Institution: University of Aberdeen

Unit of Assessment: 17 (Business Management Studies)

Title of case study: Taxation and Investment in the Maturing UK Continental Shelf

Period when the underpinning research was undertaken: 2005-2019

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g., job title):	Period(s) employed by submitting HEI:
Alex Kemp	Professor, Petroleum Economics	1966 - present
Sola Kasim	Research Fellow/Lecturer	1999 - present
Linda Stephen	Research Fellow	1994 – May 2020

Period when the claimed impact occurred: 2014-2020

Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact (indicative maximum 100 words)

Research on North Sea oil tax, led by Professor Kemp at the University of Aberdeen (2005-2019), was instrumental in informing major reviews by the UK Treasury and underpinning key decisions made by both the Scottish and UK Governments regarding the UK Continental Shelf (UKCS), including introduction of Transferable Tax History (TTH) to support late life field asset transactions. Furthermore, Kemp's research underpinned acknowledgement by the Oil and Gas Authority (OGA) that the investment hurdles for the UKCS should take into account significant capital rationing and its impact on investment decisions in the UKCS.

2. Underpinning research (indicative maximum 500 words)

For two decades, the UKCS has been regarded as a mature petroleum province, presenting commercial challenges as well as opportunities. The OGA and Industry act to mitigate barriers to investment in UKCS to create attractive active investment opportunities. Since 2014, capital rationing has had a serious impact on resource renewal. Large companies concentrate on the perceived best opportunities, but many smaller undeveloped fields present economic challenges to both large and small licensees. As a result, fewer new fields are being developed, and at late 2019, there were over 400 undeveloped discoveries, many of which were small. In that year, exploration and new field developments were at historically low levels.

Professor Kemp, a world authority on North Sea economics, is highly regarded by industry and government for his insightful and high-quality research, confirmed by his continuing research sponsorship from both industry and government organisations. Professor Kemp's work has been recognised: in 2006, by the award of an OBE for services to the oil and gas industry; and in 2011, he was appointed as a member of the Independent Oil and Gas Expert Commission by the Scottish Government and as a member of the Scottish Energy Advisory Board chaired by the First Minister, a position he continues to hold. In 2012, he received a Lifetime Achievement Award from the Society of Petroleum Engineers (SPE) and, in 2016, he became the first person to be inducted into the North Sea Hall of Fame at the Aberdeen Press and Journal Gold Awards.

In 2005, Professor Kemp and colleagues, Sola Kasim and Linda Stephen, provided key research findings concerning the economic trajectory of the North Sea oil and gas industry, demonstrating that the UKCS had already entered its mature phase, with new fields being relatively small and the taxable capacity correspondingly smaller. The tax arrangements, however, did not recognise this major change [1, 2] but was evidenced by major operators "retreating" and a reducing number of attractive opportunities for new entrants to invest in the UKCS.

In 2014, HM Treasury (HMT) published the "Driving Investment Plan" outlining the principles HMT follow when developing UKCS fiscal policy including "to be consistent with the objective of maximising economic recovery as new projects become ever more marginal, the overall tax burden will need to fall as the basin matures". During this period, Professor Kemp and colleagues produced a body of work relating to "capital rationing", restricting the amount of new investments or projects undertaken by a company. This research produced valuable evidence to suggest that, in order to secure maximum economic recovery (MER), reduced headline tax rates plus targeted investment allowances were vital to stimulating investment in new fields and incremental projects in mature fields [3]. Furthermore, such action would facilitate the selling of oil and gas fields to new entrants with plans to enhance production and investment. Professor Kemp's research into tax problems relating to late field life transactions found that, these could be inhibited by inadequate relief for decommissioning costs. He demonstrated that changes to tax legislation to permit the Transfer of Tax History (TTH) when an asset transaction took place would facilitate such deals and thus enhance economic recovery [4].

Kemp and Stephen produced evidence showing that capital rationing had become an endemic feature of the operating environment in the UKCS. Evidence was produced that investment hurdles reflected this, and taxation policies also needed to acknowledge this phenomenon [5, 6]. This research on the future of the North Sea oil industry and the need for tax reform was received with interest by the Treasury and by other influential organisations between 2014-2018 including: the Energy Institute; Citizens' Jury on Energy, organised by Judge Business School, University of Cambridge; and the Royal Institution of Chartered Surveyors and Chartered Institute of Management Accountants.

