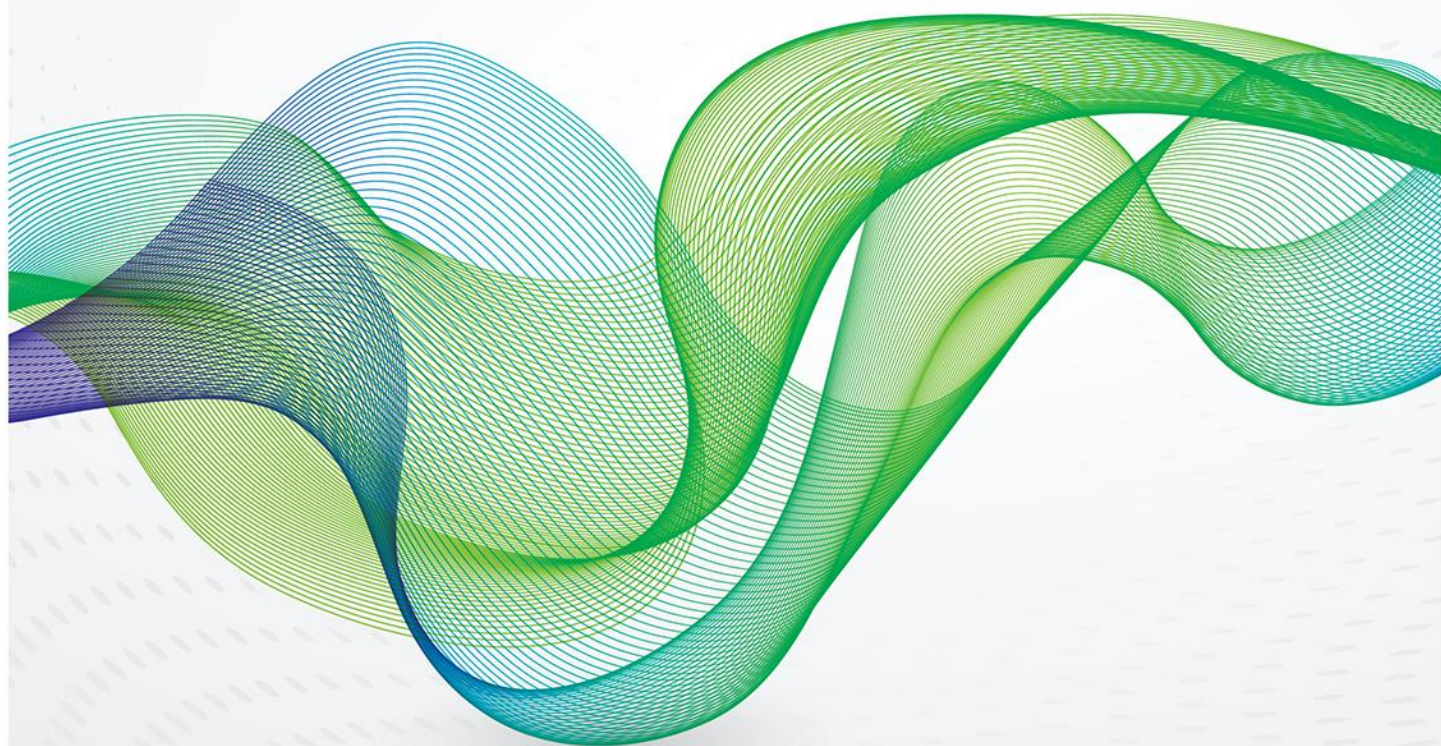




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Fiscal Stabilization in Oil and Gas Contracts: Evidence and Implications





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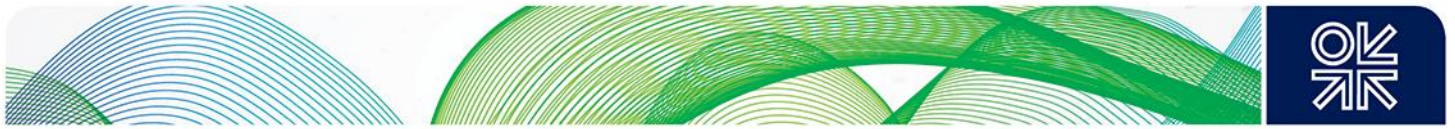
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Abbreviations

CIT	Corporate income tax
FSC	Fiscal stability clause
GDP	Gross Domestic Product
IMF	International Monetary Fund
IOC	International oil company
NOC	National oil company
PSA	Production Sharing Agreement
PSC	Production Sharing Contract
UKCS	UK Continental Shelf
VAT	Value Added Tax
/bl	per barrel



1. Introduction

The importance of fiscal stability is a popular mantra for the oil and gas industry. In reality, it is rarely delivered as circumstances are constantly changing. Almost every month, countries announce or introduce fiscal changes such as: a new fiscal regime for a new exploration basin, an amendment to an existing regime, higher taxes, the introduction of incentives to stimulate late-life investment, or the closing of tax loopholes, to name but a few.

One of the reasons why long-term fiscal stability is difficult for governments to adhere to is simply the existence of significant unknowns when the fiscal regime is first designed at the start of the province opening – which is often before a single exploration well has been drilled. Invariably, oil and gas basins evolve in an unpredictable way: for example, few anticipated the riches in the North Sea when drilling first began in the 1970s, the deepwater Gulf of Mexico, or the shale revolution.

Governments keep fiscal regimes under almost continual review; the dynamics of what constitutes a 'fair share' of the resource rent are fundamentally unstable given volatility in oil and gas prices, unpredictable geology, and global competition for scarce capital and know how. While both governments and investors share a common objective (to maximize the exploitation of the hydrocarbon resource) governments generally want to ensure a fair share of the resource for the nation; investors, on the other hand, wish to ensure a minimum return on investment and a simple and stable tax regime. The difficulty with these objectives is that the interaction between governments and investors is dynamic, making enduring fiscal stability a very challenging proposition in practice.

Investors attempt to neutralize these uncertainties by putting in place stabilization clauses; these come in different forms, but their main objective is to lock in fiscal terms for the duration of a project. The term 'stabilization' refers to the attempt to avoid potential conflicts or risks with respect to the alteration of the regime in which the project takes place (Erkan, 2010, p.101). The success of such mechanisms has been mixed; if the relationship between host governments and investors deteriorates to the stage where the legal provisions are invoked, investors may well become disappointed with their effectiveness. They remain, however, a mechanism in contractual agreements, and in laws governing oil and gas activities, in many countries.

Stability clauses may cover a broad range of host country laws including, among others, those relating to: labour; the environment; government control over production decisions and share participation; the obligation to provide local infrastructure; and the possibility of nationalization. A particular type – so called *fiscal stability* clauses (FSCs) – deals exclusively with taxes and royalties. FSCs may cover some or all taxes and fees, potentially including income taxes, royalties, duties on imported material and capital equipment, excises, value added tax (VAT), and other sales taxes on imported and domestic goods and services.

This paper analyses how FSCs have evolved since the late 1990s, based on a survey of 20 countries (19 developing countries and Mexico) listed in Annex II. This period is characterized by significant developments to the oil and gas industry, including major price changes, which prompted governments all over the world to review the fiscal treatment of the sector, often to extract a higher share of the oil rent. Since fiscal stability is a fundamental element of the fiscal regime of developing countries, it is interesting to explore whether it was tightened or eliminated. The review of the literature relating to fiscal stability and country experience is particularly timely due to the oil market context and anticipated volatility in prices.

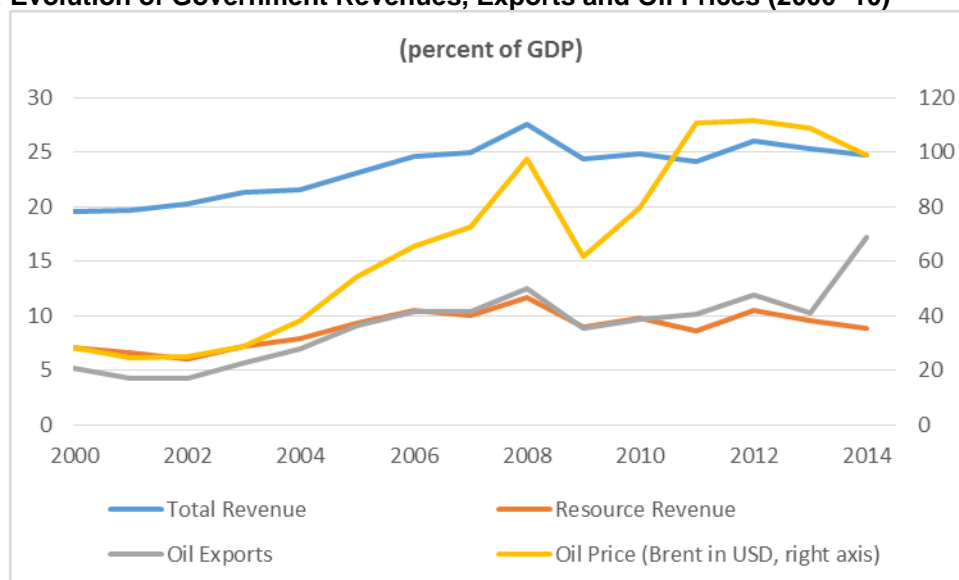
Oil GDP in the selected countries (excluding Mexico) currently accounts for about 70 per cent of oil production in low-income and lower/middle-income countries¹ (it was only a third in the early 2000s). On average, oil exports and government revenue from oil in these countries each accounts for about

¹ Based on World Bank classification of countries.



10 per cent of GDP, and the latter represents about one-third of total government revenue (Figure 1). This suggests that fiscal stabilization and its impact on revenues, if any, could have significant budgetary consequences for governments and companies.

Figure 1: Evolution of Government Revenues, Exports and Oil Prices (2000–10)



Sources: IMF (2012), IMF staff reports, and authors' calculations.

Note: Averages are weighted by GDP, and exclude countries/years for which 'resource revenues' are not available (52 out of 255 observations).

