefore be described by

the term proprietorial.84

In the governance structure pioneered in the UK North Sea, things work exactly the other way around: it is investors which name their price (supposedly after taking into consideration the geological, geographical and political circumstances of every country in question), and governments which have to adjust their pretensions accordingly. Potentially, this adjustment can take the remuneration that government is to receive for the common property all the way down to zero (as happened in the case of some fields in the UK between 1993 and 2002), even while a project continues to generate profits for its backers. The British reference, therefore, is *nonproprietorial*.

Given this characteristic, the British model would appear unappealing for less well-off countries interested in growing affluent on the back of their hydrocarbons potential'. Moreover, in view of these countries' lack of robust institutional structures for the assessment and enforcement of fiscal obligations, not to mention the managerial know-how required to administer complex vehicles for resource rent taxation such as PRT, the adoption of the British model posed the very real risk that these countries would realise tax collections inferior even - in relative terms – to those in the UK. Nevertheless, the fact is that many such resource owners around the world have indeed 'bought' into the UK North Sea Model or its underlying philosophy (especially after the fall of the Soviet Union).

The widespread imitation of the UK North Sea model inevitably leads one to ask just how it was that countries whose objective position was very different from that of the UK (in that they were modest consumers of oil, their hydrocarbons production was destined mainly for export markets and, therefore, fiscal revenues were of paramount importance both for governmental finances and the economy at large) were somehow convinced of adopting this model.

The answer is that the model was clad in the ideologically popular (albeit empirically baseless) supply-side argument that lower taxes provide such a stimulus to investment (and hence to overall activity and production) that, in their presence, government income will be greater than that which would obtain at higher tax rates, as long as higher output does not translate into significantly lower prices. The British model was presented as the classical 'win-win' situation for both oil companies and producing governments, with the former benefiting from both higher output and lower taxes today, and the latter from larger total tax revenues, albeit admittedly in the long run.

Keynes' famous quip about the fatal drawback of reliance on long run outcomes highlights a key weakness to the second limb of the above proposition. Furthermore, the likelihood of higher fiscal

incomes materialising in the fullness of time depends upon increased output from any one player only having a marginal impact on the global supply picture, and hence no effect on prices.

The problem was that if many oil producers followed the UK prescription, then oil prices could be expected to drop. And, indeed, this was the very outcome which developed countries (and a number of multinational oil companies) were banking on when they urged and pressured lesser developed countries to adopt the UK North Sea model. The idea being that a fiscal race to the bottom would eventually give rise to a self-reinforcing mechanism, here described in the words of Michael Klein (former chief economist at Royal Dutch/Shell):

[w]ith declining real oil prices the fight over upstream rents continues to intensify. Many oil-exporting countries are crucially dependent on oil revenues ... As population grows and the price of oil declines, producer countries open up all parts of the oil and gas business for foreign investors. They revise tax regimes to attract investors. In particular, countries with marginal fields abolish royalties ... [B]y 2040 ... tax systems for upstream operations converge to regular corporate tax regimes as upstream rents diminish.⁸⁵

Michael Klein was writing in the late 1990s, at the end of a decade that saw the implementation of the UK governance model in countries like Algeria, Russia⁸⁶ and Venezuela, to name but three prominent examples. The UK model had been embedded in the neoliberal consensus, and over the next two decades, targeted lobbying by oil companies and consumer states led to a range of oil and gas producers in South America, sub-Saharan Africa and Central Asia adopting the model.⁸⁷

The global spread of the UK governance model destabilised many key petroleum producers, whose governments found themselves starved of fiscal income. As a result, ultra-liberal British-inspired policies turned out to be authentic lose-lose propositions for all concerned

> did indeed translate into significant production gains, but also destabilised many key petroleum producers, whose governments found themselves starved of fiscal income. As a result, ultra-liberal British-inspired policies have turned out to be authentic lose-lose propositions for all concerned, including their presumptive, behind-the-scenes, beneficiaries: consumers in developed countries. In order to appreciate this point one need only recall that securing low petroleum prices was the prime objective of the model, and yet 2011 was the first year in history when the international price of crude averaged over 100 dollars per barrel, 2012 was the second, 2013 the third, and 2014 only just missed being the fourth.⁸⁸

> Furthermore, the political fallout of the implementation of the UK governance model in countries like Venezuela or Russia has meant that even international oil companies have ended up being burned on account of their enthusiastic support for this liberal policy agenda, leading to the restructuring of many extant exploration and production agreements in an adversarial context.

Just as taxation without representation is a byword for tyranny, the slogan of access without taxes in upstream petroleum is a recipe for political conflict and endless litigation. Thus, for all their thirst for abundant and cheap oil and gas, and their talk of an endless succession of attractive investment prospects, oil companies would be well advised to reconcile themselves to the idea that they have got to pay, and pay a fair price (again, not merely with investment), in exchange for access to petroleum resources.

