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PRODUCTION SHARING AGREEMENTS IN AFRICA: SOVEREIGNTY AND RELATIONALITY

Professor John Paterson

Visiting Professor, Centre for Maritime Law, Faculty of Law, NUS
Professor, School of Law, The University of Aberdeen

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Production Sharing Agreements in Africa: Sovereignty and Relationality

John Paterson[*]

This paper considers Desta's critique of how contracts in the extractive industries involving host nations in Sub-Saharan Africa and international companies have been drafted and adjudicated. It first sets out the options that the state has in setting out a legal framework for the development of its hydrocarbon sector before going on to examine the dynamic risk matrix that characterises oil and gas projects. It then sets out the principles underpinning the design of fiscal systems for upstream oil and gas. With these foundations laid, the paper goes on to complexify the understanding of stabilisation in modern state-investor contracts, first, in terms of self-adjustment mechanisms and, secondly, in terms of the shift towards economic equilibrium clauses. It then examines the extent to which these contracts are best understood as relational in nature and concludes by proposing the development of principles to guide arbitral adjustment of contract terms based on this observation.

Keywords: Production sharing agreements, Africa, state-investor contracts, oil and gas, relational contracts, arbitral adjustment.

[*] Visiting Professor, Centre for Maritime Law, Faculty of Law, National University of Singapore; Professor, School of Law, The University of Aberdeen. This working paper was prepared during the author's research visit to the Centre for Maritime Law (CML) at the Faculty of Law, National University of Singapore. The author would like to thank CML for the funding that supported this research.

1 Introduction

In his paper 'Competition for Natural Resources and International Investment Law: Perspectives from Africa', which appeared in the first issue of the *Ethiopian Yearbook of International Law*, Melaku Geboye Desta raises important questions about the way in which contracts in the extractive industries involving host nations in Sub-Saharan Africa and international companies have been drafted and adjudicated. Noting the challenge to sovereignty inherent in these arrangements both in terms of legislative jurisdiction (involving such phenomena as the internationalisation of contracts and the use of stabilisation clauses) and of judicial jurisdiction (involving international arbitration in place of domestic courts), Desta concludes that African nations can push back against this situation by adopting a common approach to the review, termination and renegotiation of such contracts.[1]

As tough as such suggestions may sound to lawyers in other jurisdictions, there is certainly evidence that there is an appetite for such a strong stance, for example, in the form of recent Tanzanian legislation which explicitly empowers the legislature to review both new and existing natural resource contracts and, where it finds that they contain 'unconscionable' terms, to 'advise' the government to commence renegotiation in order to rectify the situation.[2] The term 'advise' turns out to be inaccurate, however, as the statute goes on to oblige the government to serve notice of intention to renegotiate within 30 days, and such renegotiation, unless extended by mutual agreement, must be completed within 90 days of the service of the notice.[3] In the event that the other party does not agree to renegotiate or there is a failure to agree to new terms, the statute provides that the 'unconscionable … terms shall cease to have effect and shall … be treated as having been expunged'.[4] Bargaining in the shadow of the law writ large! Lest there be any doubting the serious intent behind this legislation, one need only consider the approach of the Tanzanian government to the mining company Acacia in recent times.

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1 Melaku Geboye Desta, 'Competition for Natural Resources and International Investment Law: Perspectives from Africa' [2016] *Ethiopian Yearbook of International Law* 117-149.

2 The Natural Wealth and Resources Contracts (Review and Re-Negotiation of Unconscionable Terms) Act 2017, s 5.

3 Ibid, s 6.

4 Ibid, s 7.

Such toughness undoubtedly holds an appeal in the context of the history of the relations between African countries and international companies that Desta so compellingly presents in his paper, but there must be a question as to whether it may equally have a chilling effect on foreign investment which may not necessarily be in the best interests of the countries concerned. In this context, an argument may be made for a different approach to the development of the contractual relations between host states and investors that emphasizes the mutuality of interest that exists and that seeks to achieve long-term stability to the benefit of both parties. It is, of course, by no means the case that the argument developed in this paper is inevitably an alternative to that set out by Desta. Rather, the approach outlined here could very much inform the common approach he is looking for with a view to bolstering the position of host nations in Sub-Saharan Africa and it is very much in this spirit that this paper proceeds.

The paper first sets out the options that the state has in setting out a legal framework for the development of its hydrocarbon sector before going on to examine the dynamic risk matrix that characterises oil and gas projects. It then sets out the principles underpinning the design of fiscal systems for upstream oil and gas. With these foundations laid, the paper goes on in the following two sections to complexify the understanding of stabilisation in modern state-investor contracts, first, in terms of self-adjustment mechanisms and, secondly, in terms of the shift towards economic equilibrium clauses. It then examines the extent to which these contracts are best understood as relational in nature and concludes by proposing the development of principles to guide arbitral adjustment of contract terms based on this observation.

2 State options for legal arrangements in the petroleum sector

In order to understand the problems that arise in the context of relations between international extractive companies and host nations, it is important first to consider the options that are open to state actors in terms of regularising the relationship between the parties concerned. The argument that follows focuses on hydrocarbons, but can also be applied mutatis mutandis to contracts relating to mineral resources.

When a state suspects that it may have hydrocarbons within onshore or offshore sedimentary basins, it must first decide whether it wishes to proceed to explore for those resources by itself (or at least using indigenous commercial capacity) or whether it would be appropriate to involve foreign commercial actors. Almost inevitably, because it is a frontier hydrocarbon province, it is unlikely that the country will possess the necessary technical expertise itself (either in state or indigenous commercial organs) and, as such, foreign involvement will be required. It is then a question of deciding how that involvement will be achieved. Broadly speaking there are three key models from which states are able to choose.[5]

First, they may adopt a licence and taxation approach in which foreign companies are issued with licences to explore for hydrocarbons and, in the event that they are successful, to develop and produce them. Payments may be made by the companies in respect of the issue of the licence and royalties may be payable from the start of production, but the substantial return of value to the state under this model will only come when oil and gas are produced and sold *and* when the companies concerned earn profits.[6]

Secondly, the state may adopt a Production Sharing Agreement (PSA) approach in which it enters into contracts with foreign companies which, similar to a licence, permit the companies to explore for and, if successful, to develop and produce oil and gas. Such contracts differ from licences in respect of the means by which value generated by successful developments will be returned to the state. Whereas under the licence this occurs substantially via the taxation of the operator's profits, in the case of the PSA, as the name suggests, the state derives value principally by receiving a share of the oil and gas produced (or the equivalent in cash where the operator is required to dispose of the hydrocarbons on the state's behalf),

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5 For further details see, for example, Bernard Taverne, *Petroleum, Industry and Governments: A Study of the Involvement of Industry and Governments in the Production and Use of Petroleum* (2nd edn, Wolters Kluwer Law & Business 2008) 255 ff.

6 The UK, for example, uses such an approach. For a discussion, see Greg Gordon, 'Petroleum Licensing', in G Gordon, J Paterson and E Üşenmez, *UK Oil and Gas Law: Current Practice and Emerging Trends — Volume I: Resource Management and Regulatory Law* (3rd edn, Edinburgh University Press 2018) 81-131.

albeit that it may equally receive income via fees, royalties and bonuses. The precise means by which the share allocated to the state will be calculated will vary from contract to contract (and will occupy more of our attention below for reasons that will become apparent), but in essence it will be an agreed portion of so-called 'profit' oil or gas that remains in any accounting period after 'cost' oil has been allocated to the contractor to reimburse it for the money it has expended in exploration, development and production.[7]

Crucially, whether the state opts for the licence and tax model or the PSA model, the risk that no hydrocarbons will be found lies with the foreign commercial party. In other words, if after millions of dollars have been spent in seismic survey and exploratory drilling nothing has been discovered, then the cost will be borne by the licensee or the contractor respectively. This risk in no small measure explains why oil companies expect to make a relatively high return on their investment in the event that they are successful.

There is a third option open to the state, however, namely the use of service contracts. In this case, the state retains the services of foreign companies to carry out specific tasks and pays them a fee for the provision of those services. In this case, were the state to contract for the services of companies to provide seismic survey and exploratory drilling, the risk of failure would lie with the state.

It is accordingly not difficult to see why, in the case of developing countries entering oil and gas for the first time, the use of risk as opposed to non-risk contracts will be more attractive. That basic choice having been made, however, it then remains to explain why Sub-Saharan African countries have opted for PSAs as opposed to licences almost without exception (Gambia employs a licensing approach) — a choice also reflected almost uniformly by developing countries in other regions of the world. Economists have pointed out that it is ultimately possible to derive the same value under each model over the life of a project,[8] so

7 For a discussion of this approach, see Bernard Taverne, 'Production Sharing Agreements in Principle and Practice' in M R David (ed), *Upstream Oil and Gas Agreements* (Sweet & Maxwell 1996); and Bernard Taverne, *Cooperative Agreements in the Extractive Petroleum Industry* (Kluwer Law International 1996) 158 ff.