The paper is organized as follows. Section 2 discusses the major triggers that push host governments to revise the fiscal terms to which they originally agreed with investors – principally in contracts, but also in laws of general application, such as hydrocarbon and tax laws. The section also describes the characteristics of the main forms of stabilization and their *raison d'être*. These triggers are universal, yet stabilization clauses are typically offered in developing, not developed, countries. Section 3 assesses the effectiveness of such mechanisms by looking at specific countries' experiences, and discusses the central issues related to the design and implementation of fiscal stabilization measures. Section 4 analyses the results of country reviews, adding comments from a small group of industry experts (who were invited to comment by drawing on their experience) to the findings. Section 5 concludes with some policy lessons.

2. Fiscal stability: *raison d'être* and models

The appetite of oil and gas investors depends not only on the level of tax, but also on the extent to which the government shares the project's risks, though companies, unlike governments, have the means to diversify certain levels of risk. Governments, however, can minimize one important risk – that is the fiscal risk – by providing fiscal stability. A tax system subject to continuous tinkering tends to undermine investors' confidence in government policy, resulting in a higher discount rate to compensate for increased risk, thereby reducing the value placed on future income streams and increasing the barriers to investment.



For investors, fiscal stability therefore secures the basis on which investment decisions are originally made. For governments, it provides some level of predictability that enables them to estimate, more accurately, how much revenue will be collected and when, therefore assisting with budget management.

Despite these appealing benefits, stability of petroleum fiscal regimes is rarely delivered in practice. Since circumstances are constantly changing, a certain degree of flexibility has to be allowed in any tax system if it is to respond to differing conditions and to evolve as a result of major changes in the external environment.

The government response, however, largely depends on the nature of the fiscal regime itself and whether it has any inherent profitability-responsive features. For instance, well-designed fiscal regimes, which are mainly profit-based, respond automatically to changing conditions and provide a self-adjusting framework that can be applied to a wide range of project types – unlike revenue-based or royalty systems.

This section discusses the main triggers that lead host governments to revise their upstream petroleum fiscal regime. It also analyses the reasons why investors ask for stability provisions in their petroleum contracts and why governments offer them. The section explains why, despite the prevalence of the same triggers worldwide, fiscal stability tends to be a predominant feature of contracts signed in developing countries. The section finally reviews the main models of fiscal stability.

2.1 Drivers of Fiscal Instability

Although changes to fiscal regimes might seem to be a random event, there is a pattern in the way pressure for changes in government take – that is the total share of government revenues from a project's net cash flows – is manifested. As summarized by Bilder (2011), contractual renegotiation generally takes place under all or some of the following circumstances: changes to prices and production levels normally prompted by factors that are external to the parties to a contract; the perception of an unfair balance between the parties of the risk/reward allocation under the law or contract; and allegations of having agreed to an incomplete, ambiguous, or at least a not so precise contract (together with a lack of clear understanding) between the parties. The oil price, however, remains the most obvious driver.²

Oil prices

Many governments around the world attempt to modify their fiscal terms as a result of changes in oil prices, particularly in response to increases in prices, as depicted in Figure 2. According to the World Bank,³ more than 30 countries revised petroleum contracts, or entire fiscal regimes, between 1999 and 2010 – a period which witnessed major changes in the price of oil. A fiscal regime established when oil prices were US\$50 per barrel (/bl) may well be viewed, when prices stand at US\$100/bl, as simply being too generous to the industry, particularly if it is not designed to capture automatically the additional rents resulting from higher oil prices.

The price level plays a significant role in determining the degree of bargaining power each party has at the negotiating table. Typically, when the oil price is high, the government has the upper hand; when the price moves in the opposite direction, the pendulum swings in favour of the companies, although the reaction to falling prices tends to be slower and more erratic.

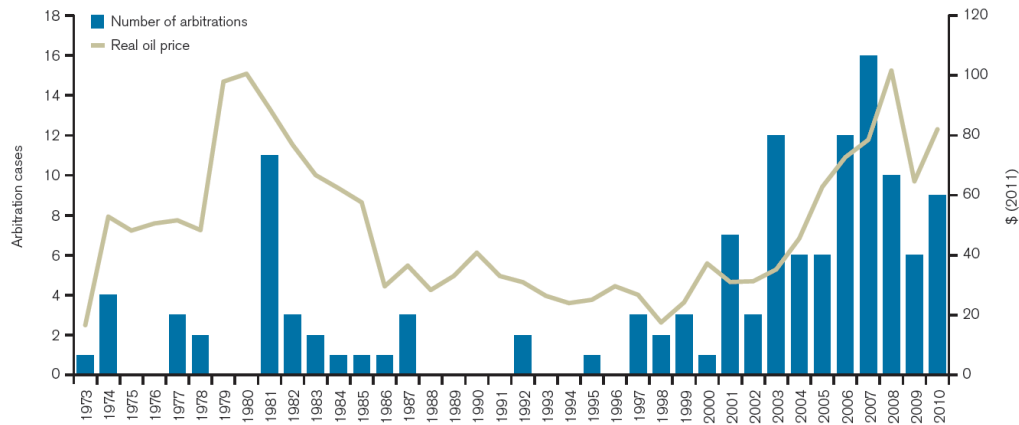
The period between 2002 and 2008 is a good illustration (Figure 2). Over that period, oil prices were rising steadily. Accordingly, from Angola to Argentina, China, Ecuador, India, Kazakhstan, Libya, Nigeria, and the USA (Alaska), governments increased the tax rates paid by oil companies. Countries

² For a more detailed assessment of the triggers of various fiscal changes see Nakhle and Hall (2012).

³ As cited in Stevens et al. (2013).



Figure 3: Real Oil Prices and International Arbitration Cases in the Petroleum Sector



Source: Stevens et al. (2013).

In the UK, where the North Sea has been hit hard by falling oil prices, the Chancellor, George Osborne, announced in his March 2015 Budget a US\$ 1.9 billion support package to the industry; this included a reduction in the tax burden and the provision of additional support for exploration of the UK Continental Shelf (UKCS). The UK has long been a textbook example of fiscal instability. Since the establishment of the UKCS tax system in 1975, the regime has been repeatedly reviewed and many amendments applied.

The major challenge for governments chasing the oil price is that oil is a global commodity and its price moves unpredictably. There is also an additional variable that tends to be forgotten and which has a material impact on project economics – that is cost. Both capital and operating expenditures are correlated with price movements, typically with a time lag of six to nine months.

Investment

Investment trends are one of the key drivers in determining fiscal outcomes, with exploration being the activity most responsive to tax changes. Governments closely monitor the impact on investment from tax changes, while some make detailed assessments of the likely investment response to planned fiscal changes. Rising investment may encourage governments to believe that they can introduce a tax increase with little pain. Unexpected declines in investment may trigger the opposite response.

Even before the 2014 oil price decline, some governments introduced significant changes to improve the investment conditions in their oil and gas sector. In Algeria, auctions held between 2008 and 2011 revealed limited international interest in bidding for oil and gas exploration rights. Hoping to rescue its economy by stimulating interest in new energy developments and to reverse the decline in the country's oil and gas production (which peaked in 2007 and 2005 respectively) the Algerian government revised its hydrocarbon law in 2013, providing tax incentives and relaxing some of the sector's otherwise strict regulations.

It is often observed, that a good time for governments to introduce tax increases is after large-scale investments have been committed, when it is too late for them to be cancelled. This is referred to as the 'obsolescence bargain'. Once committed, the investor has lost his leverage and bargaining power.

Tensions can also arise if a large project, critical to the nation in terms of tax generation and finances for the host government, is delayed or suffers cost overruns. Depending on the nature of the fiscal regime, the impact of the cost overrun may fall disproportionately on the government, especially if uplift is available or favourable cost recovery mechanisms are in place. In this situation, the flow of tax revenues to the state will be deferred and run at a lower level. This is likely to engender material



budgetary problems for state finances if the proceeds have already been committed to public programmes. A typical response is an increase in taxes to keep the expected government revenue stream intact.

The Kashagan project in Kazakhstan is a good example. The field was discovered in 2000 but what should have been one of the most attractive and profitable projects for a generation turned into a headache for the investors. Project costs more than doubled and production was significantly delayed. A combination of overly optimistic estimates of start-up dates and development costs caused serious disappointment to the government, which had expected that major tax revenues would flow from the project as soon as 2005; however, first production started only in 2013. Facing a major shortfall in expected revenue flows, the Kazakh Government demanded in 2008 a fine of US\$4–7 billion as a penalty for the delay to start up, together with a large increase in its equity; additionally the fiscal terms were tightened.

Production life cycle

At the beginning of the life of a basin, the host government has an incentive to provide the most attractive tax regime possible to oil companies in order to encourage them to make the investment. Once commercial discoveries are made, the bargaining power shifts in favour of the host country which owns the (now proved) resource, possibly promoting the introduction of a new law, or the amendment of an existing law, for the government to capture the upside of those discoveries. When a basin matures, however, the tax regime designed for basin opening ceases to be competitive, given that unit costs rise and discovered volumes decline.

In 1999, Israel made its first offshore natural gas discovery – the Noa field. Subsequent discoveries (Mari-B field in 2000, Dalit and Tamar in 2009, Leviathan in 2010, and Tanin in 2011) confirmed the presence of significant quantities of natural gas in the Levant Basin (EIA 2013). In 2000 the then Israeli Ministry of National Infrastructure⁶ froze all offshore activities in order to give the government enough time to amend its regulations and fiscal regime. More than six years later, the sector was opened to new exploration, but with more restrictive regulations and tightened fiscal terms. The government take was increased from around 50 per cent to more than 60 per cent accordingly.

Prices in asset sales

Often governments do not have a clear idea of the value of oil and gas assets, particularly the upside potential: the real worth of an asset is revealed only when the asset is sold. The value can be a surprise, especially in immature basins with little turnover of assets. Governments may respond by seeking to tax the value of the transaction via capital gains tax or equivalent fiscal measures.

One good example is the sale of Cairn Energy's Rajasthan assets in India in 2010. In reaction to the deal, the state oil company ONGC, which had up to that point paid all the royalty due on the licence, demanded a review of the royalty terms. The matter was eventually settled, with Cairn India agreeing to pay a share of the royalty as per its equity stake, but the wrangling delayed settlement of the deal by over a year.

