

The 1973 Oil Shock and the Institutional and Fiscal Framework for Petroleum Exploration and Production Activities in the UK North Sea

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The UK North Sea occupies a special place in the annals of the evolution of both the international oil industry and the world petroleum market after 1973. This prominence is a reflection of the immense influence that North Sea exploration and production activities have had, on multiple dimensions. For example, 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 On an industrial economics front, the genesis and expansion of forward and futures markets for Brent crude oil were at the forefront of marketization and financialization processes whereby the international oil trade assumed 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 On the global macroeconomics front, the significant incremental flows from the North Sea at a time of rapidly contracting demand made a key contribution to the demise of the administered price structure that the Organization of the petroleum exporting countries (OPEC) had sought to erect after its most important members began to sell directly the oil that had been commercialized by

¹ Veldman, H., and Lagers, G., *50 Years Offshore*, Delft, Foundation for Offshore Studies, 1997.

² Mabro, R., Bacon, R., Chadwick, M., Halliwell, M., and Long, D., *The Market for North Sea Crude Oil*, Oxford, Oxford University Press, 1986; and Horsnell, P., and Mabro, R., *Oil Markets & Prices: The Brent Market & the Formation of World Oil Prices*, Oxford, Oxford University Press, 1993.

their erstwhile concessionaires. And one should not forget that 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 shareholding in British Petroleum – proved to be the spearhead of a privatization wave that was to sweep Great Britain, first, and then the much of the rest of the world, during the 1980s and early 1990s.³

As befits their importance, each and every one of the topics mentioned above has been the object of exhaustive 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.⁴ The answer is yes, and the purpose of this article is to provide some general reflections which may be used as pointers for a research agenda that may ultimately fill in the *lacuna* in the academic literature devoted to the novel UK governance structures that were designed *ex professo* in response to the political and institutional challenges thrown up by the so-called OPEC Revolution, with a view towards their export and eventual adoption throughout the rest of the world.⁵

At first glance, the claim that the governance dimension of North Sea oil has been a neglected area seems suspect. After all, much of Alexander Kemp's official history is taken up by detailed expositions on the sometimes tortuous routes whereby the various components of 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 seemingly sharing the same name as their equivalents elsewhere, actually responded to very different political motivations and represented a very significant break from what had been the mainstream oil industry practice up until that point. Thus, whereas in a Middle East context, the policy of "participation" heralded the radical measure that was the nationalization of concessions, in Great Britain "participation" was merely a commercial

³ Vickers, J., and Yarrow, G., *Privatization. An Economic Analysis*, Cambridge (Mass.), The MIT Press, 1988.

⁴ Kemp, A., *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.

⁵ More such pointers may be found in Mommer, B., *Fiscal Regimes and Oil Revenues in the UK, Alaska and Venezuela. WPM 27*, Oxford, Oxford Institute for Energy Studies, 2001; Mommer, B., *Global Oil and the Nation State* Oxford, Oxford University Press, 2002.

instrument giving BNOC a call option to purchase up to half of the output of a field at market value. But the highly distinctive (and, in its own way, very radical) nature of the British approach to issues of upstream oil and gas governance was obscured by the fact that its formative stages coincided with a period when the Labor government was in power (and Tony Benn, no less, held the Energy portfolio between 1975 and 1979). Given that the policy agenda of the Labor party at the time was highly statist and interventionist, it is entirely natural to suppose that the oil and gas policies of the Labor government had a similar character, not least because those responsible for articulating such policies in public did so relying on the sort of vocabulary that was common currency all over the world at the time. Hence, when the likes of Dennis Healy (Chancellor of the Exchequer between 1974 and 1979) came out with a statement like “[i]f we do join the Third World, it will be as a member of OPEC”, it was not unreasonable to take him at his word.⁶ In fact, with the benefit of considerable hindsight, today we are in a position to appreciate that such a possibility was never even fleetingly entertained at any point and that, in fact, the British governance structures were imbued to the quick with an uncompromising anti-OPEC character from their very 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 such structures departed from the traditional principles of oil governance that had mediated the interaction between resource owners and oil companies since the birth of the oil industry in the United States, and which was transformed into a liability in the eyes of policy makers in the developed nations as a result of the traumatic and unexpected oil price rises of the 1970s. It then offers a characterization of the new British governance structures and highlights their fiscal outcomes. Finally, by way of conclusion, it offers an account of both the manner in which the British Reference was exported to other jurisdictions and the very problematic consequences that this has had, for oil exporters and oil consumers alike.