8 Daniel Johnson, *International Petroleum Fiscal Systems and Production Sharing Contract*s (Pennwell 1994) 39.

there must be another reason for the choice. No doubt individual cases will reveal specific rationales, but the following may well account for the choice in many cases. Whereas in the case of licence regimes ownership in the produced hydrocarbons passes at the wellhead — after all, the licensee must be able to sell the product if any taxable profits are to be generated — in the case of PSAs ownership passes at a point stipulated in the contract (usually the point at which export occurs)[9] and the state receives from the outset a share of 'profit' oil and gas whether or not the contractor is yet generating profits. In other words, there is more of a sense of the state being in control of its own natural resources under the PSA model (whether or not that impression is reflective of reality) and the state receives value earlier in that model than under a licence regime, which may of course be an important consideration for a developing country.

Whatever the precise reasons for the choice of the PSA model in Sub-Saharan African countries, the fact that this contractual form is the norm does raise the sorts of issues which Desta has correctly identified as potentially problematical in terms of the threat to sovereignty in terms of both legislative and judicial jurisdiction. But it is then a question of understanding *why* international oil companies stipulate for internationalisation of contracts, stabilisation clauses and international arbitration. The first and third of these stipulations may, of course, be explained by nervousness (justified or not) on the part of international investors that in many jurisdictions they may not benefit from judicial independence and may equally feel that judges (at least in the early years) may lack the specialist knowledge required to adjudicate on disputes arising from petroleum contracts.[10] The issue of stabilisation, however, is more complex. As Desta points out, contractors in the case of PSAs have traditionally sought to minimise the risk of state actors adversely affecting their investments during the lifetime of a project by seeking to freeze the applicable law as at the effective date of the contract.[11]

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9 Taverne (n 7).

10 For an up-to-date overview of the situation, see Steven P Finizio, 'Energy Arbitration in Africa', Global Arbitration Review, 20 April 2017, <https://globalarbitrationreview.com/insight/the-middle-eastern-and-african-arbitration-review-2017/1139822/energy-arbitration-in-africa>.

11 Desta (n 1) 137 ff. See also AFM Maniruzzaman, 'The Pursuit of Stability in International Energy Investment Contracts: A Critical Appraisal of the Emerging Trends' (2008) 1 *Journal of World Energy Law & Business* 121-157, 122ff.

Law students encountering this phenomenon for the first time react in precisely the same way as the citizens of countries whose governments have agreed to such arrangements: they are astonished that international companies would attempt to curtail the sovereignty of state actors in this way and perhaps even more surprised that the latter have actually accepted to be so curtailed. Desta's dismay at such arrangements is surely entirely understandable and widely shared.[12]

A possible response, however, may be that understanding the stabilisation of contracts on the basis purely of classical freezing clauses is to ignore the fact that they have over recent decades become a much more sophisticated concept, characterised both by a desire to build self-adjustment into PSAs and by a recognition that in the context of complex long-term agreements it will be impossible to foresee all future contingencies such that renegotiation may well become necessary. It is nevertheless the case that even this increased sophistication does not mean that the tension that exists between state and investor in the context of PSAs is thereby dissipated and that Desta's concerns are misplaced. A long-term upward trend in the number of arbitrations under such contracts in step with increases in oil prices[13] would appear to question the ability of sophisticated stabilisation mechanisms to remove worries either that states are failing to derive fair value or that contractors are being denied legitimate 'upside'. Insofar as this is the case, it would not be unreasonable to assume that even if we broadened Desta's definition of stabilisation to include self-adjustment and renegotiation, his concerns with the challenge to sovereignty would remain.

This paper argues, however, that in complexifying Desta's understanding of stabilisation to include recognition of the desire to ensure ongoing economic equilibrium through, first, self-adjustment mechanisms and, secondly, renegotiation arrangements, we actually gain a richer appreciation of the inherent nature of these contracts which in turn leads us away from an *adversarial* position and towards a *relational* one. This in turn has consequences for the way in which the parties to such contracts understand their efforts to enhance stabilisation and

12 See, for example, P Daniel and E Sunley, 'Contractual Assurances of Fiscal Stability', in P Daniel, M Keen and C McPherson (eds), *The Taxation of Petroleum and Minerals: Principles, Problems and Practice* (Routledge 2010) 405-424.

13 Paul Stevens et al, *Conflict and Coexistence in the Extractive Industries* (Chatham House 2013) 48.

for the way in which arbitral tribunals deal with disputes. Before going on to examine these economic equilibrium aspects of modern stabilisation arrangements, it is necessary to examine, first, the risks that petroleum agreements must respond to and, secondly, the principles that underpin the design of petroleum fiscal systems if the interests of the parties are to be protected and promoted in a mutually beneficial way.

3 Oil and gas projects: the dynamic risk matrix

That the oil industry's successes are so visible goes some way to explaining why its failures are less so. Colourful maps of numerous oil and gas fields across the world's sedimentary basins and of the attendant production and transportation infrastructure can give the impression that this is an industry that requires no more than adequate capital to have access to the riches lying beneath the ground or the seabed. The truth is somewhat different. Finding oil and gas is not simply expensive, but also technically challenging: 'The reality of oil and gas exploration worldwide is that despite best efforts, companies are going to be drilling 60-70% non commercial wells.'[14] The substances involved are volatile and potentially polluting — and also of very considerable economic and political importance. There is, accordingly, much that can go wrong as well as potential success to be enjoyed. The range of risks confronting the international oil company contemplating bidding for acreage in a developing country may be conveniently listed under the following headings:[15]

geological	seismic survey reveals no prospectivity or wells drilled are either dry or reveal only uncommercial deposits or a commercial reservoir does not perform as anticipated
natural	a project is adversely affected by natural disaster
technical	equipment failures result in loss, damage and liability

14 Balakrishnan Kunjan, 'Exploration Chance of Success Predictions — Statistical Concepts and Realities', paper presented at ASEG-PESA-AIG 2016, 21-24 August 2016, Adelaide, Australia, available online at <http://www.publish.csiro.au/EX/pdf/ASEG2016ab150>.

15 For a discussion, see Peter A Nolan and Mark C Thurber, 'On the State's Choice of Oil Company, Risk Management and the Frontier of the Petroleum Industry', Program on Energy and Sustainable Development, Stanford, Working Paper no 99, December 2010. See also TW Wälde, 'Stabilising International Investment Commitments: International Law versus Contract Interpretation', CPMLP Professional Paper, No PP13, 1994, 5 ff.

managerial	a reservoir is damaged by poor decision making or poor implementation of good decision making
commercial	a discovery that is economically viable at prices current or envisaged at the point when the decision to develop is taken becomes marginal or uneconomic in the context of unanticipated low prices
financial	the viability of a project is adversely affected by movements in interest rates
currency	the viability of a project is adversely affected by movements in exchange rates

Insofar as the PSA is, as has been said above, a risk contract, the companies will be bearing all the costs. As such they must take action to minimise or mitigate these risks to the greatest practicable extent. Natural, technical and managerial risks can be managed, for example, by means of insurance.[16] Commercial, financial and currency risks may be managed, for example, by means of a hedging strategy using derivative financial instruments.[17] Geological risk, however, is not amenable to such techniques meaning that oil companies typically respond by:

1. investing in a range of projects in different parts of the world with a view to compensating for problems confronted in one place with success in others;[18]
2. operating individual projects on the basis of joint ventures, sharing both risk and reward with co-venturers;[19] and
3. looking for a significant return beyond normal commercial rates to compensate them for the scale of the risk taken on.[20]

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16 See Jenny Allen and Sian Aitken, 'Finance, Security and Insolvency in the Upstream Oil and Gas Sector', in G Gordon, J Paterson and E Üşenmez (eds), *UK Oil and Gas Law: Current Practice and Emerging Trends — Volume II: Commercial and Contract Law Issues* (3rd edn, Edinburgh University Press 2018) 331-367.

17 See Blanche Sas, 'Legal Aspects of Risk Management in Energy Markets', Petroleum Economist, Energy Law Supplement, July 1992, 50-59; Robert W Kolb, *Financial Derivatives* (2nd edn, Blackwell Business 1996) 73 ff; see also Robert L McDonald, *Fundamentals of Derivatives Markets* (Pearson/Addison Wesley 2009) 20 ff.

18 Thurber and Nolan (n 16) 15 ff.

19 See Scott Crichton Styles, 'Joint Operating Agreements', in Gordon, Paterson and Üşenmez (n 16) 15-73.

20 See S W Carmalt, *The Economics of Oil* (Springer 2017) ch 2.

Responses 1 and 2 may be explained in terms of the common sense approach of avoiding having 'all the eggs in one basket', while response 3 reflects the fact that a PSA, as a risk contract, offers no guaranteed return of any money whatsoever for the work done in the exploration phase.