Regional trend and neighbourhood effect

Governments, like companies, normally benchmark the competitiveness of tax regimes, because they fear losing out. Most governments have a selected list of countries with which they compare themselves. In principle, the comparison is done with countries of similar resource potential, geography, and cost structure, although in practice many countries only consider geographic proximity.

A tax increase in one country can be followed by copycat increases among its neighbours, especially if the perception takes hold that the changes have had little impact on investment and competitiveness.

⁶ This later became the Ministry of Energy and Water Resources.



The neighbourhood effect may work in reverse, but the process is much slower and needs a collapse in investment to provide the catalyst.

Changes in political conditions

Perhaps the strongest indicator of fiscal change occurs with a change of government. A fiscal regime designed by the previous administration will invariably be reviewed critically by a successor with a different political persuasion or ideology. 'Resource nationalism' is another manifestation. It is defined as

... the expression, by states, of their determination to gain the maximum national advantage from the exploitation of national resources (Joffé et al., 2009, p.3).

Resource nationalism results in either a greater or a lesser role for the international oil companies (IOCs) in resource exploitation.

Venezuela is an interesting example. At the end of the 1990s, the Venezuelan oil industry was open to international investment. However, after Hugo Chavez, the late president, officially took office in February 1999, several policy changes involving the country's oil industry were made to explicitly tie it to the state.

Deteriorating government finances

When governments look for new sources of revenue, the extractive sector is an easier target than many others, since companies in this business cannot simply move abroad because the resource is immobile. In difficult domestic economic conditions, when other industries suffer, governments have to weather both falling corporate tax rates and declining tax yields from the corporate sector. Meanwhile, tax increases for the oil and gas sector, especially in periods of high oil prices, can help fill the financial hole in the short term.

2.2 *Raisons d'être of Contractual Fiscal Stability*

The above list of factors triggering fiscal change is not exhaustive but it highlights an important reality: fiscal changes are likely throughout the lifetime of an oil and gas project – whether in a developed or developing country and irrespective of the type of fiscal regime, be it concessionary or contractual.⁷ The petroleum industry is characterized by a high level of economic and technological complexity; it would be impossible to conceive of all future outcomes relating to costs, technology, reserve estimates, and prices at the time a contract is signed between a host government and oil companies. It is therefore not surprising that investors advocate fiscal stability but why it is included in oil and gas contracts almost exclusively in developing countries is not clear.

Why do companies want stability clauses?

Oil and gas projects are, by their very nature, long term – particularly those that are offshore and in locations remote from markets. They are also capital extensive with large sunk costs. The main expenses incurred in the initial stage of investment relate to exploration and development; the bulk of such expenses cannot be recovered if the economics of the project change at the time of production and commercialization because of changes in domestic laws. There is also a significant time lag, often of several years from the initial discovery of oil or gas reserves to the time of first production. Payback on the initial exploration investment can take decades.

⁷ See Nakhle (2008).



The lengthy planning horizon for both government and companies means that dynamic aspects are more important than they are in most other industries (Osmundsen, 2008). Time creates the time/dynamic inconsistency problem, which occurs when a government starts with a specific policy but, after conditions change, finds it welfare-increasing to go back on the commitment implied by the policy (Daniel and Sunley, 2010). Companies will then face, in addition to technical and commercial risks, the political risk, which is the chance that any entity of the host country with executive, legislative, administrative, or regulatory power may take any act or measure with a negative effect on the investors' legitimate interests (De Macedo, 2011).

The long-term and capital-intensive characteristics of investment in the international oil and gas industry underline the vulnerability of the foreign investor to unilateral alteration of the petroleum contract by the host government at some point during the life of the contract (Cameron, 2006). Furthermore, the involvement of the state as the sovereign owner of the resource and as a contracting party in a petroleum contract always raises the possibility of unilateral change or premature termination, by virtue of the state's sovereign legislative power (Faruque et al., 2006).

Although the principle of *pacta sunt servanda*,⁸ or strict sanctity of contract, is widely accepted, under no legal system has the principle been found to be absolute, and contractual rights can be expropriated (Daniel and Sunley, 2010). In an attempt to neutralize the political risk, investors typically push for a legally binding guarantee, in order to safeguard the terms that were originally agreed upon for the duration of a project and to protect their investment from the unilateral exercise of state power aimed at changing the terms of the contract by legislation or administrative discretion.

A stabilization clause is a contractual risk-mitigating device to protect investments from variations in the legal environment. This would include risks deriving from a possible exercise of host state sovereignty such as: expropriation,⁹ the obsolescence bargain, or any other change which the government might utilize in order to impose new requirements on investors (Jardim, 2011).

The stabilisation clause is essentially a phenomenon of long-term state contracts, in contrast to private contracts, commercial contracts and short-term state contracts, which are not usually vulnerable to political or regulatory risk (Faruque et al., 2006, p. 317).

According to Johnston (2010), stability provisions are vital to the petroleum industry; without them, the scope and effectiveness of petroleum agreements are often limited.

Oil companies are so vulnerable to potential changes in fiscal terms that they behave much more conservatively if they cannot limit this risk. Conversely if they can mitigate, reduce or eliminate certain elements of risk they can be more aggressive in their investment efforts (Johnston, 2010, p.5).

Shemberg (2009) brings in the lenders' perspective, arguing that these stakeholders often view stabilization clauses as essential to the bankability of a project, particularly in emerging markets; they may insist that at least the fiscal terms of an agreement should be stabilized.

While fiscal changes can be expected in any oil and gas resource-rich country, there is asymmetry in their advocacy. Typically, the call for fiscal stability is made when companies fear an increase in tax, but it is less of a concern if there is a prospect of tax reductions. In other words, this tends to be a one-

⁸ *Pacta sunt servanda* is a fundamental principle of law, whereby contractual obligations must be respected.

⁹ Expropriation is the most extreme measure a host country can adopt regarding foreign investment; it consequently represents a special concern to foreign investors, whether it be an outright, partial or 'creeping' expropriation – the latter referring to each time a host country unilaterally changes the contract in such a way that, although not consisting in a formal expropriation, increasingly complicates or unreasonably interferes with the investor's right to enjoy his property (although in the case of oil and gas assets, property rights vary across the world) and/or to conduct his enterprise (De Macedo, 2011).



way argument and, in many respects, the desire for fiscal stability amounts to industry urging governments not to raise taxes.

Why do developing countries offer stabilization provisions?

One of the curiosities of stabilization clauses is that no developed country will offer them to investors (Erkan, 2010). Developing countries tend to negotiate individual contract terms, whereas in the OECD the content of contracts or licences is scarcely affected by any negotiations between IOCs and host governments, since the terms on offer are largely standardized (Cameron, 2006).

The nature of political risk is clearly different between developed and developing countries, as the latter include some of the world's most unpredictable and unstable countries – beset with political and economic crises and potentially laden with a history of coups and countercoups (Nwaokoro, 2010). Blitzer et al. (1985) argue that while fiscal uncertainty is universally present, IOCs give it a greater weight when considering investing in developing countries where political instability and reaction to possible windfalls have traditionally led to adverse changes in the contractual relationship.

However, according to Cameron (2006), the political risk alone is an insufficient condition for assessing the usefulness of fiscal stabilization provisions; it should be combined with the geological risk. Experience shows that where geologic prospectivity is high enough, the IOCs have been generally willing to risk capital on exploration according to terms that afford them a much lower degree of security of investment than is demanded by the community of international financial institutions (Alexander, 2010). Countries like Norway, with a good track record in dealing with IOCs, hence with a low political risk, do not offer stabilization provisions; others (such as Saudi Arabia and Brazil) follow suit despite the high political risk, because the perception of geological risk is low.

Bilder (2011), in a similar vein, argues that stabilization mechanisms seem to be more prevalent when there is a combination of both high geological and political/regulatory risk. In countries where the arrangement is sufficiently profitable, there is no perceived need for stability clauses. Developing countries, like Nigeria and Angola, with a well-established petroleum sector, do not offer stability provisions. Further, according to Johnston (2010), many of the countries that do not provide stability mechanisms have relatively low political, geographical, currency, or financing risks and are less likely to feel the need for added stability. These arguments can be linked to the bargaining power of respective players. As put by Erkan (2010), stability clauses are typically offered by governments in a weak bargaining position.

Developing countries also offer stability provisions to attract investment in the oil and gas sector, whereby contractual stability is used as a bargaining chip to increase the country's credibility in international markets and to compensate for existing risks. This issue, however, is debatable given the myriad of factors that affect the political and financial risks of investment in the oil and gas sector. These include, among others: political stability; private property and expropriation laws and the country's track record in upholding these laws; capital control laws; and the level of corruption in the political system and in the public service.

Companies are reluctant to invest where the weakness of their bargaining position may be exploited, resulting in underinvestment. A credible assurance not to change tax terms once investment has been committed should, in principle, raise the level of investment (Daniel and Sunley, 2010). The presence of stabilization mechanisms in a petroleum contract can act as a psychological boost, giving confidence to investors at the initial stage of the investment, and can thus have an important 'market function' in developing countries (Faruque et al., 2006).

Another factor used by developing countries to justify offering stabilization is tax competition, which has increased over the past two decades in light of increased globalization and integration of the world's economies. Approximately 150 host countries compete for capital from IOCs and the list is growing as new discoveries are made and unconventional oil and gas resources are further exploited. Developing



countries therefore accept stabilization clauses in order to gain an economic advantage in attracting foreign investment in the petroleum sector (Faruque et al., 2006).

Checkol (2008) contends that stability provisions are not merely designed to meet the needs of the investors alone. Host governments zealously vindicate public interest by ensuring a stable flow of returns from exploitation of scarce resource. Similarly, Johnston (2010) argues that stabilization mechanisms enhance a government's ability to attract companies, adding that such provisions are supported by economic logic and imperative, promoting the alignment of interests between the oil companies and host governments. The author adds that stability provisions facilitate oil company efficiency and performance, which is typically in the best interests of the government.