The Political Setting

The impact that the First Oil Shock (and the subsequent nationalization of petroleum concessions in the Middle East and Venezuela) had on industrialized consuming countries was immense. 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 revolution played a prominent role in the final unraveling of the

⁶ Castle, B., *Diaries*, entry for 17 November 1974.

Bretton Woods system of monetary management). The governments of these countries, in turn, made it crystal clear to 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 perfidious plot culminating in the high-handed expropriation from their rightful corporate owners of the most valuable pieces of real estate in the planet. Not only 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 Organization of Arab Petroleum Exporting Countries) in order to push oil prices to extortionate levels, thereby weakening the capacity of advanced industrial societies to withstand the Communist threat. 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 moral, conviction" that it was necessary "to bring about a reduction in oil prices by breaking the power of OPEC".⁷

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 investing as much of their profits as possible in the expansion of capacity, wherever an additional barrel could be found and produced, and not only in Organization for economic co-operation and development (OECD) countries (the perspectives 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 handsomely in exchange for allowing the exploitation and concomitant depletion of their non-renewable oil and gas resources were characterized as the most significant obstacle standing in the way of oil companies being able to realize higher, re-investable, profits.

This point was highlighted with great clarity 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 (at the time Secretary for Trade and Industry) and Martin Maddan MP. 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

⁷ Kissinger, H., *Years of Renewal. Memoirs*, Vol. 3, New York, Simon and Schuster, 1999, p. 668-9.

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 organizations 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”.⁸

Marshall’s diagnose was correct, but unfortunately for him (not to mention Kissinger’s wider policy agenda), the process of decolonization that had followed World War II (completed by the early 1970s) meant that there was no way in which the governments of the industrialized countries could openly deny or question the sovereign rights of eminent domain, taxation and regulation that nations 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 (not least because, 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 as scabs 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, whether developed or not, would have to be convinced somehow that their lot in life would improve only if they renounced OPEC and its nefarious ways (but especially its illiberal approach to fiscal matters), despite the apparently resounding success of the latter.

The apostles of petroleum liberalization understood well that there was no sense in “dispersing resources in trying to secure favorable results piecemeal”, and that it would always be “more efficient and politically wiser to use those resources to influence the institutional mechanisms that

⁸ 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, p. 74.

produce future streams of valued outcomes”.⁹ This ruled out engaging in innumerable one to one discussions, making a case anew each time a country or a minister had to be brought on board. Instead, what was required was the leveraging of the tremendous institutional strengths of developed countries and the international oil companies (which were the mirror image of the institutional weaknesses of developing countries, in general, and the oil producing countries, in particular) to set up a new reference 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 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 Creation of a New Global Frame of Reference in the UK North Sea

Great Britain was the crucible where this new reference was to be forged. Offshore commercial production of natural gas in the UK Continental Shelf had begun in 1967 and, starting in 1969, very significant finds of crude oil were 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 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.¹⁰ 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). This was a major issue in the February 1974 election that would take the Labour

⁹ Majone, G., *Evidence, Argument and Persuasion in the Policy Process*, New Haven, Yale University Press, 1992, p. 97.

¹⁰ Dam, K. W., “Oil and Gas Licensing and the North Sea”, *Journal of Law and Economics*, 8, 1965, p. 58; see also by the same author “The Pricing of North Sea Gas in Britain”, *Journal of Law and Economics*, 13, No. 1, 1970, p. 11-44. The royalty and income tax rates were comparable to those prevailing in the USA at the time.

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 licenses.¹¹ Inevitably, 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 liberal *ethos*, was the fact that these discussions took place *after* the First Oil Shock. The impact that this had on policy discussions comes across clearly in an account written by Labor politician Edmund Dell, Paymaster General from 1974 to 1976 (and No. 2 at the Treasury to the Chancellor of the Exchequer), and the man responsible for designing and implementing the Petroleum Revenue Tax (PRT), the main vehicle for the collection of petroleum rent in the UK North Sea. 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*”.¹² 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 he was in the cabinet.