So far, of course, this discussion of risk has assumed that the counterparty to the agreement, the host state, is a neutral and static factor in the equation, which is by no means the case. A host state, uncertain whether there are hydrocarbons in the basin or, if there are, whether they exist in commercial quantities, but needful of the technical and/or financial resources of the international companies, may feel compelled to enhance its attractiveness to such investors who will be expected to spend significant time, money and effort in exploration without any guarantee that such expenditure will be compensated (as a consequence of geological risk, discussed above). The terms and conditions on offer at an early stage may, therefore, be extremely attractive to foreign companies, promising advantageous cost recovery arrangements and generous fiscal arrangements. In the event that significant commercial discoveries are made, however, it is not difficult to see that what appeared to be necessary to attract investment can in due course come to seem like unwarranted generosity to foreign companies at the expense of more deserving domestic needs.[21] In such circumstances, fiscal arrangements may be changed in order to rebalance returns from hydrocarbon extraction to the greater advantage of the state.[22] From the point of view of the companies, however, this appears to be moving the goalposts after the game has started and indicates a failure by governments to appreciate the extent to which oil companies must of necessity operate globally in order to offset the risk of failure in one play with successes in others — that is, response 1 above.

In short, in addition to the other risks listed above, oil companies also confront *political* risk, that is, the possibility that the counterparty to the PSA, precisely because it is not simply

21 Bearing in mind also that these concerns often exist in a broader context of heightened, but perhaps misplaced, public expectations regarding the benefits the industry will bring. For a discussion, see John O Kakonge, 'Challenges of Managing Expectations of Newly Emerging Oil and Gas Producers of the South' (2011) 4 *Journal of World Energy Law and Business* 124-135.

22 The so-called obsolescing bargain. See Raymond Vernon, *Sovereignty at Bay: The Multinational Spread of US Enterprises* (Basic Books 1971) 46 ff.

another commercial actor, but rather a sovereign power, may adversely affect the economic value of the contract to the companies by changing the general law, specifically but not exclusively as it relates to fiscal matters. It is precisely this risk which the stabilisation clause, discussed below, is designed to respond to. In order to understand more fully the source of this political risk, however, it is necessary next to consider the issues at stake in the design of a state's petroleum fiscal arrangements.

4 Designing petroleum fiscal arrangements

As regards the taxation of upstream petroleum operations, the state is concerned to ensure it puts in place a fiscal regime that both achieves an appropriate return to the state for development of its depleting natural resources and attracts the foreign investment that, as has been seen, is usually required to explore for and produce those resources. The companies bringing that investment are concerned to ensure that the fiscal regime permits them to make a return on their investment that appropriately reflects the risk they have taken on in entering into a PSA with no guarantee that they will be successful and thus no guarantee that their exploration costs will be recovered.

State and investor thus clearly have a mutual interest in a stable long-term relationship which avoids unnecessary disputes, but they equally both want to ensure that they extract maximum value from a petroleum project. There is a difference, however, between the maximum that could be extracted, all else being equal, and the maximum that can be extracted without provoking the other party to protest in one way or another. Whilst, given the range of uncertainties and risks involved in such projects and their potentially long duration, these must inevitably be seen as incomplete contracts (perhaps even as the paradigm case of incompleteness) the aim of the drafters must be to achieve documents which are as robust as possible across a range of eventualities throughout the decades they are expected to endure. It may, therefore, appear harsh to say so, but the extent to which one party is perceived by the other to be enjoying an undue advantage at any given moment may be read as indicative of an arrangement that is deficient in some respect.

Broadly speaking, it is desirable from the point of view of both states and investors to have fiscal arrangements which are flexible, neutral and stable.[23] Flexibility in this context refers to the system's ability to ensure an appropriate return to the state under a wide range of price and production scenarios. Whereas an inflexible system which allows windfall profits to the investor as production and prices rise appears desirable from the perspective of the commercial actor, the probability that this will provoke a dispute in due course means that flexibility is also in the interests of the investor, provided it can be reassured as to an adequate rate of return on investment and a level of reward commensurate with the risk taken on in the first place. Neutrality in the context of petroleum fiscal systems refers to the extent to which petroleum projects which are regarded as profitable before taxation are still profitable after taxation is applied. It is clearly not desirable from the state's perspective to have a fiscal regime which discourages investment because it adversely affects the profitability of projects that would otherwise go ahead. Generally speaking, it is easier for systems which focus on the taxation of profits (for example, corporation tax) to achieve neutrality than those which focus on the taxation of output (for example, royalties charged per barrel of production). Finally, stability in this context refers to the quality of a fiscal regime which is either fixed or which changes only in pre-determined or otherwise predictable ways. From the point of view of the investor, stability makes it easier to rank a project compared to others given the range of other uncertainties which are faced in terms of such issues as geological and price risks. While one way of achieving stability is by means of a stabilisation clause of the sort that Desta is most concerned about, as mentioned above and discussed further below it is also the case that a well-designed fiscal regime can achieve the sort of stability that commercial actors desire in terms of relative certainty about rate of return on investment, whilst also accommodating the state's legitimate desire for flexibility in the face of, for example, variable and uncertain production levels and prices.

In short, a regime which is flexible, neutral and stable is best placed to meet the overlapping but not always coincident interests and objectives of state and investor.

[23] For a fuller discussion, see Silvano Tordo, 'Fiscal Systems for Hydrocarbons: Design Issues', World Bank Working Paper no 123, August 2007, ch 5.

The precise details of a fiscal regime are also dependent on a range of factors specific to the state in question and its position in relation to other states seeking to attract hydrocarbon investments. Thus, as mentioned above, a state new to hydrocarbons with uncertain and unproved prospectivity may feel the need to offer more favourable terms. Similarly, where political risk is perceived to be high, incentives in the form of a lighter tax burden may be required. In short, it will always be a matter for the state of seeking to measure its attractiveness compared to other opportunities for investors internationally and adjusting fiscal terms accordingly.

With these considerations behind us, we can now go on to look at those aspects of modern PSAs which we have suggested represent a more adequately complex understanding of stabilisation than is conveyed by a focus on the early practice of freezing clauses. The paper turns in the next section to examine efforts to introduce self-adjustment mechanisms into contracts and thereafter to the practice of including renegotiation clauses — both of which may be seen to be seeking to ensure the ongoing economic equilibrium of the agreement.

5 Complexifying stabilisation: building in self-adjustment

In order to meet the requirements of flexibility, neutrality and stability, it is obviously desirable for the fiscal arrangements to be clearly established at the outset so that both parties may see clearly what value they will derive in a range of future scenarios. This is actually easier to achieve in a PSA system than in a licence and tax regime. In the latter, the only tools available to the state are to change the rate of taxation in response to new circumstances (notably increases in production level and in price are those that tend to be seen as creating the impetus for change) and perhaps in the extreme to add entirely new taxes to those already existing.[24] This leads to considerable uncertainty, as it is entirely unforeseeable what levels of taxation or what new taxes may be introduced in response to any given higher level of production or higher price – or indeed whether those higher rates

[24] For a discussion of the use of these tools in the context of the UKCS, see Alexander Kemp and Linda Stephen, 'Rejuvenating Activity in the North Sea Oil and Gas Industry: The Role of Tax Incentives in Context', in Gordon, Paterson and Üșenmez (n 6) 14-41.

or new taxes will be removed or disapplied in the event of lower production or reduced prices in future. By contrast, it is a relatively straightforward matter in the context of a PSA to build in sliding-scale arrangements which adjust the proportion of profit oil and gas going to each party depending on predetermined production and/or price bands. Insofar as the objective of this approach is to link the division of profit oil and gas between the parties to the contractor's profitability, more sophisticated PSAs tend to replace the price and production bands with those related to so-called R-Factors or to some measure of return on investment. The R-Factor is simply a calculation of the ratio of costs to income, albeit that the precise formula used in any given case may be quite complex as the drafters seek to achieve the most sensitive measure of profitability. Measures of return on investment are distinguished by their ability to incorporate the time value of money. These self-adjusting approaches have the advantage that they are sensitive (albeit in varying degrees) to changes in oil price as well as to the specific characteristics of individual reservoirs and are therefore attractive both to governments and to contractors.[25]

Whereas Desta focuses on the freezing clause variant of stabilisation, it is instructive to look at a range of model PSAs from a variety of African jurisdictions to get a sense of the extent to which self-adjustment is built-in and thus to see whether the situation is as problematical as he suggests. In this regard, one contract stands out to the extent that it was the subject of a high-profile arbitration, the details of which were widely publicised, namely the Ugandan PSAs from 2007.[26] Albeit that the point in contention in that case related to whether capital gains tax was payable by the original contractor on a transfer of interest, the dispute exposed to public view the limitations of the contracts to the extent that while they included a sliding scale approach to the division of profit oil based on production levels, they lacked any means to achieve similar self-adjustment based on price.[27] A review of other African PSAs reveals

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25 For a discussion, see Kirsten Bindemann, 'Production Sharing Agreements, An Economic Analysis', Oxford Institute for Energy Studies, WPM 24, October 1999. See also Daniel Johnston and David Johnston, 'Fundamental Petroleum Fiscal Considerations', Oxford Institute for Energy Studies, February 2015, 12-14.