Cameron (2006), however, states that, whatever its attractions to IOCs, a stabilization clause is not a mandatory requirement for a host government that seeks to attract investment into its petroleum sector. Daniel and Sunley (2010) argue that the need for a fiscal stability clause is less compelling under certain conditions: a history of sound fiscal management, statutory and effective corporate tax rates in line with international rates, low tariff rates, non-imposition of taxes that distort investment and production decisions (such as asset taxes, excises on machinery), non-discrimination between domestic and foreign investors, a low level of corruption, a transparent tax policy process, and a reasonably efficient tax administration. This explains why most developed countries, unlike developing countries, do not grant fiscal stability clauses in their petroleum agreements.

2.3 Stabilization Mechanisms

Stabilization clauses are not a new phenomenon. Their use dates back to the 1930s (Paasivirta, 1989). Investors originally attempted to neutralize governments' power by introducing stabilization clauses in new contracts with host states in the then new oil provinces of the Middle East; such clauses then became common practice in other world regions (Erkan, 2010). The essential goal of such provisions was to ensure that the concession contract remained in force throughout the period stated in the contract (Cameron, 2006).

From the 1950s to the 1970s, the thrust of stabilization clauses in petroleum contracts was to act as a defence against expropriation. The period up until the early 1980s was characterized by highly confrontational revisions of petroleum contracts and nationalizations of oil and gas assets, which triggered several arbitral awards.¹⁰

In the 1980s and 1990s, stability provisions evolved and proliferated (Johnston, 2010). Since then, two patterns of behaviour are discernible: some countries chose not to provide commitments on contract stability at all, while those who offered them provided different forms of mechanisms in terms of coverage and flexibility (Cameron, 2006). Accordingly, stabilization provisions can be grouped into two categories: classical and modern.¹¹

Classical stabilization mechanisms

The common types of stabilization tools under this category include:

- Freezing clause: also referred to as *stabilization clause stricto sensu* in the legal profession. It provides that the governing laws – general and special – applicable to operations under a contract between a company and a sovereign state should be those of the state at the time the contract was executed. In other words, it intends to guarantee that the future laws of the host state will not affect the contractual relationship. Freezing typically covers all tax policy changes that could affect

¹⁰ For examples, see Cameron (2006).

¹¹ For a detailed discussion see Cameron (2010), Erkan (2010), and Maniruzzaman (2008), among others.



the tax situation of an investment project (and hence its profitability), whether or not such taxes are included in the contract.

- Intangibility clause: provides that the signing country may not modify or terminate the contract unilaterally.
- 'Good will' clause: the contract shall be performed consistently with 'good will' or 'good faith', hence the clause precludes unilateral modification or termination of the contract. According to Coale (2003), the main difference between intangibility and good will clauses is the scope they provide for interpretation in case of litigation.
- Hybrid clause: includes both freezing *stricto sensu* and intangibility; its aim is to protect against destabilization and unilateral actions.

These classic mechanisms have, however, come under criticism: since their aim is to neutralize the state's power, they are seen as incompatible with the state's permanent sovereign power, which cannot be limited to contractual mechanisms.¹² Authors such as Cameron (2010) describe these categories as taking a narrow perspective. As put by Dias (2010), for some, the traditional forms of stabilization are seen as the limits of non-alienation of State prerogatives, or as self-limitation of its legislative competences. Others, like Adaralegbe (2008), however, argue that the state cannot rely on the doctrine of sovereignty as justification for its unilateral repudiation of a stabilization clause.

Another difficulty with these mechanisms is their sheer administrative complexity; if a government concludes oil and gas contracts containing such legal clauses at different points in time, then it has to apply to each project the law existing at the time of concluding the contract (Maniruzzaman, 2008). The administrative processing becomes considerably complicated, since for each investor a customized legal and fiscal regime applies. The tax authority ends up administering different tax procedures and forms, which could become quite complex with the accumulation of contracts.

Modern stabilization mechanisms

Freezing clauses have largely fallen out of use, in favour of more modern 'Economic Equilibrium' clauses (Shemberg, 2009), since the exercise of sovereign authority by the host state cannot be completely restrained by virtue of a classic stabilization clause. These more modern techniques have been developed in ways that respect this reality, while at the same time protecting the economic equilibrium of the contract (Maniruzzaman, 2008). Such techniques include elements of balancing, negotiation, or a combination of these with 'freezing' of some of the contract terms.

Economic Equilibrium or Rebalancing Clauses are perhaps the most familiar modern stabilization mechanisms. They aim to keep the same financial position – the economic equilibrium – of the investor as provided by the contract on the date it was signed and therefore provide protection through a renegotiation mechanism. They stipulate that the investor comply with new laws but also require that the investor (or 'it') be compensated for the cost of complying with them so that it remains in the same economic situation it would have been in had the laws not changed. Compensation can take such forms as: adjusted tariffs, extension of the concession, tax reductions, or monetary compensation, but exemptions are not specifically mentioned in the contract (Alexander, 2010). Under such clauses, the state's exercise of sovereign authority is not contractually barred but is counterbalanced by the requirement to undertake renegotiation to re-balance the same economic equilibrium initially agreed between the parties.

Economic Equilibrium clauses come in different types – the difference being the way in which the economic equilibrium of the contract is re-established. They can be either stipulated economic

¹² This parameter of sovereignty includes the power of the State over its natural resources, to the point that it is considered that the right of exploration of such resources is absolutely inalienable or non-negotiable (Dias, 2010).



balancing (automatic adjustment); non-specified economic balancing (does not stipulate the nature of the amendment); or negotiated economic balancing (parties negotiate how to restore the balance).

The popularity of economic rebalancing clauses in the oil and gas industry resides in the fact that if the state's unilateral acts adversely affect the contract, the available remedies could be more favourable than under the freezing clauses. The breach of a freezing clause may result in only lump sum damages, which could be far below what the company considers would be necessary to 'keep it whole'. Under an economic balancing clause, however, the government would have to indemnify on an ongoing basis (Maniruzzaman, 2008). Bilder (2011) adds that freezing clauses may deprive an IOC of potential beneficial changes. Shemberg (2009), however, argues that if formal claims result in monetary compensation, the impact of these two types of stabilization clauses would be similar, except that economic equilibrium clauses only formally require good faith negotiations of the parties in the event of a dispute, it is unclear how these clauses would be enforced and whether they would potentially result in monetary compensation.

One of the key issues with economic rebalancing is how to define the threshold that would trigger renegotiation (if the adjustment is not automatic). In a very small number of contracts, the trigger is specifically defined. More commonly, the following terms are used: 'material change', 'adversely affected', 'significantly affect', 'materially affect', 'materially adverse effect', 'profound changes in circumstances', or 'material adverse change'. These, however, may be prone to conflicting interpretations in different contexts (Maniruzzaman, 2008) and the outcome, in case of a dispute, depends on the drafting (Bilder, 2011).

Furthermore, these clauses seem even more complex to administer than freezing, since they require the calculation of two tax results in order to determine the amount of compensation: one under the post-change system and one under the system at the time the contract was signed.

Variations

According to De Macedo (2011), the three main features of a typical stabilization clause are:

- i) the precedence of the agreement over any following provision passed by the host country damaging the investors' interests (intangibility);
- ii) the impossibility of changing the contract terms without previous consent of the other party, usually to be given in writing; and
- iii) the legislation and regulations that apply to the contract are those in force at the moment the contract is signed.

While many would argue that freezing clauses are outdated and are not in use anymore, in practice, many stabilization clauses can be described as hybrids since they carry aspects of both freezing and economic balancing provisions. Like economic equilibrium clauses, hybrid clauses do not make investors automatically exempt from new laws but (more like freezing clauses) they explicitly include the granting of exemptions from laws as one way of ensuring that the investor is not financially impacted by the new laws (Shemberg, 2009). In other words, such clauses aim to restore to the investor the economic benefit originally established in the agreement, and to exempt the contract from any future law enacted (Guirruogo, 2014).

Stability clauses may also vary with the period they cover. The host country can grant stability provisions for an initial period of years of operations (say 10 years) or for the entire contractual period. The coverage can also differ. Stability provisions may cover specific fiscal laws, or certain provisions (such as tax and royalty rates), or follow an 'all inclusive' approach (broad legal and fiscal laws – including environmental laws as well as labour legislation, companies and exchange control regulations). It is, however, preferable to limit the FSC to direct taxation: corporate tax, royalties, and other resource-specific taxes such as rent taxes. In fact, the inclusion of all indirect taxes and fees in the FSC could



send a signal to investors that the indirect tax system is detrimental to investment in general and needs to be reformed.

Given these variations, Shemberg (2009) distinguishes between *full freezing* clauses (which aim at freezing all laws for the entire duration of the project) and *limited freezing* clauses (which aim at protecting the investor in a more restricted frame of reference). The same can be said of economic equilibrium clauses which can aim at either:

- *full economic equilibrium* – protection against the financial implications of all changes of law, or
- *limited economic equilibrium* – having some limitation on the application of the clause designed on the face of the contract. For example, requiring that the investor incur a certain amount of financial loss before compensation is due, or, for some types of new laws (like laws protecting health, the environment, individual safety, or security) compensation will not be due (see Table 1).

Perhaps one of the most powerful fiscal stabilization mechanisms, although one that tends to be overlooked, is 'Paid on Behalf' or 'Paid in Lieu', typically in Production Sharing Contracts (PSCs). In some jurisdictions, the state wishes to lift a greater share of the physical production, rather than receiving taxes in cash – in such cases it is common to see royalty payable in kind. Some countries with PSC regimes go still further and include a requirement for the NOC, or another government body, to pay income tax on behalf of the PSC contractor. This is achieved by the state retaining an additional share of the production from a field. The tax is then discharged by (usually) the NOC which 'pays the taxes on behalf of the IOC', and still determines its tax liability, according to current policy, regulations, and administrative norms, but deducts it from the government share of revenue. According to Johnston (2010), contracts with these provisions are considered to be some of the most stable arrangements in the world, since they significantly limit fiscal manoeuvring and protect IOCs against increasing tax rates. The author adds that some experts in the industry believe that having taxes in lieu trumps even a freezing clause. It could be argued that because fiscal terms are fixed upon the signature of a contract between government and contractor, contractual systems like PSCs offer a more stable environment than the concessionary systems. However, many concessionary regimes around the world have been relatively stable, though these are generally those with high government take.