The global spread of the UK governance model

TABLE 1 Comparative Effective Tax Ratios for Petroleum Production around the North Sea Basin, 1988-2017 (%)

	Netherlands	UK	Norway	Denmark So	chleswig-Holstein
1988	0.46	0.39	0.05	0.12	
1989	0.45	0.29	0.18	0.15	
1990	0.45	0.23	0.35	0.25	
1991	0.51	0.14	0.37	0.22	
1992	0.48	0.13	0.28	0.22	
1993	0.46	0.12	0.24	0.21	
1994	0.40	0.12	0.22	0.23	
1995	0.44	0.15	0.31	0.23	
1996	0.46	0.17	0.41	0.20	
1997	0.45	0.20	0.48	0.23	0.28
1998	0.40	0.19	0.34	0.28	0.25
1999	0.34	0.15	0.25	0.22	0.28
2000	0.42	0.16	0.47	0.25	0.39
2001	0.49	0.21	0.74	0.31	0.40
2002	0.44	0.22	0.59	0.33	0.30
2003	0.50	0.19	0.57	0.30	0.36
2004	0.51	0.21	0.56	0.44	0.33
2005	0.49	0.29	0.59	0.45	0.35
2006	0.54	0.28	0.64	0.51	0.36
2007	0.48	0.25	0.60	0.45	0.35
2008	0.60	0.28	0.62	0.52	0.33
2009	0.54	0.30	0.58	0.55	0.31
2010	0.53	0.24	0.52	0.47	0.32
2011	0.55	0.28	0.54	0.53	0.33
2012	0.58	0.22	0.57	0.44	0.33
2013	0.72	0.17	0.52	0.44	0.33
2014	0.63	0.11	0.49	0.46	0.32
2015	0.45	0.03	0.43	0.18	0.23
2016	0.31	(0.01)	0.30	0.11	0.19
2017	0.34	0.04	0.33	0.19	0.22

TABLE 2 Comparative Fiscal Income per Barrel of Hydrocarbons Production around the North Sea Basin, 1988-2017 (USD/Barrel of Oil Equivalent)

	Netherlands	UK	Norway	Denmark So	chleswig-Holstein
1988	7.95	6.17	0.68	1.26	
1989	7.20	4.96	2.82	1.89	
1990	9.92	4.70	6.94	4.42	
1991	11.75	2.77	6.99	3.35	
1992	10.21	2.54	5.04	3.28	
1993	8.52	1.92	3.86	2.76	
1994	7.83	1.94	3.15	3.02	
1995	10.12	2.52	4.94	3.28	
1996	10.05	3.29	7.66	3.45	
1997	9.70	3.72	8.41	3.33	2.54
1998	7.89	2.85	4.22	3.08	1.33
1999	6.30	2.41	3.96	2.93	2.21
2000	9.98	3.56	11.96	5.27	4.90
2001	12.90	4.68	17.10	5.88	6.88
2002	11.21	4.95	13.07	6.32	4.50
2003	16.00	4.89	14.93	7.15	6.59
2004	17.38	6.61	18.15	13.53	6.90
2005	21.34	12.29	26.39	19.18	11.85
2006	30.87	14.98	35.30	27.43	15.80
2007	29.82	14.77	36.00	28.96	16.86
2008	45.88	20.44	48.12	42.84	23.53
2009	31.23	12.72	29.40	30.74	13.90
2010	27.10	13.75	31.42	30.13	18.08
2011	34.69	23.21	45.31	46.48	26.48
2012	38.73	19.03	47.77	39.91	29.21
2013	39.90	14.99	43.36	41.99	33.09
2014	32.34	8.71	35.99	37.71	27.81
2015	18.07	1.53	18.70	7.78	9.88
2016	9.72	(0.37)	10.14	4.20	6.77
2017	10.78	1.86	13.53	8.45	10.35