26 For a critique, see Platform, 'Contracts Curse: Uganda's Oil Agreements Place Profit before People', February 2010, available at <http://platformlondon.org/wp-content/uploads/2012/01/Contracts-Curse-Uganda-Platform-CSCO.pdf>. See also Global Witness, 'A Good Deal Better? Uganda's Secret Oil Contracts Explained', Global Witness Ltd, September 2014.

27 A draft version of the PSA between the Government of the Republic of Uganda and Heritage Oil and Gas Ltd has been made available on the OpenOil website at <https://repository.openoil.net/wiki/Uganda_Block-3A_dd20070123_PSA>.

that Uganda was by no means alone. The contract Mauritania signed for Bloc 1 in 1999 includes a production sharing clause very similar to the Ugandan one, insofar as it operates a basic sliding scale focused only on production levels,[28] and this approach was still evident in the contract the country signed for Bloc 25 in 2007.[29] The same may be said for the model contract from Madagascar in 2007,[30] the contracts signed by Gabon for the Etame area in 1995[31] and the Diaba Licence in 2006,[32] and for the model contract from Equatorial Guinea dated 2006, albeit that the last-mentioned utilises accumulated production,[33] an approach mirrored in the contract signed by the Democratic Republic of Congo for Bloc III in 2010.[34] Straightforward production-based profit oil sharing is also a feature of Guinea's contract with USOil Corporation in 2002,[35] and its contract with SCS Corporation in 2006.[36] Note, however, that, intriguingly, earlier signed contracts from Equatorial Guinea contain more sophisticated production sharing arrangements based on the contractor's rate of return,[37] whilst later contracts in Mauritania have moved on from the simple production-based sliding scale approach to one based on a more sophisticated R-factor approach.[38] The Nigerian model PSA from 2005 similarly uses an R-factor approach to the profit oil split and includes the possibility that the state oil company can take action to modify the calculation in the event of prolonged periods of low oil prices so as to increase its share — an approach very much in the state's favour rather than the contractor's.[39] The Libyan model contract from 2006 determines the contractor's share of profit oil by essentially applying two sliding scales, one focused on

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28 Contrat de Partage de Production entre la République Islamique de Mauritanie et Dana Petroleum (E & P) Ltd et Hardman Petroleum (Mauritania) Pty Ltd et Elixir Corp Pty Ltd, 1999, Bloc 1, art 10.3.

29 Contrat de Partage de Production d'Hydrocarbures entre La République Islamique de Mauritanie et Blue Chip Energy S.A sur le Bloc 25 du Bassin Cotier, Février 2007, art 10.3.

30 Republic of Madagascar, Model Production Sharing Contract, Offshore and Onshore versions, 2007, art 24.2.

31 Exploration and Production Sharing Contract between the Republic of Gabon and Vaalco Gabon (Etame) Inc, Etame, 7 July 1995, art 25.

32 Exploration and Production Sharing Contract between the Gabonese Republic and Total Gabon, Diana Licence, 13 December 2006, art 25.

33 The Republic of Equatorial Guinea, Model Production Sharing Contract, 2006, art 7.2.

34 Contrat de Partage de Production conclu entre la République Democratique du Congo et South Africa Congo Oil (Pty) Ltd et la Congolaise des Hydrocarbures, Bloc III du Graben Albertine, 26 May 2010.

35 Royalty and Production Sharing Agreement between the Republic of Guinea and USOil Corp, 2002, art 13.

36 Hydrocarbon Production Sharing Agreement between the Republic of Guinea and SCS Corp, 22 September 2006, art 13.

37 For example, Production Sharing Contract between the Republic of Equatorial Guinea and Triton Equatorial Guinea, Inc For Block F, 26 March 1997.

38 For example, see Exploration and Production Contract between the Islamic Republic of Mauritania and Kosmos Energy Mauritania Ltd in relation to C12, 2012.

39 Federal Republic of Nigeria, Model Production Sharing Contract for 2005 Bid Round, cl 9.1.

production levels, the other on the cumulative value of the production, thus producing a division that is sensitive to price levels,[40] which approach is also evident in the contract signed by Libya in relation to Area 47 in the previous year.[41] The Angolan model contract from 2007 achieves the division of profit oil on the basis of a sliding scale where the bands are related to the contractor's rate of return, again implying a price-sensitive approach.[42] This approach is evident in contracts signed for Block 5/06 in 2006[43] and for Block 20/11 in 2011.[44] By contrast, the Liberian model contract from 2007 utilises a similar approach to Uganda's insofar as it divides profit oil purely on the basis of a sliding scale related to production levels,[45] and this approach is evident in the contract signed for Offshore Block 13 in 2005[46] and in the restated and amended contract for the same block signed in 2008.[47] At first sight, the Kenyan model contract from 2008 appears to adopt a similarly unsophisticated approach insofar as the basic approach is that profit oil is divided on the basis of production levels. The relevant clause also includes, however, protection for the government in the case of high oil prices by providing for a so-called 'second tier' allocation to the government in the event that the price rises above \$50/barrel.[48] This approach, which involves calculating a cash payment to address what are explicitly referred to as 'windfall profits', is adopted, for example, in the contract signed for Block 2B in 2008.[49] The situation is similar with the Tanzanian model contract from 2008 where at first sight there appears only to be a production-based sliding scale,[50] but elsewhere in the agreement there is a provision for an additional profits tax based on the

40 Great Socialist People's Libyan Arab Jamahiriya, Model Exploration and Production Sharing Agreement, 2006, art 12.

41 Exploration and Production Sharing Agreement between National Oil Corp and Verenex Energy Area 47 Libya Ltd and Medco International Ventures Ltd, Contract Area 47, 12 March 2005.

42 Sonangol, Model Production Sharing Contract, December 2007, art 12.

43 Production Sharing Agreement between Sonangol EP and Vaalco Angola (Kwanza) Inc, Sonangol Pesquisa e Produção SA, Interoil Exploration and Production SA in the Area of Block 5/06, 1 November 2006, art 12.

44 Production Sharing Agreement between Sonangol EP and CIE Angola Block 20 Ltd, Sonangol Pesquisa e Produção SA, BP Exploration Angola (Kwanza Benguela) Ltd, China Sonangol International Holding Ltd in the Area of Block 20/11, 20 December 2011, art 12.

45 Republic of Liberia, Model Production Sharing Contract, October 2007, art 16.

46 Production Sharing Contract between National Oil Company of Liberia (NOCAL) and Broadway Consolidated PLC, Offshore Block 13, 31 May 2005, art 16.

47 Restated and Amended Production Sharing Contract between The Republic of Liberia by and through the National Oi Company of Liberia and ExxonMobil Exploration and Production Liberia Ltd and Canadian Overseas Petroleum (Bermuda) Ltd, Offshore Block 13, 8 March 2008.

48 Republic of Kenya, Model Production Sharing Contract, 2008, cl 27.

49 Production Sharing Agreement between the Government of the Republic of Kenya and Lion Petroleum Inc relating to Block 2B, 17 September 2008.

50 Government of the United Republic of Tanzania, Model Production Sharing Agreement, October 2008, art 11.

contractor's real rate of return.[51] This approach is, indeed, already evident in the contract signed for the Songo Songo gas field in 2001.[52] The Ghanaian model contract from 2008 allocates profit oil on the basis of a very complex formula for the calculation of the contractor's rate of return,[53] which approach is already evident in the earlier contracts, such as that signed for the West Cape Three Points Block in 2004.[54] The Mozambique model contract from 2010 uses a sliding scale based on an R-factor calculation,[55] which approach is already evident in the contract signed for the Rovuma onshore area in 2007.[56] The contract signed by Cameroon in respect of the Ndian River area in 2006 uses an R-factor sliding scale,[57] as does the model contract from São Tomé and Principe from 2010,[58] and the contact signed by Chad in 2011 in respect of the Chari Ouest Dosea area,[59] while the Egyptian model contract from 2010 uses two sliding scales, one related to production levels and the other to price.[60] In view of the general trend evident above towards more sophisticated self-adjustment mechanisms, it is perhaps not surprising to find that relatively old PSAs signed by Benin in 1997 use straightforward production-based sliding scales,[61] but that the more recent Ethiopian model contract from 2011[62] and the contracts signed by Senegal in 2012[63] similarly contain no protection for the state in relation to high prices is less easy to understand,

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51 Government of the United Republic of Tanzania (n 50), art 15.

52 Production Sharing Agreement relating to the Songo Songo Gas Field between the Government of the United Republic of Tanzania and PanAfrican Energy Tanzania Ltd, 11 October 2001.

53 Ghana National Petroleum Corp, Model Petroleum Agreement of Ghana, 2008, art 10.

54 Petroleum Agreement among the Republic of Ghana, Ghana National Petroleum Corp, Kosmos Energy Ghana HC and the EO Group in respect of the West Cape Three Points Block, 22 July 2004, art 10.

55 Republic of Mozambique, Model Exploration and Production Concession Contract, 4th Bidding Round, May 2010, art 9.10.

56 Contrato de Concessão e Produção entre o Governo da República de Moçambique e Artumas Moçambique Petróleos Limitada e Empressa Nacional de Hidrocarbonetos EP para Área 'Onshore' do Bloco do Rovuma, 18 April 2007, art 9.