The centerpiece of the *Oil Taxation Act (1975)* was the aforementioned PRT. This was a ‘resource rent’ (i.e. windfall or excess profit) tax creditable against US income tax and ring-fenced both by field and country. 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).¹³ 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). Just as importantly, in the event that at any point over the life of the license, cumulative investment (with uplift) and costs should exceed cumulative profits (with applicable deductions), then PRT in the amount necessary to bring the two sides of the equation into balance would be reimbursable to payers. This innovation signaled an unequivocal intention on the part of the British government that the taxation of excess profits would, under

¹¹ Dam, K. W. “The Evolution of North Sea Licensing Policy in Britain and Norway”, *Journal of Law and Economics*, 17, No. 2, 1974, p. 214.

¹² Dell, E., “The Origins of Petroleum Revenue Tax”, *Contemporary British History*, 7(2), p. 246; emphasis ours. After his time as a cabinet minister, Dell would be a non-executive director of Shell Transport and Trading Company (1979-1992).

¹³ The 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.

no conceivable circumstance (including accident, oversight or even negligence on the part of the operator), be allowed to bite into the returns due to oil capital.¹⁴

Radical as the new British approach to hydrocarbon taxation was, in many quarters (especially within the oil companies) it was seen as not going far enough. The chief criticism concerned the retention of royalties, on account of two factors. Firstly was 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 was the undeniable, but ultimately irrelevant, dilatory effect of royalties on investment (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 if not downright outlandish to expect that resource holders should grant access without expectation of payment for it).¹⁵ By way of a palliative gesture to the oil companies and their many advocates 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".¹⁶ Fortunately for them, their disappointment in this regard was not to last long because, in the wake of the electoral triumph of the Conservative party under Margaret Thatcher (1979), royalties were to come under a sustained attack that led, in short order, to their selective elimination (1983, 1989) and, eventually, to their total abolition.

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

¹⁴ There are many other jurisdictions 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 is unique in carrying out these calculations on the basis of the whole elapsed term of the licence).

¹⁵ In connection with this point, it is difficult not to be reminded of one of the many devastating passages in the *Wealth of Nations* which supposed admirers of Adam Smith display a marked reluctance to cite (Book I, chap. IX): "Our merchants and master-manufacturers 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".

¹⁶ Dell, "The Origins of Petroleum Revenue Tax", p. 243.

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. 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”.¹⁷ 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 had to go 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”.¹⁸

Dell and his cabinet 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, because the exact opposite was true. 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.¹⁹ Ultimately, 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 taxation such as PFFT.²⁰ This took the form of ever more comprehensive and valuable tax breaks and loopholes, first through the relaxation of the PRT ring-fencing

¹⁷ Quoted by Dell, *Ibid.*, p. 244.

¹⁸ *Ibid.*

¹⁹ 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.

²⁰ In fairness, it should be said that the Labour successors to these Conservative cabinets did nothing to reverse the deal.

conditions (in 1983 for exploration and in 1987 for development) and then, through the complete abolition of PRT for new fields, and the reduction in the prevailing PRT rate to 50 per cent (1993).²¹ By 1993, the vision of a low tax hydrocarbons sector had materialized: the abolition of royalties and the exemption from PRT granted to all fields developed after that year meant that all such fields enjoyed the same fiscal arrangements as a bakery or a bike shop. Or, to put it another way, the British government was content to receive a compensation of precisely zero from the exploitation of certain hydrocarbon resources belonging to the Crown (i.e. although the income that post-1993 fields generated came from the liquidation of a non-renewable Crown patrimony, Corporation Tax was the only levy that these fields had to pay, like any other “ordinary” business). This situation, however, was to last only until 2002, when the vertiginous rebound of the oil price from its catastrophic 1998 cycle lows forced the British government to introduce 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.