Endnotes

- 1 Hans Veldman and George Lagers, 50 Years Offshore (Delft, Foundation for Offshore Studies, 1997).
- 2 Paul Horsnell and Robert Mabro, *Oil Markets & Prices: The Brent Market and the Formation of World Oil Prices* (Oxford, Oxford University Press, 1993).
- 3 Robert Mabro, Robert Bacon, Margaret Chadwick, Mark Halliwell and David Long, *The Market for North Sea Crude Oil* (Oxford, Oxford University Press, 1986).
- 4 John Vickers and George Yarrow, *Privatization. An Economic Analysis* (Cambridge (Mass.), The MIT Press, 1988).
- Alexander Kemp, The Official History of North Sea Oil and Gas. Volume I: The Growing Dominance of the State; Volume II: Moderating the State's Role (London: Routledge, 2011).
- 6 More such pointers may be found in Bernard Mommer, *Fiscal Regimes and Oil Revenues in the UK, Alaska and Venezuela. WPM 27* (Oxford, Oxford Institute for Energy Studies, 2001) and Bernard Mommer, Global Oil and the Nation State (Oxford, Oxford University Press, 2002).
- 7 The author concurs with Christopher Harvie's opinion regarding Kemp's official history (albeit probably for very different reasons): "What it does not say turns out to be as important, if not more important, than what it does say" ("Review Article of *The Official History of North Sea Oil and Gas", Northern Scotland* 4:1 (2013): 66).
- 8 In its origins, the British concept of participation was recognisably similar to its analogues elsewhere. As a former Minister of State in the Department of Energy (J. Dickson Mabon) candidly put it, "nobody who started off with a concept of participation as envisaged in 1974 'could have conceived that we would finish up with the form of participation we did by late 1975" (Richard Toye, "The New Commanding Height: Labour Party Policy on North Sea Oil and Gas, 1964-74", *Contemporary British History*, 16:1 (2002): 110). The emergence of the British form of participation in its definitive, and rather toothless, form is chiefly attributable to the efforts of Labour minister Harold Lever (Chancellor of the Duchy of Lancaster between 1974-9), said by one former civil servant to have "totally castrated the idea of participation" (ibid.).
- 9 Terence Daintith and Ian Gault, "Pacta Sunt Servanda and the Licensing and Taxation of North Sea Oil Production", Cambrian L. Rev. 8 (1977): 37-8. For fields discovered in blocks allocated from the Fifth Licensing Round onwards, participation was to have been a vehicle for BNOC to acquire the right to participate in any commercial find by exercising an option and paying its share of future development costs and past exploration costs. In the event, BNOC put together by these means a relatively modest upstream portfolio, which was privatised as Britoil in 1982.
- 10 As noted by Malcolm Forster and Donald Zillman ("The British National Oil Corporation: The State Enterprise as Instrument of Energy Policy", *Journal of Energy Law and Policy* 3 (1982-1983): 78): "[i]n October 1978 the Labour Party Conference unanimously approved a motion for further extension of public ownership. Secretary Benn endorsed 'full public ownership of North Sea oil,' and spoke of reducing the oil companies' status to that of contractors".
- **11** Hence the subtitle of the first volume of Kemp's official history; see Note 5 *supra*.
- 12 Barbara Castle, The Castle Diaries, 1974-76. London, Weidenfeld & Nicolson (1980): 222 (entry for 17 November 1974). Castle notes that Healey made the comment in response to James Callaghan's gloom about the British economic outlook and the possibility that not even North Sea oil would be enough to kick-start the British economy again.
- **13** As Tony Judt observed, in Europe, the First Oil Shock "put an end to a quarter of a century of cheap energy, sharply and definitively raising the cost of manufacture, transport and daily

living ... [such that] neither the German nor any other Western European economy has ever been the same again". In West Germany, in what were "unprecedented blips in the postwar *Wirtschaftswunder*", GNP fell by 0.5 per cent and 1.6 per cent in 1974 and 1975, respectively, while Italian GNP fell by 3.7 per cent in 1976, its first such contraction since the end of the Second World War. See Tony Judt, "Europe: The Grand Illusion" in *When the Facts Change. Essays, 1995–2010* (London, Heinemann, 2015): 32.