57 Production Sharing Contract between the Republic of Cameroon and Kosmos Energy Cameroon HC, Ndian River, 2006, art 13.

58 Democratic Republic of São Tomé and Principe, Exclusive Economic Zone Model Production Sharing Contract, March 2010, cl 10.1(d).

59 Contract de Partage de Production, entre la République de Tchad et Griffiths Energy (Chad) Ltd, 19 January 2011, art 42.

60 Arab Republic of Egypt, English Model Concession Agreement for Petroleum Exploration and Exploitation, 2010, art VII.

61 Production Sharing Contract between Benin and Addax Petroleum Benin Ltd and Abacan Resources (Benin) Ltd, Offshore Block 4, 1 February 1997, as disclosed in Form 10-KSB, Annual Report Pursuant to Section 13 or 15(D) of the Securities Exchange Act of 1934 for the Fiscal Year ended December 31, 1998 Commission File Number 33-99978, Abacan Resource Corp.

62 Federal Democratic Republic of Ethiopia, Model Petroleum Production Sharing Agreement, 26 August 2011, s 7.2.

63 For example, Hydrocarbon Exploration and Production Sharing Contract between the Republic of Senegal and Petro-Tim Ltd and Petrosen, Cayar Offshore Profond, 17 January 2012, art 22.

especially when, as early as 1994, Congo had a contract which, although based on a very simple production-related division of profit oil, also contained a provision which ensured that that the state took the lion's share of any profit derived from the sale of oil for a price above \$22 per barrel[64] — a provision that also appears in a contract signed a decade later.[65]

In short, even if there are a number of contracts in this set drawn from across the continent over the past twenty or so years which have minimal self-adjustment related only to production levels, there is plenty of evidence of African jurisdictions utilising much more sophisticated self-adjustment tools — and it is notable that *all* of the contracts considered include at least *some* degree of self-adjustment.

6 Complexifying stabilisation: from freezing to economic equilibrium

Recognising, nevertheless, that no matter how sophisticated the self-adjustment mechanism employed by a PSA might be, these are complex, long-term agreements and as such must be regarded as inevitably incomplete, it is then a question of moving on to consider just what sort of further arrangement might be made to seek to ensure that the relationship between the parties endures in a mutually beneficial way notwithstanding that the contract as agreed, including its self-adjustment arrangements, has, as it were, run out of road.[66]

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64 Contrat de Partage de Production entre la République de Congo et Elf Congo SA et la Societé Nationale de Recherche et Exploitation Pétrolières, Haute-Mer Nkossa, 21 April 1994, art 8.

65 Contrat de Partage de Production entre la République de Congo et Total E&P Congo, Haute-Mer C, 7 January 2004, art 8.

66 It is sometimes contended that this step is not inevitable inasmuch as things tend to happen differently in developed countries. Whilst it is generally true that stabilisation clauses are a feature of petroleum arrangements in developing rather than developed countries, as observed by Mustafa Erkan in *International Energy Investment Law: Stability through Contractual Clauses* (Wolters Kluwer Law & Business 2010) there is at least one recent exception in the UK which may point to the direction of travel in the later stages of the development of a hydrocarbon basin. This exception relates to the Decommissioning Relief Deed by which the Treasury guarantees the current value of decommissioning allowances under the fiscal regime by agreeing contractually to compensate an operator in the event that a future parliament legislates to reduce the value of those allowances or even to remove them altogether (see Judith Aldersey-Williams, 'Decommissioning Security', in Gordon, Paterson and Üșenmez (n 16) 435-449, 447. Quite what would happen were such a parliament also to take a dim view of the Treasury's pre-emptive efforts to negate the effects of its actions raises constitutional questions beyond the scope of this paper. Equally, whilst it is also generally true that developed countries do not tend to negotiate petroleum contract or licence terms, as observed by Peter Cameron (in 'Stabilisation in Investment Contracts and Changes of Rules in Host Countries: Tools for Oil & Gas Investors', Association of International Petroleum

At one extreme, of course, lies the classic freezing stabilisation clause highlighted by Desta. With the knowledge we now have of the context and content of the PSA, we can see that this attempts to protect the contractor come what may at the expense of the state. However much the state may want, indeed need, to adjust the terms of the contract or to pass legislation to mitigate the deleterious effects of the contract arising from unforeseen changed circumstances, the clause attempts to block its efforts and to leave it regretting the agreement it has entered into.[67] The knowledge we now have, however, also reveals that this clause fails the tests set out above for a mutually beneficial petroleum fiscal regime. It is not flexible, inasmuch as it requires one party to suffer in the event of price movements beyond those envisaged by any self-adjustment mechanism that are to its disadvantage, and to that extent it is also not stable, inasmuch as the rigid protection of the contractor is at the expense of the exposure of the state. These observations no doubt help to explain why, when subject to the consideration of arbitral tribunals, classic freezing clauses have not operated as those stipulating for them would have imagined. While the key published arbitral tribunal decisions dealing with stabilisation clauses have been concerned with expropriations rather than lesser regulatory or fiscal interventions, they may be interpreted so as to indicate that while even a freezing clause cannot rule out future legislative or regulatory action it could provide grounds for compensation insofar as it adversely affected the contractor.[68] Concern has been expressed, however, that this approach may have a chilling effect on the ability of poorer countries to take forward legitimate reforms of, for example, health, safety and

Negotiators, 2006), preferring to offer standardized terms, even a country like the UK has been open to the idea of a bespoke licence. It is also important to realise that some of the industry allowances to be found in general tax legislation in the UK are there only as a result of lobbying by operators who claim to be unable to develop marginal discoveries without some form of tax relief. The format of the negotiation may be different in developed countries, but it is not absent.

67 The clause we have been discussing so far is generally referred to as a stabilisation clause stricto sensu. A variation of the clause may seek to insulate the contract from any material adverse effect of existing or later laws, thus freezing the contract rather than the surrounding law, by prohibiting unilateral changes and requiring mutual consent. Such a stabilisation clause is sometimes referred to as an *intangibilité* clause. These two versions are sometimes referred to as classic stabilisation clauses. See Manniruzziman (n 11) 122 ff.

68 For example, *Government of the State of Kuwait v American Independent Oil Company (Aminoil)*, Award of 24 March 1982, 21 ILM 976 (1982).

environmental law and regulation where the presence of a freezing clause would lead to their being faced with potentially costly payments to affected contractors.[69]

Nevertheless, recognising the likely limitations of such clauses from the point of view of the contractor, practice in respect of stabilisation clauses in PSAs has evolved away from the classic freezing approach and towards an approach that aims instead to preserve the economic equilibrium of the contract. Whilst most academic commentary on such clauses tends to focus on the shift away from freezing, this development can perhaps best be understood as a continuation of the progressive enhancement of self-adjustment arrangements in the profit oil and gas sharing elements of PSAs. The advantage of such an approach is that it reflects the reality of the situation of both the commercial and the state party in the event that things develop in such a way that one or other is adversely affected to the extent that, had such circumstances been foreseen, they would have fundamentally altered the willingness of that party to sign the contract on the agreed terms.

Economic equilibrium clauses have been identified as falling in practice into three categories:[70] stipulated economic balancing (SEB); non-specific economic balancing (NSEB); and negotiated economic balancing (NEB). The aim in each case is both to allow legitimate subsequent legislative and regulatory action by the state while re-establishing the value of the economic balance that existed when the contract became effective. The SEB operates so as to amend the contract automatically in a specified manner should a stipulated triggering event coming to pass, such as a modification of the tax law.[71] The NSEB stipulates that the contract will be amended automatically to re-establish economic equilibrium should a triggering event come to pass, but does not specify how this will be achieved. Finally, the NEB, as its name suggests, calls for the parties to agree to the amendments required to re-establish economic equilibrium in the event of a triggering event. Strictly speaking, the NEB could be further subdivided, as a clause which envisages a negotiation to re-establish a previous

[69] See, for example, Lorenzo Cotula, 'Regulatory takings, Stabilization clauses and sustainable development', paper submitted to the 7th OECD Global Forum on International Investment, 27-28 March 2008. For a discussion, see Manniruzzaman (n 11) 156-7.

[70] I draw here on the categories suggested by Maniruzziman (n 11) 127-132.

[71] Indeed, an argument can be made that the self-adjustment mechanisms discussed above, such as sliding scale elements in profit sharing clauses, are varieties of stipulated economic balancing.

balance may genuinely seek to re-balance the positions of the state and contractor or it may be specifically concerned to return only the contractor to its previous position.[72]

Recalling that one of the most contentious African disputes involving PSAs was that involving the Ugandan contracts from 2007, it is instructive to see what those instruments contained in relation to stabilisation. While it is not identified as such, but rather forms part of art 33 headed 'Applicable Law', there can be no doubt that art 33.2 is a stabilisation clause.[73] It reads as follows:

> If, following the Effective Date, there is any change, or series of changes, in the laws or regulations of Uganda which materially reduces the economic benefits derived or to be derived by Licensee hereunder, Licensee may notify the Government accordingly and thereafter the Parties shall meet to negotiate in good faith and agree upon, the necessary modifications to this Agreement to restore Licensee to substantially the same overall economic position as prevailed hereunder prior to such change(s). In the event that the Parties are unable to agree that Licensee's economic benefits have been materially affected, and/or are unable to agree on the modifications required to restore Licensee to the same economic position as prevailed prior to such change, within ninety (90) days of the receipt of the notice referred to hereinabove, then either Party may refer the matter for determination pursuant to paragraph 26.1 [that is, by arbitration].