Characterization of the New British Frame of Reference

At the core of the British model of petroleum governance is the idea that the optimal development of a country’s petroleum resources can be realised 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 (ideally one subject to the ultimate discipline of the capital market) 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 (i.e. by reducing – if necessary all the way down to zero – the value of the natural resource, so as to make the investment in question profitable). In other words, the supposedly market-driven British model rests on the highly 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 be fiddled with in order to secure the profitability of sub-marginal investment projects (in the process turning all other

²¹ After 1990, PRT effectively withered away, never capturing more than 15 per cent of the net operating surplus of the industry. Even among those fields potentially liable to pay PRT (67 fields during the second half of 2013, for example), only a minority (29) did so. See Table 11.13 “Numbers of oil and gas fields with different Petroleum Revenue Tax liabilities” (latest updating available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323402/Table_11.13_-_June_2014.pdf).

projects intra-marginal). By extension, government take is conceptualized as “the ‘price’ that investors are willing to pay for exclusive access to concession or contract areas for petroleum exploration, development and production”, with this ‘price’ being “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]”.²² However, this alleged process of ‘price determination through market forces’ in the UK North Sea model rarely if ever involves genuine market interactions between government, on one side, and prospective or incumbent investors, on the other.²³

The starting point new British frame of reference is that the value of oil and gas resources in the ground can only be realised through investment. In the words of McPherson and Owens, “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”.²⁴ However, from this non-controversial (indeed, tautological) premise, the conclusion is 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. As McPherson and Owens see it: “because natural resources do not become economic resources until they are found and put to use [...] 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”.²⁵ This last conclusion, despite its purported fundamental unsoundness, has come to enjoy a great deal of popularity, an anomaly that McPherson and Owens attribute 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”.²⁶ As these authors would see it, in no sector has this ‘misapplication’ been quite as pervasive as in the oil and gas industry.

²² van Meurs, P., *Maximizing the Value of Government Revenues from Upstream Petroleum Arrangements under High Oil Prices. A Discussion Document*. Nassau, van Meurs Corporation, 2008, p. 4.

²³ *Ibid.*

²⁴ McPherson, J.L. and Owens, O.E., “Mineral Leasing in a Private Enterprise System”, in Crommelin, M., and Thompson, A.R. (eds.), *Mineral Leasing as an Instrument of Public Policy*, Vancouver, University of British Columbia Press, 1977, p. 230.

²⁵ *Ibid.*, p. 232.

²⁶ *Ibid.*

The logical corollary of the McPherson-Owens 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 (even though McPherson and Owens acknowledge, *en passant*, that “of course, none of this [and by ‘this’, they mean the argument sketched above] applies *if there is no mineral to work upon*”, an admission that pulls out the rug from under their conceptual edifice).²⁷ But if one is prepared to accept, *arguendo*, that capital is indeed much scarcer than hydrocarbon resources, then the role of government in their finding and development has to be understood exclusively in terms such as these: “*Fostering Investment: The Role of a Petroleum Regime*”.²⁸ Moreover, saying that fostering investment is the role of a fiscal regime is tantamount to turning on its head the political relationship between resource owners, on the one hand, and the companies exploiting such resources, on the other. Traditionally, governments (in their capacity as representatives of natural resource owners) had thought about themselves as 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 context of the liberal British frame of reference, natural resource owners are characterized as having nothing of value to offer, so their governments in turn are cast in the role of mere *capital importers*, and the policy levers which are supposedly expressions of their sovereignty are thereby 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 potentially characterised 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

²⁷ *Ibid.*; emphasis ours.

²⁸ Jay Park, J., “*Understanding the Emerging Petroleum Legal Regime in Iraq*”, Iraq Petroleum 2007 Conference (Dubai, UAE) September 10, 2007, p. 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).

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).²⁹ 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, the perception that, at that time, most British bidders (other than BP or Shell) would have been unable to hold their own in open bidding against much more experienced and better capitalized American competitors was almost certainly correct.³⁰ However, the fact that the beauty contest procedure adopted for these early licensing rounds 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), can only be explained on ideological grounds.³¹ After all, the conceit that oil in the ground has zero value will be very difficult to sustain to the extent that 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. 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, they serve to highlight the fact that petroleum is an exhaustible, non-renewable – and hence inherently valuable – natural resource.³²

²⁹ Assignation of licences in the UK North Sea has always been a discretionary 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).