- **14** Henry Kissinger, Years of Renewal. Memoirs, Volume 3 (New York, Simon and Schuster, 1999): 668-9.
- 15 Committee of Public Accounts, First Report from the Committee of Public Accounts, Together with the Proceedings of the Minutes of Evidence, Part of the Minutes of Evidence of Session 1971-72 and Appendices Thereto. Session 1972-73. North Sea Oil and Gas (London, Her Majesty's Stationary Office, 1973): 74; emphasis ours. It was also made clear elsewhere in the report (ibid.: 24) that an important consideration shaping the UK's decisions on its fiscal framework was the fact that "[m]ost of the countries from whom we imported our oil supplies were members of OPEC and were pressing for increased revenue from the oil company concessionaries in their country... If the United Kingdom, were to impose onerous financial terms it might have incited OPEC countries to follow suit, to the detriment of our overseas oil interests and our balance of payments".
- 16 Giandomenico Majone, Evidence, Argument and Persuasion in the Policy Process (New Haven, Yale University Press, 1992): 97
- **17** Ibid
- **18** Kenneth W. Dam, "Oil and Gas Licensing and the North Sea", Journal of Law and Economics, 8 (1965): 58; see also by the same author "The Pricing of North Sea Gas in Britain", *Journal of Law and Economics*, 13, No. 1 (1970): 11-44. At the time, these UK royalty and income tax rates were comparable to those prevailing in the offshore areas under the jurisdiction of the US Federal government.
- **19** Kenneth W. Dam, "The Evolution of North Sea Licensing Policy in Britain and Norway", *Journal of Law and Economics*, 17, No. 2 (1974): 214.
- **20** Dell, who had chaired the Public Accounts Committee on North Sea Oil, was a close friend and ally of Harold Lever, who had been Paymaster General in 1969-70.
- **21** Edmund Dell, "The Origins of Petroleum Revenue Tax", *Contemporary British History*, 7(2): 246; emphasis ours.
- 22 In Dell's view, the problem lay in that "OPEC knew that its raw material was the basis of everyone's prosperity, and decided to extract its share by taxing the rest of the world, rich and poor alike ... The effect was to worsen the balance of payments of the oil-consuming countries by something like \$50 billion" (Edmund Dell, *The Chancellors. A History of the Chancellors of the Exchequer, 1945–90* (London, HarperCollins, 1996): 397).
- 23 Robert J. Marjolin, Architect of European Unity. Memoirs 1911-1986 (London, Weidenfeld and Nicolson, 1989): 396. Marjolin was a member of the board of Royal Dutch/Shell between 1969 and 1986. After his time as a government minister, Edmund Dell served as a non-executive director of Shell Transport and Trading Company (1979-1992).
- 24 In Dell's words, "I was to have the specific role of following through the recommendations of the Public Accounts Committee on North Sea Oil made when I was the Chairman of that Committee. I was to create a new system of taxation, Petroleum Revenue Tax, which would yield to the Government a proper share of the North Sea Rent" (Edmund Dell, A Hard Pounding: Politics and Economic Crisis, 1974-1976. Oxford, Oxford University Press, 1991: 25; italics ours). Dell's description of his mandate is interesting because communion with Ricardo's theory of rent would suggest that, once an oil company has obtained a return on its investment capital commensurate to its risk (i.e. a return that reproduces the capital invested), a government representing the owners of the natural resource would be ill-advised (indeed, arguably, in dereliction of its duty as steward of that resource) to share

Endnotes (continued)

any of the ensuing rent with the owners of the capital, thereby allowing the company to realise windfall profits (i.e. profits owing only to the fecundity of the resource itself and arising without any entrepreneurial act or merit on the part of the company).

- 25 The concept of the resource rent tax was first advanced in Ross Garnaut and Anthony Clunies Ross, "Uncertainty, Risk Aversion and the Taxing of Natural Resource Projects", *The Economic Journal*, Vol. 85, No. 338 (June 1975): 272-28.
- **26** As Dell explains, the issue of the creditability of PRT with the United States Internal Revenue Service (IRS) "was of the highest importance. If not recognised as creditable by the IRS, American oil companies would be unable to offset their tax payments in the UK against their US liabilities. Nothing could be better designed to drive them out of the North Sea" (Dell, "The Origins ...": 224).
- **27** Uplift is an interest factor meant to approximate the producer's opportunity cost of capital, and whose rationale is to compensate the producer for the delay in cost recovery.
- **28** Robert Arnott, "Infrastructure Issues on the UKCS", in *Oxford Energy Forum*, Issue 53 (May 2003): 16–18.
- 29 There are other jurisdictions (like Norway and Denmark) which have fiscal regimes that treat investment as a current expense, always subject to uplift, for the purpose of assessing windfall profit taxes, albeit only on an annual basis. The UK fiscal regime is unique in carrying out these calculations on the basis of the whole of the elapsed term of the licence.
- 30 PRT incorporated a series of special reliefs and mechanisms meant to ensure that projects which generated no windfall profits would be protected from the tax. Among these mechanisms was one known as "Safeguard", designed "to give companies a degree of assurance about the minimum level of profits they can expect to enjoy after PRT (but before CT [corporation tax]), with a view to ensuring that marginal fields remain profitable". Safeguard restricted "the amount of PRT payable by a participator in a chargeable period if the effect of the PRT would be to reduce after-tax profit below a minimum return on investment in the field". That minimum return was defined as "15 per cent of the participator's 'accumulated capital expenditure' in the field up to the end of the chargeable period in question", with 'accumulated capital expenditure' in turn defined as "the cumulative amount of field expenditure allowed as qualifying for supplement". If the adjusted profit were less than 15 per cent, then the PRT for that chargeable period would be reduced to nil. If the adjusted profit were more than 15 per cent of accumulated capital expenditure, then the PRT charge would be the lesser of 80 per cent of the excess or else the amount of the PRT charge calculated in the normal way. See HM Revenue and Customs, A Guide to UK and UK Continental Shelf Oil and Gas Taxation – January 2008: ¶¶4.16-4.18 (available at http://www.hmrc.gov.uk/ international/ns-fiscal3.htm).
- **31** In connection with this point, it is difficult not to be reminded of one of the less-cited passages in Adam Smith's *Wealth of Nations* (Book I, chap. IX): "Our merchants and mastermanufacturers complain much of the bad effects of high wages in raising the price, and thereby lessening the sale of their goods both at home and abroad. They say nothing concerning the bad effects of high profits. They are silent with regard to the pernicious effects of their own gains. They complain only of those of other people".
- 32 Dell, "The Origins...": 243.
- **33** This feature of a PFFT was originally posited in a seminal article by E. Cary Brown, "Business Income Taxation and Investment Incentives", in *Income, Employment, and Public Policy: Essays in Honor of Alvin H. Hansen* (New York, Norton: 300-316). In Brown's analytical scheme, negative taxes made