Table 1: Variations of Stabilization Provisions

Full Freezing Clauses freeze both fiscal and non-fiscal law with respect to investment for the duration of the project. Exemptions are required.	Limited Freezing Clauses freeze a more limited set of legislative actions. Exemptions are required.
Full Economic Equilibrium Clauses protect against the financial implications of <i>all changes of law</i> , by requiring compensation or adjustments to the deal to compensate the investor when any changes occur.	Limited Economic Equilibrium Clauses protect against financial implications of <i>some limited set</i> of changes in law or after specified costs are incurred. They require compensation or adjustments to the deal to compensate the investor only when the covered changes occur.
Full Hybrid Clauses protect against the financial implications of <i>all changes of law</i> , by requiring compensation or adjustments to the deal, including exemptions from new laws, to compensate the investor when any changes occur	Limited Hybrid Clauses protect against financial implications of <i>some limited set</i> of changes in law or after specified costs are incurred. They require compensation or adjustments to the deal, including exemptions from new laws, to compensate investor only when the covered changes occur.

Source: Shemberg (2009).



3. Effectiveness of stabilization clauses

Despite the popularity of stabilization clauses, their practical value to oil and gas companies is questionable, particularly when the fairness of fiscal regimes is so often called into question. This section analyses the arguments put forth by other authors; the analysis is complemented by opinions from a small group of industry experts, who were invited to comment by drawing on their experience.¹³

To be valid and legal, stabilization clauses must not be in conflict with any constitutional and legislative requirements. The granting of stability provisions that conflict with national law do not receive the protection of international law (Daniel and Sunley, 2010).

While authors like Mato (2012) argue that stabilization clauses are the major means of investment protection at the disposal of oil companies, other authors like Dias (2010) believe that despite such mechanisms, host countries will still proceed with their nationalization policies, under the aegis of the permanent sovereignty over natural resources principle, and challenge their previous commitments if they find it lucrative to do so. According to De Macedo (2011), the use of stabilization clauses in state contracts should, in theory, restrain the host country from adopting unilateral measures of this sort (which have such detrimental consequences on the investors' interests); this, however, could not be further from the truth. A minority of the industry experts interviewed felt that companies would be unwise to place faith in such clauses, as governments could ignore them (and have ignored them in the past).

Cameron (2006) argues that freezing has proved to be of little value in resisting expropriation, although it may have helped investors to secure an exit on better financial terms than they would have otherwise obtained. The author further adds that the effectiveness of the more flexible modern clauses has not yet been the subject of review by arbitral tribunals. According to Alexander (2010), however, even if the IOC is successful and 'wins' an arbitral award, it may find it impossible to 'execute' (monetize) an arbitral award against the host country.

Daniel and Sunley (2010) argue that because of the lengthy planning time for oil and gas projects, which far exceeds the life expectancy of most governments, tax stability in particular is difficult to achieve. While governments may be able to make commitments of their own, they cannot bind the legislative competence of the State into the future. Taxes 'Paid on Behalf' can offer some protection, but this is limited to changes in taxes and/or royalties only. For this reason, Johnston (2010) argues that having both this kind of mechanism and other forms of contractual stabilization should provide greater stability than having just one of these elements.

Meanwhile, authors such as Bilder (2011) observe that many petroleum contracts do not have stability mechanisms, yet IOCs continue to invest. The author refutes the argument that this issue is a deal breaker, knowing that investors expect the fiscal and regulatory regime to be adjusted occasionally. After all, it is difficult for a fiscal arrangement to envisage all possible economic outcomes.

Mansour (2004), however, argues that FSCs appear to be superior to tax exemptions and tax holidays as a mechanism to deal with the peculiar nature of natural resource industries where governments lack the credibility to provide a stable general tax environment. In this situation, FSCs could achieve stability and attract the same level of foreign direct investment at a lower revenue cost to the host country. Nevertheless, their major shortcoming lies in their strength: they reduce control over tax policy and, to some extent, over fiscal policy, particularly in countries where corporate taxes (income and royalties) account for a significant share of tax revenues.

Industry experts consulted for this paper endorsed the idea that stability clauses had at least some worth, noting that while protection was not guaranteed, clauses were generally respected and might serve as a deterrent. Once such provisions are invoked, relations between the government and the

¹³ Ten experts, from the private sector (oil majors included) and academia, were invited to respond anonymously to a short questionnaire seeking expert opinions on the issue. A summary of responses is provided in Annex I.



company, or companies, in question deteriorate, perhaps irretrievably. Taking a government to court/international arbitration can mean that the company in question has little future in the country. This may be acceptable if the company is planning on exiting its assets in the country, but in basins with large hydrocarbon potential it is unlikely that companies can afford to do so. In most circumstances, the industry acquiesces, or uses the threat or risk of potential invocation of the stability clause to help negotiate a compromise outcome. Some would argue that the real value of a stability clause lies in the government's belief that the investor may be prepared to activate its provisions. This may be regarded as an inducement for appropriate conduct from all parties concerned.

The IMF (2007) concludes that, on the one hand, stability clauses can be administratively cumbersome, limit tax policy flexibility, and impair the legislature's normal authority to pass fiscal legislation. On the other hand, they may be necessary in high-risk environments and can increase the overall government take if they reduce investor risk premium. They may also make tougher policies elsewhere in the regime more acceptable than they would be otherwise. In fact, some countries provide stabilization provisions at a premium. Papua New Guinea's former prime minister, Sir Michael T. Somare, recommended that a stabilization guarantee should be provided at a premium of 2 per cent for a period of 10 years, as quoted in Johnston (2010).

Chile provides fiscal stability as an option to foreign investors who may opt to pay an overall tax rate of 42 per cent of taxable income for 10 years, effective in the year income-generating activities start, instead of 35 per cent (20 years for investments exceeding US\$50 million). In April 2003 South Africa proposed a similar stability for royalties. Investors may elect to stabilize royalty rates for 30 years by paying, in addition to the regular rate which varies between 1 and 8 per cent depending on the resource extracted, the minimum of an additional royalty of 1 per cent, or 50 per cent of the existing royalty liability. A unique feature of both the Chilean and the South African stability mechanisms is that they do not discriminate against those investors who do not opt for fiscal stability; these investors are treated similarly to domestic investors. This is an important design element since it ensures a level playing field between domestic and foreign investors, as well as between foreign investors competing for the same resource.

In this sense, contrary to prevailing wisdom, it may not always be in the industry's best interests to press for greater stability. The removal of fiscal risk in exchange for a higher level of government take may not be the optimal bargain from a shareholder perspective. In Alaska, in 2005/6, the oil industry sought to lock in the fiscal terms for 30 years, to permit a gas export project to proceed (this would cost close to US\$30 billion to construct over 10 years, before the first export could be secured). Fiscal stability was deemed essential so as to remove the fiscal uncertainty for such a giant project, particularly given Alaska's history of fiscal instability. The outcome was a step change increase in the fiscal burden. The legacy is a tax regime with the highest level of government take in North America.

The above discussion shows that when it comes to the effectiveness of FSCs, the jury is still out. Although they seem to provide some degree of protection against unexpected policy changes, they are not the only mechanisms that investors can use to reduce the risk of fiscal change and to reinforce contractual stability. Some measures include the following:¹⁴

- **Progressive regimes.** Constructing a fiscal regime whereby the government take rises automatically or formulaically with rising profitability helps deliver to the host government the predictability of receiving a rising share of any price windfall, thus circumventing the need for intervention to change the fiscal regime. This, in turn, delivers for the investor a predictable and stable fiscal framework, although this will mean the upside is sacrificed. A progressive fiscal regime establishes a flexible structure and is more stable.

¹⁴ For more details, see Nakhle and Hall (2012).



- **High government take.** Fiscal regimes with high government take tend to be more stable than those with low take, as long as the regime fundamentals justify and can sustain high levels of tax. Norway is a good example of a very stable tax regime that has stood unchanged while prices have ranged from US\$15 to US\$100/bl, and with government take of 78 per cent.
- **Broad stakeholder base in a project.** Mechanisms to achieve this include: state ownership in the joint venture; ownership by private companies domiciled in and staffed by citizens of the host country; or equity ownership by local entrepreneurs (who may have political influence).

4. Review of fiscal stabilization mechanisms in developing and transition economies

Based on a narrative of their laws or contractual agreements with oil and gas companies, this section analyses fiscal stabilization mechanisms in 19 developing countries and Mexico.¹⁵ The choice of countries was primarily based on the importance of oil and gas activities in the country (or its potential) and targets developing countries since stabilization is primarily found in these countries. It is difficult to say whether this group represents standard practice in stabilization in developing countries, but as noted earlier, it accounts for about 70 per cent of oil and gas production in low- and lower/middle-income countries.

The purpose of this analysis is to document the key characteristics of fiscal stabilization by referring to the most recent practices, and assessing whether and how these characteristics have evolved over the past 15 years. The analysis also attempts to gauge whether stability, when it exists, provides for better protection of governments' share of the petroleum rent. Past stabilization models were frequently asymmetric – they protected companies against increases in tax rates, but allowed them to benefit from decreases – making them unfairly biased in favour of oil companies. This was particularly the case for new producing countries, where governments were eager to attract foreign investors, and even provided investment tax incentives in addition to stability. The analysis is complemented by expert opinions, as stated earlier.

4.1 Data collection

The table in Annex II provides the full article in the law or PSA relating to stabilization. The table in Annex III presents the findings of the survey of countries' laws and contractual agreements.

The selection of documents focused on laws and contractual agreements between the host governments, or their NOCs, and private companies. All documents were publicly obtained. Since the purpose of the analysis is to trace changes in fiscal stabilization mechanisms, documents were selected according to the date they were signed and/or became law. It is assumed that the selected PSAs represent general policy – in other words, that other PSAs signed around the same period have similar fiscal stabilization provisions. Data constraints prevented us from covering all countries at the same dates; but given the long horizon of contractual agreements in the sector, small variations in dates across countries are unlikely to have a material impact on the results.