3. References to the research (indicative maximum of six references)

[1] Kemp, A with Kasim, A.S., "Are Decline Rates Really Exponential? Evidence from the UK Continental Shelf", The Energy Journal, Vol.26, No.1, 2005, pp.27-50

[2] Kemp, A with Stephen, L. and Kasim, A.S., "Petroleum Taxation for the Maturing UK Continental Shelf (UKCS), North Sea Study Occasional Paper No. 128, University of Aberdeen Department of Economics, October 2014, pp.1-94
https://www.abdn.ac.uk/research/acreef/working-papers/

[3] Kemp, A with Stephen, L., "Price Sensitivity, Capital Rationing and Future Activity in the UK Continental Shelf after the Wood Review", North Sea Study Occasional Paper No. 130, University of Aberdeen Department of Economics, November 2014, pp.1-41
https://www.abdn.ac.uk/research/acreef/working-papers/

[4] Kemp, A with Stephen, L., "Can the Transfer of Tax History Enhance Later Field Life in the UKCS?", North Sea Study Occasional Paper No. 140, University of Aberdeen Department of Economics, July 2017, pp.1-53
https://www.abdn.ac.uk/research/acreef/working-papers/

[5] Kemp, A with Osmundsen, P., Emhjellen, M., Johnsen, T. and Riis, C., "Petroleum Taxation Contingent on Counter-factual Investment Behaviour", The Energy Journal, Vol.36, Special Issue 1, 2015, pp.195-213

[6] Kemp, A with Stephen, L., "The Implications of Different Acceptable Prospective Returns to Investment for Activity in the UKCS", North Sea Study Occasional Paper No. 141, University of Aberdeen Department of Economics, September 2017, pp.1-61
https://www.abdn.ac.uk/research/acreef/working-papers/

GRANTS

[P1] By group of oil companies and Scottish Enterprise, 2005: Subject: North Sea Oil and Gas Economics, 2005, Amount: GBP93,000
[P2] By group of oil companies and Scottish Enterprise, 2014: Subject: North Sea Oil and Gas Economics, 2014, Amount: GBP133,700

[P3] By group of oil companies, Scottish Enterprise and Office of Chief Economic Advisor, Scottish Government, 2015: Subject: North Sea Oil and Gas Economics, 2015, Amount: GBP120,000

[P4] By group of oil companies, Scottish Enterprise and Office of Chief Economic Advisor, Scottish Government, 2016: Subject: North Sea Oil and Gas Economics, 2016, Amount: GBP120,000

[P5] By group of oil companies, Scottish Enterprise and Office of Chief Economic Advisor, Scottish Government, 2017: Subject: North Sea Oil and Gas Economics, 2017, Amount: GBP95,000

[P6] By group of oil companies, Scottish Enterprise, Office of Chief Economic Advisor, Scottish Government, and Oil and Gas Authority, 2018: Subject: North Sea Oil and Gas Economics, 2018, Amount: GBP110,000

[P7] By group of oil companies and Scottish Enterprise, Office of Chief Economic Advisor, Scottish Government, and Oil and Gas Authority, 2019: Subject: North Sea Oil and Gas Economics, 2019, Amount: GBP115,000

The quality of the research and its impact are reflected in the fact that the grants are given on an annual basis, only, but have been renewed annually over the years (starting in 1975) by sponsors, some of whom have renewed ever since then. The sponsors are from both industry and Government bodies reflecting the perceived benefits to both.

4. Details of the impact (indicative maximum 750 words)

Research at the University of Aberdeen, led by Professor Kemp and colleagues Linda Stephen and Sola Kasim has provided valuable, impartial evidence to inform the long-standing debate on North Sea oil economic and taxation issues, which have impacted the growth, decline and diversity of the UKCS. From 2005-2014, key research published by Kemp, Kasim and Stephen highlighted the looming problem of maturity and the need to re-engineer the tax system to be more relevant for smaller fields with lower materiality and thus lower taxable capacity, affecting economic recovery, job security and investment. Their research highlighted the likelihood of falling future production, modest levels of exploration activity, limited numbers of new field developments and increasing numbers of undeveloped proven discoveries. The Scottish Government published “UK Continental Shelf Tax Regime – Options for Reform”. This referenced Professor Kemp’s major contribution to thinking on the subject and his influence continued through his appointment as a member of the Scottish Government’s independent Oil and Gas Expert Commission. Their report, published in 2014, was entitled “Maximising the Total Value Added (including the supply chain)”. This emphasis has been increasingly recognised by the Scottish Government and the OGA in recent years.

In late 2014, the UK Government acknowledged the problem outlined by Kemp and his team and issued a review of the oil and gas fiscal regime on the possible long-term tax structure [S1]. This included reference to the need to reduce effective headline rates and to introduce investment allowances to facilitate maximum economic recovery, as outlined by Kemp and colleagues. Professor Kemp was asked to give a presentation entitled “Modelling the Future of the UKCS” to a visiting group to Aberdeen from HMRC/HMT/DECC in August 2014. In 2015, the Investment Allowance for supplementary charge (SC) was introduced by the UK Government, and in 2016, the rate of SC was reduced; both changes were based on Kemp’s findings [S2].