sense in contexts where the maximisation of investment was called for (post-war reconstruction or industrial reconversion, say). However, "Brownian taxes" have subsequently been transformed into a *sine qua non* element in any respectable pro-business tax framework, no matter what the circumstances. Advocates of pure Brownian taxation are keen to highlight its equitable nature, derived from the fact that "[b]y paying the entrepreneur the tax ... the Government would literally be a partner in the firm. It would make a capital contribution on new investment at the same rate at which it shared in the future net receipts of the enterprise. The contribution would be made at the same time the investment was undertaken" (*ibid.*). However, this rationalisation conveniently overlooks the ex ante contribution that government has to make for any business investment to have a chance of succeeding, in the form of infrastructure, public services and the like. This contribution has to be financed through taxation.

34 Quoted by Dell, "The Origins...": 244.

35 Ibid.

- 36 In the original Sakhalin II PSA, for example, the Russian government would only start receiving a share of oil profits once the consortium developing the field (which had been discovered in Soviet times and hence posed no exploration risk) had recovered both its costs and a 17.5 per cent real rate of return. Even after this point, the Russian government was to receive only 10 per cent for two years, and then 50 per cent until the consortium had achieved a 24 per cent real rate of return. Only after that point would the distribution formulae adjust to give the Russian government a long-term rate of 70 per cent. Hence the title of Ian Rutledge's analysis of this contract: The Sakhalin II PSA – a Production 'Non-Sharing' Agreement, Analysis of Revenue Distribution, A Report for CEE Bankwatch Network, Friends of the Earth, Pacific Environment, Platform, Sakhalin Environment Watch, and the World Wildlife Fund (Sheffield, Sheffield Energy & Resources Information Services (SERIS), 2004).
- 37 In discussing Geoffrey Howe's chancellorship, Edmund Dell suggests that Tory Chancellors of the Exchequer were as keen on oil revenue as their Labour predecessors had been (see *The Chancellors...*: 458). In Dell's view, Howe knew that "[t] he oil industry with its vast fixed investments in the North Sea could not run away and was available for squeezing until the pips squeaked" (*ibid.*: 463). But there was a very pragmatic motivation behind the "repeated additional imposts" (*ibid.*: 458) which Howe introduced; namely, the need to fund the Falklands War (the Supplementary Petroleum Duty was adopted in 1981, at a rate of 20,000 barrels per day). Once this particular financial emergency had passed, the Supplementary Petroleum Duty was phased out (1982) and the trend under Howe's Tory successors to the Chancellorship became one of ever lighter effective tax burdens on the upstream oil industry. The trend continued unabated under Labour Chancellors Gordon Brown and Alastair Darling (1997-2007).
- **38** After 1990, PRT has never accounted for more than 15 per cent of the net operating surplus of the industry.
- **39** Such differences are analysed in greater detail further on.
- 40 Pedro van Meurs, Maximizing the Value of Government Revenues from Upstream Petroleum Arrangements under High Oil Prices. A Discussion Document. Nassau, van Meurs Corporation, 2008: 4.
- **41** J.L. McPherson an O.E. Owens, "Mineral Leasing in a Private Enterprise System", in M. Crommelin and A.R. Thompson, (eds.), *Mineral Leasing as an Instrument of Public Policy* (Vancouver, University of British Columbia Press, 1977): 230.
- **42** *Ibid*.: 232.
- **43** *Ibid.*. According to McPherson and Owens, this last conclusion, despite its fundamental unsoundness, has come to enjoy a great deal of popularity, an anomaly attributable to the cupidity that is characteristic of governments: "the term 'economic rent' has been lifted ... from the textbooks of economic theory ... and has been misapplied to the natural resource industries as the raison d'être for the method of applying increased levels of taxes and royalties" (*ibid.*).

