Number 57

5 May 2015

Economic Bulletin

THE TRIPLE CHALLENGE FACING BRITAIN'S OIL AND GAS SECTOR

- The Oil and Gas sector is facing rising costs, falling prices and heavy taxation.
- Britain has the highest operating costs in the World for oil production.
- Falling prices are leading to a vicious circle of lower investment and lower production.
- Radical Fiscal Reforms are needed, such as abolishing the Supplementary Charge.

1. INTRODUCTION

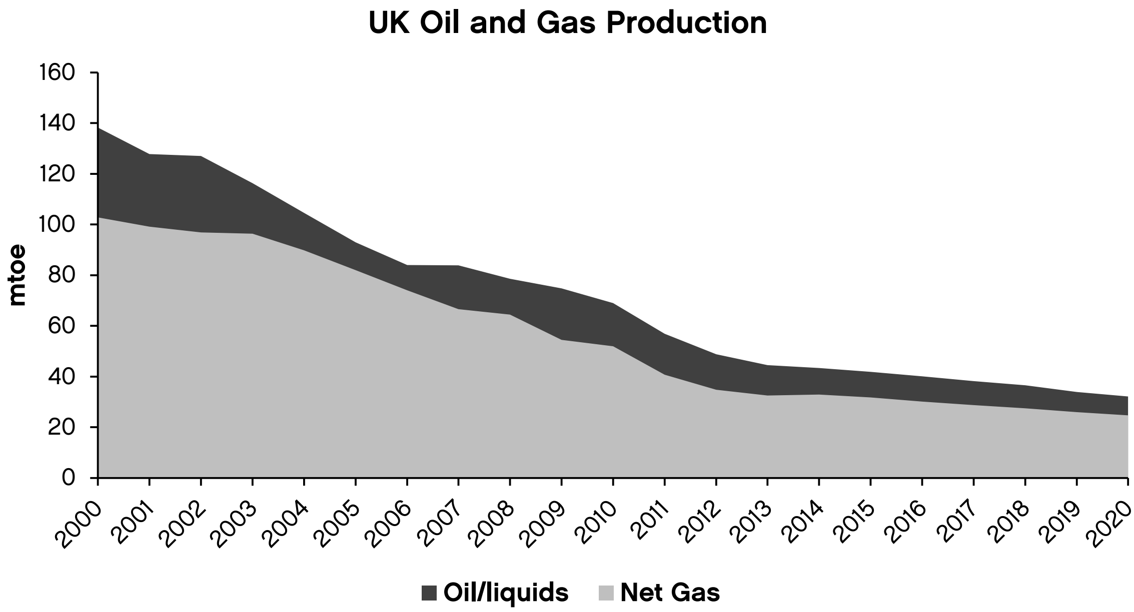
Britain's oil and gas industry contributes about £24 billion in Gross Value Added to the economy and employs approximately 240,000 people directly and within the wider supply chain. Oil and gas, which supplies more than 70% of the UK's total primary energy, is evidently still an important sector for the UK. However, in many respects, the industry is in long term decline. Production, revenues and its contribution to GDP have all fallen. The sector now faces three immediate challenges to its success: a rising cost base, the impact of the sharp decline in prices and a burdensome fiscal regime.

Click here to subscribe to the CPS eNewsletter

2. PRODUCTION OF OIL AND GAS

The recent fall in the oil price has exacerbated the problems of weakening supply. Oil and gas natural resources are of course being depleted over time but the collapse in prices means that exploration in high-cost basins is becoming increasingly unaffordable. The consequences for domestic production of oil and gas are inevitably negative.

Although oil is no longer the dominant source of energy in the UK since its share of primary energy consumption has fallen over the last four decades from 44% to 32% in 2013, it remains a vital component of the UK energy supply. On the other hand, the percentage of natural gas in the primary energy mix increased from 5% to 35% over the same time period. As highlighted in the Wood Review, even by 2030 oil and gas will still be the source of around 70% of the UK's energy supply. However, domestic production has seen a sharp decline over the last 15 years. As data from DECC shows, in 1998, total UK oil and gas production was 230 million tonnes of oil equivalent. This fell to 76 million in 2014 and is expected to continue falling to 57 million by 2020. As we mentioned in an Economic Bulletin earlier this year, this has important consequences for the UK's energy security.