The analysis of the surveyed countries' relevant legislation and contracts focused on the following:

- **Taxes covered:** The research investigated whether fiscal stabilization covers all taxes applicable, general or sector specific (except government participation), or whether it is limited in scope to

¹⁵ See Annex II for a list of countries.



specific taxes that are mentioned in the stabilization provisions (such as, for example, income tax).

- **Type:** This refers to the form of the stabilization mechanisms, as they were described in Section 2, with the two broad categories being: freezing fiscal terms for part of the (or for the entire) life of the investment and; compensating the investor in case changes in tax laws affect its return on investment (equilibrium or rebalancing mechanisms).
- **Change over period covered:** The changes relate to the key characteristics of the stabilization mechanism, and whether it is more or less favourable to the investor than previous mechanisms.

4.2 Key Features of Stabilization Mechanisms

The data analysis reveals a number of key features about stabilization. First, all countries (except Trinidad and Tobago) offer it explicitly in their laws or contractual agreements, but Papua New Guinea is the only country that provides stabilization through an Act specifically dedicated to the issue, rather than including it in petroleum laws or PSAs.

Trinidad and Tobago's 2000 PSC provides only that the contract cannot be modified in any way except by agreement of the two signing parties, and a 2013 model PSA states that the model supersedes the Petroleum Act and Regulations on matters specifically addressed in the model. Since the Petroleum Act and Regulations contain no fiscal terms, we can presume that the laws of Trinidad and Tobago, including the tax laws, apply to oil and gas production without any stabilization.

The case of the 2000 PSA, however, highlights the other means by which investors and governments can obtain the same (economic) result as would be provided by explicit fiscal stabilization: when one party demands renegotiation of the contract following a major policy change or exogenous shocks that affect its share of the oil rent. Renegotiation is a main feature of PSAs, even where governments provide fiscal stability.¹⁶ Such a redundancy is a manifestation of the incomplete nature of contractual agreements, especially in a complex sector where multiple domestic and international laws interact.¹⁷ However, the 2013 PSA does not provide for similar renegotiation, except in the case of *force majeure* – which includes only wars and natural disasters.

Second, the majority of countries cover all taxes and levies on the sector in their fiscal stabilization. This coverage is not provided explicitly, but rather implicitly by reference to various (arguably, economically equivalent) notions of 'benefit' (more on this below). Azerbaijan's PSA refers explicitly to tax laws (or any other laws containing tax provisions) being subject to stabilization. Papua New Guinea lists specifically the taxes covered by its stabilization act. Uganda is the only country that limits stabilization to income taxes, in a 2012 PSA.

Third, the majority of stabilization mechanisms are drafted broadly by reference to various notions of benefit, such as: 'economic equilibrium', 'economic balance', 'original situation of the parties' (at the time of negotiation), 'economic benefits', 'commercial and fiscal benefits', and 'balance in the interest of the parties'. It is difficult to assess whether these notions are legally equivalent, but economically they seem to refer to the share of the parties from the oil rent. In certain countries, reference is made to the relative shares of the parties, while in others only the oil company's share is stabilized. In the first case, stability is usually symmetrical – in other words it preserves the share of government if policy changes cause a reduction in this share.

¹⁶ While stability strictly concerns changes to the fiscal terms of a PSA, renegotiation is much broader and covers, in principle, any changes – endogenous or exogenous – affecting the economics of a project.

¹⁷ An incomplete contract is one that does not define all possible outcomes, due for example to moral hazard and adverse selection problems; the parties agree to intentionally leave gaps in the contract and these will be dealt with by law – domestic or international.



Only three countries provide stability by freezing applicable laws at the time of the contract signature (Ghana, Côte d'Ivoire, and Papua New Guinea). However, the last two countries' clauses are from old/dated PSAs, and therefore may not be relevant today.¹⁸ Ghana changed its stabilization clause from a broad mechanism similar to those described in the previous paragraph, to a freezing type, which is a rare exception, since the trend over the period covered seems to have been moving in the opposite direction.

Fourth, one important and little known characteristic of stabilization mechanisms is that they do not always just cover tax policy parameters (an endogenous variable to government).¹⁹ Some, like Angola, extend coverage to exogenous shocks – which presumably relate to market conditions, but can be anything that affects the return on investment. Fiscal stability in this case inherently contains an element of renegotiation.

Finally, it is interesting to note that despite the fact that all stabilization mechanisms reviewed in this section appear to have the same objectives for governments and investors, they are written in varying legal terms and lengths. It is not clear why this is so; country legal practices may be at play, with some favouring more detailed provisions, while others leave details to regulations and interpretations. Whatever the reasons for these differences, they raise the issue of enforcement of such provisions when they are invoked.

4.3 Trends and Implications for Governments and Companies

Among the 20 countries reviewed, changes over the last 15 years were documented only for 10 countries. We were not able to obtain information for the beginning and the end of the period covered for all countries. Therefore, changes over the period may not reflect general practice in developing countries. We can draw the following observations.

The most important, and perhaps obvious, observation is that stabilization clauses are still widely provided in developing countries, and are here to stay for the foreseeable future. Moreover, there is no indication that there has been a tightening of such clauses by restricting them to certain taxes, or by limiting the time period of their application (Uganda and Trinidad and Tobago are exceptions). However, as noted earlier, and discussed in more detail below, stabilization is increasingly symmetrical.

These results are consistent with the opinions of industry experts, who were generally of the view that companies seek stabilization mechanisms mainly for the potential financial benefit they provide (protection against governments increasing taxation once exploration yields positive results), and that they usually push for stabilization of all fiscal terms.

Stability has become more focused on outcomes – typically measured as the economic benefits of the parties involved in a contract – rather than on tax policy parameters to be stabilized. The latter type lists specifically the taxes that must remain constant during an agreed period. The former type abstracts from any changes in taxes, and focuses only on the results that such changes may have on the economics of a project.

This significant evolution of stabilization mechanisms poses a number of questions and implications.

¹⁸ We were unable to obtain publicly available recent PSAs.

¹⁹ Of course, tax policy can change as a result of an exogenous shock. The point, though, is that government has control of policy, but little or no control over market or other exogenous factors. Where government has control over market conditions – e.g. worldwide monopoly in the production of a given resource commodity – policy and market factors are closely related.



First, the change in the type of stabilization is probably an indication that classical models, mostly of the freezing type, have not been successful in practice, which is confirmed by the literature review in earlier sections. A number of reasons can explain this, including:

- the difficulty in defining an exhaustive list of taxes to be stabilized;
- the definition of a tax as opposed to other forms of levies, or even non-tax regulations that have an equivalent impact on a project;
- the fact that taxation in developing countries is often scattered across various government departments and government levels, which compete for a share of the oil rent with little coordination, due to institutional weaknesses (this latter issue is particularly acute in the natural resources sector).

Second, the more modern clauses are more likely to treat changes in fiscal terms symmetrically and may be equally beneficial to governments and oil companies, unlike freezing-style clauses which are frequently biased in favour of the latter. Hence, a reduction in tax rates, when applied across the board, need not apply to oil and gas extraction, since the 'economic balance' which was originally agreed on in the contract needs to be maintained. This contrasts with asymmetrical FSCs that allow companies to benefit from general tax reductions that bring their tax liability below the initially agreed level. Such older mechanisms would thus provide the best of both worlds for oil companies: an insurance against tax increases, and a free call option to buy tax decreases when they occur.

The implication of keeping a balance of the financial interests of the parties means that the government can change the tax mix to improve incentives without changing the total tax take. This could be desirable for efficiency reasons; for example, higher taxes on profits or rent can substitute for customs duties on intermediate inputs, or royalties, thus reducing distortions to investment without compromising revenues. For example, during recessions or crises, when prices fall steeply, governments may choose to decrease royalties in order to reduce the disincentive to abandon projects. Or if prices go up to unexpected levels, government may introduce a surcharge on profits (assuming the tax system does not capture oil rent accurately). Over the life of a project, these changes could be neutral on government revenues while providing the right incentives for investors.

Third, the advantages of the more modern style of stabilization could extend beyond the oil and gas sector, and have linkages to the general tax system, especially where elements of such systems apply to the oil and gas sector. This is particularly the case for corporate income tax (CIT), which has declined across developed countries over the past 20 years, driven by two factors: tax competition among countries to attract foreign direct investment; and policymakers' desire to reduce distortions in capital income taxation by broadening the CIT tax base and reducing rates. The trend toward lower CIT rates and broader bases has, however, been much slower in developing countries, in particular in resource-rich countries where CIT applies to the oil sector (for example in the oil-rich central African countries). In these countries, CIT is a major contributor to the total tax take from the oil and gas sector; a reduction in its rate could have significant consequences on revenue from the sector, with few or no implications for foreign direct investment, given the immobility of natural resources. Asymmetric stabilization may explain, at least partly, why some of these countries did not reduce their CIT rates as fast or by as much as other countries.²⁰ Modern stabilization clauses can allow policymakers to consider the overall tax system and its impact on revenue and growth, without worrying about the specific impact on the oil and gas sector, and without penalizing investors in the sector.

Countries that have not been able, for various reasons, to change their stabilization clauses to make them symmetrical (particularly in the case of traditional freezing) could obtain the same result by delinking the taxation of the resource sector from that of the general economy: for example, the CIT

²⁰ For further detail on the differences in CIT rate trends among resource and non-resource countries see Mansour and Swistak (2016).



rate can be specified for the resource sector, separately from the rest of the economy. This, however, would not solve the issue of stabilization of other fiscal parameters, such as royalties.

Nevertheless, and in line with the analysis carried out in earlier sections, outcome-based stability (economic balancing/equilibrium) is more complex to administer than freezing-style mechanisms. Complexity derives from various sources.

First, the fact that the policy tools subject to stabilization are not identified implies that the parties must know the outcome at any point in time (although the main ones – such as income taxes and royalties, or calculation of production shares – are usually known and easy to identify). This in turn means that governments must have, and be able to use, all the information and analytical tools necessary to calculate outcomes, otherwise, companies are likely to have an informational advantage. In contrast, with freezing-style clauses, governments need only to know when their tax rules change and the impact of such changes on a company's tax liability.