Endnotes (continued)

- 44 J. Jay Park, "Understanding the Emerging Petroleum Legal Regime in Iraq", Iraq Petroleum 2007 Conference (Dubai, UAE) September 10, 2007: 16-46; emphasis ours. This notion finds contractual expression in, for example, Clause 4.7 (relating to the approval of investment decisions) of the Venezuelan risk-sharing exploration contracts of 1995: "The members of the Control Committee named by CVP [an affiliate of the Venezuelan national oil company, PDVSA] will vote ... taking into account whether the proposal in question is consistent or not with the national interest of the Venezuelan state in the exploration, development and exploitation of its hydrocarbons reserves, it being understood that the Venezuelan state has a national interest in attracting and maintaining [sic.] private investment projects of importance for the national economy" ("Framework of Conditions for the Exploration at Risk and Profit Sharing Association Agreements", Official Gazette No. 35.754, published July 17, 1995).
- 45 Assignation of licences in the UK North Sea has always been a discretionary administrative procedure, with the exception of very few blocks auctioned, on an experimental basis, in Licensing Rounds 4 (1971-72), 8 (1982-83) and 9 (1984-85). In monetary terms, the results from these auctions were excellent, not least in view of the fact that, as Gerry Corti and Frank Frazer observed, "there was nothing special about the [auctioned] blocks which were as typical as anything else on offer ... This forced the conclusion that in the awards the Government had probably foregone much larger sums which could have been realised by a more extensive auction" (*The Nation's Oil. A Story of Control.* London, Graham and Trotman (1983): 67). Such a conclusion was indeed expressed in the report on North Sea Oil and Gas issued by the Committee of Public Accounts (see Note 15 *supra*). Despite this, competitive bidding was also not adopted by any of the other North Sea producers: Denmark, Germany, The Netherlands and Norway).
- **46** Kenneth W. Dam, "The Evolution of North Sea Licensing Policy...": 65.
- 47 Work programme bidding is a poor substitute for a genuine market mechanism for the purpose of allocating access to natural resources, since "[e]xcept in the odd situation where all elements save one in the work-programme bid by two or more firms are identical, there is no way to objectively determine the high bidder. Judgment must be subjective" (Walter Mead, "Oil and Gas Leasing Policy Alternatives", in Richard D. Gilbert (ed.), *The Environment of Oil*. Dordrecht, Kluwer Academic Publishers, 1993: 252). Quite apart from this, work programme bidding "involve[s] high and wasteful administrative costs for both lessor and lessee and reduce[s] or dissipate[s] economic rent" (ibid.: 253). Hence Mead's policy recommendation, so far unheeded in Great Britain, that "work programme bidding should be rejected... on the argument that ... [it] substantially reduce[s] the economic rents available to society (ibid.: 252).
- **48** The auction of 3G mobile-phone licenses by the British government in 2000 raised 34 billion dollars, or two per cent of GDP at the time. See Ken Binmore and Paul Klemperer, "The Biggest Auction Ever: The Sale of the British 3G Telecom Licenses", *Economic Journal*, 112 (2002).
- 49 American oilman and corporate raider T. Boone Pickens hit this particular nail in the head when he wrote in his memoirs: "I couldn't help thinking about the great possibilities across the Atlantic, especially when I learned that 50,000-acre tracts were being given free to companies willing to explore them. To oilmen used to paying millions just for the privilege of drilling, that was a real incentive" (*Boone*. London, Hodder & Stoughton, 1987: 112).
- **50** Pat Roche, "Carbonate Klondike: the Next Oil Sands?", *New Technology Magazine*, Summer 2006: 4).