³⁰ Dam, K. W., “The Evolution of North Sea Licensing Policy in Britain and Norway”.

³¹ The auction of 3G mobile-phone licenses by the British government in 2000 raised 34 billion dollars, or two per cent of GDP. See Binmore, K., and Klemperer, P., “The Biggest Auction Ever: The Sale of the British 3G Telecom Licenses”, *Economic Journal*, 112 (2002).

³² Incidentally, this is something which may 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 can be seen in the 464.7 MMUSD 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* 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 clearly did not lead the Alberta government to conclude that it had to give Shell access to these potential resources for free (Roche, P., “Carbonate Klondike: the Next Oil Sands?”, *New Technology Magazine*, Summer 2006, p. 4).

Another very significant aspect of the UK North Sea regime concerns the *ex post* transfer of risk from investors to government. While the British model does not shift risk away from oil and gas firms at the exploration stage, the risk profile that they have to face once a commercial discovery has been made is highly favorable, 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 (generally assessed on an annual basis, although the inordinately generous UK fiscal regime assesses them over the lifetime of licenses), plus an assured (and quite generous) rate of return.³³ 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 least secured creditors but even the equity holders. In addition, the government's excess tax receipts are effectively transformed into a contingency reserve to fund any incremental investments/costs associated with Acts of God, exogenous market developments and even negligence on the part of the 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 example, the 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. Finally,

³³ PRT incorporates a series of special reliefs and mechanisms meant to ensure that projects which generate no windfall profits are protected from the tax. Among these mechanisms is 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 restricts "the amount of PRT payable by a participant 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 is defined as "15 per cent of the participant'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 is less than 15 per cent, then the PRT for that chargeable period is reduced to nil. If the adjusted profit is more than 15 per cent of accumulated capital expenditure, then the PRT charge will be the lesser of 80 per cent of the excess or else the amount of the PRT charge calculated in the normal way. 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>).

mention should be made of the fact that, thanks to this tax treatment, the government has often ended up funding investments in infrastructure that may very well be used by its owners to extract very significant revenues from third parties which are not connected in any way to the project that such infrastructure was meant to serve.

Fiscal Outcomes

Effective tax rates in the British upstream sector were indeed very aggressively reduced from the mid-1980s onwards. UK North Sea production expanded rapidly during the late 1970s (and even more so during the 1980s) and, as mentioned beforehand, certainly made a major contribution in terms of the progressive weakening of the international oil market, first in 1982 and then, catastrophically, in 1986.³⁴ 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. Indeed, 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 much higher taxes (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 1987.³⁵ Likewise, in the 37 years elapsed between 1976 and 2013, 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 the effect of required investments post Piper Alpha can clearly be seen to have been the cause (in 1991 and 1992). In large part this was because, as oil companies themselves had no qualms in revealing, 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

³⁴ UK hydrocarbons output first peaked in 1986 at 3.4 million barrels of oil equivalent per day (MMBOE/D) and, after a period of decline, reached a second peak in 1999 at 4.68 MMBOE/D.

³⁵ The relevant time series for the UK North Sea can be found in Boué, J. C., and Wright, P., "A Requiem for the UK's Petroleum Fiscal Regime", in Rutledge, I., and Wright, P. (eds.), *UK Energy Policy and the End of Market Fundamentalism*, Oxford, Oxford University Press, 2010, p. 39-86.

order to fund exploration programs outside the country, courtesy of the British taxpayer.³⁶