In particular, production in the North Sea has fallen by an average of 7.8% each year since 1999 and as the Fiscal Sustainability Report published by the Office for Budget Responsibility last year shows, official forecasts of North Sea production have been continuously far too optimistic.

Oil reserves can be divided into proved, probable and possible reserves as well as what are classed as Ultimately Recoverable Reserves which is an estimate of the total amount of oil that will ever be recovered or produced. The proved reserves of a field are defined as having a better than 90% chance of being produced over a life of a field whereas the probable reserves of a field have a better than 50% chance of being economically and technically produced. Approximately 40 billion barrels of oil equivalent (boe) have been taken from the UK Continental Shelf (UKCS).

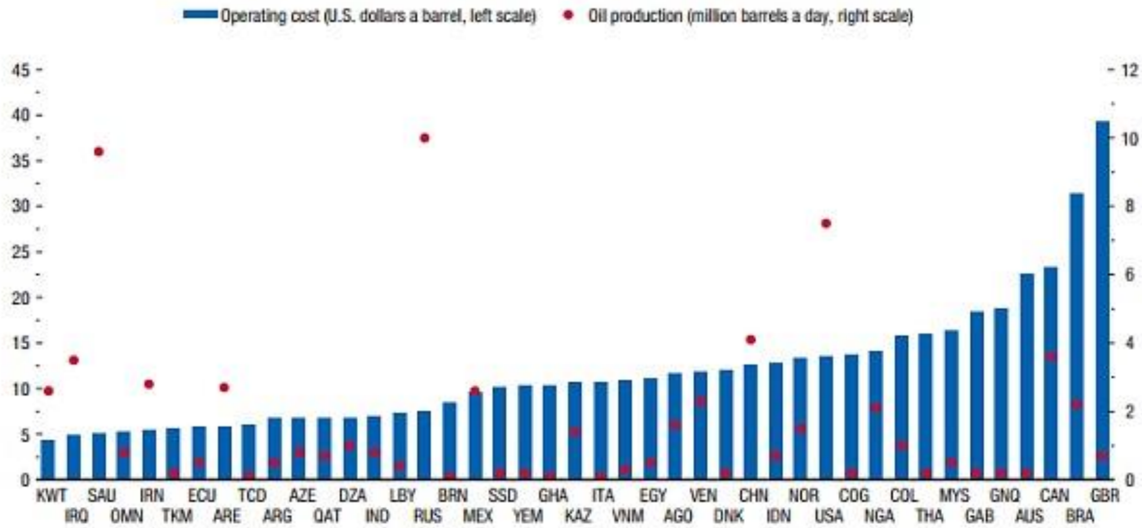
The UK Oil and Gas Survey 2015 shows that there are up to 10 billion boe of recoverable reserves which could be taken from the UKCS over the next four decades. Of these, 6.3 billion boe are sanctioned reserves ie they are from fields which are already in production or being developed. Another 2.6 billion boe are in 36 potential new developments which still need investment and the remaining 1.1 billion boe are in an estimated 100 incremental opportunities which are being considered.

The sector remains an important employer. The oil and gas companies and their major contractors operating in the UK Continental Shelf directly employ 32,000 people and the wider supply chain employs around 207,000. Oil and Gas UK which is the industry's trade association estimates that there are another 200,000 jobs which are supported by expenditure from the industry's employees and through export activity. Almost half these jobs are based in Scotland and 20% in South East England with the rest spread across the country. The sector has traditionally been a highly skilled and high productivity sector with average salaries of around £60,000 which amounts to more than £20,000 per-capita in payroll taxes.

3. COST BASE

The reserves which are left are more difficult to reach and so are more expensive to extract. This process may also require new and expensive techniques, skills and technologies which are driving up costs. New sources are often "deep underground, difficult to drill and distant from companies' existing sites"; this is the so-called 3D effect. The latest estimates from the IMF show that the UK has by far the highest operating costs in the world for oil production.