- **51** The debilitating effect that British incremental production had on the oil market was exacerbated by the fact that BNOC sold, on a spot basis, the very large volumes it obtained through "participation".
- **52** The relevant time series for the UK North Sea can be found in Juan Carlos Boué and Phillip Wright, "A Requiem for the UK's Petroleum Fiscal Regime", in Ian Rutledge and Philip Wright (eds.), *UK Energy Policy and the End of Market Fundamentalism* (Oxford, Oxford University Press, 2010): 39-86.
- **53** "The UK North Sea provides a strong stream of earnings and cash flow with relatively modest reinvestment needs. This is important for the funding of the Company's plans in other strategic areas" (Oryx Energy, *Annual Report and Accounts on Form 20-F*, 1996: 4).
- **54** June Morris, "Thomas Balogh and the Fight for North Sea Revenue", *Contemporary British History*, 12:2 (1998): 125.
- 55 Lord Balogh, "'The North Sea Oil Blunder", *The Banker*, March 1974: 281.
- 56 Ibid.
- 57 Lord Balogh, "'The North Sea Oil Blunder", 286.
- 58 The tax regime in Schleswig-Holstein is very simple. First, there is a royalty payable to the *Land* government (as mineral taxation is a Land matter under the German federal constitution), whose statutory rate has increased sharply in recent years from 8 per cent in 2000 to 21 per cent in 2013. In 2014, the Schleswig-Holstein government adopted a sliding scale arrangement whereby the base royalty rate for offshore oil production would still be 21 per cent but, depending on oil prices, the rate could be as high as 40 per cent. In addition to the royalty, normal corporate income tax (not ring-fenced) is payable to the German federal government.
- 59 M. Doehler, "The Mittelplate Oil Field", in A. G. Doré and B. A. Vining (eds.), Petroleum Geology: North-West Europe and Global Perspectives – Proceedings of the 6th Petroleum Geology Conference (London, The Geological Society of London, 2005): 461–468. Mittelplate crude oil has gravity of 22.2° API and a sulphur content of 2.49 per cent.
- 60 The tax receipts break down as follows: Corporation tax in the amount of 548 million dollars, Supplementary Charge in the amount of 295 million dollars and PRT in the amount of minus 847 million dollars, for a net tax income of minus 3 million dollars. License fees amounted to 107 million dollars (see https://www.ogauthority.co.uk/media/4955/tax_table_ june_2018.pdf).
- **61** Wirtschaftsverband Erdöl- und Erdgasgewinnung e.V. (WEG), Statistischer Bericht 2015 Die E&P-Industrie in Zahlen: 14.
- 62 The tax receipts break down as follows: Corporation tax in the amount of 366 million dollars, Supplementary Charge in the amount of 74 million dollars and PRT in the amount of minus 847 million dollars, for a net tax income of minus 406 million dollars. License fees amounted to 85 million dollars, so total government fiscal income came to minus 322 million dollars.
- 63 BVEG Statistischer Bericht 2017: 11 (https://www.bveg.de/Der-BVEG/Publikationen/Jahresberichte)
- **64** Gross income figures from the table "Income from and Expenditure on UK Continental Shelf Exploration Development and Operating Activities" (available at http://www.gov.uk/guidance/oil-and-gas-uk-field-data) and Table 11.11 "Government Revenues from UK Oil and Gas Production" from the report *Statistics of Government Revenues from UK Oil and Gas Production* (available at //www.gov.uk/government/ statistics/government-revenues-from-uk-oil-and-gas-production).

The fiscal years of other North Sea producers run concurrently with calendar years, so UK fiscal data has to be annualized on a calendar basis to make it properly comparable to that of other North Sea producers

- **65** As of the time of writing, Danish fiscal income statistics have only been published for the years up to 2014.
- **66** Exchange rate data come from the OECD's Monthly Monetary and Financial Statistics (available at http://www.oecd.org/std/). Danish fiscal and output data can be found at section

Endnotes (continued)

7 of the annual report Denmark's Oil and Gas Production and Subsoil Use, published by the Danish Energy Agency (http:// www.ens.dk/en), and national accounts data from Statistics Denmark (http://www.dst.dk/en). Norwegian production data can be found at the Norwegian Petroleum website maintained by the Norwegian Petroleum Directorate and the Ministry of Petroleum and Energy (http://www.norskpetroleum.no/en/) and annual gross oil and gas production as well as fiscal income can be found at Statistics Norway (https://www.ssb.no). For The Netherlands, annual petroleum fiscal revenues since the start of production can be found in Natural Resources and Geothermal Energy in the Netherlands – Annual Review, and annual gross oil and gas production income in National Accounts of the Netherlands at Statistics Netherlands (http://www.cbs.nl/). Finally, for Schleswig-Holstein, the annual royalty income and royalty rate is reported in WEG, Jahresbericht (http://www. erdoel-erdgas.de/Medien/Publikationen/Jahresberichte), production data are reported in the annual Erdöl und Erdgas in der Bundesrepublik Deutschland (published by the Landesamt für Bergbau, Energie und Geologie in Hannover, and available at http://www.lbeg.niedersachsen.de/) while yearly income tax payments as a percentage of gross income are derived from BASF A.G. Annual Report, Supplementary Information on the Oil & Gas Segment (Unaudited) for Wintershall Holding GmbH., available from the year 1997 onwards (http://www.basf.com/ group/corporate/en/investor-relations/news-publications/ reports/ index). Wintershall has a 50 per cent stake in the Mittelplate field and operates Germany's sole gas production platform in the German North Sea (A6/B-4).