From the foregoing discussion of stabilisation clauses, it is possible to see quite clearly, firstly, that art 33.2 is an economic equilibrium clause rather than a classic freezing clause; secondly, that among the varieties of economic equilibrium clause, it is a Negotiated Economic Balancing clause; and, thirdly, that among NEBs it is focused specifically on the position of the contractor rather than that of both parties.

72 It is a question whether returning the contractor to its original position must by definition so return the state actor also if we are genuinely talking about equilibrium or whether the latter variant rather sees the 'negotiation' as something more akin to a zero-sum game.

73 The clause at the heart of the dispute in *Amoco International Finance Corp v Iran* was similarly headed 'Applicable Law' and was found *not* to be a stabilisation clause, but that clause expressly protected the contractor only from the 'provision of any current laws and regulations which may be … inconsistent with' it. See the discussion in AFM Maniruzzaman, 'Drafting stabilization clauses in international energy contracts: some pitfalls for the unwary', (2007) 2 IELTR 23-26, 24.

Having looked at the production sharing arrangements of a series of PSAs for African states in the previous section, it is instructive to consider the stabilisation clauses, if any, in those same agreements — to what extent are the contentious Ugandan PSAs in line or out of step with equivalent contracts in other African states? Generally speaking, it may be said that the older agreements either lack a stabilisation clause or have a classic clause, whilst more modern agreements have stabilisation clauses in broadly similar terms to that in the Ugandan PSAs, that is, Negotiated Economic Balancing clauses. Thus, the model contract from Libya dated 2006 lacks a stabilisation clause,[74] while the older model contract from Mauritania, which dates from 1994, includes a classic stabilisation clause which reads:

> The Contractor shall not be subject to any legislative provision which would give rise to an aggravation, whether directly or indirectly, in the charges and obligations arising from this Contract and from the legislation and regulations in force on the date of signing this Contract, unless as mutually agreed upon by the Parties.[75]

A freezing clause is also contained in the Senegalese contract from 2012, which reads:

> No provision may be applied to the Contractor the purpose of which is to directly or as a consequence thereof increase the charges and obligations deriving from the systems mentioned in Chapter 7 of the Oil Code, as these systems are defined by the legislation and the regulations in effect as of the date this Contract is signed, without prior agreement of the Parties.[76]

On the other hand, the Nigerian Model PSA dating from 2005 includes a Negotiated Economic Balancing Clause recognising the interests of both parties which reads as follows:

> The Parties agree that the commercial terms and conditions of this Contract are based on the existing fiscal terms in accordance with the provisions of the Deep Offshore and Inland Basin Production Sharing Contracts Act 1999. If such fiscal terms are changed, the Parties agree,

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74 Great Socialist People's Libyan Arab Jamahiriya (n 40).

75 Islamic Republic of Mauritania, Model Production Sharing Contract, 1994, Unofficial English Translation, art 27.3 (Applicable Law and Stability of Conditions).

76 Hydrocarbon Exploration and Production Sharing Contract between the Republic of Senegal and Petro-Tim Ltd and Petrosen (n 33), art 33.3.

subject to Clause 27.3, to review the terms and conditions of this Contract affected by such changes to align such terms and conditions with the fiscal terms.

As it stands, the sub-clause referred to is rather ambiguous. Clause 27.3 reads:

> If at any time or from time to time there should be a change in legislation or regulations which materially affects the commercial benefits afforded the Parties under this Contract, the Parties will consult each other and shall agree to such amendments to this Contract as are necessary to restore as near as practicable such commercial benefits which existed under the Contract as of the Effective Date.[77]

The Angolan model contract includes a Negotiated Economic Balancing Clause, albeit one that is slightly different to the Ugandan, insofar as the Angolan contract is entered into by the state oil company (Sonangol) rather than the Government. Sonangol can thus only undertake to present any agreed alterations for approval to the competent authorities. Further, and again unlike the Ugandan clause, the Angolan version recognises the positions of both parties. It reads:

> Without prejudice to other rights and obligations of the Parties under the Agreement, in the event that any change in the provisions of any Law, decree or regulation in force in the Republic of Angola occurs subsequent to the signing of this Agreement which adversely affects the obligations, rights and benefits hereunder, then the Parties shall agree on amendments to the Agreement to be submitted to the competent authorities for approval, so as to restore such rights, obligations and forecasted benefits.[78]

The Liberian model contract, like the Angolan dating from 2007, contains the following NEB, again recognising the interests of both parties, and also stipulating that no party can see its benefits reduced as a result of any adjustment:

> In the event of changes in circumstances from those existing at the Effective Date, that have a material effect on the terms of this Agreement, either NOCAL [the state company] or the

[77] Federal Republic of Nigeria (n 39), cl 27 (Changes in Legislation).
[78] Sonangol (n 42), art 37(2) (Double Taxation and Change of Circumstances).

> Contractor shall at the request of the other consult together. If it is established that such Profound Changes in Circumstances have occurred, then the Parties shall effect such changes in or clarifications to this Agreement that they agree are necessary. The Parties shall meet in good faith to make the necessary revisions and adjustments to the Agreement in order to maintain such expected economic benefits to each of the Parties, provided that the economic benefits to the Parties shall not be reduced as a result of exercising the terms of this article…[79]

The Kenyan model contract has a stabilisation clause which similarly recognises the interests of both parties:

> If after the effective date of this contract the economic benefits of a party are substantially affected by the promulgation of new laws and regulations, or of any amendments to the applicable laws and regulations of Kenya, the parties shall agree to make the necessary adjustments to the relevant provisions of this contract, observing the principle of the mutual economic benefits of the parties.[80]

The same may be said of the stabilisation clause in the Ethiopian model contract, which reads as follows:

> In the event that after the Effective Date of this Agreement the economic benefits to be derived by a Party from the Petroleum Operations under this Agreement are substantially affected by the promulgation of new laws and regulations or of any amendments to the applicable laws and regulations of Ethiopia and if the affected Party so requests, the Parties shall agree to make the necessary adjustments to the relevant provisions of this Agreement, in order to ensure that the affected Party is restored to the same economic condition it would have been in if such change in the applicable laws had not taken place.[81]

There is a similarly modern approach in the Mozambican contract, which reads:

> In the event of changes in Petroleum legislation or in other Mozambican legislation affecting Petroleum Operations that may, individually or in the aggregate, create a material adverse

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79 Republic of Liberia (n 45), art 36.3 (Stability of Conditions)
80 Republic of Kenya (n 48), cl 40(3) (Governing Law).
81 Federal Democratic Republic of Ethiopia (n 62), s 16.1.3 (Governing Law).

effect to the economic benefits of the Concessionaire or to the Government in terms of this EPC, the Parties shall, as soon as possible after any of the above-mentioned situations occur, meet to verify and agree on the changes, in all cases, that may be required to the EPC in order to restore, as closely as possible, the economic benefits that the Concessionaire would have derived if the change in the legislation had not been effected.[82]

The model contract from Mozambique is particularly interesting insofar as it departs from the standard practice of placing the stabilisation clause at the end of the contract in conjunction with the applicable or governing law clause and adds it to the clause dealing with Fiscal Terms and Other Charges. Like the Ugandan approach, it is focused on the interests only of the contractor, rather than of both parties. It reads as follows:

In the event that, after the Effective Date, any other tax is introduced in the Republic of Mozambique which is not of the type set out in Article 11 [Fiscal Terms and Other Charges] and, as a result, there is an adverse effect of a material nature on the economic value derived from the Petroleum Operations by the Concessionaire, the Parties will, as soon as possible thereafter, meet to agree changes to this EPCC which will ensure that the Concessionaire obtains from the Petroleum Operations, following such changes, the same economic benefits as it would have obtained if the change in the law had not been effected.[83]

The model contract from São Tomé and Principe is similarly focused on the interests of the contractor, and includes the following provisions dealing with review and renegotiation in the event of changes to the fiscal regime or other material changes:

(1) The Parties agree that the commercial terms and conditions of this Contract have been negotiated and agreed having due regard to the existing fiscal terms and in accordance with the provisions of the Petroleum Law and the Petroleum Taxation Law in force at the time of the Effective Date. If such fiscal terms are materially changed to the detriment of the Contractor, the Parties agree, subject to Clause 27.2 [immediately following], to review the terms and conditions of this Contract affected by such changes to align such terms and conditions with the fiscal terms as at the Effective Date.