The cost of the British North Sea governance model in terms of UK public finances has never been other than very significant, but as oil prices skyrocketed from 2000 onwards, the differences in the amounts that the UK levies compared to other producers (not only in the North Sea) reached astonishing proportions. Over the 2008-2012 timeframe, for example, total UK government take from North Sea oil and gas came to 44.62 billion pounds sterling, representing about 30 per cent of a gross industry income of 165 billion pounds sterling. If the quantum of money generated in the UKCS oil and gas activities during these four years had attracted the effective tax rate which oil and gas activities attracted in Denmark and Norway during these same years (50 and 57 per cent, respectively), then the UK would have received an additional 38.9 and 49.8 billion sterling more in income over these five years.³⁷ These differences are adjusted for production levels: for instance, in 2012, observed Norwegian fiscal income (43 billion pounds sterling) was actually 5.5 times greater than the annualised UK fiscal income for that year (7.7 billion pounds sterling), because Norwegian production is significantly larger (mainly because Norwegian resources were exploited with a more conservative depletion profile).³⁸ It is sobering to think that, had the UK's fiscal yield from the country's oil and gas revenues been the same as that of Norway between 2002 (when Supplementary Corporation Tax was introduced) and 2012,

³⁶ "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, p. 4).

³⁷ 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/government/uploads/system/uploads/attachment_data/file/251931/UKCS_Income_and_Expenditure_including_annual_estimates_to_2012.pdf) 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* (latest issue available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/323371/140620_UK_oil_and_gas_tables_for_publication_in_June_2014.pdf).

³⁸ Observed Danish fiscal income in 2012 (2.4 billion pounds sterling) was considerably less than UK income (7.7 billion pounds sterling) but only because Danish production is a fraction of that of the UK (which means that Danish unit costs are considerably higher). Danish fiscal and output data can be found at section 7 of the annual report *Denmark's Oil and Gas Production and Subsoil Use*, published by the Danish Energy Agency (latest issue available at http://www.ens.dk/sites/ens.dk/files/dokumenter/publikationer/downloads/danmarksolie-og_gasproduktion_2013_dk.pdf); Norwegian fiscal and production data can be found at Appendix 1 of the annual report *Facts. The Norwegian Petroleum Sector*, published by the Norwegian Petroleum Directorate (latest issue available at http://www.regjeringen.no/upload/OED/pdf%20filer/Faktaheftet/Fakta2014OG/Facts_2014_net.pdf).

fiscal income would have exceeded the amount actually collected by a staggering 111 billion pounds sterling.

No Taxation but Plenty of Misrepresentation: Exporting the British Reference to Other Jurisdictions

Given all the factors mentioned above, the British model never looked like a straightforward ‘sell’ to resource proprietors wishing to grow affluent on the back of their oil potential and/or their oil production (as opposed to using that production as a means to achieve other goals of considerably less moment to them, like ‘breaking the power of OPEC’). Moreover, the lack of robust institutional structures for the assessment and enforcement of fiscal obligations in such countries meant that they had to face the potential risk of realizing tax collections inferior even (in relative terms) to the modest taxes levied in the UK itself. And yet, the fact is that many such resource owners around the world ‘bought’ into the scheme, with the UK North Sea Model or its underlying philosophy being widely imitated outside its jurisdiction of birth. So the question inevitably arises: how were countries in which, as Silvan Robinson puts it, the overhead costs of the oil industry include “the cost of running the whole country”, convinced of adapting this model?³⁹

The answer is that the appeal of the model was much enhanced by cladding it in the classic supply-side argument that lower taxes provide such a stimulus to investment (and hence activity and production) that, in their presence, government income will be greater than that which would obtain at higher tax rates, even if higher output translates into somewhat lower prices.⁴⁰ In other words, the British model was presented as a ‘win-win’ situation for both companies and governments, with the former benefiting from both higher output and lower taxes today, and the latter from larger tax revenues overall.

The failure of the UK liberal model to deliver on its promises can be appreciated by looking at the disastrous results stemming from what was arguably its highest profile implementation outside the OECD area, Venezuela’s so-called “Apertura”. On account of this program, oil production in Venezuela went from 2.6 million barrels per day (MMBD) in 1993 to 3.5 MMBD by 1998. These incremental flows played a decisive role in the oil market collapse of 1998 (which saw the price of oil plumbing its lowest levels, in real terms, since the end of the Second

³⁹ Robinson, S., “Real Cost Base of Oil Isn’t What You Think”, *Petroleum Intelligence Weekly*, April 3 1989, p. 6.

⁴⁰ Espinasa, R., “Evolución de la política petrolera nacional”, *Revista SIC*, No. 600 (December 1997), p. 536-540.