- **67** Royalties are not neutral in this particular sense, and so neither is the Schleswig-Holstein fiscal regime.
- **68** For instance, the Norwegian Petroleum Directorate correctly describes the country's fiscal oil regime as having been 'designed to be neutral, so that an investment project that is profitable before tax will also be profitable after tax... [in order] to harmonise the requirement for significant revenues to the society with the requirement for sufficient post-tax profitability for the companies' (*Facts: The Norwegian Petroleum Sector*, Oslo, Norwegian Ministry of Petroleum and Energy/Norwegian Petroleum Directorate, 2014: 30).
- **69** Sir Ian Wood, *UKCS Maximising Recovery Review: Final Report* (available at https://www.gov.uk/government/groups/wood-review-implementation-team).
- **70** The eventual elimination of the 10 per cent Supplementary Charge seems only a matter of time.
- **71** Measured in July 2017 dollars, a WTI price of 50 USD/B is 40 per cent higher than the price average registered between January 1986 and December 2004, inclusive.
- 72 HM Treasury, Spring Budget 2017 (HMSO, London 2017): 60.
- 73 HM Revenue and Customs (2008). A Guide to UK and UK Continental Shelf Oil and Gas Taxation (http://webarchive. nationalarchives.gov.uk/20140206182352/http://www.hmrc. gov.uk/international/ns-fiscal3.htm): ¶1.11.
- 74 See https://www.gov.uk/government/speeches/budget-2016george-osbornes-speech.
- 75 See "Shell Begins Huge Task of Decommissioning Brent Oil Rigs", *The Guardian*, 6 February 2017. The Brent decommissioning is likely to take between 8 and 10 years, at an expected cost of "several billion pounds" (http://www. shell.co.uk/sustainability/decommissioning/brent-fielddecommissioning/brent-field-faqs.html).
- **76** Wood McKenzie, *Decommissioning: the UK's US\$66 Billion Headache* (Edinburgh, Wood McKenzie, 2016).
- **77** The think tank Global Witness commissioned a study on the likely effects of the TTH initiative on UK government finances, which found that "TTH could add more than £3bn to the UK's decommissioning bill over the first ten years, with further

potential costs beyond this time horizon" (*Global Witness* submission to the Treasury consultation on Draft Legislation for "Transferable Tax History", 31 August 2018 (available at https:// www.globalwitness.org/en/blog/uk-treasurys-transferabletax-history-plans/). The study was authored by a former oil company financial executive. who managed Chevron's taxation and financial planning in the North Sea in the 1990s

- 78 The OGA was originally launched on 1 April 2015 as an executive agency of the Department for Energy and Climate Change (DECC). The Energy Act 2016 transformed OGA into an incorporated government company, limited by shares under the Companies Act 2006, and with the Secretary of State for Business, Energy and Industrial Strategy as sole shareholder. OGA is vested with a variety of regulatory powers, including the ability to participate in meetings with operators, to have access to data, provide dispute resolution and introduce a range of sanctions such as enforcement notices and fines.
- **79** Judicial review of the decisions of executive decisions relating to the oil industry would always have been possible on procedural grounds, but the two acts of Parliament highlighted above allow challenges to be brought on substantive grounds.
- **80** In 2014, the balance of the fund for the first time reached the equivalent of a million Norwegian krone for every person in Norway. The evolution of the market value of the fund can be found at https://www.nbim.no/en/the-fund/market-value/.
- 81 As Chancellor of the Exchequer Nigel Lawson stated in 1986, "the whole outstanding success of the North Sea has been based on the fact that it is the freest petroleum province in the world ... [W]e are not only or even principally, a major oil producer; we are also a major world producer and trader of many other goods and services and a major oil consumer [...] There is no overall United Kingdom interest in keeping oil prices high" (cited by Christopher Harvie, *Fool's Gold. The Story of North Sea Oil* (London, Hamish Hamilton, 1994): 301). From a purely Scottish perspective, of course, this rationalisation does not make any sense.
- 82 Silvan Robinson, "Real Cost Base of Oil Isn't What You Think", *Petroleum Intelligence Weekly*, April 3 1989: 6.
- 83 A very different view prevailed in countries where the influential legal doctrines stemming from the French Revolution held sway. According to these, mining was an activity d'utilité publique (i.e. in the public interest). Thus, the Nation had the right to promote and bring about the exploitation of minerals, making sure that the interests of private parties e.g. farmers concerned about the damage that effluvia from a mine could cause to their land would not stand in the way of the wider interest of the commonwealth. Patrimonial compensation in exchange for the severance of these resources from the subsoil, either for the landowners or for the Nation, was not deemed necessary. But, as it happened, the business of oil was born in places like Pennsylvania and Ohio.
- 84 Bernard Mommer, Global Oil....
- **85** Michael Klein: "Energy Taxation in the 21st Century", *Oxford Energy Forum*, Issue 40, December 1999: 134.
- 86 The Sakhalin II PSA a Production 'Non-Sharing' Agreement, Analysis of Revenue Distribution, A Report for CEE Bankwatch Network, Friends of the Earth, Pacific Environment, Platform, Sakhalin Environment Watch, and the World Wildlife Fund (Sheffield, Sheffield Energy & Resources Information Services (SERIS), 2004).
- 87 e.g. "Contracts Curse: Uganda's oil agreements place profit before people" (Platform London and Civil Society Coalition on Oil in Uganda, February 2010)
- **88** Overall, oil prices exceeded 90 USD/B for 47 months between November 2010 and September 2014 inclusive.

Platform

c/o Oxford House Derbyshire Street Bethnal Green London E2 6HG UK ♀ +44 (0)20 7749 1109 ∢ info@platformlondon.org