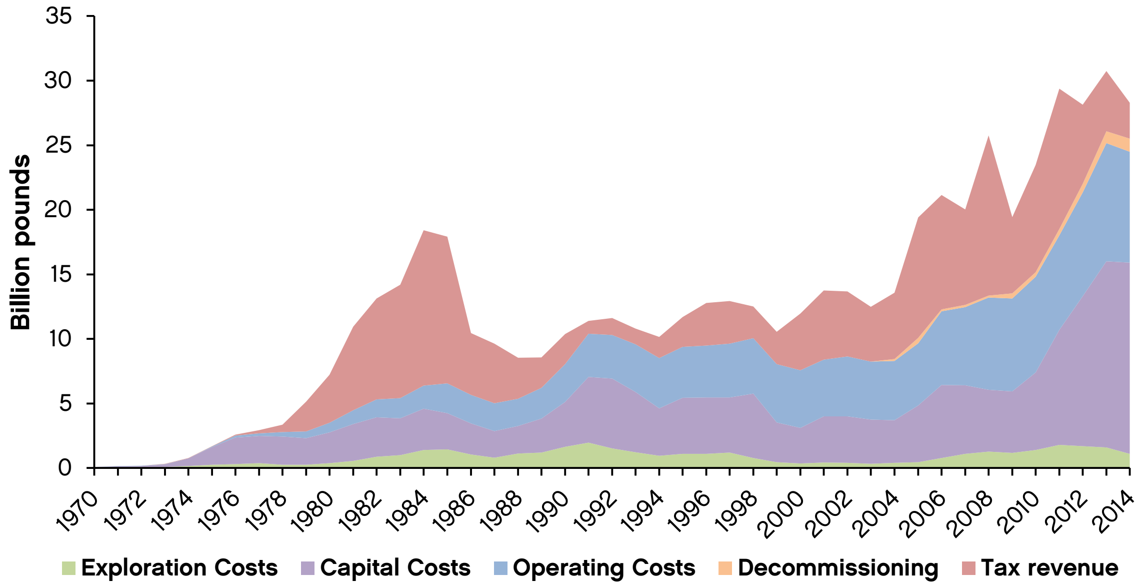
Figure 1.SF.12. Oil Production and Operating Costs by Country



The operating cost is one of several key components of the cost of production. In addition, exploration costs, decommissioning costs and capital expenditure are all important and the tax levied on the sector should also be considered. Capital expenditure is the largest component of the cost base and in 2014 it reached £14.8 billion for the sector as whole which is up from £6 billion in 2010. The increasing complexity of reaching beyond the existing, drying wells has required much heavier investment. In turn this has increased the cost of production. Day-to-day operating expenses have almost doubled over the last ten years; increasing from £4.6 billion across the sector in 2004 to £8.6 billion in 2014. Efficiency gains across the sector in 2014 contributed to a 6% reduction in operating costs last year. Much more will need to be done in this regard.

The sum of decommissioning, exploration and operating costs with capital expenditure has tripled over the last decade; in 2004 it was £8.4 billion across the sector and this increased to £25.5 billion in 2014. Over the same period, the income generated by the sector fell from £23.4 billion to £22.5 billion. As our graph below shows, including the tax paid by the sector, the cost base has been on a relentless march upwards over the last decade. Joint ventures with rival firms might allow some firms to generate economies of scale through shared use of equipment for example. However, different working cultures and long term goals might in some cases make this a difficult task.

Oil and Gas Cost Breakdown



4. FALLING PRICES

The change of policy in Saudi Arabia from price support to increasing and maintaining market share in Autumn 2014 led to increased supply driving down prices in combination with weaker demand. Whilst the price has stabilised in recent months, it is still about half of the price it was at in Summer 2014. As KPMG has argued, it is likely that even when the price eventually recovers, it will settle at a level below the pre-crash average.

