
Moving the transparency agenda forward – National hydrocarbon accounting

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The global transparency movement

The push for open data in the extractive sector is motivated by twin objectives; to improve accountability by empowering citizen oversight, and to strengthen Governments' ability to manage resources effectively on behalf of its citizens. Transparency initiatives like EITI have focussed on payments made to and received by Government. However annual revenue data may reflect of contracts and investment decisions made years previously, whilst the sustainability of resource flows reflects the quantum of extractable resources and the rate of depletion.

Moving the transparency agenda forward

The national hydrocarbon accounting (NHA) approach is aimed at bringing together in one place the key information needed to allow a concerned citizen to evaluate how well hydrocarbon resources are being managed on their behalf.

- *How much oil and gas does the country have to extract?*
- *How much profit does it generate?*
- *How much of that profit does the Government collect on behalf of its citizens?*

National Petroleum Accounting

National Hydrocarbon Accounts

Physical oil and gas resources

Reserves and resources

- Developed
- Undeveloped
- Undiscovered

Oil & Gas production

- Volumes produced and sold

Industry revenues and costs

- Oil & Gas sales price
- Oil & Gas revenue
- Operating Costs
- Capital Costs

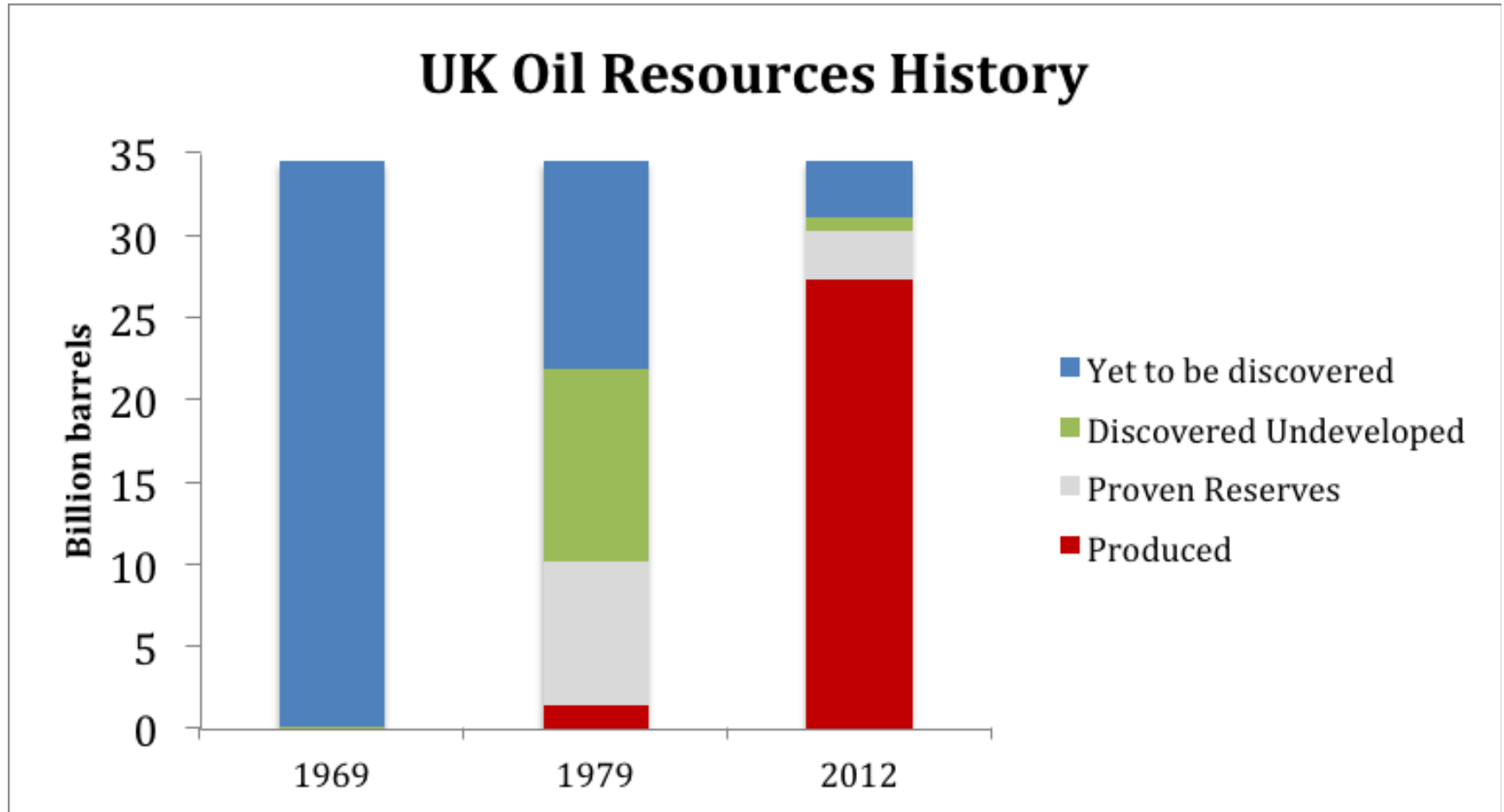
- Operating Surplus
- Capital employed

- Pre-tax net income
- Cash flow

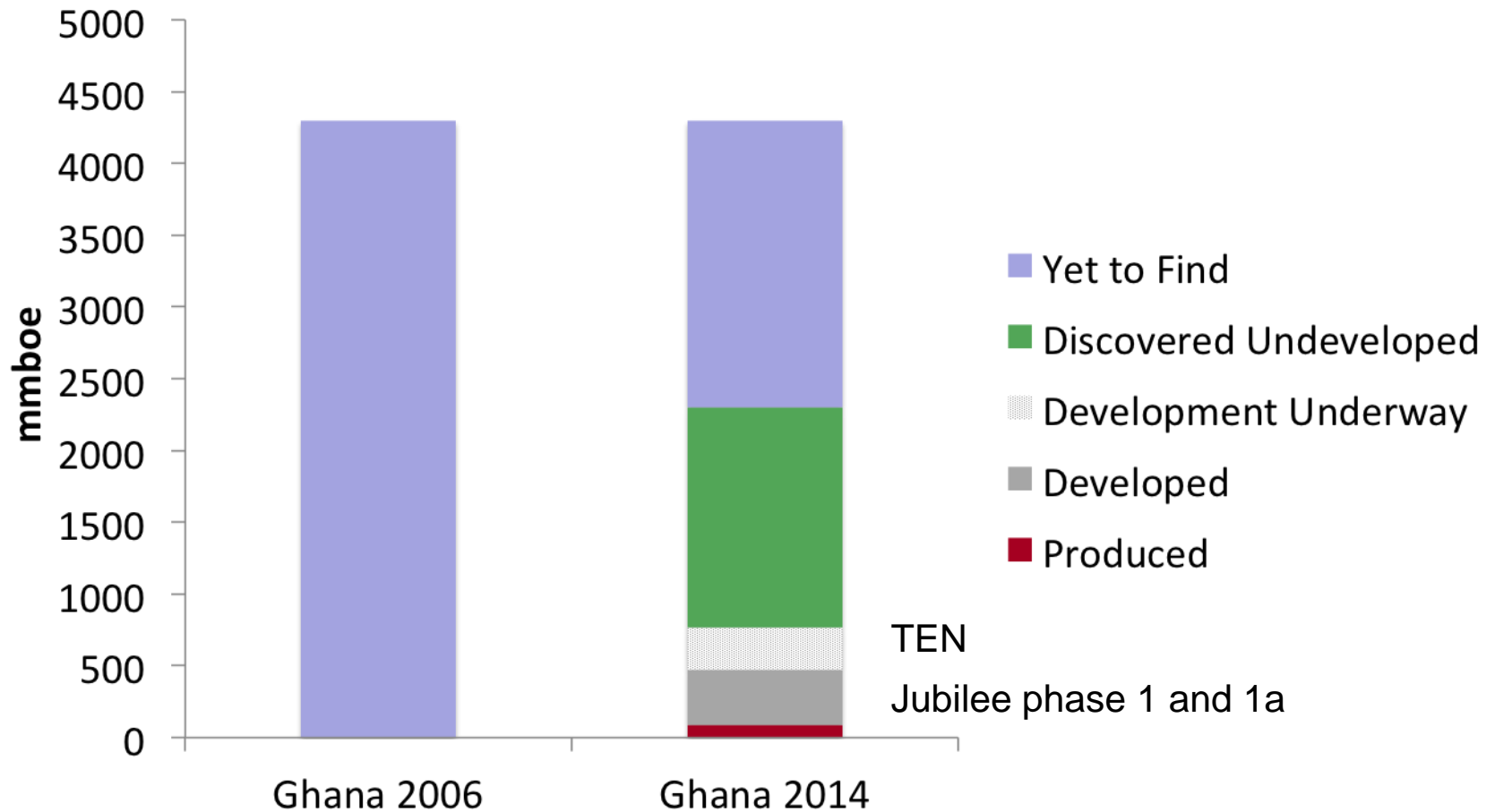
Economic rent and taxation

- Govt taxes & royalties
- NOC profit share
- Private company pre and post- tax profits
- Return on capital employed

Accounting for the resource



Ghana resource status example*



Example Reserves Statement - UK

Reserves Statement	2012	2009	1999	1989	1979
Billion barrels of oil					
Proven reserves start of year	3.0	3.1	5.1	4.3	8.8
Production	-0.4	-0.5	-1.1	-0.7	-0.6
Reserve additions	0.3	0.3	0.9	0.3	0.6
Proven reserves end year	3.0	2.8	5.0	3.8	8.8
Cumulative proven reserves	30.2	28.8	23.7	13.6	10.2
Cumulative production	27.3	26.0	18.8	9.8	1.4
Estimated Ultimate Recovery	35	35	35	35	35
Reserve depletion rate	13%	16%	22%	16%	7%
Reserve replacement ratio	75%	60%	82%	43%	100%
Remaining EUR depletion rate	5%	6%	7%	3%	2%
%Cumulative proved reserves produced	90%	90%	79%	72%	31%
% EUR produced	79%	75%	54%	28%	9%