HMT subsequently instigated a consultation on the possibility of a Transfer of Tax History to facilitate late life asset transactions. Kemp and Stephen produced evidence that, in the absence of TTH, late life asset transactions could be inhibited because the remaining return (net present value) to the prospective seller could exceed the prospective return to the buyer due to ineffective tax relief for decommissioning costs. When the Treasury was studying the evidence on the case for Transfer of Tax History, HMT representatives visited Professor Kemp on 31st July 2017 to discuss his submission on the subject. The Treasury acknowledged Professor Kemp’s contribution and Transfer of Tax History was subsequently enacted. In 2018, a TTH mechanism was introduced for UK oil and gas producers, for deals that complete on or after 1 November 2018, allowing companies selling UKCS oil and gas fields to transfer some of their tax payment history to the buyers of those fields [2] [S3].

During this period of transition, Kemp and his team's research informed key debates in the House of Commons (2015-2016). Kirsty Blackman MP stated that, based on Kemp's research, the proposed changes did not go far enough to facilitate the development of the many marginal fields [S4]. Hannah Bardell MP [S5] also supported the view expressed by Professor Kemp on two separate occasions stating that further reforms were clearly necessary [4]. Mike Weir MP in the House of Commons expressed support for a reduction in the SC as suggested by Professor Kemp [S6].

Further evidence of the impact of Professor Kemp's and his team's research was the invitation by the House of Commons Committee on Scottish Affairs for him to provide written and oral evidence relating to their inquiry on "The Future of the Oil and Gas Industry". His written evidence, was sent on 5th June 2018, entitled "The future of the UK Oil and Gas Industry", Memorandum to House of Commons Select Committee on Scottish Affairs, and he was invited to give oral evidence. "The future of the UK Oil and Gas Industry", Oral Evidence to the House of Commons Select Committee on Scottish Affairs was published on 25th June 2018. His views on future prospects were quoted in the report of the Committee published on 4th February 2019 "The future of the Oil and Gas industry"; Sixth Report of Session 2017-19.

In 2017, the OGA produced a consultation on what constitutes "a satisfactory expected return" in the UKCS. Kemp and Stephen undertook a study to examine OGA's proposed discount rates and investment hurdles [S7] and their findings pointed to the need for discount rates to be higher than OGA's suggested levels. They also emphasised the importance of capital rationing in the industry and the need for it to be considered as a central element in understanding investment hurdles. The OGA, post-consultation, agreed that discount rates in the range suggested by Professor Kemp were realistic. The OGA also agreed that use of the ratio NPV/I to determine hurdle rates was also appropriate [S8-9].

5. Sources to corroborate the impact (indicative maximum of 10 references)

[S1] Treasury consultation paper on Investment Allowance: Fiscal reform of the UK Continental Shelf: response to the consultation on an investment allowance, (https://bit.ly/3eVFY80) March 2015, acknowledgements on p.23

[S2] HMRC Oil Taxation manual citing changes to SC (https://www.gov.uk/hmrc-internal-manuals/oil-taxation-manual/ot21202); House of Commons library, North Sea oil taxation standard note; article in Energy voice (2015) outlining the introduction of new investment allowance for SC

[S3] Treasury consultation paper on Transferable Tax History: An outline of Transferable Tax History, November 2017, p.11

[S4] Speech by Kirsty Blackman MP in House of Commons: https://hansard.parliament.uk/Commons/2016-09-05/debates/0E343AAD-149E-43CE-A4D7-7E5C7F421CC4/FinanceBill?highlight=alex%20kemp#contribution-25826DA5-1A7F-4294-A48C-6E8F7CEC985A

[S5] Speeches by Hannah Bardell MP in House of Commons: https://bit.ly/30ZOWZQ *and* https://bit.ly/3tCtZQY

[S6] Speech by Mike Weir MP in House of Commons: https://hansard.parliament.uk/Commons/2015-01-20/debates/15012054000001/NorthSeaOilAndGas(Employment)?highlight=%22alex%20kemp%22#contribution-15012054000066

[S7] Oil & Gas Authority consultation paper on Satisfactory expected commercial return (SECR), August 2018, p.14

[S8] Testimonial from Global Tax Director of Shell (retired), now Non-Executive Director of Scottish Government

[S9] HM Treasury, a plan to reform the oil and gas fiscal regime; Oil and Gas Authority (2014) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/382785/PU1721_Driving_investment_-_a_plan_to_reform_the_oil_and_gas_fiscal_regime.pdf