The collapse in prices, along with the burdensome fiscal regime, has led to a sharp fall in the profitability of the oil and gas sector. Indeed, in 2014 the sector as a whole had a negative cash flow of £5.3 billion which is the industry's worst performance since the 1970s and last year, only 14 out of 25 planned drilling projects actually went ahead. Internationally, the trend is similar with Royal Dutch Shell, Exxon Mobil and BP all having recently reported a sharp fall in profits. Shell's upstream business, including exploration and production, has seen an 88% in profits over the last year. A number of firms such as BP and Chevron are already cutting jobs in the sector.

This spectacular oil price fall has contributed to workers in the sector wanting to go abroad in search of higher wages and more job security. A survey undertaken of North Sea workers, showed that 71% would consider moving overseas. This places in jeopardy the medium term success of the industry and would of course exacerbate the existing skills shortages. Profitability, confidence and production in the sector are all being weakened by the oil price fall and Oil and Gas UK argues that even a return to prices of $100 a barrel would not be enough to resolve the underlying problems.

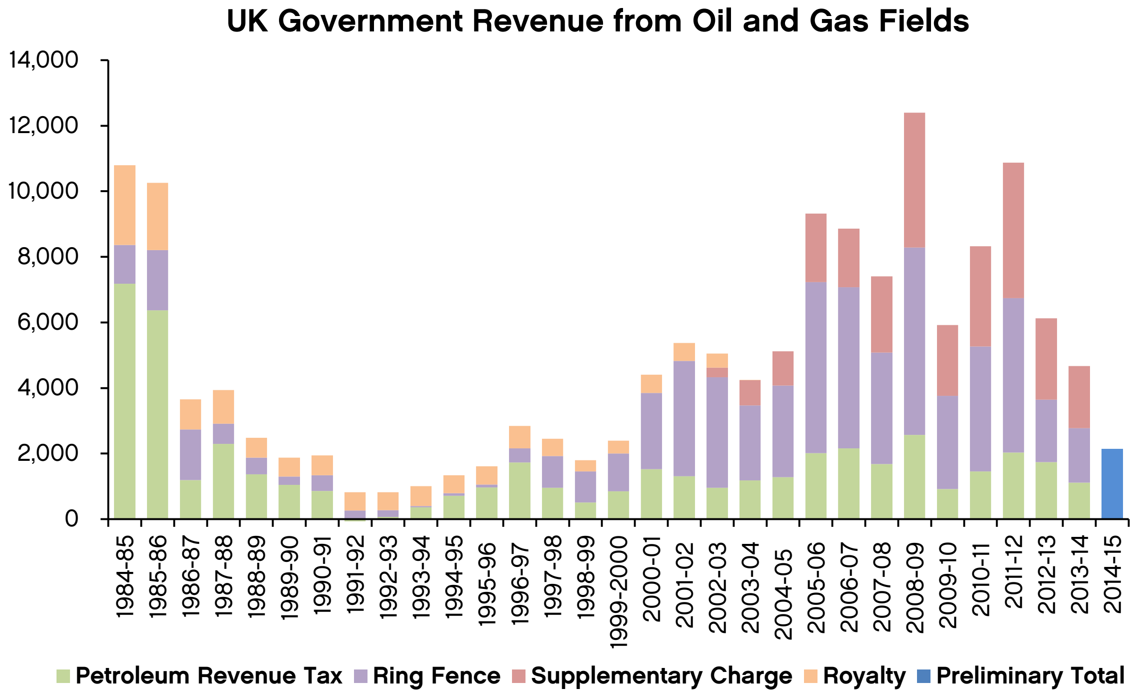
Furthermore, the oil price fall could have a domino effect on the industry. Lower prices make further capital investment less attractive which reduces medium term productive capacity. DECC's central estimate is that capital expenditure will fall from £14.8 billion in 2014 to £10.8 billion this year and only £8.3 billion in 2016 – in large part due to falling prices. Reduced profitability could lead to the earlier decommissioning of fields and thus reduced confidence in the future potential of the UKCS; this would also reduce long-term investment. Premature decommissioning could reduce connectivity across the North Sea which would make fewer areas viable. Shutting down individual platforms could mean that nearby operators have to invest in replacement by-passes and it would also mean that shared infrastructure costs would have to be spread across fewer platforms. This would drive up unit costs especially within the context of oil and gas infrastructure which is already ageing.