The impact of depletion policy

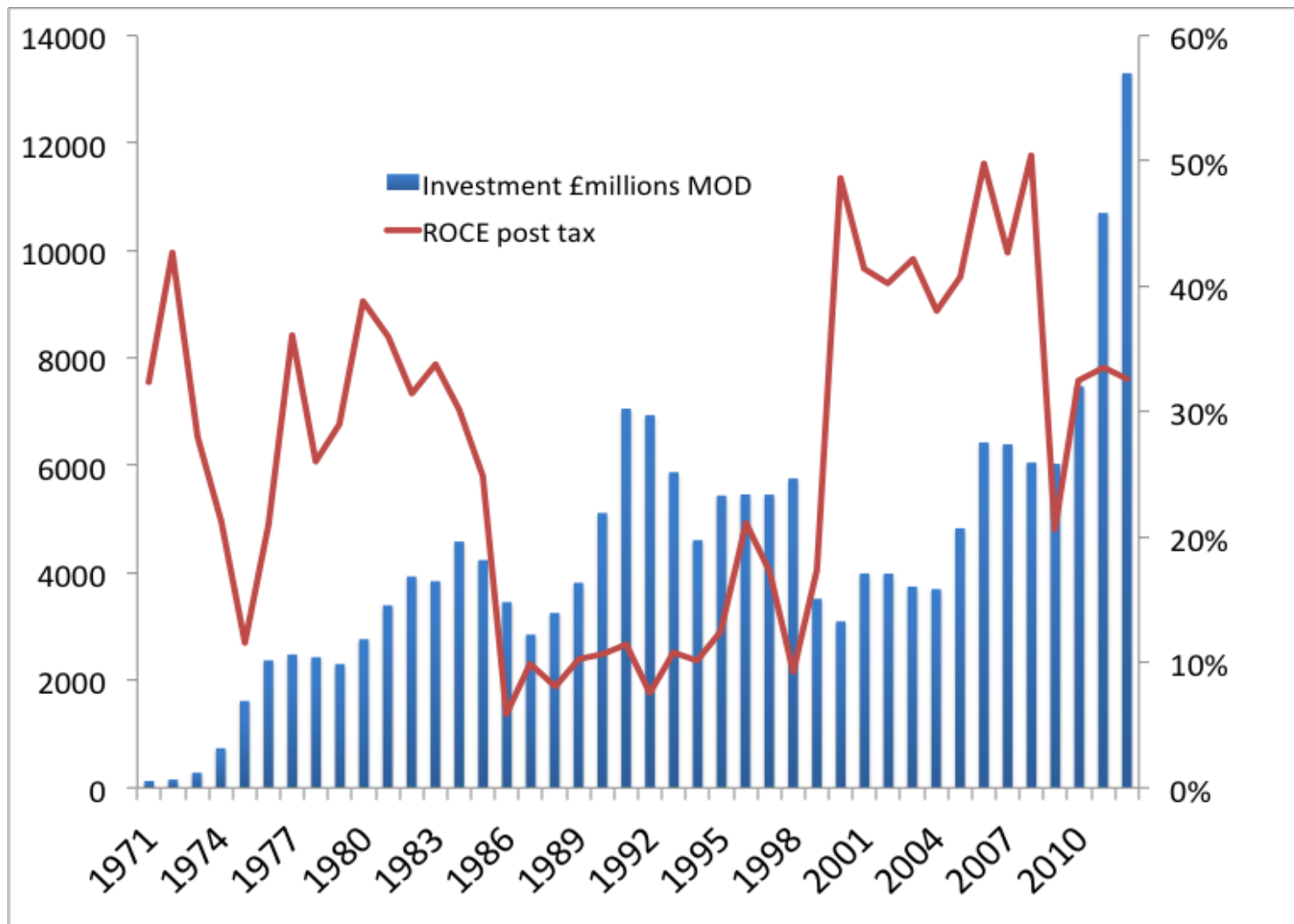
UK has produced 6.6 bn bbl more than Norway from same resource base and has lower production

Resource Accounts North Sea Oil	UK 2012 Bn barrels	Norway 2012 Bn Barrels
Total Estimated ultimate recovery	34.5	33.7
Produced	27.3	20.7
Reserves	3	4.5
Contingent resources	0.8	4.7
Undiscovered resources	3.4	3.7
% EUR Depleted	79%	61%
Oil production mbd	967	1606

Example National Income Statement - UK

UK National Oil & Gas Income Statement £bn (money of the day)	2009	1999	1989	1979
Gross Revenues				
Oil sales	20.3	11.0	7.5	5.7
Gas sales	6.5	5.0	2.2	0.6
Other income	1.8	1.4	0.5	-
Total Revenue	28.6	17.4	10.2	6.3
Operating costs	-6.9	-4.5	-2.4	-0.5
Operating Surplus	21.7	12.9	7.8	5.8
Capital depreciation charge	-6.2	-4.3	-3.3	-0.7
National oil & gas Income before tax	15.5	8.6	4.5	5.1
Government tax and royalty income	-6.6	-2.6	-2.4	-2.3
Investor income after tax	8.9	6.0	2.1	2.8

Return on capital UKCS



Conclusions

Government revenue data for any one year needs to be considered in the context of fiscal terms, contracts, and physical reserves and production volumes, capital and operating costs, and technical risks.