World War. Aside from this, the “Apertura” was also directly responsible for the rise of Hugo Chávez as an electoral force, thanks in the main to the profoundly asymmetrical distribution of proceeds that underpinned it: as the “Apertura” got into full swing from the standpoint of production, the oil receipts of the Venezuelan government shrank dramatically. The nadir came in 2002, when production pursuant to “Apertura-era” contracts reached approximately 850 MBD (equivalent to nearly 30 per cent of the country’s total crude oil production), and Venezuelan oil and gas exploration and production activities as a whole (i.e. those undertaken by both PDVSA and private companies) generated no income tax receipts whatsoever, even though the price of oil in 2002 was twice what it had been during the *annus horribilis* of 1998. At that point, the Venezuelan government was only saved from a catastrophic fiscal crisis thanks to the increase in the statutory royalty rate (from 16 2/3 per cent to 30 per cent) which had been enacted in the 2001 Organic Law of Liquid Hydrocarbons, against stiff PDVSA resistance. Indeed, it is not unfair to say that some of the projects signed under the aegis of the “Apertura” may very well have been the most unfavorable in the whole history of the Venezuelan petroleum industry. To cite but one example: gross upstream revenues for the Cerro Negro project in 2004, before the Venezuelan government reinstated the 16 2/3 per cent royalty for all the Orinoco upgrading projects, amounted to USD 24.80 per barrel, with royalty payments coming in at USD 0.25 per barrel and no income tax payments at all. Such a level of fiscal income is comparable, both in relative and absolute terms (at suitably deflated prices), to the one generated exactly eighty years before in the concession that produced the country’s first oil for export (the General Asphalt concession), governed by the 1910 Mining Law.

The casualty list stemming from the adoption of UK-inspired tax policies worldwide is a long one: Venezuela, Russia, Nigeria, Algeria, Kazakhstan (to name only the most prominent). Furthermore, even international oil companies and the governments of oil consuming countries have ended paying dearly for their enthusiastic support of such policies. In the case of the former, the restructuring of many extant exploration and production agreements in an adversarial context has meant that many attractive investment opportunities could not be pursued for years, at a time when there is a clear dearth of such opportunities on a global basis (with money chasing projects, rather than the other way around). Furthermore, for some companies, this process culminated in their exclusion from any investment opportunities in certain countries (such as Venezuela) for the foreseeable future, an outcome that does nothing to serve the interests of their shareholders, not to mention oil consumers at large. Quite apart from this, had some of the politically disastrous – and inevitable – corollaries of the implementation of such policies not happened (like the Venezuelan

oil strike of late 2002), global crude oil output could very well have been significantly higher than what it was at a time when global oil markets overall were tightening (in Venezuela's case, by as much as 1 MMBD). Needless to say, such additional supplies could have had a welcome (however modest) dampening effect on international oil prices, which peaked at around 150 USD/B during the summer of 2008.

Today, oil prices continue to be at record levels, with 2011 the first year in which the annual average for the oil price was more than 100 USD/B, 2012 the second one and 2013 the third. This price behavior represents the defeat (indeed, the ignominious rout) *at the hands of the world petroleum market*, of the UK petroleum governance model, which was predicated on the premise of untrammelled resource abundance, to be everywhere unlocked by a combination of relentless technological advance and the elimination of restrictions on access to hydrocarbons resources.⁴¹ Thus, ultra-liberal British-inspired policies, like the "Apertura", have turned out to be authentic lose-lose propositions for all concerned, including their presumptive, behind-the-scenes, beneficiaries: consumers in developed countries.

⁴¹ As in a scenario imagined by Michael Klein of Royal Dutch/Shell: "[w]ith declining real oil prices the fight over upstream rents continues to intensify. Many oil-exporting countries are crucially depend 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" (Klein, M., "Energy Taxation in the 21st Century", *Oxford Energy Forum*, Issue 40, December 1999, p. 134. Ironically, as these lines were being published in 1999, the oil price was already on the rebound from its catastrophic 1998 cycle lows, and being vertiginously propelled by a feeble supply response in the face of runaway demand (emanating primarily from China) along an upward path that would take it to historical highs in 2008.