Second, some of the notions under modern stabilization mechanisms are difficult to define. Application rules or regulations related to PSAs can define the meaning of these notions, but it remains difficult to see how they can be linked in isolation to changes in tax rules. It is likely that outcome-based stabilization clauses provide more room for interpretation by the parties and courts than freezing-style mechanisms; hence they are more costly to administer and comply with, and more challenging for developing countries, where administrative capacities remain important constraints. On that latter point, if countries want to offer fiscal stabilization, they could consider designing one model to offer to all firms, rather than negotiating different FSCs with different investors. The rationale for this has to do with treating all investors in an equitable manner and reducing the administrative burden.

5. Conclusion

For decades, oil companies have tried to minimize political and fiscal risks, by pushing for stabilization mechanisms in the contracts they sign with the host government. As this paper has pointed out, stability clauses and fiscal stability in particular are mostly observed in developing countries. This suggests that such clauses attempt to counteract general political instability and lower credibility of policymaking – although the authors know of no empirical evidence establishing this causality.

The objective of this paper has been to analyse how contractual stabilization devices have evolved since the late 1990s, based on a survey of 20 countries and a review of the literature and evidence on stabilization clauses. The paper has studied the major triggers that push host governments to revise the fiscal terms to which they originally agreed with investors; amongst various economic and political factors, one of the obvious drivers is the oil price. This has been illustrated by the fact that more than 30 countries have revised petroleum contracts or entire fiscal regimes between 1999 and 2010 – a period which witnessed major changes in the price of oil. However, this paper has argued that chasing the price of oil is a burdensome and inefficient strategy, as oil is an internationally traded commodity where short-term price volatility is the norm. Instead, host governments should dedicate sufficient effort and time to designing their petroleum fiscal regime so that it adjusts automatically to various factors. Given past trends, it is likely that the fall in the oil price in 2014 will tilt the balance in favour of oil companies, who might be able to negotiate more lenient fiscal terms and lock them in through FSCs. Nevertheless, experience shows that fiscal regimes with low government take are rarely stable, irrespective of the inclusion of FSCs. The industry should instead emphasize the greater importance of sustaining the international competitiveness of a fiscal regime, regardless of the oil price.

Although fiscal stability is a commonly cited attribute of a desirable upstream petroleum regime, one of the commonly observed features of existing regimes is in fact the lack of stability. Whilst it is easy to understand the significance of fiscal stability to the industry it is, in practical terms, difficult for



governments to deliver it. Some degree of flexibility is therefore to be expected, with occasional review of the system to cater for significant and long-lasting changes in various conditions (such as maturing basin, new technologies, and new geological plays). However, a tax regime which is subject to continuous tinkering will negatively affect investors' confidence in government policy.

There are three broad conclusions from this paper's review of the effectiveness of stability mechanisms over the last decade and a half.

- First, classical stabilization models, mostly of the 'freezing' type, have not been successful in practice, for a number of reasons including the difficulty in defining an exhaustive list of taxes to be stabilized, the definition of a tax as opposed to other forms of levies, or even non-tax regulations that have an equivalent impact on a project.
- Second, the more modern (equilibrium or outcome-based) clauses are more likely to treat changes in fiscal terms symmetrically, and may be equally beneficial to governments and oil companies, unlike freezing-style clauses which are frequently biased in favour of oil companies.
- Third, modern stabilization clauses can allow policymakers to consider the overall tax system and its impact on revenue and growth, without worrying about the specific impact on the oil and gas sector, and without penalizing investors in the sector.

The country reviews carried out in this paper, together with comments from industry experts, therefore suggest that fiscal stability clauses in developing countries will remain a key feature of contractual agreements and oil and gas laws for years to come. Their evolution over the past 15 years – toward more flexibility and much less asymmetry – is perhaps a welcome development.

However, somewhat contradictorily, the effectiveness of the more modern (equilibrium or outcome-based) clauses in achieving the desired outcome remains as questionable as that of previous stability models, particularly in countries which continue to lack the administrative capability to enforce these mechanisms, and where government policy in general and investment laws and the judiciary in particular lack credibility. They are likely to be much more complex to enforce, both by the parties involved and by the courts. This in turn suggests that contractual devices alone are insufficient – either for investors concerned about unexpected changes in policy, or for governments trying to guard against the potential of losing revenue – for managing the risks associated with the sector.

Fiscal regimes should primarily include mechanisms to reinforce contractual stability, such as competitive and 'progressive' systems where government take automatically adjusts with profitability. Stability can also be reinforced by the inclusion of a broad stakeholder base in a project (for instance through state ownership or equity ownership by local entrepreneurs). And rather than negotiating different FSCs with different investors, countries should consider designing one model to offer to all investors.



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Annex I: Industry Expert Views – Summary

Question 1

- a) Do companies always push for the inclusion of stability provisions in contracts?**
- b) What coverage do companies ask for (all fiscal terms, including income tax, or partial coverage)?**

There was no consensus among respondents' answers to this question, as they fundamentally disagreed about the efficacy of stability clauses. Broadly speaking, the answers fell into two groups. The (larger) first group argued that since stability clauses are financially beneficial, companies do generally push for their inclusion, especially in developing countries. In this group, the respondents answered that companies usually ask for coverage of all relevant fiscal terms. The second group argued that because governments are likely to renege on stability clauses, companies do not ask for the inclusion of such clauses in their contractual agreements.

Question 2: To what extent do companies believe that stability provisions can protect them from undesirable fiscal changes?

Respondents again varied on their answers. Most endorsed the idea that stability clauses had at least some worth, noting that while protection was not guaranteed, clauses were generally respected and might serve as a deterrent. Some respondents felt that companies would be unwise to place faith in such clauses, as governments could ignore them (and have ignored them in the past).

Question 3: Would companies still want to stick to the stability provision if the government reduces its fiscal take?

The respondents split evenly on this question. Among those who answered yes, respondents noted that companies would always want to capture the benefit of a decreased fiscal take, and several noted that some governments allow one-way contracts – where a company can capture such benefits but would never see its fiscal take increase. Among those who answered no, several respondents noted that many governments explicitly prevent such changes.

Question 4: Have you noticed any major changes in stability provisions since the 1990s?

Most respondents who argued that there had been changes noted that the use of stability provisions has gone down. Some noted that there had been no changes.



Annex II: Laws Surveyed with Relevant Articles

Country ↓	Legislation Title	Provision(s)	Contract Title	Clause(s)	Legislation Title	Provision(s)	Contract Title	Clause(s)
			Data circa 2000				Data Circa 2010	
Angola	Republic of Angola LAW No. 10/04 of 12 November 2004	Article 92 (<i>Transitional provision</i>)					Production Sharing Agreement Among Sociedade Nacional De Combustíveis De Angola – Empresa Pública (Sonangol, E.P.) – 2008	Article 37
Azerbaijan			Agreement On The Exploration, Development And Production Sharing For The Shah Deniz Prospective Area In The Azerbaijan Sector Of The Caspian Sea (Initial 1996, Five Addendums 1996, 1996, 2003, 2005, 2006)	Article 23 Article 12			Agreement On The Exploration, Development And Production Sharing For The Shafag-Asiman Offshore Block In The Azerbaijan Sector Of The Caspian Sea (2010)	Article 23.1, 23.2, 23.3 Article 12(1)(c)
Chad					Loi relative aux hydrocarbures Loi n°07- 006 du 2 mai 2007 [Modifiée par l'ordonnance n°10-001 du 30 septembre 2010 Les dispositions de la loi n°006/PR/2007 du 2 mai 2007 incompatibles avec celles de l'ordonnance n°10-001 du 30 septembre 2010, ne sont pas applicables aux Contrats de Partage de Production conclus par ou pour le compte de la République du Tchad]	Article 51 Article 95	Contrat de Partage de Production_Le 03 Aout 2011_entre Le Republique du Tchad et Griffiths Energy (DOH) Ltd	Article 56.2.1, 56.2.2, 56.2.3
Côte d'Ivoire	Code Petrolier_31 Mai 1996	Article 84						



Equatorial Guinea					Hydrocarbons Law No. 8/2006, of 3 November of the Republic of Equatorial Guinea.	Article 57 Article 61 Article 62 Article 118 (<i>Transitional provision</i>)		
Egypt			Concession Agreement for Petroleum Exploration and Exploitation between the Arab Republic of Egypt and the Egyptian General Petroleum Corporation and Kriti Oil and Gas S.A. in North West Gamsa Area Eastern Desert A.R.E. (2002)	Article XIX Article XVIII			Concession Agreement For Gas And Crude Oil Exploration And Exploitation Between The Arab Republic Of Egypt And The Egyptian Natural Gas Holding Company And -- And ----- And ----- In ----- Area ----- A.R.E. (Estimated 2012)	Article XIX Article XVIII
Ghana	Petroleum (Exploration and Production) Law, 1984	Section 13	Ghana Model Petroleum Agreement 2000	Article 26.2 26.3 26.4			Petroleum agreements in 2005, 2006, 2008	Article 26.2, 26.3, 26.4
Kazakhstan			Contract N 1734 concluded on 05.05.2005	Section 26. 26.1, 26.2, 26.3	Law of Subsoil and Subsoil Use: Law of the Republic of Kazakhstan June 24, 2010	Article 71.1–3; Article 129. 4 (<i>Transitional provision</i>)		
Kenya			Model Production Sharing Agreement (estimated 1990s)	Article 40.3	The Energy Act 2006	Section 123 (<i>Transitional provision</i>)	Republic Of Kenya Model Production Sharing Contract (estimated 2013)	Article 52.3
Kurdistan			Production Sharing Agreement between the Kurdistan Regional Government and Genel Enerji A.S. Dated 20 January 2004	Article 26.4, 26.5	Oil And Gas Law Of The Kurdistan Region – Iraq Law No. (22) – 2007	Article 40, Article 50	Production Sharing Contract Sulevani Area Kurdistan Region Between the Kurdistan Regional Government of Iraq and Petroquest Petrol ve Enerji Ticaret Sanayi Limited Sirketi 14/10/2010	Article 43.2, 43.3, 43.4
Liberia	An Act Adopting the New Petroleum Law of the Republic of Liberia 2002	Section 11 (<i>Transitional provision and dispute resolution provision</i>)	Model Production Sharing Contract (no date stated but Open Oil references first use of model in first licensing rounds of 2004)	Article 36.2			Restated and Amended Production Sharing Contract between the Republic of Liberia by and through the National Oil Company of Liberia and ExxonMobil Exploration and Production Liberia Limited and Canadian Overseas Petroleum (Bermuda) Limited Liberia Offshore Block 13. 8 March 2013	Article 36
Mauritania	Ordonnance No 88.151 Relative Au Régime Juridique Et Fiscal De La Recherche Et De L'exploitation Des Hydrocarbures (1988)	Article 12	Republique Islamique De Mauritanie Honneur – Fraternité – Justice, Contrat De Partage De Production Entre La Republique Islamique De Mauritanie Et Contrat-Type Proposé Aux Compagnies Pétrolières 1994	Article 27.1, 27.2, 27.3	Code des hydrocarbures bruts: Loi n°2010-033 du 20 juillet 2010	Article 51		