82 Republic of Mozambique (n 55), art 27.13.
83 Republic of Mozambique (n 55), art 11.9.

> (2) If at any time or from time to time, there is a change in legislation or regulations which materially affect the commercial benefit afforded to the Contractor under this Contract, the Parties will consult each other and shall agree to such amendments to this Contract as are necessary to restore as near as practicable such commercial benefits which existed under this Contract as of the Effective Date.[84]

The Egyptian model contract also focuses on the interests of the contractor, and provides as follows:

> In case of changes in existing legislation or regulations applicable to the conduct of Exploration, Development and production of Petroleum, which take place after the Effective Date, and which significantly affect the economic interest of this Agreement to the detriment of CONTRACTOR or which imposes on CONTRACTOR an obligation to remit to the A.R.E. [Government] the proceeds from sales of CONTRACTOR's Petroleum, CONTRACTOR shall notify GANOPE [the State Company] of the subject legislative or regulatory measure and also the consequent effects upon issuing legislation or regulation which impact on the stabilization. In such case, the Parties shall negotiate possible modifications to this Agreement designed to restore the economic balance thereof which existed on the Effective Date. The Parties shall use their best efforts to agree on amendments to this Agreement within ninety (90) days from aforesaid notice. These amendments to this Agreement shall not in any event diminish or increase the rights and obligations of CONTRACTOR as these were agreed on the Effective Date. In case of the parties' failure to solve the disputes, Article XXIV of this Agreement shall be applied.[85]

A similar approach to negotiated economic balancing may be found in the Cameroonian contract considered previously.[86]

The Chadian contract signed in 2011 is interesting insofar as it includes what at first sight looks like a standard negotiated economic balancing clause, but which on closer inspection is

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[84] Democratic Republic of São Tomé and Principe (n 58), cl 27 (Review/Re-negotiation of Contract and Fiscal Terms).

[85] Arab Republic of Egypt, Model Concession Agreement for Petroleum Exploration and Exploitation, 2010, Article XIX (Stabilization).

[86] Republic of Cameroon (n 57), art 29.

weighted very much in favour of the contractor insofar as if after the specified period of renegotiation no agreement has been reached the changes to the law which provoked the renegotiation shall not apply to the contract.[87]

The Mauritanian contract from 2012 contains a freezing clause:

> No legislative or regulatory provision occurring after the Effective Date of the Contract may be applied to the Contractor which would have as a direct or an indirect effect to diminish the rights of the Contractor or to increase his obligations under this Contract and the legislation and regulations in force upon the Effective Date of this Contract, without the prior agreement of the Parties …

but one which significantly includes a carve-out for changes to safety, environmental and employment law:

> However, it is agreed that the Contractor cannot, with reference to the preceding paragraph, oppose the application of the legislative and regulatory provisions which are generally applicable, adopted after the Effective Date of the Contract, in the matter of safety of persons and of protection of the environment or employment law.[88]

The Ghanaian Model Petroleum Agreement[89] is also interesting because it combines a classic freezing clause with an NEB which accommodates the possibility that any party may be concerned that the economic equilibrium of the contract has been adversely affected. Thus, art 26.2 provides inter alia:

> … As of the Effective Date of this Agreement and throughout its Term, the State guarantees Contractor the stability of the terms and conditions of this Agreement as well as the fiscal and contractual framework hereof specifically including those terms and conditions and that framework that are based upon or subject to the provisions of the laws and regulations of Ghana (and any interpretations thereof) …

[87] République de Tchad (n 59), art 56.2.
[88] Islamic Republic of Mauritania (n 38), art 26.3.
[89] Ghana National Petroleum Corp, Model Petroleum Agreement of Ghana, 2008.

while art 26.3 provides:

> Where a Party considers that a significant change in the circumstances prevailing at the time the Agreement was entered into, has occurred affecting the economic balance of the Agreement, the Party affected hereby shall notify the other Parties in writing of the claimed change with a statement of how the claimed change has affected the relations between the Parties.

Article 26.4 continues:

> The other Parties shall indicate in writing their reaction to such representation within a period of three (3) months of receipt of such notification and if such significant changes are established by the Parties to have occurred, the Parties shall meet to engage in negotiations and shall effect such changes in, or rectification of, these provisions as they may agree are necessary.

There are some exceptions to the general position stated above among the African model PSAs reviewed so far. Firstly, the 2006 Model PSA from Equatorial Guinea mentions 'Article 25 Applicable Law and Stabilization' in its table of contents, but within the body of the document only Applicable Law is discussed in Article 25 — a potential contractor may nevertheless infer from this that the state would be open to negotiation of a stabilisation clause.[90] The Madagascan onshore and offshore model Production Sharing Contracts dating from 2007 contain no stabilisation clause, but do include '*Faits de Prince*' (acts of state) in the definition of force majeure, perhaps offering some protection for a contractor against more extreme government intervention.[91] The Congolese contract from 1994 contains no stabilisation clause, nor any other provision that might offer similar comfort to the contractor,[92] and the situation is similar in the Equatorial Guinean contract. In the Gabonese contracts considered above the state offers a guarantee of stability without referring any dispute on this issue explicitly to the dispute resolution provisions — albeit that in each case

90 The Republic of Equatorial Guinea (n 33).
91 Republic of Madagascar (n 30), art 39(3)(d).
92 République de Congo (n 64).

the clause dealing with the application of the contract stresses the mutuality inherent in it and the need for cooperation between the parties.[93] The Tanzanian 2008 Model PSA contains no stabilisation clause[94] and in view of the new legislation mentioned in the introduction to this paper it is a question whether any such clause would survive the test of unconscionability.

What this brief survey demonstrates is that the characterisation of stabilisation in Desta's paper is at best only partially correct and, where it is, this would have to be regarded as exceptional. Does this mean, then, that Desta's concerns with the challenge to sovereignty offered by stabilisation is more illusory than real? I would be inclined to say no. Even where disputes do not become public or where contracts have been signed in recent years in states where the industry is as yet at an early stage of development, there can be no gainsaying the passions that PSAs can give rise to. Whereas, as we saw earlier, the PSA has historically been favoured over the licence and tax alternative precisely because it sees the state (1) take possession of physical hydrocarbons, (2) derive value from successful projects earlier and (3) generally convey an impression of greater control over the foreign companies, it is not unusual for lingering doubts to remain that the government will lack the knowledge and experience either to negotiate the strongest deal or to hold the contractor to account in the long term or both.[95] As such, PSAs, even as a contractual form, are not infrequently the subject of quite strongly worded political attacks,[96] no matter how sophisticated the self-adjustment and the stabilisation clauses may be. In addition to fears about the abilities of government to reign in the industry, of course, are concerns about another of the challenges to sovereignty articulated by Desta, namely the removal of disputes from the jurisdiction of domestic courts and their treatment by international arbitral tribunals.[97] The idea that foreigners (even those chosen by the state) may pronounce on disputes relating to, in many cases, the most valuable sector of the domestic economy is not an easy one to accept. Nor is

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93 Republic of Gabon (nn 31 and 32), art 43.

94 Government of the United Republic of Tanzania (n 50).

95 It is worth noting that concerns on the part of government that it is the junior partner in such negotiations are not confined to developing countries. Tony Benn, Secretary of State for Energy in the late 1970s, states in an explanatory note in his diary: 'Some oil companies are comparable in strength and wealth to national governments ... As Secretary of State, I learned that relations between governments and oil companies were much like treaty negotiations' (*Conflicts of Interest: Diaries 1977-80* (Hutchinson 1990) 3).

96 For a discussion of the situation in Russia in the 1990s in this regard, see A Konoplyanik, 'The fight against PSAs in Russia: who is to benefit and why not the state?' (2003) 10 *International Energy Law and Taxation Review* 277-286.

97 Desta (n 1) 140-141.

it always easy to persuade critics that the record of tribunals indicates something other than bias to commercial actors, but rather, in the main, a genuine attempt to give effect to the agreement the parties have entered into, albeit that circumstances have now caused the initial warmth of the relationship to cool.[98]

But these observations, added to those discussed earlier regarding the prevalence of self-adjustment in PSAs as well as the demonstrable evolution away from freezing clauses and towards negotiated economic equilibrium clauses, serve importantly to highlight the fact that, however acrimonious relations between the parties to a PSA may become and however intense the media and political criticism of the contractual form may be, these must surely be understood not as *discrete* contracts but rather as *relational* contracts, to employ Ian Macneil's terminology.