5. FISCAL REGIME

In the 2015 Budget, the Chancellor announced tax cuts for the oil and gas sector which amounted to approximately £1.3 billion as suggested by the CPS. The tax regime that applies in the exploration and production of the UK's oil and gas has three elements: the Ring Fence Corporation Tax (RFCT), the Supplementary Charge (SC) and the Petroleum Revenue Tax (PRT). In 2010/11, oil and gas was Britain's largest corporation tax payer and together with the financial sector paid 35% of total corporation tax receipts. However, tax revenues from oil and gas production have fallen dramatically. The RFCT, PRT and SC raised £10.9 billion in 2011/12 but this fell to £2.1 billion in 2014/15 which is well below initial forecasts.

The RFCT is the standard corporation tax that applies to all UK companies with the addition of a 'ring fence' and is currently 30%.The RFCT offers the opportunity of a tax free allowance in the first year for all capital expenditure and is designed in such a way to prevent the reduction of taxable profits from other business activities. In March 2011 the rate of the

Supplementary Charge (an addition to the corporation tax) was increased from 20% to 32%. This was then cut back to 30% and then to 20% in the 2015 Budget which will also be backdated to January 2015. The PRT is a field-based tax that charges the profits from the production of oil and gas which were sanctioned before 16 March 1993 and was cut from 50% to 35% in the latest Budget.



In spite of the easing of the fiscal regime, the survey data shows that only 17% of North Sea workers believe that the tax cuts implemented so far by the Government will be sufficient to drive meaningful investment in exploration over the coming years. The measures enacted so far do not appear to be enough to resolve the challenges facing the sector. The fall in revenues in recent years has in part been due to capital expenditure being tax-deductible. As capital expenditure falls in the coming years, not only will jobs be lost but the effective tax rate will rise.

6. PROPOSALS

The UK oil and gas sector is fighting for survival. The long term decline in production is being exacerbated with the immediate challenges of rising costs, falling prices and high taxes. The measures undertaken in the 2015 Budget are certainly welcome but without further action the sector could fall into a vicious spiral of contraction.

The recent report by Andy Samuel, Chief Executive of the Oil and Gas Authority, "Call to Action: The Oil and Gas Commission 2015" contains a number of important recommendations which are aimed at protecting critical infrastructure, driving investment and exploration, improving productive efficiency and cost competitiveness as well as improving collaboration on decommissioning. It is important that these measures are swiftly implemented. In particular, more effective sharing and spreading of information in areas such as well reviews and the planning of decommissioning projects will be particularly useful.

Further reform of the fiscal regime with substantial tax cuts is also necessary to help to revitalise exploration and capital investment along with continued efficiency improvements in the industry. In the short term, the next Government should consider abolishing the Supplementary Charge entirely. This would send a powerful message that the UK oil and gas sector is still an attractive place to invest. In addition, the Government should examine the case for more imaginative use of investment allowances to encourage the development of mature fields.

For example, the Dutch fiscal model which includes a marginal field tax allowance has had some success in incentivising the development of marginal offshore gas fields. In the long term, the Government should consider implementing an entirely new fiscal regime which incorporates changes in the oil price to mitigate risk for oil and gas companies. This could act as an automatic stabiliser, cutting the tax rate if market conditions deteriorate. It should also recognise that as fields mature, the tax burden should also fall.

The triple challenge facing the oil and gas sector should not be underestimated. More needs to be done to reduce the burdens it is facing.

7. MUST BE READ:

Oil Voice: Pessimism marks the mood of the oil and gas industry
The Atlantic: The hidden effects of cheap oil

8. MUST BE READ ON CAPX:

Guy Sorman: Innovation, technology and free markets offer a bright future
Rupert Darwall: Britain's energy market is back under state control

Adam Memon, Angeliki Terpou and Tim Knox
Centre for Policy Studies