Mexico					DECRETO por el que se expide la Ley de Petróleos Mexicanos; se adicionan el artículo 3o. de la Ley Federal de las Entidades Paraestatales; el artículo 1 de la Ley de Obras Públicas y Servicios Relacionados con las Mismas y un párrafo tercero al artículo 1 de la Ley de Adquisiciones, Arrendamientos y Servicios del Sector Público. (2008)	Disposiciones Transitorias en Materia de Presupuesto V. Décimo Segundo (<i>Transitional provision</i>)	Modelo de Contrato, Arenque Junio 8 de 2012	Artículo 27.2
Mozambique	Petroleum Law Nº 3 /2001 Of 21 February	Article 26 (<i>Transitional Provision</i>), Article 27 (<i>dispute resolution</i>)			Law no. 21/2014	Article 68 (<i>Transitional Provision</i>), Article 69 (<i>dispute resolution</i>)	Exploration and Production Concession Contract between the Government of the Republic of Mozambique and ENI East Africa S.p.A and Empresa Nacional di Hidrocarbonetos, E.P. for Area 4 Offshore of the Rovuma Block Republic of Mozambique 2006	Article 27.12 27.14
Papua New Guinea	No. 33 of 2000. Resource Contracts Fiscal Stabilization Act 2000	Section 2						
Sierra Leone	Petroleum Exploration and Production Act 2001	Section 66(2) (<i>Transitional provision</i>)	Petroleum Agreement between Government of Sierra Leone and Oranto Petroleum Limited (2003)	Article 26			Model Petroleum agreement (2011 (Open Oil estimate))	Article 26
Tanzania	The Petroleum (Exploration And Production) Act 1980 The United Republic Of Tanzania No. 27 Of 1980	Second Schedule Section 95 (<i>Transitional provision</i>)	Model Production Sharing Agreement Between The Government Of The United Republic Of Tanzania And Tanzania Petroleum Development Corporation And Abc Oil Company November 2004	Article 30(b)	Petroleum Act 2008	Section 56 (<i>Transitional Provision</i>)		
Trinidad and Tobago	The Petroleum Act 1969	Section 38 (<i>Transitional Provision</i>)	Production Sharing Contract 2000	Article 38 Article 39			Deep Water Model Production Sharing Contract 2013	Article 38 Article 40
Turkmenistan	Law of Turkmenistan No. 206-1 dated 30 December 1996, entitled 'On Hydrocarbon Resources'	Article 48	Model Production Sharing Agreement for Petroleum Exploration and Production in Turkmenistan (Part 2) 1997	Article 16				
Uganda			Uganda Model Contract 1999 Model Production Sharing Contract	Article 31	The Petroleum (Exploration, Development And Production) Act, 2013	Part XVII Section 190 (<i>Transitional provision</i>)	Production Sharing Agreement For Petroleum Exploration Development And Production In The Republic Of Uganda By And Between The Government Of The Republic Of Uganda And Tullow Uganda Limited In Respect Of Exploration Area 1, Feb 2012	Article 33



Annex III: Key Elements of Stabilization and Changes, 2000 – Present

	Documents Reviewed	Taxes Covered	Type	Change over period covered
Angola	Petroleum Activities Law, 2004. PSA 2008.	All taxes are covered, implicitly without mention to specific taxes.	Stability is provided by renegotiation, when policy or exogenous factors change, to reestablish rights and obligations of the parties. Stability is symmetrical.	No material change in stability.
Azerbaijan	PSA 1996 with changes up to 2006. PSA 2010.	All taxes. Reference is made to tax laws or any law containing tax provisions, but no tax is specifically noted.	Adjustment is made to reestablish 'economic equilibrium' of the signing parties. Stability is symmetrical.	No material change in stability.
Chad	Hydrocarbon Law, 2007.	All taxes are covered, implicitly without mention to specific taxes.	Stability is maintained by renegotiation, when either policy or exogenous factors change. Stability is assured if renegotiation is not successful in 90 days.	N.A.
Côte d'Ivoire	Petroleum Code, 1996.	All taxes are potentially covered through a general provision in the code that states and stabilization can be provided in the petroleum contract.	Unknown, but most likely through freezing of fiscal terms at the time of signature of the petroleum contract.	N.A.
Egypt	Concession Agreement, 2002. Concession Agreement 2012.	All taxes are potentially covered through a provision to maintain constant rights and obligations of oil company.	Stability is maintained by renegotiation when policy factors change, with the objective to restore the 'economic balance'. Stability is symmetrical.	No change. Same provision for stability is used in both agreements.
Equatorial Guinea	Hydrocarbons Law, 2006.	No stabilization is explicitly provided in the law.	N.A.	N.A.



	Documents Reviewed	Taxes Covered	Type	Change over period covered
Ghana	Petroleum Exploration and Production Law, 1984. Model Petroleum Agreement, 2000. Various Petroleum agreements in 2005, 2006, and 2008.	All taxes are covered, implicitly without mention to specific taxes.	Freezing of terms of contract. Not clear if symmetrical or asymmetrical.	Stability type changed from renegotiation of contract if conditions affecting its economics change (1984), to explicit stability provided through freezing of agreement at the date of signature (2000 law and 2005, 2006, and 2008 agreements reviewed).
Kazakhstan	Contract dated 2005. Law of Subsoil and Subsoil use, 2010.	All taxes are covered, implicitly without mention to specific taxes.	In the 2010 law stability is designed to protect the state's economic interest and security if warranted by changes in exogenous factors.	Stability was provided through freezing of laws in the 2005 contract, but no explicit mention of stability in favour of the investor in the 2010 law.
Kenya	Model Production Agreement, 1990. Model Production Sharing Contract, 2013.	All taxes are covered, implicitly without mention to specific taxes.	Preserve economic benefit of both parties, hence symmetrical.	No change. Similar legal wording is provided in both models.
Kurdistan	Production Sharing Agreement, 2004. Production Sharing Agreement 2010.	All taxes are covered, implicitly without mention to specific taxes.	Stability is provided for 'legal, fiscal, and economic conditions'.	Stability in the 2010 agreement is broader, and may include the impact of exogenous factors on the economics of a project, while stability in the 2004 agreement was for fiscal terms.
Liberia	Model Production Agreement, 2004. Production Sharing Agreement, 2013.	All taxes are covered, implicitly without mention to specific taxes.	Re-establish the original situation of the parties through negotiation if a material change in the situation occurs due to exogenous or policy factors. Stability is symmetrical.	Stability in the 2013 agreement is broader, but unlike the 2004 model agreement, it is symmetrical.



	Documents Reviewed	Taxes Covered	Type	Change over period covered
Mauritania	Model PSA, 1994. Hydrocarbons Law, 2010.	All taxes are covered, implicitly without mention to specific taxes.	Stability can be included in contractual agreements, but the 2010 law does not specify which form it takes.	The 1994 model agreement contained a clause referring to the 'non-application of laws that aggravated the situation of the contracting company'. The move to a general permission of stability clauses in the 2010 law probably indicates more flexibility in their design, which could be viewed as broader than the language of the 1994 Model Agreement.
Mexico	Model Agreement, 2012.	All taxes are covered, implicitly without mention to specific taxes.	Stability is provided to keep the 'economic balance' of the parties in case exogenous or policy factors change. Stability is therefore symmetrical.	N.A.
Mozambique	Exploration and Production Concession Contract, 2006.	All taxes are covered, implicitly without mention to specific taxes.	Stability is provided to keep the 'economic benefits' of the parties in case of exogenous or policy factors change. Stability is therefore symmetrical.	N.A.
Papua New Guinea	Resource Contracts Fiscal Stabilization Act, 2000.	All taxes are covered, and most are listed in the Act.	Freezing laws at time of contract signature.	N.A.
Sierra Leone	Petroleum Agreement, 2003.	All taxes are covered, implicitly without mention to specific taxes.	Post-agreement laws or changes to laws are not applicable. However, parties can request renegotiation in case conditions change and affect the 'economic balance' of the parties.	N.A.
Tanzania	Model PSA, 2004.	All taxes are covered, implicitly without mention to specific taxes.	Stability is provided by restoring 'commercial and fiscal benefits' of the contracting enterprise, through renegotiation of contracts.	N.A.



	Documents Reviewed	Taxes Covered	Type	Change over period covered
Trinidad and Tobago	PSC 2000; model PSC 2013; and 2013 Petroleum Act.	Not clear; PSC 2013 provides that contract cannot be modified in any way except by agreement by the two signing parties.	N.A.	Uncertain
Turkmenistan	Hydrocarbons Resources Law, 1996.	All taxes are covered, implicitly without mention to specific taxes.	Stability is provided by securing 'balance in the interests of the parties and economic results agreed when the contract was signed'. Clause possibly symmetrical.	N.A.
Uganda	PSA, 2012.	Income taxes only.	Stability provided by renegotiating terms in the event that tax laws change, but does not prevent government taking extra income taxes on additional profits in the event such profits are realized.	N.A.

Source: Compiled by the authors from various sources including countries' laws, production sharing model agreements, etc.

Notes:

N.A. means data were not available to ascertain whether a change took place.

'Type' refers to the method by which stability is provided (e.g. laws are frozen; company is compensated for increases in taxes, and whether stability is symmetrical or asymmetrical).