7 Relationality in PSAs

Recalling the realities of oil and gas projects discussed previously, it is clear that these arrangements must reflect certain issues if they are to have a realistic prospect of enduring to the mutual benefit of both parties. Among these may be mentioned: the need to preserve the relationship between state actor and contractor over the long term; flexibility to cope with complexity and uncertainty generated by the dynamic risk matrix in the context of the decades-long duration; recognition of the importance of reciprocity and of a co-operative stance on the part of both parties; recognition of the link with wider social considerations. In many respects, these considerations map almost exactly on to the key features of Ian Macneil's influential theory of relational contracting. Indeed, one might make a strong argument that PSAs are almost the paradigm case of the relational contract.[99] Insofar as that is true, it becomes important to understand how we best understand the nature of the obligation that is created by the contract between state and commercial parties in the context

98 See the extensive discussion in Maniruzzaman (n 11) 138 ff.

99 Given this observation, it is surprising that the link has not been more widely made. Only one example appears in the literature, as far as I am aware, in relation to contracts for diamond mining. See Lisa Berstein, 'Opting out of the Legal System: Extralegal Contractual Relations in the Diamond Industry' (1992) 21 *Journal of Legal Studies* 115-157.

of the particular circumstances that characterize the oil and gas industry. How should an arbitral tribunal respond when confronted with a dispute that essentially arises because one party is not claiming force majeure but rather economic impossibility?[100]

It is easy to resort in such circumstances to the safe haven that is signposted pacta sunt servanda. What could be simpler? What could be more in line with the pre-eminent concern with legal certainty? But, equally, what might be less realistic in the context of contracts so imbued with incompleteness? In those circumstances, the attraction of pacta sunt servanda must complete with the allure of rebus sic stantibus. Nor is this to make a radical proposal. The features discussed above in relation to PSAs are less and less unique, to the point where, at the IBA Arbitration day in Buenos Aires in April 2018, they were highlighted as increasingly common:

> [W]e see more and more complex long-term relational contracts which include arbitration clauses. Because these contracts are structured to last for many years, sometimes decades, they become more vulnerable to technological, political and/or economic changes which may substantially affect the parties' rights and even disrupt the contract's economic equilibrium. Were that to happen, the possibility to restore that equilibrium through adjudication becomes crucial.[101]

The idea that arbitrators could adapt contracts in such circumstances is, of course, not uncontroversial, nor is the controversy new. But the evidence would seem to suggest that the need to think more systematically about how it could operate in practice is becoming more pressing. Quoting again from the report of the IBA Arbitration Day in April 2018:

> [T]he IBA debate revealed a feeling among practitioners that whether expressly or impliedly, or directly or indirectly, arbitrators frequently adapt contracts to meet the needs and intentions of disputing parties, and by doing so, they contribute to the rule of law. Were the tribunal not to do this, the dispute resolution procedure would not be fully effective. Our comfort level with arbitrators acting in this manner is reflected in the express hardship or re-

100 For a discussion see Aziz T Saliba, '*Rebus Sic Stantibus*: A Comparative Survey', (2001) 8(3) *Murdoch University Electronic Journal of Law*.

101 Julián Bordacahar, 'The Rule of Law As Created by Arbitrators — An Update on the Discussions at the Recent IBA Arbitration Day in Buenos Aires', Kluwer Arbitration Blog, April 8 2018, <http://arbitrationblog.kluwerarbitration.com/2018/04/08/iba-buenos-aires-report/>.

> negotiation clauses which have become a common feature of modern contracts that establish complex and long-term arrangements. As a general matter, the prevailing view seemed to be that we should not be too cautious to grant and/or accept that arbitrators have powers to fill gaps and adapt contracts, but we should demand that arbitrators be extremely cautious while making use of them.[102]

The question then is how we might recognise the need for arbitrators to be able to adapt contracts that we now understand to be inherently relational, whilst providing reassurance in respect of the concerns expressed by Desta. Two observations might be made in this respect. First, it is surely the case that the very recognition of the relational nature of such contracts in itself offers reassurance for those concerned that the legitimate interests of the state are put at risk in the context of agreements characterised by stabilisation agreements. Realising that stabilisation in modern contracts is substantially about building in self-adjustment arrangements explicitly designed to maintain economic equilibrium reveals the extent to which such agreements can now more adequately protect the state's interests as well as those of the commercial actor, both in terms of ensuring a fair return of value in the long term and in terms of avoiding disputes that are costly in terms of money and of the relationship between the parties. Secondly, whilst arbitrators faced with the need to adapt a relational contract may look to a variety of sources for guidance (including the lex arbitri, the lex causae and the terms of the contract — especially the extent to which self-adjustment and renegotiation are explicitly envisaged), there is surely an opportunity to develop a set of principles of broad application and either explicitly incorporated by reference into new contracts or agreed to by parties in dispute at the point of arbitration. Such a set of principles would in a certain sense bridge the gap between pacta sunt servanda and rebus sic stantibus to the extent that they would be an acknowledgement of the inevitably incomplete character of relational contracts but importantly equally an acknowledgement that the adaptive response to such incompleteness cannot be unbounded if we are to ensure that such contracts fulfil their prime objective of maintaining a mutually beneficial relationship between the parties in the long term.

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[102] Ibid.

In this regard, it might be suggested that an argument that diverged from Desta's critique of Production Sharing Agreements by pointing to the need to complexify the understanding of stabilisation in the context of modern agreements returns to meet his analysis again by proposing that if African nations are indeed to take collective action with regard to such contracts then it might most fruitfully be in the development of principles which could guide the arbitral adaptation of PSAs properly understood as relational contracts.

8 Conclusion: towards principles to guide renegotiations and the arbitral adaptation of relational contracts

The development of such principles would be a matter for the governments concerned in conjunction with other interested parties. In terms of sources of inspiration, the work of relational contract theorists such as Ian Macneil and Stewart Macaulay will, of course, be important. Discussing the former in this regard, the latter had the following to say:

> McNeil's work demands anyone who thinks seriously about contract doctrine confront the reality of long-term continuing relations. These relations can involve trust and joint effort for common, or at least consistent, and goals. These relationships can also involve power and expectation where the dominated party continues in the relationship because it is the best of a bad set of options open. But one thing is clear: if we are concerned with real expectations, that is, with reasonable reliance and good-faith, then we cannot be satisfied with only formal written documents.[103]

But in addition to the insights that might be drawn from the theoretical literature, it is surely also the case that, as has been suggested above, the evolving practice of drafting and managing PSAs could also provide an indication of the sorts of overarching principles to which arbitrators could fruitfully be directed to guide the adaptation of PSAs where renegotiation efforts have been unsuccessful. In this regard, the draft Guiding Principles for Durable

[103] Stewart Macaulay, 'Relational Contracts Floating on a Sea of Custom? Thoughts About the Ideas of Ian Macneil and Lisa Bernstein' (2000) 94 *Northwestern University Law Review* 775.

Extractive Contracts produced by the OECD,[104] though they do not explicitly refer to the concept of relationality, are full of references to concepts that would be familiar to that school of thought. For example, Guiding Principle II reads:

> Durable extractive contracts are anchored in a transparent quality long-term relationship and operational partnership between host governments, investors and communities, to fulfil agreed and understood objectives based on shared and realistic expectations that are managed throughout the lifecycle of the project.

Guiding Principle III states, inter alia, that ‘Durable extractive contracts balance the legitimate interests of host governments, investors, and communities’, while Guiding Principle IV reads, inter alia, ‘Durable extractive contracts seek to maximise overall value, including economic, social and environmental outcomes to be drawn from the development of the host country’s resources’. Guiding Principle V states that ‘Durable extractive contracts are negotiated and based on continuing sharing of key financial and technical data to build a common understanding of the performance and of the main risks and opportunities of the project throughout its life-cycle’, while Guiding Principle VIII states that ‘Durable extractive contracts are underpinned by a fiscal system that provides for a fair sharing of economic rent between the investor and the host government, taking into consideration the risks and potential rewards.’ These draft principles are thus clearly consistent with the idea that PSAs are relational contracts. It must, of course, be acknowledged, that the impulse behind the development of the principles is explicitly ‘to provide guidance for the content and negotiation of mutually beneficial, sustainable and therefore enduring extractive contracts and thus *reduce or eliminate the risk of disputes and renegotiation of contract terms* over time’ (emphasis added). Equally, Guiding Principle VIII also states that ‘A regime with automatic adjustments for the government take to prevailing market conditions (variable with commodity price, production volume, resource quality, or project profitability) *reduces the incentives for either party to seek re-negotiations of terms*’ (emphasis added).

[104] OECD Development Centre, Guiding Principles for Durable Extractive Contracts, Advanced Draft, available at: <https://www.oecd.org/dev/Guiding-Principles-public-consultation.pdf>.

It is suggested, however, first, that recognition of the degree of incompleteness inherent in PSAs means that we should be open to the idea that renegotiation and disputes can never be ruled out even in the context of the most carefully drafted contract and, secondly, that by no means all existing PSAs have been drafted with such insights in mind. Accordingly, there would appear to be good reason to think in terms of the extent to which these principles aimed at negotiation and drafting could just as usefully inform parties involved in the renegotiation of existing agreements and, importantly, arbitrators faced with the need to adapt contracts in the context of disputes where there is a risk to the continuing viability of a mutually beneficial long-term relationship between state and commercial actors.

In such circumstances, it is surely also the case that arbitral awards would be regarded as more broadly acceptable and indeed legitimate to the extent that contractual adaptations may be explained in terms of reference to widely acknowledged guiding principles — especially if these have been actively developed by the very African governments who have most at stake in these contracts. Recognising relationality in this way allows us to respect sovereignty in a way that ensures that the balance of interests inherent in PSAs is maintained to the mutual benefit of investors and states.